CLPA
CC-Link Partner Association

English version

Japan
Korea
Taiwan
Americas
Europe
China
ASEAN

CC-Link IE
CC-Link
CC-Link/LT
CC-Link Safety

CC-Link Partner Product Catalog

CC-Link

CC-Link/LT

CC-Link Safety

CC-Link IE

Plentiful partner products as various as your network needs

In addition to ISO, adopted also as an IEC International Standard, CC-Link has become a genuine world standard network.

More than 1,000 types of products support the connection with CC-Link, and further growth is expected for the future.

From CC-Link to CC-Link/LT and CC-Link Safety, the lineup of the CC-Link family has been expanding, always satisfying the needs of time. Now, here comes an Ethernet-based CC-Link IE controller network, leading the integration of industrial networks.

A variety of products are already in the queue for release.

When you pick up a product that supports the CC-Link connection, the potential of your FA system is expanded to the world.

In this catalog, you see a lineup of all types of reliable products, each of which supports the CC-Link connection and has passed conformance tests. Find a product type that best suits your use and purpose.

◎ For the latest updates, specifications, and relevant information, please contact each manufacturer.

Level	Network
Intra-factory (Information management)	Ethernet etc.
Inter-factory (Production control)	CC-Link IE Controller network
Inter-line (Device control)	CC-Link IE Field network / CC-Link
Individual sensor/actuator (Control of device and I/O)	CC-Link Safety / CC-Link/LT
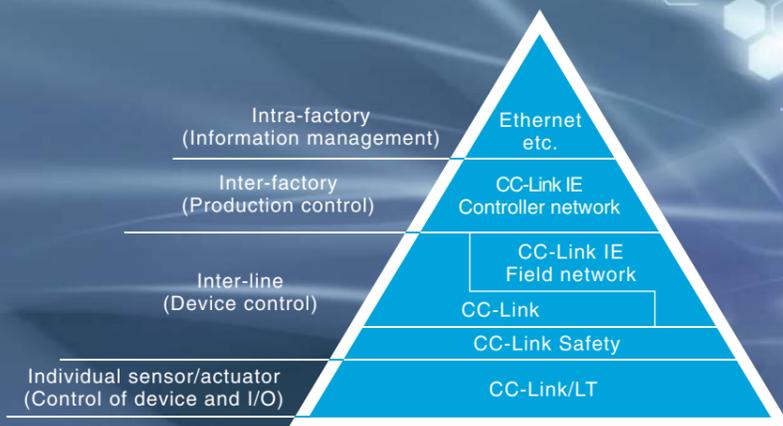
CLPA presents a new integrated network concept: CC-Link IE
The CC-Link family is exceeding field network borders

For the control of devices on the line **CC-Link**	CC-Link is a high speed field network that can handle control and information at the same time. Its communication speed is as fast as 10 Mbps, the maximum overall cable extension length is 100 m, and up to 64 remote stations are supported. This overwhelming performance has been recognized more and more widely. Having already obtained SEMI certification, CC-Link is becoming an open technology faster and faster.	◎High speed communication ◎Overall cable extension length: 100 m to 1,200 m ◎Directivity improved by a repeater ◎High speed cyclic transmission, large capacity transient transmission (message data)
For networked communication in a control board and a device **CC-Link/LT**	CC-Link/LT is a network that reduces wiring in a control board and a device, relieving the site workers from the possibility of incorrect wiring. You can easily reduce wiring that connects sensors and actuators with their controller. Moreover, CC-Link/LT provides high speed response time and executes high performance communication inherited from CC-Link.	◎Fast response ◎Easy installation by connector connections ◎Easy expansion by T-junction connection ◎Single cable for communication and power supply
For reliable safety **CC-Link Safety**	CC-Link Safety is a safe network system for securely operating your system. The system provides communication as fast as CC-Link. In addition, the system has high compatibility with CC-Link. CC-Link dedicated cables enable you to use existing resources such as conventional CC-Link remote stations.	◎Fast response ◎Detection of communication errors ◎Utilization of existing resources ◎RAS function ◎Effective development of supported products
Ethernet-based integrated network **CC-Link IE**	The CC-Link IE Controller network is a backbone network that controls field networks and is capable of handling distributed control of high-speed and large data transmissions. CC-Link IE Field network is designed for the intelligent, new manufacturing systems that consist of control data of devices and management data such as logs and diagnostics as well as require high-speed and large data transmissions.	◎Ethernet base ◎High speed & Large scale shared data ◎Seamless communication ◎Enhanced troubleshooting function

Products in this catalog are categorized into following 3 types; Compliant, Recommended, and Reference. (See the table below.)

Master	Compliant
Slave	Compliant
Peripheral devices	Compliant Recommended Reference

For example, in the CC-Link IE section shown in the Table of Contents on the right, Master refers to "PLC" and "PC • others", Slave refers to "HMI", and Peripheral devices refer to "Cable connecters", "Peripheral software", and "Tool".

CC-Link Compliant products
Refer to products that are designed in accordance with the CC-Link specifications to be compliant with CC-Link. Such products meet the specifications set by CLPA and have passed the conformance tests conducted by CLPA.

CC-Link Recommended products
Refer to products that meet the specifications set by CLPA and have passed the Recommended product tests conducted by CLPA.

CC-Link Reference products
Refer to products that CLPA has not confirmed their connectivity but have been used by the CLPA partner.

CC-Link Partner Product
CONTENTS

CC-Link Partner Association

CLPA further accelerates the momentum of the CC-Link that opens potential on a global scale.

What is "CC-Link Partner Association"?

"CC-Link Partner Association" is a organization made up of partner-manufacturers developing "CC-Link" products, and was established to expand "CC-Link" throughout the world.
Japanese name : CC-Link 協会   English name : CC-Link Partner Association   Abbreviation : CLPA
(CC-Link products···CC-Link, CC-Link/LT, CC-Link/Safety, CC-Link IE)

The Board of Directors consisting of five firms operates CLPA and decides on major association issues.

Board of Director firms

IDEC   NEC   COGNEX   Digital   MITSUBISHI ELECTRIC Changes for the Better

We help users in building automation systems, and vendors in developing CC-Link compatible products.

Under the motto "CC-Link, the open field network, will become world's de facto standard", CLPA was established in November 2000. Ever since, the Board of directors, Marketing Task Force and Technical Task Force have joined forces to help the vendors to develop compatible products and the users to build up FA systems.

Vendor Support

- Exhibiting at shows
- Planning and management of technical seminars
- Distribution of product information via the Internet
- Distribution of catalogs and reference materials for selecting CC-Link compatible products
- Support for developing CC-Link compatible products
- Execution of conformance tests
- Admission procedures into CC-Link Partner Association

User Support

- Distribution of product information via the Internet
- Distribution of catalogs and materials for selecting CC-Link compatible products

If you obtain membership in the CC-Link Partner Association

- You can obtain the latest technical information about the CC-Link.
- You can obtain the CC-Link Specification free of charge.
- You are informed of the latest CC-Link specifications and can, therefore, develop new products ahead of your competitors.
- You can obtain the latest technical information about the CC-Link.

*The CC-Link Specification consists of
1. Overview/Protocol
2. Implementation
3. Profile

What is a conformance test?

You can rely on CC-Link products. All of the CC-Link certified products sold by partner-manufacturers have passed conformance tests to ensure compatibility.

(Example)
* Power supply noise test (AC/DC) ··· Check the noise resistance on the power cable of the product.
* Branch line noise test ··· Check the noise resistance of the product for the noise applied to the CC-Link communication cable.
* Surging test with 64 stations connected … Checks communication reliability with the maximum number of stations connected.

## Adoption rate of the CC-Link

Many member firms come crossing the boarders to join CLPA.

Though starting with only 134 member firms when CLPA was established, we now have more than 1350 member firms as of September 2009. The overseas firms account for as much as 60 % of the memberships, providing a solid evidence that the world has recognized that the field network CC-Link, first from Japan, is to the true global standard.

◎Growing CLPA members
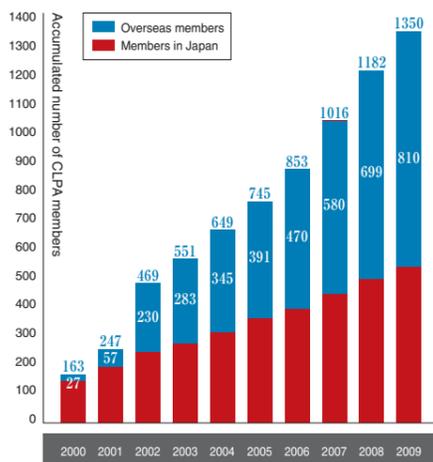
A line of diversified CC-Link compatible products, as many as the number of user voices.

With the increasing number of vendor firms joining CLPA, the accumulated CC-Link compatible products have exceeded as diversified as 1000 in kinds. For the excellent features of these member products to be known and understood, CLPA prepares "CC-Link Product Catalog" and "CC-Link Family Demonstration Panel".

◎Increase of number of CC-Link compatible products
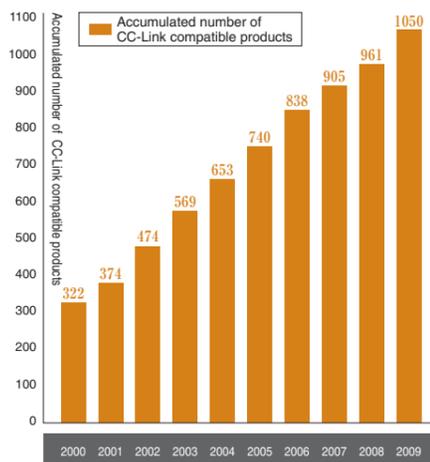
Recognized in the world market, the number of shipped nodes has exceeded 6.5 million.

Centered on the automobile, semiconductor and liquid crystal industries, the number of shipped nodes of CC-Link compatible products keeps growing. It is expected to reach 7 million nodes in year 2009 and is picking up speed even more.

◎Increase of number of shipped nodes (Unit :10000 nodes)
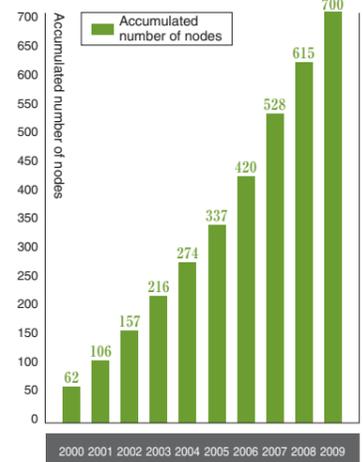
Global support system

The CC-Link Partner Association has branches not only in Japan but also in overseas countries to find more partner companies and seek for customers' convenience.

CT : Testing body founded

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North America	500 Corporate Woods Parkway, Vernon Hills, IL60061, U.S.A. Phone:+1-847-478-2341 Fax:+1-847-876-6611 E-mail:info@cclinkamerica.org URL:http://www.cclinkamerica.org/	Taiwan	6th Fl, No.105, Wu Kung 3 Rd., Wu-Ku Hsiang, Taipei, Taiwan Phone:+886-2-8990-1573 Fax:+886-2-8990-1572 E-mail:cclink01@ms63.hinet.net URL:http://www.cc-link.org.tw/index.asp
Europe	Postfach 10 12 17, 40832 Ratingen, Germany Phone:+49-2102-486-1750 Fax:+49-2102-486-1751 E-mail:partners@clpa-europe.com URL:http://www.clpa-europe.com/	ASEAN	307 Alexandra Road #05-01/02, Mitsubishi Electric Bldg., Singapore 159943 Phone:+656-470-2480 Fax:+656-476-7439 E-mail:cclink@asia.meap.com
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The high-level technology and ease-of-use

It has been approved for ISO 15745-5, Chinese National Standard GB/Z19760-2005, and Taiwanese standard CNS 15252X6068, in addition to SEMI E54.12, the international standard for the semiconductor and FPD industries. This network, a defacto standard in Japan, is recognized, both in name and in reality, as a global standard. CC-Link open technology, the wide variety of compatible products, and the ease of application integration makes it efficient and convenient for system designers and users across the globe.

### From a Japanese defacto standard to a Global Standard!!

SEMI Standarad SEMI E54.12	Certified to the international standard of semiconductor and FPD industry in 2001.
The National Standards of the People's Republic of China: GB	Certified to GB/Z 19760-2005 in December 2005. CC-Link appears on the Chinese BA (Building Automation) standard (GB/T 20299.4-2006) in December 2006. Certified to GB/Z 19760-2008. Enforced in June 2009.
International Organization for Standards: ISO15745-5	Certified in January 2007.
International Electrotechnical Commission: IEC61158, IEC61784	Certified in December 2007.
Korean National Standard: KS	Certified for KBS ISO 15745-5 in March 2008.
Taiwan Standard: CNS	Issued for CNS 15252X6068 in May 2009.

Member structure

Member Category	Registered Member	Regular Member	Executive Member	Board Member
Annual dues	—	100,000 yen	200,000 yen	1,000,000 yen
Initiation fee	—	—	—	1,000,000 yen
Acquisition of protocol specification	Offered free of charge in response to member's request			
CC-Link technology use right	—	○		
Conformance test fee (per device) — Remote device and IO stations of CC-Link, Master and slave stations of CC-Link/LT, Recommended products of CC-Link IE, Cables, Miscellaneous	—	200,000 yen	100,000 yen	Included in annual dues
Conformance test fee (per device) — Master, local and intelligent device stations of CC-Link, Normal and management stations of CC-Link IE	—	300,000 yen	200,000 yen	Included in annual dues
Use of CC-Link logo	—	○		
Technical support	—	○		
Posting of products on home page and product catalog (no charge)	—	○		
Exhibition at shows	—	○		
Distribution of CC-Link products catalog and CC-Link News Information about events Posting corporate name on the CLPA web site	○			

Admission to the Association and flow of commercialization

If you want to be a member of the Association, confirm and agree to the membership regulations, fill in the application form, and send it to the CC-Link Partner Association by fax. We are waiting for your application for admission and inquiries.

Partner Maker → CC-Link Partner Association
CC-Link Partner Association membership registration application → (FAX) → CC-Link Partner Association membership registration
· Disclosure of technological specifications
· Proposal of conformance test specifications
· Design and evaluation of development
· Manufacturing and evaluation of product scheduled for mass production
Conformance test
Mass production
· Sales · Customer support
· Internet information registration disclosure · Support   · Product PR

Index by applicable product types — CC-Link/LT

Index by applicable product types — CC-Link Safety

Index by applicable product types — CC-Link IE

Support / Specification

CC-Link Master Block for FX2N-16CCL-M Micro PLCs

A CC-Link system can be constructed with an FX PLC.

Features

● With an FX PLC used as the master station, a high-speed field network system can be constructed at low cost.
● Since our FA equipment or that of other CLPA members, compatible with the CC-Link can be connected, any equipment configuration optimum for control required by customers can be constructed using a high-speed field network.
● A network requiring less wiring and space can streamline wiring work and reduce installation and maintenance costs.

Station type	Master station (without local station and standby station functions)
Number of stations occupied	
CC-Link version	Conforming to Ver.1.10
External dimensions	85(W)×90(H)×87(D) mm
Mass	0.4 kg

Master/local module QJ61BT11N for MELSEC Q series

It is a master/local module for MELSEC Q series PLC.
The CC-Link connects the CPUs of various MELSEC series PLCs within a single network.

Features

● These modules are available as master or local stations for the CC-Link.
● CC-Link parameters can be set on the Parameter Setting screen of the programming software GX Developer for the MELSEC.
● Setting a standby master station can maintain a data link even if there is something wrong with the regular master station. Additionally, a redundant function enables the master station to return to the system even during data link control at the standby master station in anticipation of the breakdown of the standby master station.
● High-speed communication is available in remote I/O network mode only when slave stations are remote I/O stations. (Parameter setting is not required either.)

Station type	Master, local station
Number of stations occupied	1 to 4 stations (for local stations)
CC-Link version	Ver. 2
External dimensions	
Mass	0.12 kg

MITSUBISHI ELECTRIC CORPORATION

CC-Link | PLC

Master/local module A1SJ61BT11 for MELSEC AnS series

It is a master/local module for MELSEC AnS series PLC.
The CC-Link connects the CPUs of various MELSEC series PLCs within a single network.

Features

● These modules are available as master or local stations for the CC-Link.
● Setting a standby master station can maintain a data link even if there is something wrong with the regular master station.

Station type	Master, local station
Number of stations occupied	1 to 4 stations (for local stations)
CC-Link version	Ver. 1
External dimensions	
Mass	0.25 kg

MITSUBISHI ELECTRIC CORPORATION

CC-Link | PLC

Master/local module A1SJ61QBT11 for MELSEC QnAS series

It is a master/local module for MELSEC QnAS series PLC.
The CC-Link connects the CPUs of various MELSEC series PLCs within a single network.

Features

● These modules are available as master or local stations for the CC-Link.
● CC-Link parameters can be set on the Parameter Setting screen of the programming software GX Developer for the MELSEC.
● Setting a standby master station can maintain a data link even if there is something wrong with the regular master station.

Station type	Master, local station
Number of stations occupied	1 to 4 stations (for local stations)
CC-Link version	Ver. 1
External dimensions	
Mass	0.25 kg

KEYENCE CORPORATION

CC-Link | PLC

Master/local module for the series KV-CL20 and KV-5000/3000/1000/700.

Newly compatible with the series KV-5000/3000 products with a standard feature of the ultra-high speed & Ethernet (FL-net) (The Ethernet function is available only for KV-5000).
Enables to construct a network utilizing the features of the ultra-high speed and huge capacity of the CPU module.

Features

● Compatible with a variety of operational stations. Master station / master station (dual system) / waiting master station / local station
● The KV STUDIO (a ladder support software) has a connection setting tool as a standard feature.
● Equipped with the functions of automatic configuration, master module monitor and link device monitor.

Station type	Master station/Local station
Number of stations occupied	1 to 4 stations (for local stations)
CC-Link version	Ver. 2
External dimensions	35(W)×90(H)×80(D) mm
Mass	0.11 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link | PC・others

Q80BD-J61BT11N Interface Board for Personal Computer

Features

● DOS/V Personal Computer can be included in a CC-Link system.
● A program for a CC-Link Ver.1 board can also be used with a CC-Link Ver.2 board.
● Parameter settings for a CC-Link Ver.1 board can also be used with a CC-Link Ver.2 board.
● With a PCI bus, the annoying switch settings are no longer needed.
● Parameters can easily be set.
● Displays test information and monitor information related to the CC-Link system.

Station type	Master station, standby master station or local station
Number of stations occupied	1 to 4 stations
CC-Link version	
External dimensions	158(W)×121(H)×18(D)
Mass	0.11kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link | PC・others

IU2-1ECLM-100 CC-Link Communication Board

This is the Mitsubishi Intelligent Inspection Unit MELQIC IU2 Series CC-Link Communication Board.
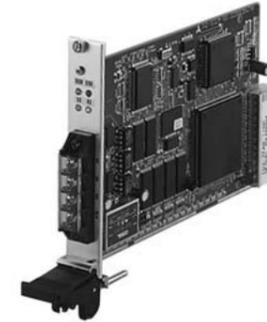
Features

● This is the Mitsubishi Intelligent Inspection Unit MELQIC IU2 Series expansion board.
● This board can be used by inserting it into a MELQIC IU2 series inspection unit slot.
● This extension board easily connects an inspection unit incorporating the MELQIC IU2 with line-control PLCs and a variety of other devices via the CC-Link.

Station type	Master station/local station
Number of stations occupied	1 station or 4 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

MITSUBISHI ELECTRIC CORPORATION | CC-Link | PC・others

Master/Local Station Board for CNC C64 for Machining Lines

As a master or local station for the MELSEC CC-Link, the CNC MELDAS C64 for machining lines can be connected directly to a network

Features

● Up to two communication boards (FCU6-HR865) can be connected to the MELDAS C64.

Station type	
Number of stations occupied	1 station or 4 stations
CC-Link version	
External dimensions	
Mass	

MITSUBISHI ELECTRIC ENGINEERING COMPANY LIMITED | CC-Link | PC・others

Type ECP-CL2BD For CompactPCI CC-Link Interface Board

The control and the monitor of a device connected to a CC-Link Ver.2 system with the computer for CompactPCI can come out.

Features

● ECP-CL2BD becomes the master station or the local station of the CC-Link Ver.2 system, and monitor and control of devices connected to CC-Link.
● With attached utility softwareware, can perform the setting of the CC-Link parameters, monitering of the other station, setting of PLC connection, line test and hardware test.
● The communication function library to develop an application to apply the ECP-CL2BD is attached.

Station type	Master, Standby Master or Local Station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver.2.0
External dimensions	210(W)×131(H)×20(D) mm
Mass	0.11 kg

CC-Link Interface Block for FX2N-32CCL Micro PLCs

This interface block is designed to connect an FX PLC to the CC-Link.

Features

● The FX2N-32CCL can be connected as a special extension block for an FX PLC.
● The number of remote input points and remote output points per station are both 32.
● The number of remote register points is four for an RWw write area and four for an RWr write area.
● Since the number of stations can be set between one and four, a system suited to the scale of control can be constructed.

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver. 1.00
External dimensions	43(W)×90(H)×87(D) mm
Mass	0.2 kg

AFCJ02 CC-Link Slave Interface

CC-Link Slave Interface for SYSMAC CJ1
This slave interface board connects OMRON PLC SYSMAC CJ1 to the host CC-Link.

Features

● You can easily connect OMRON SYSMAC CJ1 to the host PLC MELSEC, PC-Base Controller, and other CC-Link masters. Now, a high-speed data exchange is possible between Mitsubishi systems and OMRON systems dispersed in your production sites.
● A single CC-Link master can connect 16 SYSMAC CJ1 units at the maximum.
● CC-Link is a world-standard open field network developed in Japan. High-speed, stable I/O responses and expandability with a high degree of freedom – this overwhelming performance has been recognized, and CC-Link is certified by SEMI, ISO, and the Chinese national standard GB. CC-Link is accelerating to become an open technology.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10/Ver. 2.00
External dimensions	31(W)×90(H)×65(D)
Mass	Approx. 100 g

CC-Link interface special block FX3U-64CCL for FX3U series

An interface block for connecting Mitsubishi Electric Corporation's Micro Sequencer (or PLC) "FX3U series" to the CC-Link (V.2 compatible)

Features

● A slave station compatible with the CC-Link Ver.2 of the FX3U series
● Allows to connect an FX3U series product as a slave station to the CC-Link.

Station type	Intelligent device station
Number of stations occupied	1 to 4 stations (with limit to multiple setting)
CC-Link version	Ver.2 (Ver.1)
External dimensions	55(W)×90(H)×87(D) mm
Mass	0.3 kg

AFMP-02-C/AFMP-02-CA CC-Link Slave Interface for YASKAWA ELECTRIC MP2000 Series

CC-Link Slave Interface with AnyWire DB Master for MP2200/2300 (YASKAWA ELECTRIC)
Slave interface board for connecting YASKAWA ELECTRIC PLC (machine controller) MP2200/2300 to the host CC-Link.

Features

● A single CC-Link master station can be connected to maximum 16 MP2200/2300s, connecting between a host PLC, e.g. MELSEC Q, and an MP with the CC-Link. (AFMP-02-C) AFMP-02-CA has the master function of AnyWire DB.
● Data, e.g. parameter data, can be exchanged between the host MP PLC and the slave MP PLC.
● The AnyWire DB less-wiring port with high resistance to electric noise is included as an option (AFMP-02-CA). Using the AnyWire less-wiring port enables free-wiring and free-topology I/O connection with up to 2560 points.
● The Dual Bus system of the AnyWire DB series can independently transmit two different kinds of processing, the bit ON/OFF control with Bit Bus and the analog parameter data transmission with Word Bus, through one transmission line using a full quadruplex communication chip. The use of high-speed application is realized, and the transmission of control data and information data can be integrated.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10/Ver. 2.00
External dimensions	19.3(W)×130(H)×97.8(D)
Mass	100 g

CC-Link | **PLC**

AFSR-02 CC-Link Slave Interface for Yokogawa Electric FA-M3 Series

Slot-in-type CC-Link slave interface board enabling Yokogawa Electric PLC FA-M3 series devices to be connected to upper-order CC-Link

Features

● Yokogawa Electric FA-M3 series devices can be connected to host PLCs such as MELSECs, PC-Base Controllers, and other CC-Link masters. Data can be exchanged at high speeds between Mitsubishi and Yokogawa series devices.

● A single CC-Link master station can be connected to a maximum of 16 FA-M3 series devices.

● CC-Link, developed in Japan, is a world-standard open-field network. Its superior high-speed performance, stable I/O response, and highly flexible expandability are recognized and certified by SEMI, ISO, and GB, and its openness has spread.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10／Ver. 2.00
External dimensions	28.9(W)×100(H)×93.2(D)
Mass	Approx. 135 g

CC-Link | **PLC**

AFCS02 CC-Link Slave Interface

CC-Link Slave Interface for SYSMAC CS1
This slave interface board connects OMRON PLC SYSMAC CS1 to the host CC-Link.

Features

● You can easily connect OMRON SYSMAC CS1 to the host PLC MELSEC,PC-Base Controller, and other CC-Link masters. Now, a high-speed data exchange is possible between Mitsubishi systems and OMRON systems dispersed in your production sites.

● A single CC-Link master can connect 16 SYSMAC CS1 units at the maximum.

● CC-Link is a world-standard open field network developed in Japan. High-speed, stable I/O responses and expandability with a high degree of freedom - this overwhelming performance has been recognized, and CC-Link is certified by SEMI, ISO, and the Chinese national standard GB. CC-Link is accelerating to become an open technology.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10／Ver. 2.00
External dimensions	34.5(W)×130(H)×110.5(D)
Mass	172 g

CC-Link | **PLC**

Kawasaki Robot Z Series, F Series Industrial Robot

Our type D and E controller can be connected to the robot as a remote device station.

Features

● The controller of all the application (welding, paint, handling, assembly) can connect to CC-Link.

● The robot is also available as a remote input/output device for peripheral units other than robots.

● Sequence control is programmable using a robot language.

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	
External dimensions	
Mass	

AB023-C1 CC-Link Bit Distribution I/O

This is a CC-Link system digital I/O. This digital I/O has a reduced wiring function, allowing to mount various types of I/O terminal on needed place as needed. With a large variety of compatible I/O terminals, a maximum of 512 points for I/O are supported on up to 128 I/O terminals, which have minimal point dispersion.

Features

●Flexible assistant to connection of sensor and actuator signals scattering in CC-Link system
●Wiring is reduced in the wiring section of the drive system to improve reliability in connection and reduce total cost.
●Reduced wiring not requiring cable designation is adopted for I/O expansion. Up to 128 I/O units can be connected with general-purpose cables.
●The number of stations occupied in the CC-Link digital I/O system is reduced. Four stations in the conventional system can be reduced to only one station.

Station type	Remote device station
Number of stations occupied	1, 2, 3 or 4 station
CC-Link version	Ver. 1.10
External dimensions	44W×100H×66D
Mass	

Screw Terminal Block Type I/O Unit KV-RC series

An all-in type module equipped with three stages of input constant (0.2 ms/1.5 ms/10 ms) and input voltage switching (24 V/5 V or 24 V/12 V).

Features

●Input constant switch incorporated (0.2ms/1.5ms/10ms)*
●Input voltage switch incorporated (24V/5V, 24V/12V)*
●Self-up screw terminal block adopted
●16-point module with relay terminal block function that does not require cross wiring
*Input unit only

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.2.00 or ver.1.10
External dimensions	179(W)×51.2(H)×40(D) mm
Mass	Approx. 0.25 kg / Approx. 0.26 kg / Approx. 0.29 kg

SC-GU2-C Communication Module Compatible with CC-Link

Digital sensors can be directly connected to CC-Link. Application time is reduced, and wires and spaces are saved.

Features

●The settings of the digital sensor can be saved to a file. You can easily refresh the settings when replacing the sensor, which reduces man-hours.
●The settings visualized in files enable you to check them in the case of a trouble, thus contributing to a quick recovery.
●The light intensity of a digital fiber sensor is periodically monitored, and a trouble of the sensor is detected and treated at an early stage, enabling "predictive maintenance".
●You can control the settings of a remote digital sensor over CC-Link. The man-hours of on-site workers are reduced to the minimum.

Station type	Remote device station
Number of stations occupied	1 station/4 stations, switchable
CC-Link version	Ver.1.10
External dimensions	35(W)×41.4(H)×103.9(D) mm
Mass	Approx. 70 g

Three-wire Crimping Connector Type Remote I/O Terminal C□X-AT1N C□D-AT1N C□XD-AT1N

Features

- This terminal comes in a photocoupler input type, a photocoupler output type, and a photocoupler input/output combination type.
- A crimping connecter, which does not require sheath peeling, is used for connection to an external unit.
- The crimping connector is a one-touch wire connection type that does not require any special tool.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	32(W)×113.6(H)×90.3(D)mm (16 points, 8/8 points) 56.5(W)×113.6(H)×90.3(D)mm (32 points, 16/16 points)
Mass	0.145kg (16 points, 8/8 points) 0.21kg (32 points, 16/16 points)

e-CON Compliant Connector Type Remote I/O Terminal C□X-CT1E C□D-CT1E

Features

- This terminal comes in a photocoupler input type, a photocoupler output type and a photocoupler input/output combination.
- An e-CON compliant connector is used for connection to an external unit.
- A crimping connector is a one-touch wire connection type that does not require any special tool.
- Structure for installing DIN rails.
- Horizontal structure
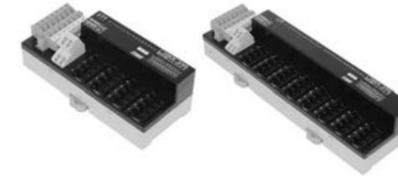
Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	65(W)×125(H)×42(D)mm (16 points) 65(W)×206(H)×42(D)mm (32 points)
Mass	0.21kg (16 points) 0.34kg (32 points)

Strip Terminal Block Type Remote I/O Terminal C□X-AT1V C□D-AT1V C□XD-AT1V

Features

- This terminal comes in a photocoupler input type, a photocoupler output type, and a photocoupler input/output combination type.
- A strip terminal block is used for connection to an external unit.
- The strip terminal block is a bare-wire one-touch wire connection type with a bare wire.
- Vertical structure

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	32(W)×113.6(H)×87.6(D)mm (16 points, 8/8 points) 56.5(W)×113.6(H)×87.6(D)mm (32 points, 16/16 points)
Mass	0.145kg (16 points, 8/8 points) 0.21kg (32 points, 16/16 points)

Strip Terminal Block Type Remote I/O Terminal C□X-CT1V C□D-CT1V C□XD-CT1V

Features

- This terminal comes in a photocoupler input type, a photocoupler output type and a photocoupler input/output combination.
- A strip terminal block is used for connection to an external unit.
- Since loosening of screws caused by vibration does not occur, further screw tightening is not required.
- Structure for installing DIN rails.
- Horizontal structure

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	65(W)×125(H)×53.3(D)mm (16 points) 65(W)×206(H)×53.3(D)mm (32 points, 16/16 points)
Mass	0.21kg (16 points) 0.34kg (32 points, 16/16 points)

BNI CCL-104-100-Z001

Digital Input Modul, with 8 M12 Ports and 16 Digital Inputs. Distributed /I/O box, Waterproof, Field mountable, IP67

Features
- 16 Digital Inputs
- IP 67 Water and Oil proof
- 8 Ports M12
- Field mountable
- Integrated Display for Adress setting
- Integrated Display for diagnosis

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.00
External dimensions	68(W)×224(H)×36.9(D) mm
Mass	0.58 g

Contact

<URL> http://www.balluff.com

BNI CCL-302-100-Z001

Digital Input Modul, with 8 M12 Ports and max. 16 Digital Inputs / Outputs, free configurable. Distributed /I/O box, Waterproof, Field mountable, IP67

Features
- max. 16 Digital Outputs / max. 16 Digital Inputs free configurable in total 16
- IP 67 Water and Oil proof
- 8 Ports M12
- Field mountable
- Integrated Display for Adress setting
- Integrated Display for diagnosis

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.00
External dimensions	68(W)×224(H)×36.9(D) mm
Mass	0.58 g

Contact

<URL> http://www.balluff.com

BNI CCL-202-100-Z001

Digital Input Modul, with 8 M12 Ports and 8 Digital Outputs. Distributed /I/O box, Waterproof, Field mountable, IP67

Features
- 8 Digital Outputs
- IP 67 Water and Oil proof
- 8 Ports M12
- Field mountable
- Integrated Display for Adress setting
- Integrated Display for diagnosis

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.00
External dimensions	68(W)×224(H)×36.9(D) mm
Mass	0.58 g

Contact

<URL> http://www.balluff.com

BNI CCL-305-100-Z001

Digital Input Modul, with 8 M12 Ports and 8 Digital Inputs / 8 Digital Outputs. Distributed /I/O box, Waterproof, Field mountable, IP67

Features
- 8 Digital Outputs / 8 Digital Inputs
- IP 67 Water and Oil proof
- 8 Ports M12
- Field mountable
- Integrated Display for Adress setting
- Integrated Display for diagnosis

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.00
External dimensions	68(W)×224(H)×36.9(D) mm
Mass	0.58 g

Contact

<URL> http://www.balluff.com

AJ65VBTCE□-□ Remote I/O Module Sensor Connector Type (e-CON)

Features

● Industry standard e-CON
● Simple wiring with sensor connector
● DIN rail/screw mounting methods
● Capable of 3-wire sensor input
● Mountable in 6 directions
● The 16 point unit is mountable in the vertical or horizontal direction on DIN rails.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	100(W)×50(H)×45.5(D) mm
Mass	0.10 kg

Terminal Block Type Digital I/O Module AJ65SBTB□-□

Features

● This digital I/O module can be mounted on the control panel with either screws or DIN rails.
● All modules adopt photocoupler insulation or relay insulation.
● A self-up screw (which, when removing a round crimping terminal, does not require the terminal screw to be unfastened) ensures labor saving in wiring work.
● The finger protector on the top of the terminal bs lock prevents users from touching the charged portion and permits direct connection of any terminal block type digital I/O module to a machine.
● Mountable in 6 directions

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	179(W)×50(H)×40(D) mm
Mass	0.25 kg

AJ65VBTS□-□ Remote I/O Unit Spring Clamp Terminal Block Type

Features

● Reduced man-hours in wiring work due to no need for screw tightening and retightening
● DIN rail/screw mounting methods
● Mountable in 6 directions

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	222(W)×50(H)×51.5(D) mm
Mass	0.41 kg

One-touch Connector Type Digital I/O Module AJ65SBTC□-□ AJ65VBTCU□-□

Features

● This digital I/O module can be mounted on the control panel with either screws or DIN rails.
● All modules adopt photocoupler insulation.
● A separate wire crimping connection system (which does not require soldering, wire sheath peeling, or screw tightening) can make a contribution to a significant reduction in the wiring work man-hours.
● Mountable in 6 directions

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	118(W)×50(H)×40(D) mm
Mass	0.16 kg

Waterproof Connector Type Digital I/O Module AJ65FBTA□-□ AJ65SBTW4-□

Features

● This waterproof type digital I/O module adopts a protective structure conforming to IP67 and ensures safety even in an environment using water.
● All modules adopt photocoupler insulation.
● Mountable in 6 directions

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	60(W)×200(H)×48(D) mm
Mass	0.40 kg

QS90SR2SN-CC/QS90SR2SP-CC Safety Relay Module

You can use these modules without any programming. Safety certification at the highest level is achieved.

Features

● You only need wiring to construct a safety circuit. No programming or setting is necessary.
● Connect a safety relay module for expansion, so that you can use 4 safety inputs and safety outputs at the maximum. These modules are optimal for a small-scale safety control.
● The modules are authorized by certifications at the highest safety level (EN954-1/ISO13849-1 category 4/performance level E).
● If a trouble should occur in the module, the fail-safe function stops operation safely.
● Because a spring clamp terminal block is adopted, you do not need to fasten any screw. Your wiring workload is considerably reduced.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.2
External dimensions	45(W)×112(H)×115.9(D) mm
Mass	0.37 kg

FCN Connector Type Digital I/O Module AJ65SBTCF1-□ AJ65VBTCF1-□

Features

● This digital I/O module can be mounted on the control panel with either screws or DIN rails.
● All modules adopt photocoupler insulation.
● The I/O unit uses a 40-pin connector, which helps to significantly reduce the wiring work man-hours.
● Mountable in 6 directions

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	118(W)×500(H)×40(D) mm
Mass	0.15 kg

2.4 GHz radio frequency band I/O unit (compatible with CC-Link) SWL30-CL, SWL30-XY08

Features

● 1:N (two-way communication) is applicable. One master station can handle 64 local stations at a maximum with 512 I/O points for each station.
● As the unit is certified as satisfying the required engineering standards, no authorization obtaining procedure is necessary to use it.
● It can communicate with locations as far as approx. 60 m away indoors and approx. 300 mm away outdoors (with an unobstructed view).
● The communication distance can be extended by the maximum 600 mm with the addition of repeater stations (with an outdoor unobstructed view).
(The extendable distance differs depending on the environmental conditions such as existence of obstacles.)
● DIN rails can be installed (with the use of necessary accessories).
● How the radio communication is carried out is outputted through the terminal block. (Only with the SWL30-XY08 model) (Either the live signal condition or error output is selected if the necessary parameters are set.)

Station type	Remote device station
Number of stations occupied	1 station, 2 stations, 3 stations, or 4 stations
CC-Link version	Ver.2.00 or ver.1.10
External dimensions	
Mass	

Brad Control IP67 Classic I/O Module

Features

● IP67 rated for Harsh Environments
● Micro-Change CC-Link connections
● Ultra-Lock M12 Input Connections
● 16 Input configuration (2×8 port)
● Compatible with NPN sensors
● Diagnostic LED indicators

Model number	TCDCC-8D0N-88U
IO format	16 NPN inputs
Rated voltage	24 Vdc
Protection	Short circuit protection
On state current	5.1 mA
Sensor current	140 mA Max.
Address setting	Rotary switches (2)
Address range	1-64
Baud rate setting	156K, 625K, 2.5M, 5M, 10M
Operating temperature	0 - 70 ℃
Environmental	IP67

Modular Type I/O System for CC-Link

Digital and analog I/O units can be used together.
This system is flexible in configuration thanks to various combinations of CC-Link bus couplers (750-310) and modules.

Features

● The operation mode can be switched between fixed and automatic addresses.
  Set the baud rate by changing the position of the rotary switch.
● The number of occupied stations (up to four stations) can be selected.
● The number of occupied stations is fixed on our competitors' units, whereas Wago's I/O system can select the number of stations according to the number of modules (automatic address mode).
● Analog and digital I/O modules can be used together.
  Combinations and positions of I/O modules can be selected as you desire.
● Since modules can be configured according to the number of points required, cost-effective, space-saving design can be realized.

Station type	Remote device station
Number of stations occupied	1, 2, 3, or 4 stations can be selected.
CC-Link version	
External dimensions	51×65×100（mm）
Mass	

Model CB2A/2B Switch Block with a Built-in CC-Link Communication Unit

This switch block can be easily connected to various units compatible with the CC-Link.

Features

● The panel mounting man-hours can be reduced thanks to preassembly.
● Incorrect operation can be prevented by integrating operation systems (DIN48 size).
● A two-piece terminal block ensures easy maintenance.
● Easy to replace the control unit from the operation block and flexible in combination.
● Safe to maintain as the back cover prevents users from touching the charged portion during maintenance. (Conforming to IEC-60204-1)
● Protective structure: IP65 (IEC60529, on the front face of the panel)

Station type	Remote I/O station
Number of stations occupied	1 station (among 64 stations)
CC-Link version	Ver.1.0
External dimensions	
Mass	

Model (type)	CB2A-31M＊＊	CB2A-41M＊＊	CB2B-31M＊＊	CB2B-51M＊＊	CB2B-13M＊＊	CB2B-15M＊＊
Type and number of switches	L6/horizontal 4	L6/horizontal 6	H6/horizontal 4	H6/horizontal 8	H6/vertical 4	H6/vertical 8
Station type	Remote I/O station					
Number of stations occupied	1 station (among 64 stations)					
CC-Link version	Ver.1.0					
External dimensions	144×48×96	192×48×96	144×48×96	240×48×96	144×48×96	240×48×96
Mass						

＊Prices differ according to the types of switches. Contact us for more details.

R1C Multi-analog Input Unit

A handheld remote I/O unit realizing a price of 10,000 yen per thermocouple input.
Detected data is transmitted in real values and does not need to be converted.

Features

- Input signals: Thermocouple and DC input, 16 points
  Input resistance: 300 kΩ
  Thermocouple types: PR, K, E, J, T, B, R, S, C, N, U, L
  Sampling cycle: Approx. 150 ms/16 points
- Analog input
  A/D conversion output data: 16-bit signed binary data (negative values are in twos-complement form).
  Actual values in each input range correspond to the A/D conversion data shown in the table below.

Station type	
Number of stations occupied	Ver.1.10 4 stations Ver.2.00 1 station
CC-Link version	Ver.1.10 ／ Ver.2.00
External dimensions	W175×H115×D40mm
Mass	Approx. 400g

61C Multi-analog Communication Unit

This communication unit helps you fetch standard signals insulated for a recorder or indicator.

Features

- M-System's ultra compact converter Pico-M series is a dual output type with two mutually isolated outputs.
  The multi-analog communication unit is an interface that uses a dedicated multiple base and collectively connects 16 Pico-M series units to the CC-Link.
- One of the outputs is used for communication, and the other is available for a recorder or indicator.

Station type	Remote device station
Number of stations occupied	1 station (for 4 units), 2 stations (for 8 units), 4 stations (for 16 units)
CC-Link version	
External dimensions	
Mass	

M2BC Multi-analog Transmitter

This transmitter not only transmits analog sensor signals of various types but also calculates electric to pneumatic data and signals and transmits them directly to the CC-Link.

Features

- M-System's compact type converter
  The Mini-M series is available in a wide variety of types.
- The multi-analog transmitter is an interface that can accommodate plural Mini-M series units on the multiple base and connect them collectively to the CC-Link.
- The multi-analog transmitter comes in input and output types each of which is for 4 units, 8 units, and 16 units.

Station type	Remote device station
Number of stations occupied	1 station (for 4 units), 2 stations (for 8 units), 4 stations (for 16 units)
CC-Link version	
External dimensions	
Mass	

60C Multi-analog I/O Unit

Existing signal converters can be effectively used with this I/O unit.

Features

- The multi-analog I/O unit is an interface used for connecting the rack type converter 10・RACK or 18・RACK converter series, which are used in a wide range of fields, to the CC-Link.
  If you are a user of a 10・RACK or 18・RACK converter series product, you can connect the existing system to the CC-Link by using a connector between the converter and the multi-analog I/O unit.
  The multi-analog I/O unit comes in input and output types each of which is for 4 units, 8 units, and 16 units.
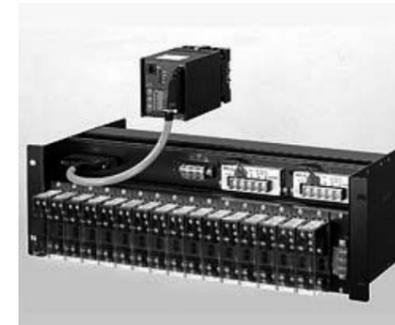
Station type	Remote device station
Number of stations occupied	1 node (for 4 units), 2 nodes (for 8 units), 4 nodes (for 16 units)
CC-Link version	
External dimensions	
Mass	

R3 Series Multi-channel Mixed Signal Remote I/O

Variety of card types and low-unit-price remote I/O

Features

● Consists of power card, communication card, I/O card and base.
  Basically easy to use only by setting the DIP switch.
● Variety of I/O cards and communication cards provided for variable fields
● Corresponds to duplication of network and power.

Station type	Remote device station
Number of stations occupied	4 stations, 8 stations (Ver. 1.11 only)
CC-Link version	Ver. 1.11, Ver. 2.00
External dimensions	W56 ~ 448 × H130 × D120 mm
Mass	

R7 Series Few-channel Compact All-in-one Remote I/O

Few-points compact all-in-one remote I/O

Features

● Most compact all-in-one design in the remote I/O series
● Extension module can be attached.
● Analogue input/output and contact I/O can be mixed.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	W115 (when extension module attached: 210) × H50 × D54 mm
Mass	

Remote I/O R5 Series Signal Converter with a Communication Function and Insulation

This compact converter requires less space and is designed exclusively for remote I/O.
All ports are insulated (except channels between contact input and output modules).

Features

● Since thermocouple, temperature measuring resistor, digital I/O, and
  other I/O modules can be combined in any way, the required types and
  number of I/O points can be fetched.
● This signal converter is compatible with high reliability or redundant
  systems, such as duplex networks and duplex power supplies.

Station type	Remote device station
Number of stations occupied	Four nodes Station type
CC-Link version	Ver.1.11
External dimensions	For four slots, 157 (W)×101.6 (H)×106.5 (D)mm mm(W231: For eight slots, W379: for 16 slots)
Mass	

Screw Terminal Block Type Analog Module with Digital Display Function KV-RC4AD/KV-RC4DA

Instantly confirmable 5-digit digital display / Highest resolution in the class 1/12000

Features

● Equipped with 5-digit digital display
  Digital value, scaling value and analog value can be confirmed instantly.
● Highest resolution in the class 1/12000
  High-accuracy control of 1/24000 can be realized at ±10V.
● CC-Link Ver. 2 compatible
  Number of occupied stations can be reduced. It can be also used as Ver. 1.
● Module setting function
  The setting can be made on the module without using the PLC setting
  program or dedicated tool.
● Trigger input terminal (KV-RC4AD)
  The module is equipped with a trigger input terminal that can securely
  obtains data at a favorable timing.
● Equipped with general-purpose I/O terminal (KV-RC4AD)
  The module is equipped with a general-purpose I/O terminal for 1 point
  each (shared with trigger input).

Station type	Remote device station
Number of stations occupied	1 station, 2 times with Ver.2.00 2 stations with Ver.1.10
CC-Link version	Ver.2.00/Ver.1.10
External dimensions	118(W)×51.2(H)×40(D) mm
Mass	Approx. 0.2 kg

C1-L3S Load Cell Three-point Unit

This is a three-input type load cell remote I/O unit with channel-to-channel insulation

Features

- The use of a DC drift correction circuit minimizes the effect of temperature.
- Four load cells connected in parallel by a power-saving voltage application circuit are packaged for three channels.
- The input channels are mutually isolated.
- Since this unit can be installed close to a load cell, the signal wiring length can be reduced, and actual measurement correction and maintenance are easy to perform.
- Tool software for personal computers (provided free of charge) capable of listing or setting plural data makes function setting and on-site adjustment easy.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	W200×H60×D126mm
Mass	700g

C2 Series Signal Converter for CC-Link

This is a single-output type signal converter.

Features

- Measured value output; remote output can be selected.
- Analog signals can be connected directly to the CC-Link.
- Analog input and output can be executed at the same time.
- A space-saving, plug-in type converter has been developed.
- Withstanding voltage among input - output - CC-Link - power supply - ground: 2000 V AC for one minute

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	W50×H80×D132
Mass	Approx. 400g

C1 Series Analog I/O Unit

This is a sensor direct input type remote I/O unit for process instrumentation with channel-to-channel insulation.

Features

- This I/O unit combines all functions of an AD unit, a signal converter, and a characteristic converter.
- The channel-to-channel withstand voltage is 2000 V AC for one minute.
- The temperature range can be freely set (set a temperature range for each input point).
- This I/O unit incorporates calculation functions for instrumentation, such as four-point warning and analog calculation, and warning values can be set at the output register of the CC-Link master station.
- The pulse signals of a volumetric flowmeter or another unit can be integrated and converted into instantaneous values.
- Functions can be set using tool software for personal computers (provided free of charge).

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	W200×H60×D126mm
Mass	Approx. 750g

C3 Series Analog I/O Unit

This remote I/O unit comes in two types: eight-point and 16-point with input and output mutually uninsulated.

Features

- No external resistor is required at a current input of 4 to 20 mA.
- The standard scanning cycle is 100 ms.
- The input/output, the communication unit and the power supply are insulated from one another.
- A separate type or fixed type connector is available.
- The I/O unit incorporates moving average filter and scaling functions.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	W150×H90×D42
Mass	Approx. 200g

VIC-CL20 General-purpose Eight-channel Input Converter

Features

●The input signal connector is a easily detachable BNC type, and the signal and power supply units use a two-piece type terminal block, ensuring easy replacement of units installed on site.
●Remote operation makes it possible to correct the zero span of each channel.
●The stand for mounting the converter can be installed on the panel or the back.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	
External dimensions	200(H)×49(W)×150(D)
Mass	1.25kg

AJ65SBT2B-64DA Analog Output Module

The high-accuracy, high-resolution CC-Link 4CH analog output module saves man-hours and space.

Features

●4 analog output channels
●High accuracy within the system accuracy of ±0.3% (0 to 55℃)
●Fast conversion at the maximum conversion rate of 200 µs/CH
●High resolution with the voltage output of 0.333 mV and the electric current output of 0.95 µA
●A built-in automatic function for following transmission speed saves you from setting transmission speed.
●A two-piece structure is adopted for the external terminal block. The terminating resistance is built in the module to save wiring and man-hours.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver. 1
External dimensions	122(W)×50(H)×54(D) mm
Mass	0.25 kg

GCC Series Analog Interface

Features

●The "GCC4" is a remote device station occupying two stations.
●Eight-channel analog data can be transmitted.
●Up to four analog input cards can be attached.
●Input cards are available, which are capable of processing various types of analog signals.
●Two-loop, 4- to 20-mA input cards are available.
●Two-loop, two-wire transmitter input cards are available.
●This interface is compatible with single loops, thermocouples, temperature measuring resistors, DC voltage, current input, AC voltage, AC current, and slide rheostats.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	
External dimensions	125(W)×90(H)×130(D) mm
Mass	Approx. 1.4kg

AJ65SBT2B-64RD3 Temperature Measuring Resistor Input Module

The measuring resistor input module saves man-hours and space.

Features

●4-channel temperature measuring resistor input module of the space-saving SBT size
●Two types of platinum temperature measuring resistors (Pt100 and JPt100) complying with JIS standards and a nickel temperature measuring resistor (Ni100) complying with DIN standards are available.
●An open circuit of each channel is detected.
●You can make settings to execute sampling processing or averaging processing (frequency average/time average/moving average) of each channel.
●A built-in automatic function for following transmission speed saves you from setting transmission speed.
●A two-piece structure is adopted for the external terminal block. The terminating resistance is built in the module to save wiring and man-hours.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver. 1
External dimensions	122(W)×50(H)×54(D) mm
Mass	0.25 kg

Analog I/O

AJ65VBTCU-68ADVN/AJ65VBTCU-68ADIN Connector Type Analog Input Module

Features

● Compatible with Ver. 2
On the conventional model, three stations occupied eight channels, whereas a single station occupies eight channels on this module. It can also be used as conventional Ver. 1 depending on the setting of the rotary switch.

● Highly accurate
This input module performs A/D conversion with an accuracy of ±0.3% to the maximum digital output value when the working ambient temperature is between 0℃ and 55℃, or with an accuracy of ±0.2% to the maximum digital output value when the working ambient temperature is 25±5℃.

● The input range can be switched for each channel.
The analog input range can be switched for each channel, and input/output conversion characteristics can be changed.

● A high resolution of 1/±4000 is realized.
By switching the input range, the resolution of digital values can be set to either 1/4000 or 1/±4000 (AJ65VBTCU-68ADVN only), providing high-resolution digital values.

● Sampling or averaging can be designated.
Sampling or averaging can be designated for each channel as the conversion method.

Station type	Remote device station
Number of stations occupied	Ver. 1 mode, 3 stations Ver. 2 mode, 1 station
CC-Link version	Ver.1, Ver.2
External dimensions	41(W)×115(H)×67(D)
Mass	0.17kg

AJ65SBT-64AD Analog Input Module

Features

● Analog input: Four channels (voltage input/current input)
● The input range can be switched for each channel.
● The analog values of -10V to +10V or 0 mA to +20 mA are converted into the digital values of -4000 to +4000 or 0 to +4000.
● Averaging can be executed with the conversion speed kept at the same level.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	118(W)×50(H)×40(D) mm
Mass	0.20kg

AJ65VBTCU-68DAVN Connector Type Analog Output Module

Features

● Compatible with Ver. 2
On the conventional model, three stations occupied eight channels, whereas a single station occupies eight channels on this module. It can also be used as conventional Ver. 1 depending on the setting of the rotary switch.

● Highly accurate
This output module performs D/A conversion with an accuracy of ±0.3% to the maximum analog output value when the working ambient temperature is between 0℃ and 55℃, or with an accuracy of ±0.2% to the maximum analog output value when the working ambient temperature is 25±5℃.

● The output range can be switched for each channel.
The analog output range can be switched for each channel, and input/output conversion characteristics can be changed.

● A high resolution of 1/±4000 is realized.
By switching the output range, resolution can be set to either 1/4000 or 1/±4000 (when the -10 to +10 V range and user range setting 1 are selected), providing high-resolution analog values.

● Analog output retention or clearing can be set when the PLC CPU is deactivated.
Whether to retain or clear the analog value output from each channel of the module just before the sequence CPU becomes deactivated or D/A conversion is discontinued, in case of an error, can be designated.

Station type	Remote device station
Number of stations occupied	Ver. 1 mode, 3 stations Ver. 2 mode, 1 station
CC-Link version	Ver.1, Ver.2
External dimensions	41(W)×115(H)×63(D)
Mass	0.16kg

AJ65BT-64AD Analog Input Module

Features

● Analog input: Four channels (voltage input/current input)
● The analog values of -10V to +10V or -20 mA to +20 mA are converted into the digital values of 0 to +4000 or -2000 to +2000.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	
External dimensions	151.9(W)×65(H)×63(D)mm
Mass	0.35kg

AJ65BT-68TD Thermocouple Temperature Input Module

Features

- A single module can perform temperature-digital conversion on eight channels.
- Seven types of thermocouples (K, E, J, T, B, R, S) conforming to JIS standards are available.
- Any desired thermocouple can be selected for each channel.
- Conversion enabled or disabled can be designated for each channel.
- Disabling any unused channel for conversion can prevent unnecessary wire disconnection detection flags from occurring and also reduce sampling time.
- Thermocouple or compensation conductor disconnection can be detected on each channel.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	151.9(W)×65(H)×63(D)mm
Mass	0.40kg

AJ65SBT-62DA Analog Output Module

Features

- Analog output: Two channels
- The digital values of -4000 to +4000 or 0 to +4000 are converted into the analog values of -10 V to +10 V or 0 mA to +20 mA.
- The output range can be switched for each channel.

Station type	
Number of stations occupied	1 station
CC-Link version	
External dimensions	118(W)×50(H)×40(D)mm
Mass	0.2kg

AJ65BT-64RD3/AJ65BT-64RD4 Platinum Temperature Measuring Resistor Pt100 Temperature Input Module

Features

- A single module can perform temperature-digital conversion on four channels.
- A platinum temperature measuring resistor Pt100 conforming to new JIS and DIN standards (JIS C1604-1997 and IEC 751 1983) or JPt100 complying with previous JIS standards (JIS C1604-1981) is available.
- Conversion enabled or disabled can be designated for each channel.
- Disabling any unused channel for conversion can prevent unnecessary wire disconnection detection flags from occurring and also reduce sampling time.
- When moving averaging is enabled, the last four converted temperature values obtained from the platinum temperature measuring resistor input on each channel are averaged and saved in a remote register.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	151.9(W)×65(H)×63(D)mm
Mass	0.38kg

AJ65BT-64DAV Analog Output Module

Features

- Analog output: Four channels (voltage output)
- The digital values of -2000 to +2000 are converted into the analog values of -10 V to +10 V.

Station type	
Number of stations occupied	2 stations
CC-Link version	
External dimensions	151.9(W)×65(H)×63(D)mm
Mass	0.2kg

AJ65BT-64DAI Analog Output Module

Features

● Analog output: Four channels (current output)
● The digital values of 0 to +4000 are converted into the analog values of 4 mA to +20 mA.

Station type	
Number of stations occupied	2 stations
CC-Link version	
External dimensions	151.9(W)×65(H)×63(D)mm
Mass	0.2kg

Field Network Converters

NC210 RS485/CC-Link Converter
With field network converters, a variety of system configurations can be realized.

Features

● By connecting Yokogawa Electric Corporation's controller (*1) to a field network converter, a wiring-saving, space-saving, distributed, simplified instrumentation system can be constructed.
● The profiles of connected units are standardized, and Yokogawa Electric Corporation's controller (*1) can, therefore, be connected to the CC-Link without using any program.
● The plug-in structure ensures easy maintenance and permits the controller to be mounted on a DIN rail or on the wall.
*1: Digital indicating controller Green series, signal converter JUXTA series, power monitor POWERCERT series

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	86.5(H)×70(W)×143(D)mm
Mass	370g

CCL-A4D4 4CH Analog I/O Unit

This is an inexpensive, high-performance interface unit for analog units.
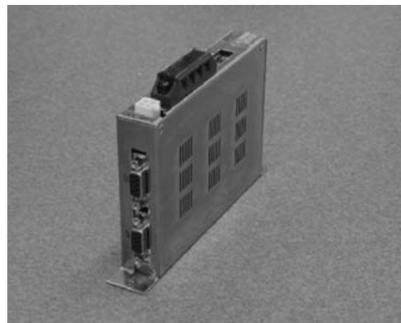
Features

● This unit is the optimum selection for automatic controllers, including analog units.
● The internal processing time is only 2 ms.
● The outside power supply input part and the inner circuit are isoration.
● This unit receives an NRTL certificate (UL61010-01A).

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver.1.1
External dimensions	24(W)×130(155)(H)×95(D) mm
Mass	0.4 kg

Field Network Converters

NC220 Ai/CC-Link Converter
With field network converters, a variety of system configurations can be realized.

Features

● By connecting Yokogawa Electric Corporation's controller (*1) to a field network converter, a wiring-saving, space-saving, distributed, simplified instrumentation system can be constructed.
● The profiles of connected units are standardized, and Yokogawa Electric Corporation's controller (*1) can, therefore, be connected to the CC-Link without using any program.
● The plug-in structure ensures easy maintenance and permits the controller to be mounted on a DIN rail or on the wall.
*1: Digital indicating controller Green series, signal converter JUXTA series, power monitor POWERCERT series

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	86.5(H)×70(W)×145.8(D)mm
Mass	380g

Field Network Converters

NC230 Ao/CC-Link Converter
With field network converters, a variety of system configurations can be realized.

Features

- By connecting Yokogawa Electric Corporation's controller (*1) to a field network converter, a wiring-saving, space-saving, distributed, simplified instrumentation system can be constructed.
- The profiles of connected units are standardized, and Yokogawa Electric Corporation's controller (*1) can, therefore, be connected to the CC-Link without using any program.
- The plug-in structure ensures easy maintenance and permits the controller to be mounted on a DIN rail or on the wall.

*1: Digital indicating controller Green series, signal converter JUXTA series, power monitor POWERCERT series

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	86.5(H)×70(W)×145.8(D)mm
Mass	380g

Message Land III CC-Link ML6408C (10C/12C)/ML9608C (10C/12C)

This 16-dot LED display can be connected to Mitsubishi's PLC network or to the CC-Link.

Features

- This is a 16-dot character display connectable directly to the CC-Link.
- Data can be displayed by writing attributes (color, displaying method, etc.) to a remote device.
- Character information can be received and displayed via the CC-Link as a communication medium.
- Up to 42 production instruction display panels can be connected to a CC-Link master station.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	800×140×100(character height: 96) mm, 600×150×100(character height: 64) mm
Mass	

CU-02 CC-Link Communication I/F Unit for Operation Interface Panel MONITOUCH V8/V7 Series

This I/F unit is connectable to the CC-Link without using any program!!
It also realizes high-speed distributed systems and contributes to an improvement in productivity.

Features

- The CC-Link is available by attaching this CU-02 (CC-Link communication I/F unit) to a MONITOUCH V8/V7 series.
- Any V8/V7 series can function as an intelligent device station.
- Any V8/V7 series can communicate with a PLC without using any program and access to data registers(D) and other devices.

Station type	Intelligent device station
Number of stations occupied	1 station or 4 stations
CC-Link version	Ver.1.1
External dimensions	98.0 (H)×150.5 (W)×32.0 (D)mm
Mass	Approx. 0.23 kg

Analog I/O

HMI

FLBoard-C Series VMCL-09S0801

A large-size, eye-friendly LED display compatible with the CC-Link.

Features

- ●Any characters can be displayed by writing character codes on the CC-Link.
- ●This is an eye-friendly display using light emitting diodes (LEDs) of high luminance and a wide vision angle.
- ●Any characters can be displayed in three colors (red, green, orange).
- ●The display automatically determines whether to display characters in fixed or flow mode, depending on the number of characters to be displayed.
- ●A variety of display functions, including character color and background color change, highlighting, and flickering, are available.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	880(W)×200(H)×90(D) mm
Mass	Approx. 12 kg

FLBoard-C Series VMCL-09S1201

A large-size, eye-friendly LED display compatible with the CC-Link.

Features

- ●Any characters can be displayed by writing character codes on the CC-Link.
- ●This is an eye-friendly display using light emitting diodes (LEDs) of high luminance and a wide vision angle.
- ●Any characters can be displayed in three colors (red, green, orange).
- ●The display automatically determines whether to display characters in fixed or flow mode, depending on the number of characters to be displayed.
- ●A variety of display functions, including character color and background color change, highlighting, and flickering, are available.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	1280(W)×200(H)×90(D) mm
Mass	Approx. 18 kg

CC-Link module GP077-CL11 for series GP2000

The intelligent device station CC-Link Ver 1.10 connects directly to the series GP2000 programmable displays.

Features

- ●The cyclic transmission and transient transmission of the CC-Link functions are available for the series GP2000 programmable displays.
- ● Use of the cyclic transmission function enables to monitor all the remote input and output and remote register that are allocated to the master station.
- ● Use of the transient transmission function provides a device access to the PLCs at the master station and two or more local stations.
- ● Enables a handy communications without a program while requiring no memory design.
- ● The models compatible with the series GP3000 products are also available (enabling switching between the CC-Link Ver. 1.10 and 2.0).

Station type	Intelligent device station
Number of stations occupied	1 or 4 stations
CC-Link version	Ver.1.10
External dimensions	110.7(W)×119.3(H)×31.2(D) mm
Mass	Approx. 300 g

CC-Link module CA7-CCLALL/EX01 for series GP3000 products

Compatible with intelligent device station CC-Link Ver2.0.

Features

- ●The cyclic transmission and transient transmission of the CC-Link functions are available for the series GP3000 programmable displays.
- ●Use of the cyclic transmission function enables to monitor all the remote input and output and remote register that are allocated to the master station.
- ●Use of the transient transmission function provides a device access to the PLCs at the master station and two or more local stations.
- ●Enables a handy communications without a program while requiring no memory design.
- ●The models compatible with the series GP2000 products are also available (CC-Link Ver. 1.10).

Station type	Intelligent device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver.1.10/2.0
External dimensions	88.4(W)×91.0(H)×35.1(D) mm
Mass	Approx. 300 g or less

GT15-J61BT13 Communication Modules for HMI (GOT1000)

Corresponds to intelligent device station module CC-Link Ver. 2

Features

● The GOT can be incorporated in CC-Link Ver. 2 field network system
● Since the CC-Link Ver. 2 module is upwardly compatible with CC-Link Ver. 1, it is easy to shift from Ver. 1 to Ver. 2
● Switch setting is not required as it is handled by the connection equipment for the utility and graph generation software
● Corresponds to GOT multiple channels
● Corresponds to QCPU (Q mode) multi-CPU system and Q-duplexing system
● Improved network construction by combining GOT utility and graph generation software

Station type	Intelligent device station
Number of stations occupied	Selectable from 1 or 4 stations
CC-Link version	Ver.1, Ver.2
External dimensions	
Mass	0.18kg

Hi-View Industrial Marquees, Model HVM 120, 140, 145, 220, 240, 245

Hi-View Marquees consist of a line of LED-Displays of various sizes for plant-wide visual communication of critical information, such as production data, machine/process status, alarms, etc. A range of 1, 2, and 4 line Marquees are available . Character sizes of 2, 4, and 8 inch height can be displayed. Hi-View Marquees gather the data from PLCs over CC-Link. No changes to the PLC logic program are required.

Features

● Easiest to Apply; no need to change the PLC program
● 2", 4", and 8" Characters, Red or Tricolor LEDs
● Matched LEDs for uniform brightness
● HV Developer software makes message programming extremely easy
● F Available in NEMA 12, NEMA 4 and NEMA 4X versions
● 4-year warranty

Item	Specification: Character height: 2 inches to 8 inches Visibility: Up to 200 feet Available colors: Red or Tri-color Display width: Up to 80 characters wide Number of lines: 1, 2, and 4 lines
Station type	Remote device station
Version available	Ver.1.1
Number of occupied stations	1 to 4 selectable

PowerMarquee (CC-Link compatible)

PowerMarquee family of products consists of LED-Displays of various sizes for plant-wide visual communication of critical information, such as production data, machine/process status, alarms, etc. PowerMarquees gather the data from PLCs over CC-Link. PowerMarquees can be added to the plant floor without any changes to PLC logic program (as long as the data is available in PLC)

Features

● Easiest to Apply; no need to change the PLC program
● 2" -8" Characters, Red or Tricolor LEDs
● Matched LEDs for uniform brightness
● FREE Windows-based programming software
● 4-year warranty
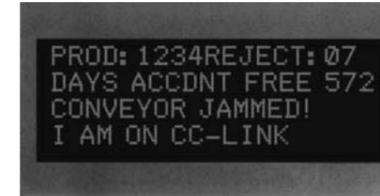
Item	Specification: Character height: 2 inches to 8 inches Visibility: Up to 200 feet Available colors: Red or Tri-color Display width: Up to 80 characters wide
Station type	Remote device station
Version available	Ver.1.1
Number of occupied stations	1 to 4 selectable

Multiple-function weighing indicator AD-4402

A multiple-function weighing indicator. In spite of the low profile body, it has a large display screen and well-established measuring functions. It offers input and output such as for the CC-Link to be compatible with various kinds of devices used in a plant.

Features

● A rate of as high as 100 samples per second enables to sensitively detects changes in weight.
● The memory function stores 100 kinds of data registrations for each material and blending code.
● Equipped with a blending function. This one unit alone enables blending of two or more materials.
● Equipped with a weighing sequence for material feed and discharge. Having functions for monitoring feed and discharge times and for auxiliary feeding.
● Equipped with a sequential function to handle charging and mixing.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	192(W)×96(H)×177(D) mm
Mass	Approx. 1.8 kg

A Weighing Indicator Designed for CC-Link AD-4408C

Features

● Direct connection to CC-Link with the CC-Link interface (provided as standard)
● Simple design to facilitate connection to a PLC
● High-speed (100 times/sec.), highly-accurate performance
● Compact, lightweight body makes it ideal for mounting into a control panel
● Dust and water-proof display (when mounted into a panel)
● Up to 64 units can be connected with one master unit (when configured with the AD-4408C)

Station type	Remote device station
Number of stations occupied	1, 2, 4 stations
CC-Link version	Ver.1.10
External dimensions	W144×H72×D135 mm
Mass	Approx. 0.8 kg

EDI-800/910 Indicator/Controller for Load Cells

This is a general-purpose indicator/controller with a wide range of applications, including hopper scales (blending scales).

Features

● The indicator/controller combines high speed, high accuracy, and high resolution backed by an A/D conversion rate of 100 times per second and a resolution of 300,000 counts.
● Up to 100 brands can be set and saved, each of which can be easily changed by selecting the corresponding brand number.
● Plural scales can be centrally operated by using the CC-Link with less wiring.
● Settings and metering results can be easily fetched at high speed with less wiring.
● The indicator/controller can communicate with the CC-Link simply by inserting a CC-Link card (option D) into an option slot.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	96(W)×144(H)×178(D)
Mass	Approx. 1.1 kg

FEC-700 High-speed Metered Quantity Filling Indicator/Controller

This general-purpose indicator/controller for load cells ensures fast, very accurate filling thanks to high-speed sampling.

Features

● High-speed sampling (500 times per second) realizes fast, very accurate filling.
● The indicator/controller contains a sequence program for controlling fillers.
● All I/O, set values, and metering results can be read and written through the CC-Link.
● Using the CC-Link permits the centralized operation of plural fillers with less wiring.
● The indicator/controller can communicate with the CC-Link simply by inserting a CC-Link card (option D) into an option slot.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	96(W)×144(H)×178(D)
Mass	1.3 kg

Load cell・Indicator

CFC-200 Calculation Regulator for Load Cells

This calculation regulator for load cells offers optimum measurement and control for metering units, such as conveyor scales and conveyor type constant feeders.
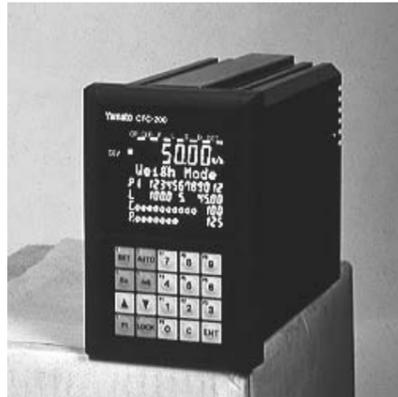
Features

● Containing knowledge about metering units for conveyors in a compact body, this calculation regulator is designed exclusively for load cells. It is available for regular conveyor scales, conveyor scales with an angle correction function, and conveyor type constant feeders.
● Settings and metering results can be easily fetched at high speed with less wiring.
● The calculation regulator can communicate with the CC-Link simply by inserting a CC-Link.
● The settings of target conveyance volumes, ratios, and water contents and the metering results of integrated values, conveyed volumes, load factors, etc. can be communicated as data.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	96(W)×144(H)×178(D)
Mass	1.4 kg

M4SC Metering Controller for Load Cells

This M4SC, if connected to a load cell, ensures complex weight control and can significantly reduce the burden on a PLC.

Features

● This M4SC, if connected to a load cell, ensures complex weight control and can significantly reduce the burden on a PLC.
● Functions can be set in an interactive input manner, so that the operability of initial setting is improved.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	W144×H192×D200
Mass	

LEC-200 Calculation Regulator for Load Cells

This calculation regulator for load cells offers optimum measurement and control for metering units for loss-in-weight type constant feeders.

Features

● Containing know-how about metering units for loss-in-weight type constant feeders in a compact body, this calculation regulator is designed exclusively for load cells.
● Settings and metering results can be easily fetched at high speed with less wiring.
● The calculation regulator can communicate with the CC-Link simply by inserting a CC-Link.
● The settings of target conveyance volumes, ratios, brands, and brand-related items and the metering results of integrated values, conveyed volumes, weight inside the hopper, etc. can be communicated as data.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	96(W)×144(H)×178(D)
Mass	1.4 kg

MX-22-D24-CC

Small instruction meter for load cell based on cc-Link by low cost.

Features

● I limit a function to indication, limiter movement and realize low price.
● Panel mount type of dimensions: 69mm × 98mm × 99mm.
● Four points limiters equipment
● Easy connect to set the output value of the load cell.
● Instructions meter of two stations occupation type.

Station type	Remote Device
Number of stations occupied	2 stations
CC-Link version	Ver.1.10
External dimensions	H69×W99×D92 mm
Mass	Approx. 0.5 kg

Contact

229-1113
3-9,Susukino-cyo,Sagamihara-shi,Kanagawa Japan
TEL : +81-42-752-4481　FAX : +81-42-752-4972
<URL> http://www.techtry.co.jp/english/index.htm
　　　http://www.techtry.co.jp/english/products/amp-hyoujiki/products-tmp-mx22.htm
<E-mail> info@techtry.co.jp

CSD-891B-73 Digital Indicator for Load Cells

This digital indicator for load cells can be housed in a panel.

Features

● This digital indicator measuring 67 mm × 208 mm × 143 mm is designed to be housed in a panel.
● High-speed A/D sampling at a rate of 200 times per second is realized.
● The digital indicator is equipped with a five-stage comparator and other control and input/output devices.
● The digital indicator has a full digital calibration function.
● The digital indicator covers a wide power range.
● A display panel and an operation unit are also provided, which can be individually operated.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	
Mass	

CSD-912-73 Graphic Digital Indicator for Load Cells

This graphic digital indicator CSD-912 for the load cells can be widely applied from an advanced sequence control such as the hopper scales, the packer scales, etc., to a simple measurement such as the platform scales, etc.

Features

● Because the STN type wide viewing angle 6.2-inch color liquid crystal display with touch panel function is adopted, and the menu of various setting can be confirmed on the screen, the operation is easy.
● The measurement condition of full flow, middle flow, dribble flow, etc., can be confirmed by the graphic display in the sight.
● The brand code and the recipe code can be registered up to 100 kinds.
● 1,000 times/s of high speed A/D conversion. (24 bit of internal resolution)
● This unit can be smoothly replaced with the old unit for compact DIN size (192 mm × 96 mm).
● The enhanced sequence functions which suits the various measurement system is equipped.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	192(W)×96(H)×170(D) mm
Mass	Approx. 1.6 kg

Digital Indicator for Load Cells CSD-815B-73

This digital indicator CSD-815B for load sell is low-priced,light weight and compact size.

Features

● This unit is compact size (96mm × 96mm × 129.5mm).
● This unit is light weight (Approx. 0.5 kg).
● This unit is equipped with three step comparator and various control I/O.
● This unit has the peak hold function.
● This unit corresponds to a wide power supply.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	96(W)×96(H)×129.5(D) mm
Mass	Approx. 0.5 kg

Weighing Controller F160 for CC-Link

Control panel mounting type Weighing Controller with CC-Link interface, compact size and display.

Features

- A compact size (W67 × H185 × D120mm) makes saving space on control panel.
- High speed of 1000 times/sec A/D converter and high speed processing CPU are equipped. 1/10000 display resolution is assured.
- 0.1 micron V/℃ is realized by using the highly precise head amplifier for the load cell.
- Multi direction installing is available with special mounting angle.
- Communication with CC-Link is available by CC-Link optional board.
- RoHS compliant product.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver. 1.10
External dimensions	67(W)×185(H)×120(D) mm
Mass	Approx. 1.2 kg

Weighing Controller F156 for CC-Link

Equipped with a CC-Link interface as a standard item, this weighing controller is best suited for use within control panels, etc.

Features

- The weighing controller has a metering sequence function that directly controls a gate simply by making settings and giving operation instructions.
- Settings can be made from a remote console unit (optional) or RS-232C in addition to the CC-Link.
  The weighing controller is also equipped with a serial output port to which our printer or display can be easily connected.
- The weighing controller has a high-accuracy head amplifier for load cells with a zero drift of 0.1 μ V/℃, and a high-speed A/D conversion and digital processing capability at a speed of 500 times per second, realizing a high resolution of 1/10000 (internal 1/40000).
- Although it can be incorporated into a unit, an attachment for installation on a DIN rail (optional) is also available. Its compact size (67 mm (W) × 185 mm (H) × 130 mm (D)) permits the weighing controller to be installed in any place.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver.1.10
External dimensions	67(W)×185(H)×130(D) mm
Mass	Approx. 1.7 kg

Accumulation Value Display Weighing Controller F720A

General-purpose type weighing controller equipped with sequence weighing function corresponding to high accuracy measurement control.

Features

- F720A is a practical machine with good cost performance equipped with the functions of high accuracy feeding, final discharge control for discharge weighing control and sequence weighing function that is indispensable for hopper and packer scale.
- Able to handle weight fluctuations with its 200 times/second high-speed conversion. It also assures a display resolution at 1/10000 for all input range (it can be further increased to 1/40000 depending on type of setting)
- Apart from checking the weight value in real time, various calculations derived by the totaling function are also displayed.
- The display weighing data such as accumulation value of weighing data and various setting value can be displayed on the 18-digits sub-display.
- On its 144W × 72H mini DIN size, a screw-type terminal block that requires very little space is connected to its load cell.
- The communication with CC-Link is possible just to install the CC-Link board on the extended slot.

Station type	Remote device station
Number of stations occupied	1, 2 or 4 stations
CC-Link version	Ver.1.10
External dimensions	144(W)×72(H)×160(D) mm (not including projections)
Mass	Approx. 1.0 kg

Graphic Display Type Digital Indicator F372

This is digital indicator for strain gauge type sensor for measuring and controlling press fitting, load, torque, etc.

Features

- Easy operation via 3.5 inch color LCD & touch panel.
  With the utilization of liquid crystal touch panel display, visibility and operability of wave profile display.
- A Combination of 26-types Holding Function. (2 Point Hold Mode used)
- The settings for hold mode, comparison, and graphs can be controlled and switched at the same time through the CC-Link as you desire.
- CE directives-conforming/RoHS-compliant product

Station type	Remote device station
Number of stations occupied	1, 2, 4 stations
CC-Link version	Ver.1.10
External dimensions	99.5(W)×96.0(H)×138(D) mm
Mass	Approx. 1.0 kg

Dynamic Force Processor F381

On-the-spot problem analysis and setting while observing fluctuation of "Force"
Boundless control on "Force" such as Pressure, Load and Torque!

Features

● Easy operation via 3.5 inch color LCD & touch panel
● Various comparison control functions (Set value can be selected up to 16 types.)
● Waveform comparison mode: comparison for indicated values along with time or displacement value
● Multi hold mode: detection and comparison for necessary point in indicated value
● Measurement data saved in SD card (All measurement waveforms can be preserved.)
● Load cell and displacement sensor can be connected.
● CE directives-conforming/RoHS-compliant product

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	99.5(W)×96.0(H)×117.3(D) mm
Mass	Approx. 1.0 kg

Graphic Display Type Digital Indicator F377

The F377 is a digital indicator for voltage and current output type sensor.
This product contributes to the quality control of production lines by its powerful hold and OK/NG judgment functions.

Features

● Easy operation via 3.5 inch color LCD & touch panel.
● With the utilization of liquid crystal touch panel display, visibility and operability of wave profile display.
● The settings for hold mode, comparison, and graphs can be controlled and switched at the same time through the CC-Link as you desire.
● RoHS-compliant product

Station type	Remote device station
Number of stations occupied	1, 2, 4 stations
CC-Link version	Ver. 1.10
External dimensions	99.5(W)×96.0(H)×138(D) mm
Mass	Approx. 1.0 kg

Dynamic Force Processor F395

This processor is capable of graphically displaying, analyzing, and controlling pressure, load, and other data input from analog sensors at a high processing speed of 4000 times per second.
It is the optimum instrument for sorting and testing machines that determine whether automatic processing results are acceptable.

Features

● A wide variety of comparison and control functions
 ・Waveform comparison mode which constantly compares indicated values varying in line with time or displacement with upper and lower limits.
 ・Hysteresis mode which compares indicated values varying in line with the increase or decrease in displacement with upper and lower limits.
 ・Multi-hold mode which detects necessary points from among indicated values with upper and lower limits.
● Two-channel sensor inputs (strain gauge, voltage, current) can serve as X-axis and Y-axis inputs.
● Pulses can be directly input from rotary encoders, etc.
● The processor can communicate with the CC-Link simply by inserting a CC-Link board into an expansion slot.
● The processor has received a CE certificate.

Station type	Remote device station
Number of stations occupied	2 or 4 stations
CC-Link version	Ver.1.10
External dimensions	174(W)×135(H)×156(D) mm
Mass	Approx. 2.3 kg

Graphic Display Type Weighing Controller F600A

This is a basic type weighing controller featuring select functions necessary for metering.

Features

● An easy-to-see guidance and a touch panel enable the operator to easily operate the weighing controller without consulting the operation manual.
● The weighing controller displays the variation in weight in real time, and marks the timing of large-volume, medium-volume, and small-volume supplies. Easy-to-identify large-size fonts are used for displaying values.
● The weighing controller has a sequence function compatible with metering systems, including checker scales, hopper scales, and packer scales.
● The panel conforms to the size (92 mm × 92 mm) specified by DIN, an international standard.
● Using the touch panel or the CC-Link or another interface, values, such as metered values, for up to eight brands can be set and saved.
● The weighing controller can communicate with the CC-Link simply by inserting a CC-Link board into an expansion slot.

Contact

7-16-3, Ginza, Chuo-ku, Tokyo 104-0061, JAPAN
TEL：+81-3-5148-3000　FAX：+81-3-5148-3001
<URL> http://www.unipulse.com/en/index.html

Station type	Remote device station
Number of stations occupied	1, 2 or 4 stations
CC-Link version	Ver.1.10
External dimensions	99.5(W)×96(H)×138(D) mm
Mass	Approx. 1.0 kg

All-in-one Type Weighing Controller F805A

A weighing controller combining a variety of functions developed exclusively for metering systems and ever-higher user-friendliness.

Features

- An easy-to-see guidance and a touch panel enable the operator to easily operate the weighing controller without consulting the operation manual.
- The weighing controller processes and displays the input from a load cell in the form of a waveform without delay at a speed of 1000 times per second. It is very convenient because you can adjust and set the starting speed of large-volume or small-volume supply by directly checking the waveform.
- The weighing controller has a sequence function compatible with metering systems, hopper scales, and packer scales.
- Another model featuring sequence functions specializing in applications, such as including checker scales, belt scales, constant feed-ware, and total weight metering, is also available.
- Using the touch panel or the CC-Link or another interface, values, such as metered values, for up to 100 brands can be set and saved.
- The weighing controller can communicate with the CC-Link simply by inserting a CC-Link board into an expansion slot.
- CE directives-conforming/RoHS-compliant product

Station type	Remote device station
Number of stations occupied	1, 2 or 4 stations
CC-Link version	Ver.1.10
External dimensions	174(W)×135(H)×159(D) mm
Mass	Approx. 2.3 kg

Weighing Controller for Constant Feed Weigher F805A-CF

A weighing controller developed for weight supply and loss-in-weight.

Features

- To enable automatic control of material's weight supply and material's replenishment.
- Master/slave operation are possible up to 8 units.
- Pre-installed with 6 types of sequence modes to provide flexibility. (Continuous operation・Batch operation・Fixed operation・Fixed and accumulated operation・Auto coordinate operation・Volumetric operation)
- The target value in relation to discharge weight (momentary flow rate) from the feeder can be set. It compares the variation of target value and momentary flow rate (control deviation) and performs feed back control (PID control) that adjusts the operational output (control rate) to enable control of momentary flow rate.
- The communication with CC-Link is possible only by the installation of the CC-Link board on the extended slot.
- CE directives-conforming/RoHS-compliant product

Station type	Remote device station
Number of stations occupied	1, 2, 4 stations
CC-Link version	Ver.1.10
External dimensions	174(W)×135(H)×159(D) mm
Mass	Approx. 2.3 kg

Weighing Controller for Checker Scale F805A-CK

A weighing controller developed for checker scale

Features

- Selectable weighing mode to suit your applications.
  Dynamic Mode : This mode is most suitable when the belt speed or the dimensions of weighed items are not consistent.
  Static Mode : This mode is most suitable when there is dispersion in the weight data.
- Apart from checking the weight value in real time, various calculations derived by the totaling function are also displayed.
- By registering the setting values for each of the 100 types Weighing Code, the setting values can be quickly changed.
- The communication with CC-Link is possible only by the installation of the CC-Link board on the extended slot.
- EC directives-conforming/RoHS-compliant product

Station type	Remote device station
Number of stations occupied	1, 2, 4 station
CC-Link version	Ver.1.10
External dimensions	174(W)×135(H)×159(D) mm
Mass	Approx 2.3 kg

ABSOCODER Conversion Device VE-2CC

Introducing an ABSOCODER model compatible with CC-Link. Let the ABSOCODER handle highly reliable position detection.

Features

●Absolute position detection eliminates the necessity for home return.
●Due to the non-contact structure, the durability and environmental resistance are outstanding.
●Resistant to power shutdown and accidental noise
●Current position setting at an arbitrary position
●Built-in self-diagnostic function

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Version 1.10
External dimensions	45 (W) × 160 (H) × 115 (D)
Mass	Approx. 0.7 kg

GYcRP/GYCL-201 Magnetostrictive Linear Displacement Sensor

High-speed transmission of digital positional data

Features

●High precision (±0.05% FS or lower)
●Noncontact measurement realizes longer operating life
●Outstanding environment resistance
●Setting changeable according to sensor
●Upper/lower limit detection function

Station type	Remote device station
Number of stations occupied	3 stations
CC-Link version	
External dimensions	180×100×39.5
Mass	Approx. 0.6 kg

Suction style gas detector PS-7

We have achieved approximately half the size and weight of previous Cosmos gas detectors.

Features

●Smaller size, reduced weight
●LCD display makes results clear at a glance
●Sensor unit post-insertion prevention function included
●Automatic sampling quantity control function included
●Easy support for sensor module/sampling module
●Converter unit can work with the controlled potential analysis sensor to detect NF3.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Version 1.10
External dimensions	W62 × H170 × D173 mm
Mass	Approx. 1.0 kg

Absolute Encoder ACURO series CC-Link

ACURO is the only encoder on the market to provide an integrated CC-Link interface node. It is the perfect absolute encoder with geared multiturn.

Features

●"Built in type" CC-Link interface, connect to PLC directly
●Battery less Geared multiturn
●High resolution (max 17bits)
●High robust design (against vibration / shock 10G / 100G)・Dust and water proof design (IP67)
●Preset function・Self check and output alarm
●UL standard・CE marking

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10, Ver.2.00
External dimensions	φ58 mm
Mass	Approx. 450 g

Measuring System MG40 Series

Network measurement system for high-speed communication, multi-axis measurements, and data management.

Features

● Its standard CC-Link or Ethernet interface, enables you to process and store remote data via your existing LAN.
● Lowers overall costs by reducing the number of peripheral devices and wiring connections while improving reliability.
● The system performs error detection on all communication lines to ensure excellent reliability.
● Ideal for measurement systems used in large-scale manufacturing facilities.
● Configures itself automatically for different models, resolutions, and measurement lengths without any initial setup operation.
● Also to provide real-time trend analyses based on actual measurements taken on the production line.

Contact

Sales and Marketing Department.
Tel：+81-463-92-7971
<URL> http://www.sonysms.co.jp/

Station type	Remote device station
Number of stations occupied	4 stations occupied
CC-Link version	Ver.1.10
External dimensions	W43 × H155 × D69 mm
Mass	MG41：300g　MG42：250g

Ionization Vacuum Gauge M-722HG-CC, M-822HG-CC, M-832HG-CC, M-922HG-CC

The B-A type ionization vacuum gauge series is controllable by the CC-Link.

Features

● A large-size liquid crystal display is adopted.
● The pressure range can be automatically switched.
● Roughing gauge option
　・The gauge can not only measure the pressure of a roughing gauge but also transmits pressure data.
　・The roughing gauge is automatically switched to the B-A gauge (M-822HG-CC and M-832HG-CC only).
● The B-A type ionization vacuum gauge series can be used for vacuum units for manufacturing semiconductors and electronic devices, and analyzing units, including electron microscopes, and for the measurement and control of the pressure of various vacuum units.

Station type	Remote device station
Number of stations occupied	1 station or 2 stations
CC-Link version	
External dimensions	99 (H) × 209 (W) × 330 (D) mm
Mass	Approx. 5.4 kg

EI-CC-03 CC-Link Interface Unit

This interface unit is designed to control and monitor turbo molecular pumps via the CC-Link/

Features

● The interface unit is compatible with our magnetic bearing type turbo molecular pump TMP-03 series.
● The interface unit is capable of activating and deactivating turbo molecular pumps.
● The interface unit is capable of monitoring the operating status of turbo molecular pumps during acceleration, deceleration, and steady operation.
● Operation status-related parameters, such as the pump speed and the motor current, can be easily obtained by using a CC-Link master unit.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	
External dimensions	40 (H) × 150 (W) × 100 (D) mm
Mass	500 g

Multi-point temperature control system (C series)

A maximum of 320 points of temperature control can be performed.

Features

● Multipoint control of up to 16 blocks (320 points) (1 block: 20 points)
● Easy operation using the Touch screen unit (CMT-200)
● Connectable easily to CC-Link compatible units
● Each unit can be mounted or removed individually.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.0
External dimensions	Differs depending on the combined units.
Mass	Differs depending on the combined units.

Contact

Overseas division
Tel：81-72-727-6100　Fax：81-72-727-7006
<URL> http://www.shinko-technos.co.jp/e/index.html
　　　　http://www.shinko-technos.co.jp/e/products/multi_point_control_system_c_series.html
<E-mail> overseas@shinko-technos.co.jp

SR83 Series Digital Regulator

The CC-Link is part of a temperature regulator.

Features

● Almost all parameters can be set with the CC-Link.
● The front operation area is of a dustproof and splashproof structure (equivalent to IP66).
● A large-size, clear display is adopted.
● A wide variety of options are available.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.1
External dimensions	96 (H) × 96 (W) × 111 (D) mm
Mass	420 g

CMC10A CC-Link/Temperature Regulator Converter

This converter can communicate with the CC-Link and digital indicators/regulators with ease.
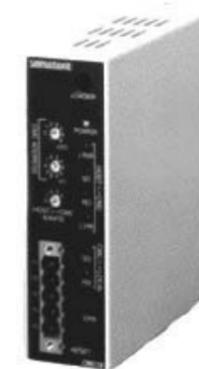
Features

● The converter can communicate with the CC-Link without using any program.
One CMC10A can communicate with up to 16 temperature regulators.
● Programs are easier to create.
Data is automatically collected from the temperature regulators connected to the CMA10A.
● Setting is easy with general-purpose software.
The CMC10A can be easily set with general-purpose software.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.1
External dimensions	100 (H) × 30 (W) × 105 (D) mm
Mass	Approx. 300 g

CCL-PS Analog I/O Microcomputer Board for Power Supplies

A low-priced, high-performance interface unit for power supplies.
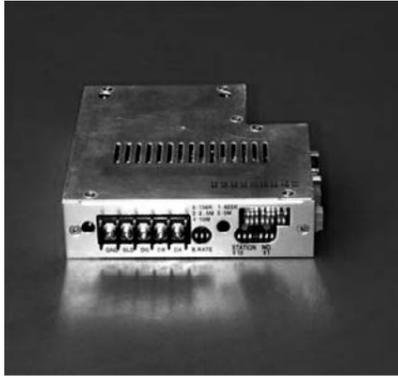
Features

● This unit is most suitable for automatic controllers, such as power supplies.
● The power supply, communication, PI, PO, and D/A&A/D systems are isolated from one another, and external input can be set on the connector for analog systems monitorring.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.1
External dimensions	113(W)×30.5(H)×112(D) mm
Mass	0.285 kg

CCL-MFC 2CH Controller for Mass Flow Controllers

A low-priced, high-performance interface unit for mass flow controllers.
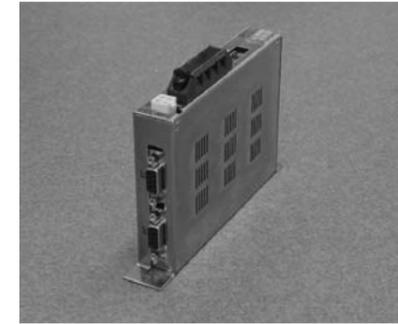
Features

● This unit is most suitable for automatic controllers, such as Mass Flow Controllers.
● The outside power supply input part and the inner circuit are isoration.
● This controller has received an NRTL certificate (UL61010-01A).

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.1
External dimensions	24(W)×130(155)(H)×95(D) mm
Mass	0.41 kg

CCL-PS2 Remote Unit Controller

A low-priced, high-performance interface unit for measuring units.
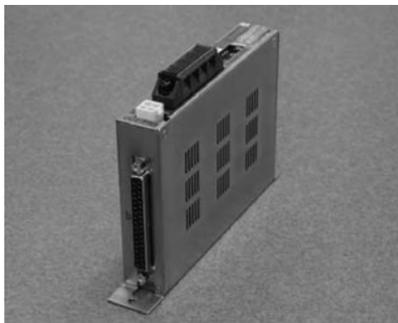
Features

● This unit is most suitable for automatic controllers, such as measuring units.
● The outside power supply input part and the inner circuit are isoration.
● This controller has receives an NRTL certificate (UL61010-01A).

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.1
External dimensions	24(W)×95(D)×130(155)(H) mm
Mass	0.39 kg

CCL-CM 2CH Unit for Capacitance Manometers

A low-priced, high-performance interface unit for capacitance manometers.
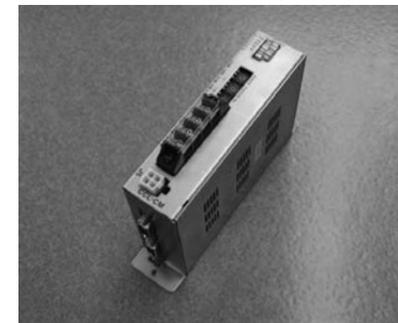
Features

● This power supply unit is most suitable for automatic controllers for capacitance manometers (Baratron@R).
● The unit's I/O is perfectly compatible with our CCL-MFC and an upgraded version of the output power supply.
● The internal processing speed is as fast as 2 ms.
● The external power supply is isolated from the communication and D/A&A/D systems.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.1
External dimensions	36(W)×130(155)(H)×95(D) mm
Mass	0.49 kg

Process Device

Module Type Multiple-point Temperature Regulator SR Mini HG System

With this regulator, a multiple-point control and monitoring system can be constructed on the CC-Link.

Features

● Up to eight two-channel modules for temperature control can be connected to the regulator.
● Three types of modules - heating control, cooling control, and heating/cooling control - are available.
● A high-performance type with an accuracy of 0.1 % and a sampling cycle of 0.1 second is also available.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.00
External dimensions	
Mass	

High-Speed Digital Controller HA400/HA900

HA400/HA900 is a digital controller which provides a high speed sampling cycle time of 25ms (0.025 sec). Supplied with high resolution input and parameter settable in 1/100 sec.

Features

● Sampling of 0.025 second, acuracy of 0.1% .
● 1 or 2 loop control.
● Ramp/Soak program control is available.
● Digital input : 7 points, Digital output : 4 points
● Heater break alarm and analog retransmission output is available.

Station type	Remote device station
Number of stations occupied	1 station/4 stations
CC-Link version	Ver.2.00/1.10
External dimensions	HA400 : 348(W)×96(H)×110(D) mm HA900 : 96(W)×96(H)×110(D) mm
Mass	HA400 : 360 g, HA900 : 460 g

Module type Digital Temperature Controller　SRZ

Small size module of 30x100x85mm (WxHxD) to perform 4-channel temperature control per module. Multi-zone temperature control can be achieved on CC-Link by using a COM-JC CC-Link communication converter.

Features

● Heater break alarm function is available.
● Three type of modules - heating control, cooling control, and heating/cooling control - are available
● The maximum of 16 temperature control modules (4ch per module) can be connected to perform 64-channel temperature control.
● Acuracy of 0.2%, sampling of 0.25 second
● Digital I/O module is available for Run/Stop transfer, alarm output and others.
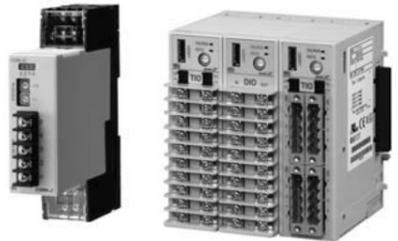
Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.2.00/1.10
External dimensions	30(W)×100(H)×85(D) mm
Mass	160kg

Digital Temperature Controller FB400/FB900

The FB Series is a high performance process controller with a more advanced Brilliant PID, autotuning., selectable cycle time of 0.05/0.1/0.25 second and 0.1% of accuracy in short depth housing.

Features

● Acuracy of 0.1% , sampling of 0.1 second
● Digital input : 7 points, Digital output : 4 points
● Heater break alarm and analog retransmission output is available.
● Ramp/Soak program control is available.
● Easy parameter setup via USB loader port (Loader communication)
● Inter-controller communication.

Station type	Remote device station
Number of stations occupied	1 station/4 stations
CC-Link version	Ver.2.00/1.10
External dimensions	FB400 : 48(W)×96(H)×60(D) mm HB900 : 96(W)×96(H)×60(D) mm
Mass	HB400 : 230 g, HB900 : 290 g

Process Device

Module type Digital Temperature Controller SRV (V-TIO-L)

2-Loop control can be performed with a module. 31modules can be connected for 62-loop control.
Distributed installation is possible, enabling multi-zone distributed control system in a compact size.

Features

● 2 loop temperature control.
● A maximum of 31 modules can be connected for 62-loop control.
● Three type of modules - heating control, cooling control, and heating/cooling control - are available
● Acuracy of 0.3%、sampling of 0.5 second
● Digital input : 1 point, Digital output : 2 points
● Heater break alarm function is available.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.2.00/1.10
External dimensions	40.5(W)×125(H)×110(D) mm
Mass	270 g

Module type Digital Controller SRX (X-TIO-L)

SRX is a module type Digital controller which provides a high speed sampling cycle time of 25ms (0.025 sec).
Supplied with high resolution input and parameter settable in 1/100 sec.

Features

● Sampling of 0.025 second, acuracy of 0.1% .
● 2 loop control.
● A maximum of 30 modules can be connected for 60-loop control.
● Ramp/Soak program control is available.
● Digital I/O module is available.
● Heater break alarm function is available.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.2.00/1.10
External dimensions	40.5(W)×125(H)×110(D) mm
Mass	300 g

SOT-GS8014V/SOT-GS15014V Serial Remote Space Optical Transmission Unit

These are serial transmitters capable of transmitting large amounts of data over long distances.

Features

● Requires no cabling, making it ideal for data communication with moving equipment.
● Use of optical media means zero effects from EMI.
● Not subject to legal restrictions like RF networks.
● Uses a CC-Link connection, so no interface unit is required.
● SOT-GS7014 (Transmission range: 0 to 80m)
● SOT-GS15014 (Transmission range: 0 to 150m)

Station type	Remote device station
Number of stations occupied	1, 2, 3, or 4 stations
CC-Link version	Ver. 1.10
External dimensions	80 (W) × 166 (D) × 40 (H) mm (main body only)
Mass	350 g (body only)

SOT-CP801/CP803, SOT-CP1601/CP1603 Parallel Remote Space Optical Transmission Unit (8-bit/16-bit)

Costs have been reduced as a result of less wiring!
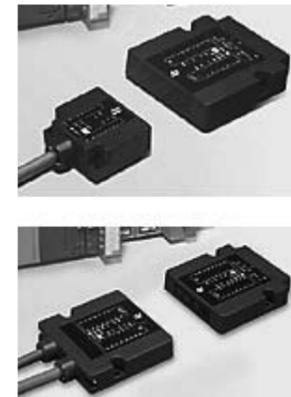
Features

● The unit requires no cables and is optimum for data transmission between mobile units.
● Using an optical medium eliminates noise and the effect of magnetism.
● The unit comes in two types: eight input points/eight output points and 16 input points/16 output points.
● The unit comes with two transmission distances: one meter and three meters.
● The unit is lightweight and compact and uses a detachable connector type terminal block.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	90 (W) × 95 (D) × 20 (H) mm
Mass	250 g

Process Device

Transmission Devices

Remote Coupler System RCD22 series / CC-Link version

CC-Link Data Transmission and Power Supply(24VDC/1A) through Air Gap

Features

● Transmitting distance
  4 to 6mm (Center off-set5mm)
● Supply voltage
  24V DC/1A
● Transmitting Speed : max.2.5Mbps
  156K/625K/2.5Mbps available
● Built-in Terminator
  Terminator used/unused can be changed by switch

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	110 (W) × 150 (H) × 55 (D) mm
Mass	

BWF-17A 17B/BWF-27A 27B Space Optical Data Transmission Unit (Serial Type)

This unit uses space as a transmission channel and is, therefore, most suitable for use with mobile units.

Features

● The unit is of a handheld size and lightweight.
● The degree of distance margin is high, and data can be transmitted with a high level of reliability.
● The unit comes with two transmission distances: 100 meters and 200 meters.
● Up to 42 units can be connected to a master unit.

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	
External dimensions	84 (W) × 44 (H) × 128 (D) mm
Mass	0.5 kg

AJ65BT-RPI-10A/AJ65BT-RPI-10B Space Optical Repeater Unit

Features

● Space transmission is realized by infrared rays.
  Space transmission over a distance of zero meters to 100 meters is realized by infrared rays.
  It is possible to use a CC-Link system even in a location where cable wiring is difficult. The maximum baud rate is 2.5 Mbps.
● The communication status of the unit can be monitored.
  The light receiving status of the unit can be monitored (fetched into the master station).
  Additionally, since the fetched light receiving status of the unit can be displayed on the unit's LEDs with the aid of the sequence program of the master station, the optical axis can be easily fine-adjusted.
● The AJ65BT-RPI-10A and the AJ65BT-RPI-10B must be used in pairs.

Station type	Remote I/O station
Number of stations occupied	1 (with monitor functions used) 0 (with monitor functions not used)
CC-Link version	
External dimensions	161 (W) × 100 (H) × 57.5 (D) mm
Mass	0.5 kg

DMM-GB HB/DMM-GC HC Space Optical Data Transmission Unit (8-bit/16-bit Parallel Type)

A popular parallel type, this unit requires few wires.

Features

● The unit requires only seven wires, thereby saving wiring.
● Up to 64 units can be connected to a master unit.
● The unit can establish optical communication with our DMS-GB HB/DMH-GC HC.
● The unit comes in two types: head-on (horizontal) and side-on (vertical).
● The unit comes with two transmission distances: one meter and three meters.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	90 (W) × 20 (H) × 87 (D) mm
Mass	0.1 kg

Transmission Devices

BWF-2CA・2CB　Wireless Optical Repeater

Long distance and high speed data transmission with high reliability

Features

● Long distance transmission(0 ～ 200m) can be made with infrared ray even though small and lightweight body.

● It is most suitable for the communication between a ground station and a moving station because of wireless communication.

● It is possible to connect the segment up to 2 phases.

● It is possible to do high speed communication up to Max. 5MBPS.(2.5MBPS in case of the communication with different frequency device)

● It is possible to monitor the situation for the communication and optical axis with LED indicators and to load the light-receiving data into the master station. Also, it is easy to do a fine adjustment of optical axis because loaded light-receiving data at opposite sidecan be checked with the sequenced program at master station.

Station type	Remote I/O station
Number of stations occupied	1 (when using monitoring function), 0 (when not using monitoring function)
CC-Link version	
External dimensions	161(W)×100（W)×57.5(D) mm
Mass	0.5 kg

Solenoid Valve F Series

This valve is more sophisticated as a result of a wish to simplify ease of use.

Features

● The valve is available for single and double solenoids./ The valve adopts joints of different diameters for single and double solenoids./ The flow rate has been increased by two to 3.3 times although the valve width remains unchanged./ A valve exclusively for single solenoids is also available./ The valve comes with a wide variety of wires available.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Solenoid Valve PB Series

This valve has achieved ease of use, energy saving, and environmental friendliness equivalent to medium-sized valves, as well as space saving and large flow.

Features

● As a valve/manifold integrated type, the valve combines the ease of use and high performance of next-generation valves.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Transmission Devices

Solenoid valve

Solenoid Valve JA Series

Although this is a tandem three-port valve, it requires less space.

Features

● Having realized downsizing and low power consumption and added a tandem three-port valve, this is a new-age solenoid valve representing high added value.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

CPV10/14/18-GE-CC-8 CPV Valve Terminal

A compact but high-performance solenoid valve manifold.

Features

● The valve terminal is compact but offers a high flow rate.
  When the valve width is 10 mm: 400 l/min.
  When the valve width is 14 mm: 800 l/min.
  When the valve width is 18 mm: 1600 l/min.
● The valve terminal is capable of accommodating a total of 14 valve functions.
● Up to eight valves, 16 coil valves, or 16 three-directional valves can be connected to a single valve terminal.
● Up to 16 I/O points can be added via a field bus connector.
● A vent port can be set in any position.
● The valve terminal is also available for vacuum if an external pilot is used.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Electric Module CPX Terminal

Features

● Combination unit with Digital or Analogue I/Os unit & valve manifolds, proportional valves or pressure switches
● Can be used as I/O unit individually or combination with valve terminals such as MPA, VTSA, VIMP-03
● Capable with max. 10 modules (max. 512 I/Os)
  Digital Input (4 inputs, 8 inputs, 16 inputs)
  Digital Output (8 outputs, 16 outputs)
  Analogue Input (2 inputs, 4 inputs)
  Analogue Output (2 outputs) etc.
● You can confirm and monitor status of diagnosis for whole of system, each module and individual I/O on PC. or Handheld
● Memorize information of process and history of fails, afterward you can confirm them on PC. or Handheld
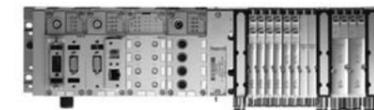
Station type	Remote device station
Number of stations occupied	1 - 4 station
CC-Link version	
External dimensions	50 mm×107 mm×50 mm (Node only)
Mass	0.115 kg

OPP2-1G Slave Station for Manifold Solenoid Valves

This station can be used in a dusty environment.

Features

● The station has a protective structure equivalent to IP64.
● The operation of the valve can be identified on the display of the slave station.
● Five baud rates can be set (156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps).
● An output mode in case of communication errors can be selected (hold or clear).

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	W = 54, H = 40, L = 112 (mm)
Mass	

OPP4-1G Slave Station for Manifold Solenoid Valves

This station adopts a slot-in system to connect the human- and environment-friendly next-generation block manifold solenoid valve MN4G series.
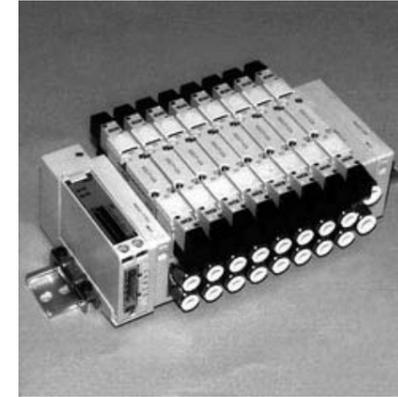
Features

● A slot-in system enables the slave station to be connected to and disconnected from valves.
● The station is slim.
● Five baud rates can be set (156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps).
● An output mode in case of communication errors can be selected (hold or clear).

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	W = 20, H = 60, L = 78 (mm)
Mass	

OPP3-1G Slave Station for Manifold Solenoid Valves

This flat cable type slave station can be equipped with a wide variety of solenoid valves.

Features

● This slave station is the shortest in height among the series (when mounted).
● Five baud rates can be set (156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps).
● An output mode in case of communication errors can be selected (hold or clear).

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	W = 50, H = 41, L = 84 (mm)
Mass	

OPP5-*G Slave Station for Manifold Solenoid Valves

This station offers high environmental resistance and friendliness, outstanding maneuverability in all processes from installation to maintenance, and upgraded performance in step with the times.

Features

● The station has a protective structure equivalent to IP65 (dustproof, jet-proof type).
● The flexibility in wiring directions has been improved vertically and horizontally.
● Input or output units can be connected.
● The maximum number of input/output points is 32.
● Five baud rates can be set (156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps).
● An output mode in case of communication errors can be selected.

Station type	
Number of stations occupied	1 station
CC-Link version	
External dimensions	W = 60, L = 130, H = 70
Mass	

Solenoid valve

Solenoid valve

CC-Link | Solenoid valve

OPP6-*G Slave Station for Manifold Valves

This three-/four-port valve block manifold combines high integration, space saving, and high performance although it is compact and requires less wiring.
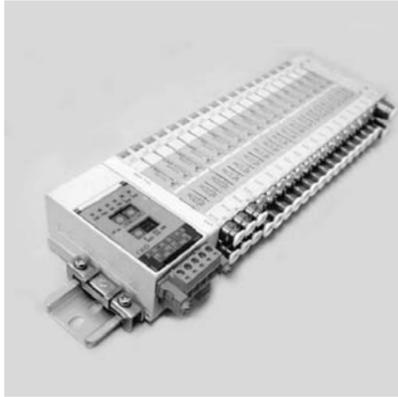
Features

- Although the slave station is compact and low, it offers 32 output points.
- Since it is compact structure, the footprint can be reduced.
- Five baud rates can be set.
- An output mode can be selected in case of communication errors.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	W=46.1, L=77, H=39.5
Mass	

CC-Link | Solenoid valve

EX12*-SMJ1 Serial Interface (SI) Unit

Valve manifolds can be connected directly to the CC-Link.

Features

- Drastically improved space efficiency
  Conventional parallel wiring systems required a large space for several hundred wires, whereas this unit occupies a very narrow space because it does not use many wires and a compact SI manifold solenoid valve is employed.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	
Mass	110 g

CC-Link | Solenoid valve

EVT-T9GAR Slave Station for Thin Type Electropneumatic Regulators

This thin type electropneumatic regulator manifold can meet the requirements of PLC control with less wiring.
It is the optimum solution to pressure control in the semiconductor and precision processing fields and creeping valve control.
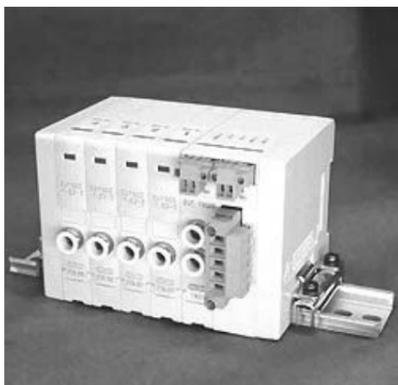
Features

- This is an analog input/output unit with four input channels for (pressure monitoring) and four output channels (for pressure control).
- A slave station is capable of controlling up to four electropneumatic regulators.
- Five baud rates can be set (156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps).
- Because of its high integration performance, the slave station can manifold up to 12 electropneumatic regulators (three slave stations).
- All piping and wiring are connected to the front, realizing improved operability and space saving.
- The DIN rail is installed either on the bottom or the back.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	32 (W) × 75 (D) × 75 (H) mm
Mass	145 g

CC-Link | Solenoid valve

EX140-SMJ1 Serial Interface (SI) Unit

Valve manifolds can be connected directly to the CC-Link.

Features

- Drastically improved space efficiency
  Conventional parallel wiring systems required a large space for several hundred wires, whereas this unit occupies a very narrow space because it does not use many wires and a compact SI manifold solenoid valve is employed.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	
Mass	80 g

Solenoid valve

EX180-SMJ1* Serial Interface (SI) Unit

Compact, space-saving, and power-saving SJ200/3000 Series solenoid valves can be connected to CC-Link with up to 32 output points.

Features

- Uses a connector format (card-edge type) for valve interconnections, enabling flexible accommodation of changes in the number of stations.
- Permits a manifold equipped with both SJ2000 (7.5mm width, 0.08 Cv value) and SJ3000 (10mm width, 0.12 Cv value) type valves.
- Equipped with a manual lock switch to prevent manual operation errors.
- Accommodates one-touch joints for super-narrow f2 tubes.
- Connectors are used for wiring, with separate power supplies for valve and communication systems.
- A T-branch connector can be selected as the communication connector.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	
Mass	110 g or less

SU1A-C, Serial interface unit for solenoid valve

Solenoid valve manifold being directly connected to CC-Link

Features

- Compact design
- Easy installation
- Number of output : Max. 16 point
- IP40 Compatible
- Eight type valves can be connected to a single valve manifold.
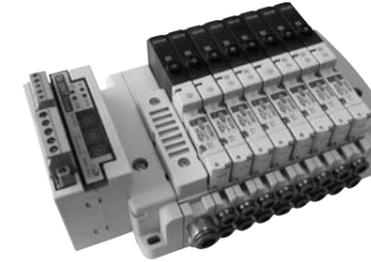
Station type	Remote I/O
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	34(W)×74(L)×65(H) mm
Mass	0.11 kg

Contact

TPC Mechatronics Co., Ltd.
TEL：+82-2-1588-5982
<URL> http://www.tpcpage.com/

EX250-SMJ2 Serial Interface (SI) Unit

Valve manifolds, input blocks, and serial units are integrated into a single location for space saving.

Features

- Maximum number of input/output points: 32 input points/32 output points
  Connection by connectors makes it easy add manifold valves and input blocks.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	
External dimensions	
Mass	250 g

SU1B-C, Serial interface unit for solenoid valve

Solenoid valve manifold being directly connected to CC-Link

Features

- Compact design
- Easy installation
- Number of output : Max. 16 point
- IP65 Compatible
- Five type valves can be connected to a single valve manifold.

Station type	Remote I/O
Number of stations occupied	1 station
CC-Link version	Ver. 1.10
External dimensions	85(W)×155(L)×90.5(H) mm
Mass	0.11 kg

Contact

TPC Mechatronics Co., Ltd.
TEL：+82-2-1588-5982
<URL> http://www.tpcpage.com/

Solenoid valve

Solenoid valve

AG42-C1 AnyWire-DB Gateway Compatible with CC-Link

The AnyWire wire-saving system complements open network CC-Link systems with flexibility.

Features

● The AnyWire wire-saving system complements a system that uses CC-Link. You can save wires for the I/O component at the sensor or actuator level equivalent to a sub-network in the control system. The system is flexibly expanded.

● The full quadruple dual-bus system, the basic structure of the AnyWire-DB series, can perform two different types of data transmission, bit ON/OFF control on the bit-bus and analog/parameter data transmission on the word-bus, using a single transmission line.

● By introducing the AnyWire wire-saving system, you can save wires, man-hours, and space. Free branching is available, including T-branch, multi-drops, and trees. Insulation displacement connectors enable simple and easy connections that leave no rubbish during wiring. You can flexibly use general-purpose electric wires for wiring. All these and others achieve excellent workability and maintenance performance.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	57(W)×54.5(H)×140(D) mm
Mass	

AG22-C1 CC-Link UNI-WIRE HX Gateway

Gateway designed to connect UNI-WIRE HX system to CC-Link Network

Features

● This gateway can connect the UNI-WIRE HX which has proposed unique wire saving system which uses open network CC-Link as a sensor bus. A special program is unnecessary in order to operate a gateway. Address translation is only carried out inside. A controller is seamlessly connectable with a sensor.

● As for the UNI-WIRE HX used as a sensor bus, wiring can use the wiring method of various sorts, such as a T junction and multidrop. Requires no particular types of transmission cables for data communication. General purpose electric cables or signal transmission cables will work.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	140(W)×58(H)×57(D) mm
Mass	180 g

AG42-C2 AnyWire DB Gateway Compatible with CC-Link Ver. 2.00

A new model compatible with CC-Link Ver. 2.00 is added to the CC-Link-AnyWire DB gateway.

Features

● A new model is added to the AnyWire DB gateway to be compatible with CC-Link Ver. 2.00 (fixed to the 4 times speed). At the maximum, 2560 I/Os can be connected, enhancing extendibility.

● The full quadruple dual-bus system, the basic structure of the AnyWire-DB series, can perform two different types of data transmission, bit ON/OFF control on the bit-bus and analog/parameter data transmission on the word-bus, using a single transmission line.

● By introducing the AnyWire wire-saving system, you can save wires, man-hours, and space. Free branching is available, including T-branch, multi-drops, and trees. Insulation displacement connectors enable simple and easy connections that leave no rubbish during wiring. You can flexibly use general-purpose electric wires for wiring. All these and others achieve excellent workability and maintenance performance.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10 / Ver. 2.00
External dimensions	57(W)×54.5(H)×140(D) mm
Mass	

Protocol Converter GAT10-CC Series

This converter can establish communication between a regulator incorporating Shimaden's standard protocol and the CC-Link without using any program.

Features

● With the protocol converter, measured temperature values, temperature settings, and parameters can be read from or written to up to eight Shimaden units with an RS-485 interface from the CC-Link.

● By distributing each system with this equipment, the wiring for the entire system can be reduced.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver. 1.10
External dimensions	80(H)×50(W)×130(D) mm (including the base)
Mass	Approx. 260 g

C1-GW Protocol Converter for CC-Link

This protocol converter is designed to connect the RS-485 communication line of Takemoto's power remote I/O to the CC-Link.

Features

●The transmission of power data on five-element type multiple converters, etc., can be centralized on the CC-Link.
●The converter operates the remote input/output and registers of the master station according to the command/response procedure of a slave station. In a send/receive trial, data of up to 16 words can be read from the slave station.
●The converter does not require any tool software for setting functions.
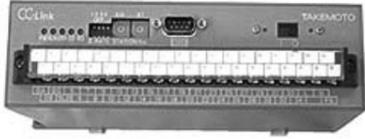
Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	200(W)×60(H)×126(D) mm
Mass	750 g

CCN-TMP Protocol Converter

Multipoint Temperature Measurement Unit

Features

●Multipoint temperature measurement
Temperature can be measured at maximum 8 points per unit.
●Cost advantage
Equipment cost is reduced by limiting the temperature measurement functions.
Simplified sensor wiring also leads to cost reduction.
●Less and simple wiring operation
Each temperature sensor is connected to the MicroLAN network with multidrop connection, enabling less wiring of the system.
Each sensor is connected to the modular jack (RJ-11) branch adapter, which makes installation and replacement easier.
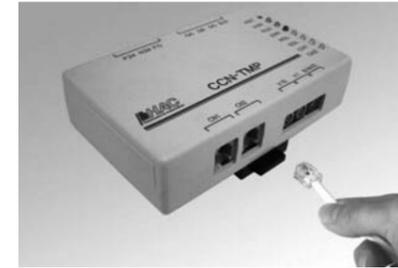
Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver. 1.10
External dimensions	125 × 80 × 32 mm
Mass	0.5 kg

VAG-CCL-G4F CC-Link/ASi Gateway

A gateway that connects the ASi network of the bottom layer bus for ON/OFF signals to the CC-Link with ease.

Features

●As a remote device station occupying three CC-Link stations, the gateway can connect ON/OFF signals of up to 124/IN and +124/OUT.
●The numbers of the slave stations comprising an ASi line can be taught easily by operating the buttons.
●The gateway is equipped with a self-diagnosis function and LEDs for displaying the status.
●The gateway is contained in a housing of protection rating IP65.

Station type	Remote device station
Number of stations occupied	3 stations
CC-Link version	
External dimensions	90 (L) × 80 (W) × 70 (H) mm
Mass	Approx. 360 g

SX5A-GM1N AS-Interface/CC-Link Gateway

This gateway converts the AS-Interface protocol with the CC-Link.
It can function as a slave station for the CC-Link or as the master station for an AS-Interface.

Features

●The gateway is compatible with AS-Interface Ver. 2.1.
●The gateway is of an IP65 protective structure.
●AS-Interfaces can be connected to the CC-Link.
●Power is supplied from an AS-Interface.
●LEDs and a two-digit display contribute to error diagnosis.
●All AS-Interfaces can be operated via the CC-Link.

Station type	Remote device station
Number of stations occupied	3 stations
CC-Link version	Ver. 1.0
External dimensions	
Mass	

Anybus Communicator Serial to CC-Link Gateway

Enables devices with a serial RS-232/422/485 interface to connect to CC-Link.

Features

- ● Serial RS-232/422/485 to CC-Link
- ● Connects up to 31 devices via RS-485
- ● Serial protocol modes: Master and Generic data modes
- ● Built-in macro for Modbus RTU Master
- ● Total 128 I/O points (bit) and 128 words on CC-Link
- ● Easy to configure via own Config Tool – No programming required

Size	120 × 75 × 27 mm (L × W × H)
Power Supply	24 VDC
Temperature	Operating + 0 ℃ to + 55 ℃
Mounting	DIN-rail, PE via DIN-rail
Mass	135 g
CC-Link version	Ver. 1 & 2
Number of stations occupied	1 to 4
Order Code	AB7008

Anybus X-gateway – CC-Link Slave to Ethernet

Simply exchanges I/O data between a CC-Link network and any Ethernet protocol (EtherNet/IP, Modbus-TCP, Profinet, EtherCAT)

Features

- ● Exchanges I/O data between CC-Link slave and a EtherNet/IP Scanner (AB7680) or Adapter (AB7841)
- ● Exchanges I/O data between CC-Link slave and a Modbus-TCP device (AB7643)
- ● Exchanges I/O data between CC-Link slave and a Profinet device (AB7661)
- ● Exchanges I/O data between CC-Link slave and a EtherCAT slave (AB7694)
- ● Rugged industrial design: CE, UL, ATEX, Haz.Loc & RoHS conformance
- ● Easy to setup - No programming required

Size	126 × 110 × 42 mm (L × W × H)
Power Supply	24 VDC
Temperature	Operating + 0° C to + 65° C
Mounting	DIN-rail
Mass	460 g
CC-Link version	Ver. 1 & 2
Number of stations occupied	1 to 4

Anybus X-gateway – CC-Link Slave to DeviceNet / ControlNet

Simply exchanges I/O data between a CC-Link network and a CIP network DeviceNet or ControlNet. Enables connectivity between CC-Link and other PLC system vendors.

Features

- ● Exchanges I/O data between CC-Link slave and a DeviceNet Scanner (AB7819) or Adapter (AB7862)
- ● Exchanges I/O data between CC-Link slave and a ControlNet Adapter (AB7871)
- ● Rugged industrial design: CE, UL, ATEX, Haz.Loc & RoHS conformance
- ● Easy to setup - No programming required

Size	126 × 110 × 42 mm (L × W × H)
Power Supply	24 VDC
Temperature	Operating + 0 ℃ to + 65 ℃
Mounting	DIN-rail
Mass	460 g
CC-Link version	Ver. 1 & 2
Number of stations occupied	1 to 4

Anybus X-gateway – CC-Link Slave to Profibus / Profinet

Simply exchanges I/O data between a CC-Link network and Profibus/Profinet protocol.
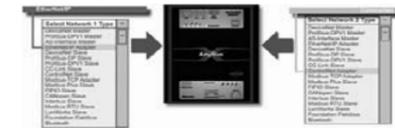
Features

- ● Exchanges I/O data between CC-Link slave and a Profibus DPV1 Master (AB7810) or Slave (AB7852)
- ● Exchanges I/O data between CC-Link slave and a Profinet device (AB7661)
- ● Rugged industrial design: CE, UL, ATEX, Haz.Loc & RoHS conformance
- ● Easy to setup - No programming required.

Size	126 × 110 × 42 mm (L × W × H)
Power Supply	24 VDC
Temperature	Operating + 0 ℃ to + 65 ℃
Mounting	DIN-rail
Mass	460 g
CC-Link version	Ver. 1 & 2
Number of stations occupied	1 to 4

EtherNet/IP to CC-Link Local & Intelligent Station 5209-DFNT-CCLINK

The ProSoft Technology EtherNet/IP® to CC-Link communication gateway allows Rockwell Automation® control platform users to integrate CC-Link Master compatible products with existing EtherNet/IP control networks.

Features

- EtherNet/IP - 5 simultaneous server connections and 3 simultaneous client connections supporting 100 communication commands per client
- CC-Link Intelligent or Local Station - Transient Message support for peer station communication.
- Adds additional acyclic data capacity (up to 8K words) to the module
- Allows integration of EtherNet/IP based systems onto a CC-Link master controlled network.
- A shared 10000 word database exchanges information from devices on both networks
- Local station provides a list of entire network slave cyclic data

Station type	Local Station
Number of stations occupied	1-4 stations
CC-Link version	Ver. 1.10
External dimensions	69(W)×132(H)×115(D) mm
Mass	0.68 kg

Contact

North America 5201 Truxtun Ave , 3rd floor Bakersfield, CA 93309 United States of America
Tel：+1 661-716-5100　Fax：+1 661-716-5101
France Zone d'activite de Font Grasse 17, rue des Briquetiers F-31700 Blagnac
Tel：+33 (0)5 34 36 87 20　Fax：+33 (0)5 61 78 40 52
<URL> http://www.prosoft-technology.com/prosoft
　　　　http://www.prosoft-technology.com/content/view/full/12404
<North America E-mail> info@prosoft-technology.com
<France E-mail> europe@prosoft-technology.com

Modbus TCP/IP to CC-Link Local & Intelligent Station 5209-MNET-CCLINK

The ProSoft Technology Modbus TCP/IP to CC-Link communication gateway allows Schneider Electric control platform users to integrate CC-Link Master compatible products with existing Modbus TCP/IP control networks.

Features

- Modbus TCP/IP - Five simultaneous Server connections on TCP/IP Service Port 502 and five additional Server connections on any unreserved service port
- CC-Link Intelligent or Local Station - Transient Message support for peer station communication.
  Adds additional acyclic data capacity (up to 8K words) to the module
- Allows integration of Modbus TCP/IP based systems onto a CC-Link master controlled network.
- A shared 10000 word database exchanges information from devices on both networks
- Local station provides a list of entire network slave cyclic data

Station type	Local Station
Number of stations occupied	1-4 stations
CC-Link version	Ver. 1.10
External dimensions	69(W)×132(H)×115(D) mm
Mass	0.68 kg

Contact

North America 5201 Truxtun Ave , 3rd floor Bakersfield, CA 93309 United States of America
Tel：+1 661-716-5100　Fax：+1 661-716-5101
France Zone d'activite de Font Grasse 17, rue des Briquetiers F-31700 Blagnac
Tel：+33 (0)5 34 36 87 20　Fax：+33 (0)5 61 78 40 52
<URL> http://www.prosoft-technology.com/prosoft
　　　　http://www.prosoft-technology.com/content/view/full/12397
<North America E-mail> info@prosoft-technology.com
<France E-mail> europe@prosoft-technology.com

EX500-GMJ1 Gateway Unit

A gateway system is adopted (the CC-Link communication protocol is converted exclusively for SMC). Four-branch wiring permits distributed control of manifold valves and input units.
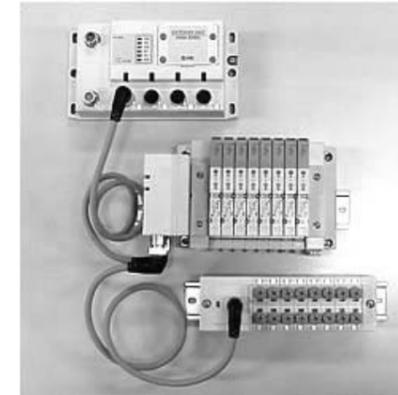
Features

- Maximum number of input/output points: 128 points (64 input points/64 output points)
- A connector connection system is adopted for input/output units so that units can be increased or decreased as you desire.
- There is no need to connect a power line to each input/output unit.

Station type	Remote device station
Number of stations occupied	3 stations
CC-Link version	
External dimensions	160 (W) × 88 (H) × 46 (D)
Mass	470 g

EX510-GMJ1 Gateway Unit

This gateway unit is capable of distributed-controlling manifold valves and input units.
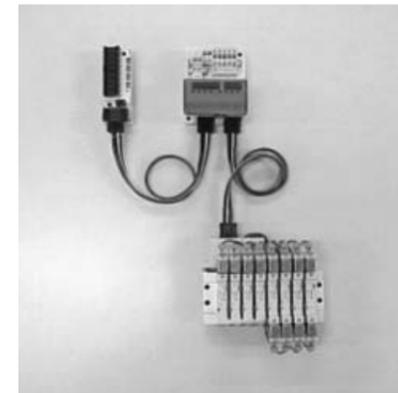
Features

- Maximum number of input/output points: 128 points (64 input points/64 output points)
- There is no need to connect a power line to each input/output unit and set an address.

Station type	Remote device station
Number of stations occupied	3 stations
CC-Link version	Ver.1.10
External dimensions	64 (W) × 80 (H) × 60 (D)
Mass	170 g

SL-GU1-C S-LINK Gateway Controller Compatible with CC-Link

SUNX has developed an S-LINK gateway controller compatible with the CC-Link that is in widespread use all over the world.
It can further reduce wiring connected to the CC-Link.

Features
●By linking the CC-Link for long-distance transmission and S-LINK for multiple-point transmission, a network realizing both long-distance transmission and multiple-point transmission can be constructed.
●Wiring distributed bit-basis I/O units, such as sensors and switches (which are the majority of connecting units) with S-LINK ensures effective wire saving. S-LINK crimping connectors offer excellent workability.

Station type	Remote device station
Number of stations occupied	2 to 4 stations
CC-Link version	Ver.1.00
External dimensions	35 (W) × 170 (H) × 72 (D)
Mass	Approx. 210 g

IB-C01 Motor Driver

A motor driver for motorized conveyor rollers (Power Moller) compatible with the CC-Link.
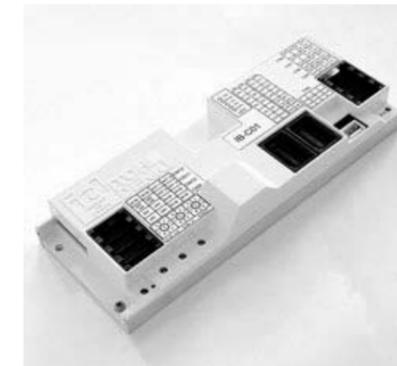
Features
●A remote I/O station and a motor driver are integrated into a single unit.
●The motor driver contains two motors.
●The two motors are independently controllable.
●Systems can be constructed with less wiring.
●One-touch type connectors (manufactured by Sumitomo 3M) make cable wiring easy.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	76(H) × 210(W) × 35(D)
Mass	

SL-VGU1-C S-LINK V Gateway Controller Compatible with CC-Link

SUNX has developed an S-LINK V gateway controller compatible with the CC-Link that is in widespread use all over the world.
It can further reduce wiring connected to the CC-Link.

Features
●By linking the CC-Link for long-distance transmission and S-LINK V for multiple-point transmission, a network realizing both long-distance transmission and multiple-point transmission can be constructed.
●Wiring distributed bit-basis I/O units, such as sensors and switches (which are the majority of connecting units) with S-LINK V ensures effective wire saving. S-LINK crimping connectors offer excellent workability.
●By connecting many bit-basis units to S-LINK V with a smaller number of occupied stations, the stations connected to the CC-Link can be effectively utilized. Saved stations can be used for intelligent devices to construct a more advanced system.

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver.1.10
External dimensions	48 (W) × 100 (H) × 66 (D)
Mass	Approx. 200 g

Ternary all-in-one servo function unit

All-in-one servo actuator (integrated amplifier, controller and CC-Link interface).
Integrated Rotary / Linear mechanism (planetary gear, cylinder and slider with ball screw mechanism, etc.)

Features
●integrated amplifier, controller and CC-Link interface. No space for amplifier is needed in electric cabinet.
●Servo motor, high performance planetary gear system, integrated rod cylinder & slider mechanism, rack & pinion system, etc.
●Two types motor: closed loop control stepping motor and Brushless AC servo motor.
●IP40 to IP65
●Besides incremental encoder, battely-less absolute encoder.
●for all factory automation system.

Station type	Remote device station
Number of stations occupied	1 station / 2 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

Contact
WITTENSTEIN ternary Co., Ltd. (Japan)
Sales department Zaimokucho 1-10-18 Ueda Nagano
Tel：81-268-29-4620　Fax：Tel 81-268-29-4621
Wittenstein, Inc. (Chicago USA)
1249 Humbracht Circle Bartlett, IL 60103
Tel：(630) 540-5300　Fax：(630) 736-6134
<URL> http://www.wittenstein-ternary.jp/

ORIENTAL MOTOR CO., LTD   CC-Link | Inverter · Servo systems

ASD□□□-□CC

The step-out-less stepping motor module αSTEP has supported the CC-Link.
This module is a positioning function built-in type, which allows positioning control directly from the CC-Link.

Features

● Stepping motor which does not step out even with a drastic load change or rapid acceleration
● Low-vibration operation can be performed at low speed for adoption of the micro step technology.
● Positioning can be made during a short time without gain adjustment even for a drive with low-rigidity mechanism.
● Standard products conform to overseas safety standards and also to the RoHS command.
● Various geared types and actuators such as an electric slider are supported.
● Sending positioning data and speed data, operation command and operation monitoring can be performed via the CC-Link.

Station type	Remote device station
Number of stations occupied	1 station/2 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

ORIENTAL MOTOR CO., LTD   CC-Link | Inverter · Servo systems

Brushless DC motor package BLE series   CC-Link

Motor and driver package has wide speed control range and realizes energy saving.

Features

● Brushless motor has high efficiency and low power loss. Energy saver to your equipment compare to inverter control motors.
● Slim and high power motor, driver package will help downsize your equipment.
● Wide speed control range, 80 to 4000r/min (Speed ratio 1:50)
● Stable peroration from low to high speed with variable load.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

ORIENTAL MOTOR CO., LTD   CC-Link | Inverter · Servo systems

DG Series corresponding CC-Link

DG series as Hollow Rotary Actuator correspond the CC-Link.
It is included controller and can control to CC-Link directly.

Features

● The DG series adopts the stepping motor supporting sudden load fluctuation and rapid acceleration.
● Less Hassle with direct coupling.
● High power and high rigidity adopting Cross-Roller Bearing.
● Large-Diameter,Hollow output makes possible simple wireing and piping.
● High accuracy positioning for non-backlash.
● Monitoring the position, speed data, operation command and motion via CC-Link.

Station type	Remote device station
Number of stations occupied	1 station/2 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

PCCⅡ-Motor-CCLink

32 Channel position control with DC motor, the position feedback will be voltage. You can use a potentiometer as the position sensor.
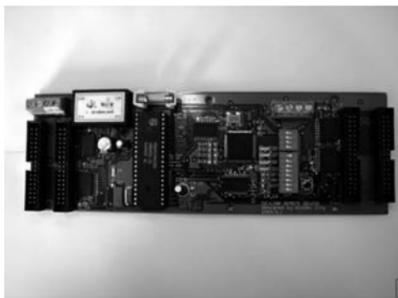
Features

- ●Low cost position control
- ●Be easy to carry out the unit and expand
- ●Great capacity and high speed communication
- ●The customer can design control program by themselves (Use 8051 Microprocessor)

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

Multiple-axis Control Drive System for System MX Line Systems

This series was developed on the new idea that a CPU for controlling the speed and current of vector inverters and an axis-to-axis control CPU for systems are integrated into a single main control unit (MCU). Various multiple-axis drive systems can be configured in combination with power amplifier units (PAUs).

Features

- ●Completely synchronous multiprocessing
  An MCU can be equipped with up to nine integrated high-speed RISC type CPUs with which the vector control and calculation of each axis and line system control and calculation, from unwinding to winding, are centrally processed by complete synchronization. The system is sure to offer ever-higher performance.
- ●Axis-to-axis communication at high speed
  Control data can be communicated between axes by memory-to-memory communication at high speed, completely solving the past problem of communication waste time caused by a network.
- ●Open network (CC-Link)
  The drive system can be easily connected to the CC-Link widely applied in the field of factory automation (FA). Additionally, the protocol thoroughly supports an intelligent device station capable of communicating messages with a PLC (first in the industry). The CC-Link interface board alone is also available.

Station type	Intelligent device station
Number of stations occupied	1 or 4 stations
CC-Link version	
External dimensions	390(H) × 170(W) × 333(D)
Mass	12 kg

TA4681N100 Smart Cam

This complete absolute rotational position detecting unit uses a brushless resolver as a sensor.

Features

- ●This position detecting system is excellent in environmental resistance and uses a long-serving brushless resolver as a sensor.
- ●The rotating direction, scale conversion, and current value can be preset by setting parameters from the CC-Link.
- ●Parameters can also be set from a PC through the RS-232C port.
- ●Noise resistance: 1500 V or more
  (Power line, sensor line: Measured with a noise simulator)

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver.1.1
External dimensions	W45 × H160 × D100
Mass	0.6 kg

TA4681N200 Smart Cam

This is an electronic cam unit for positioning control using a brushless resolver as a sensor.

Features

- ●This position detecting system is excellent in environmental resistance and uses a long-serving brushless resolver as a sensor.
- ●Smart Cam outputs unidirectional positioning control signals to the inverter by setting a target stop position from the CC-Link.
- ●Parameters can also be set from a PC through the RS-232C port.
- ●Noise resistance: 1500 V or more
  (Power line, sensor line: Noise simulator used)

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.1
External dimensions	W65 × H160 × D100
Mass	0.7 kg

High Performance TOSVERT VF-AS1 CCL001Z1

TOSVERT VF-AS1 has outstanding Performance, including high torque, fast response, high accuracy and excellent environmental compatibility with easy operation.

Features

● Compatible with CC-Link Ver.1.10 by installing a built-in option.
● The built-in noise filter/DCL reduces high frequency noise/harmonic wave.
● EASY key and 8 basic parameters.
● 0.3Hz-200% start torque, 500kW highest in the 400V class.
● My function, speed/torque control with a sensor, and RS485 communication incorporated.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Contact

<URL> http://www.inverter.co.jp/index_e.htm
<URL> http://www.inverter.co.jp/product/inv/idx_vfas1_e.asp
<URL> http://www.inverter.co.jp/product/inv/idx_option_e.asp?SERIES=AS1

Compact TOSVERT VF-S11 CCL002Z

TOSVERT VF-S11 is the easy-to-use inverter for a variety of machines and facilities.

Features

● Compatible with CC-Link Ver.1.10 by installing a built-in option.
● 1Hz-200% starting torque, maximum applicable capacity: 15kW
● The built-in noise filter of 1ph-200V and 3ph-400V input models complies with the EU EMC Directive.
● Side-by-side installation is possible.
● Monitors the expected replacement period of spare parts and outputs an alarm to serve as a rough guideline.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	64.75×64 mm
Mass	Approx. 40 g

Contact

<URL> http://www.inverter.co.jp/index_e.htm
<URL> http://www.inverter.co.jp/product/inv/idx_vfs11_e.asp
<URL> http://www.inverter.co.jp/product/inv/idx_option_e.asp?SERIES=S11

ED64sp TOYO INTELLIGENT INVERTER ED64sp-□□□□□

TOYODENKI SEIZO realize miniaturization with super high efficiency by using ED64sp inverter and an ED motor.
And it is economical, ecological Drive System.
ED64sp offers suitable efficiency at high efficiency by using the ED motor of permanent magnet built-in.

Features

● Highly efficient drive system of TOYODENKI's original technic.
● Adjustment is simple by robust control of speed.
● Possible to make torque control.
● Possible to make zero speed control.
● CC-Link communication is possible by putting on an exclusive option card.

Station type	Remove device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

VF64 TOYO INTELLIGENT INVERTER VF64-□□□□□

TOYODENKI VF64 INVERTER CAN REALIZE YOUR IDEA 100%

Features

● VF64 has 3 kinds of control system.
　(1)Seed sensorless vector controlled system
　(2)Vector conrolled system with speed sensor
　(3)V/f control
● Hybrid type vector control of TOYODENKI's original technic.
● Auto-tuning system of TOYODENKI's original technic.
● Actualizing high-level torque response and speed response power (vector control).
● CC-Link communication is possible by putting on an exclusive option card.

Station type	Remove device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

TOYODENKI SEIZO K.K

INTELLIGENT INVERTER VF66 series VF66*-#####-%%

The VF66 is the inverter which concentrated the motor drive technology of TOYO DENKI SEIZO K.K. We support every motion control of the product line by collaboration with the VF66 and CC-Link network.

Features

- ●VF66 inverter can respond to many applications. (VF66 inverter is a versatile inverter which carries five functions in one set.)
- ●The functionality which can customize an inverter in accordance with a system. (PLC functionality with a built-in inverter.)
- ●With a personal computer tool "VF66 PCTool", from the coordination after setting to a maintenance is supported powerfully.
- ●Reduced running cost. (using an ED motor.)
- ●Reduced maintenance cost.
- ●CC-Link communication is possible by putting on an exclusive option card. (CC-Link version 1.10/2.00. RoHS Compliant.)

Station type	Remove device station
Number of stations occupied	Ver1.10: 1 to 4, Ver2.00: 1 (2, 4, 8 times)
CC-Link version	Ver.1.10/2.00
External dimensions	
Mass	

AC servo driver VPS series

The newly developed VPS Series servo driver takes the balance of functionality and performance to a higher dimension.
Introducing a "useful" driver with a built-in function for 7-point positioning.

Features

- ●7 points positioning function
- ●Zero return function
- ●Feed forward torque control
- ●Resonance control filter function
- ●Auto tuning function

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	Approx. 1.0 kg ～

Model EDC drive module, series PS Mega-Torque motors

Maximum rotational speed of 10[s-1]. Realizing a detector resolution of 2,620,000 divisions/rotation.
The series PS Mega-Torque motors offer high performance that never was before.
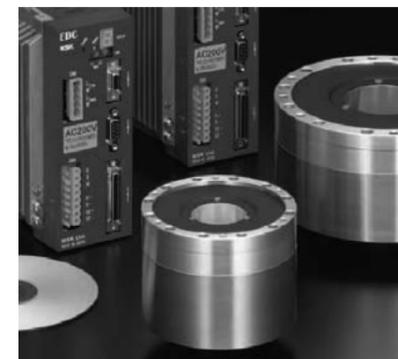
Features

- ●Reduces positioning time. Use of a new system servo algorithm cuts the setting time to one fifth or shorter compared with our predecessor models.
- ● The motors are low profile. The optimum magnetic field design realizes a thrust density of two times as high as that of our predecessor models.
- ● Equipped with an interchangeable, highly accurate absolute position detector. An integrated, interchangeable absolute position detector with a high detection accuracy of 90 seconds eliminates the return-to-the-origin operation.
- ● The drive module is down-sized. Use of a dedicated module reduces the physical volume of the drive module to 65% of our predecessor models.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver.1.10
External dimensions	85(W)×160(H)×140(D) mm
Mass	1.3 kg

NIDEC-SHIMPO CORPORATION　CC-Link | Inverter・Servo systems

PI-10 High-function Single-axis Motion Controller

This is an ultra-compact, lightweight, high-function motion controller ensuring high-precision positioning.

Features

● High-speed startup response.
● With the output frequency ranging from 1 to 5 Mpps, the motion controller is capable of controlling the motions of a wide variety of motors, including AD and DC servomotors, DD motors, and even stepping motors.
● A 32-bit encoder counter is equipped as a standard item.
● General-purpose I/O is equipped as a standard item, which can be optionally assigned.
● S-figure, cam curve, and speed multi-stage control functions are equipped as standard items.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	33.6(W) × 72.5(D) × 124(H)mm
Mass	0.36 kg

Fuji Electric Systems Co., Ltd.　CC-Link | Inverter・Servo systems

FRENIC-Eco Series　General-purpose Inverter

A new-type inverter with a new energy-saving operation function, aiming at further energy saving in air conditioning

Features

● Equipped with a new energy-saving operation function. Developed from the conventional control that minimizes the loss of a single motor, the optimum control, which leads to the smallest total loss for the inverter power consumption (inverter loss) and the loss of a single motor, is realized.
● The life of limited-life parts (cooling fan, condenser, etc.) is extended. (Designed life is 10 years.)
● Equipped with optimum functions for air conditioning (PID control, momentary power failure restart function, pick-up function, regenerated current avoidance control, and low water volume stop function, etc.)
● Simplified operation and maintenance.
● Installing a dedicated optional card makes the CC-Link communication available.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.2.0 and Ver.1.10
External dimensions	
Mass	

Fuji Electric Systems Co., Ltd.　CC-Link | Inverter・Servo systems

FRENIC5000VG7S High-performance Vector Control Type Inverter

This is the inverter combining the control performance and functions that have been sought after.

Features

● Realization of multi-drive that can control various motors in the world with high performance.
● Enhanced system support with a built-in user-programmable function card.
● Realization of high performance and cost reduction for machines or equipments such as vertical transfer, rewinder, injection molding machine, textile machine and steel line with variety of built-in functions.
● The optimum control can be selected among CT use at overload rating 150% (constant torque), VT use at 110% (square-reduction torque), HT use at 200% (overload torque) in accordance with applications.
● Installing a dedicated optional card makes the CC-Link communication available.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Fuji Electric Systems Co., Ltd.　CC-Link | Inverter・Servo systems

FRENIC Multi Series High-performance Compact Inverter

Highest level of control performance in its class
Ideal for actions specific to vertical or traverse conveying

Features

● Enables easy hit-mechanical stop control.
● Brake signal adds greater convenience.
● Select either torque limit control or current limit control to match equipment.
● Complete PID control functions.
● Complies with EU RoHS Directive.
● Long service life of 10 years for consumable parts (e.g., cooling fans and capacitors).

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver. 2.0 and Ver. 1.10
External dimensions	
Mass	

FREQROL-A700 Series General-purpose inverter

Highest level in your hand
High-performance/high-function inverter

Features

●Performance Enhancement
・High accuracy/fast response speed operation by the vector control can be performed with a general-purpose motor without encoder. Also permits torque limits during torque control and speed control.
・Vector control operation can be performed using a motor with encoder. Torque control/position control as well as zero speed control, servo lock can be realized with the inverter.

●Improved Reliability & Maintainability
・Lengthens the life of cooling fans and capacitors.
・A self-diagnosis function outputs parts life alarm and monitors degrees of deterioration, permitting corrective measures to be taken before problems occur.
・A removable terminal block and cooling fan cassette simplify replacement procedures

●Environment Friendly
・A newly developed, built-in noise filter (EMC filter) reduces noise emissions from the inverter.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1, Ver.2
External dimensions	
Mass	

FREQROL-C500 Series General-purpose Inverter

A long-desired inverter incorporating PLC functions has arrived.

Features

●Sequence control can be executed only with an inverter without using a controller.
●Programs can be created by using the programming tool "GX Developer."
●The inverter contains CC-Link functions.
●The inverter is optimum for distributed control.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	
Mass	

FREQROL-E520-KN (3-phase, 200 V Power Model), FREQROL-E540 (3-phase, 400 V Power Model) General-purpose Inverter

An enriched line of compact, powerful inverters.

Features

●The combination of Mitsubishi's unique "general-purpose flux vector control" and slip compensation can generate a torque of 150% at 1 Hz.
●The inverter can be installed in the same small area as our FR-E520.
●Programs are easy to create because the CC-Link can be operated with X and Y commands from a PLC.
●The 3-phase, 400 V power model can be operated with the CC-Link simply by connecting an optional FR-E5NC to a standard FREQROL-E540 series unit.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	
Mass	

FREQROL-F700 Series General-purpose inverter

The energy saving effect is obvious
Energy saving inverter

Features

●Environment Friendly
・Upgraded version of optimal excitation control offers improved energy saving control for both constant speed and acceleration/deceleration operations.
・An energy saving monitor displays power savings, and annual power savings, etc.
・A newly developed, built-in noise filter (EMC filter) reduces noise emissions from the inverter.

●Easy to Use
・Optimal air-conditioning and fluid control is possible by standard fan and pump functions such as PID control, commercial operation switching, V/F5 point adjustable, original operation continuation at instantaneous power failure, and regeneration avoidance.
・When CC-Link is running, operation can be controlled by X, Y commands from a PLC, making program creation easy.

●Improved Reliability & Maintainability
・Lengthens the life of cooling fans and capacitors.
・A self-diagnosis function outputs parts life alarm and monitors degrees of deterioration, permitting corrective measures to be taken before problems occur.
・A removable terminal block and cooling fan cassette simplify replacement procedures.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1, Ver.2
External dimensions	
Mass	

MITSUBISHI ELECTRIC CORPORATION | CC-*Link* | **Inverter・Servo systems**

FREQROL-E700 series, general inverter

Features

● Provides one of the highest level of control performance among compact inverters
　・Equipped with Mitsubishi Electric Corporation's unique "Advanced Magnetic Flux Vector Control" that optimally controls the magnetic flux in a three-phase motor, this inverter develops the highest level of torque characteristics over a wide range from the low frequency band up to the high frequency band.
　　(Startup torque: 200% 0.5Hz (3.7 K or less))
　・With the short time load capacity improved to 200% 3 seconds, it realizes more tenacious operation.
　・The torque limiting function protects the mechanisms, limits loads and prevents crashing.
● Compact and space-conservative
　・Though densely packed with high performances in a compact body, the external dimensions well consider the installation exchangeability with the conventional models (FREQROL-500 series).
　・Allowed to install its sides in close contact, the inverter is space-conservative.
● Extensiveness
　・Simply hooking up an optional FR-A7NCE kit to the standard FREQROL-E700 series enables the CC-Link operation.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1, Ver.2
External dimensions	
Mass	

MITSUBISHI ELECTRIC CORPORATION | CC-*Link* | **Inverter・Servo systems**

MR-J2S-□CP-S084, MR-J2S-T01 Mitsubishi General-purpose AC Servo Amplifier

Since this servo amplifier incorporates a positioning function, it can construct a positioning system via the CC-Link without using any positioning controller.

Features

● The servo amplifier MR-J2S-□CP-S084 incorporating a CC-Link-compatible positioning function is capable of controlling and monitoring up to 42 axes of servo amplifiers from the PLC if it is connected to the CC-Link interface unit MR-J2S-T01.
● The servo amplifier does not require any positioning controller because it contains a positioning function.
● Positioning data can be transmitted and servo amplifiers can be activated, deactivated, and monitored via the CC-Link.
● The servo amplifier is compatible with servomotors of 50 W to 7 kW.
● The servo amplifier has a model-adaptive control function and a real-time automatic tuning function which further improve the performance of the machine with ease.
● The high performance and functionality of Mitsubishi's general-purpose AC servomotor MELSERVO-J2-Super series means they can be used as they are.

Station type	Remote device station
Number of stations occupied	1 station/2 stations
CC-Link version	
External dimensions	
Mass	

MITSUBISHI ELECTRIC CORPORATION | CC-*Link* | **Inverter・Servo systems**

MR-J3-□T Mitsubishi General-purpose AC Servo Amplifier MELSERVO-J3 Series

Next generation servo that keeps progressing.
Entering position data, motor rotational speeds and so forth in the point table like setting parameters enables positioning operation.

Features

● With position data and speed data entered in the point table in the servo amplifier, the startup signal from the host controller initiates the positioning operation.
● Servo data transmitted through the CC-Link communications to the host controller is available for control by the host application program.
● Compatible with roll feed operation and equally divided turret operation.
● A sophisticated automatic tuning function by an advanced damping control, an adoptive filter II and a robust external disturbance compensation function.
● Available in a wide range of motor ratings from 50W to 22kW. The 100V, 200V and 400V power line specifications are available for overseas use.
● Well-established startup and adjustment support functions by the setup software "Mr. Configurator" (compatible with USB I/F). Compatible with the parameter module (MR-PRU03).

Station type	Remote device station
Number of stations occupied	1 station/2 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

MITSUBISHI ELECTRIC CORPORATION | CC-*Link* | **Inverter・Servo systems**

AJ65BT-D75P2-S3 Positioning Unit

Features

● The positioning unit can be placed in a distribute manner.
● With the AC servomotor MELSERVO-H/J2/J2S series, an absolute position detecting system can be easily constructed.
● A differential driver contributes to the following:
　・Faster pulse output (400 kpps)
　・Longer distance of connection to a drive unit (up to 10 meters)
● A variety of positioning control functions
　・Up to 600 positioning data can be set for each axis.
　・Seven types of home position return functions are available.
　・Automatic trapezoidal acceleration/deceleration and S-figure acceleration/deceleration are available as acceleration/deceleration modes.

Station type	Intelligent device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	170(W) × 63.5(H) × 80(D)mm
Mass	0.50 kg

Inverter Geared Motor GN Series

This is a geared motor with a CC-Link inverter incorporated, which realizes higher performance of the equipment and wire saving.

Features

● Constant torque operation in 6 to 60 Hz is possible without parameter settings.
(constant torque motor specifications)
● Control on multiple devices can simply be performed through CC-Link communication.
● A power supply cable and CC-Link communication cable can be multidrop-connected, allowing wire saving.
● With an incorporated inverter, wiring between a motor and inverter is not required as well as a control panel.
● The inverter, which is a totally enclosed type inverter, can also be used outside.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Energy Efficient and Powerful!　Current Vector Control Inverter Varispeed F7

Varispeed F7 strongly supports high performance and energy savings of a wide variety of equipment machinery, and is the current vector control drive that performs high cost performance.

Features

● The optimum operation can be achieved in a wide range of usage from fan pump to a general industrial machine
● A powerful torque characteristic is demonstrated with a reputable current vector control without PG.
● Three types of auto-tuning is available to drive any type of motor in the world.
● Models of 22 kW or more come equipped with a built-in DC Reactor to minimize harmonics current
● The quick CC-Link response becomes possible by installing the option card.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

YASKAWA AC Drive V1000 Compact Vector Control

V1000 is the first in its class fully equipped with current-vector control making it even easier to optimize your applications.

Features

● The most advanced motor drive technology can run both induction motor (IM) and synchronous motors (PM),
● V1000 is the first in its class fully equipped with current vector control.
● Optional visual programming software lets you instantly customize V1000 to your application.
● Replace drives in 10 minutes thanks to a pluggable terminal board with a built-in Parameter Back-Up function.
● V1000 is the first drive in its class to come standard with safety input features compliant with EN954-1, safety category 3.
● YASKAWA has applied the most advanced thermal simulation technology to create the world's smallest compact drive.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

Varispeed G7 Series Current Vector Control General-purpose Inverter

This fully-fledged current vector control inverter is the first general-purpose inverter in the world to adopt a three-level control system.

Features

● This inverter adopting a three-level control system is a quick solution to latent problems with 400 V-class inverters, such as surge voltage.
● The inverter with higher performance and functionality backed by full-fledged current vector control ensures powerful and highly accurate operation of various machines and equipment.
● Simply mounting an optional board makes the inverter compatible with the CC-Link.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	
Mass	

YASKAWA ELECTRIC CORPORATION | CC-Link | Inverter・Servo systems

VS-686SS5 Series Compact Super Energy-saving Variable Speed Drive

The combination of a compact, lightweight super energy-saving motor (synchronous motor with a built-in high-performance magnet) and our unique energy-saving control offers high-efficiency, high-power-factor operation that has never before been achieved.

Features

● Because of small power loss, the running cost can be considerably reduced.
● PC-less current vector control ensures smooth motion.
● The drive has reached the highest level of ease of use (outstanding response, selection of speed according to the machine).
● Simply mounting an optional board makes the inverter compatible with the CC-Link.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	
Mass	

YASKAWA ELECTRIC CORPORATION | CC-Link | Inverter・Servo systems

Varispeed V7 Series Compact General-purpose Vector Control Inverter

An ultra compact, high-function vector control inverter that enables powerful and flexible operation.

Features

● Our unique general-purpose vector control ensures outstanding torque characteristics.
● A software library full of drive know-how, including PID control and energy-saving control, enables the inverter to deal with various applications.
● The inverter incorporates a CC-Link communication function in a compact body as a standard item.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

YASKAWA ELECTRIC CORPORATION | CC-Link | Inverter・Servo systems

Matrix Converter for Environmentally Friendly Motor Varispeed AC

Improved Energy Efficiency with Direct Conversion from AC to AC

Features

● No harmonic distortion creates the perfect environment for peripheral equipment without the need for additional devices.
● Power supply regeneration functions offer efficiency on both the regeneration and motor sides.
● No need for a converter or extra equipment to handle harmonic distortion, Fit the entire system into a compact space.
● Continues operation at low speeds. Provides 100% torque at zero speed and 150% torque for one minute.
● The quick CC-Link response becomes possible by installing the option card.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

YASKAWA ELECTRIC CORPORATION | CC-Link | Inverter・Servo systems

YASKAWA AC DRIVE High Performance Vector Control

A cutting-edge, highly efficient AC drive, positioning control without an encoder,capable of unparalleled torque characteristics, and the ability to run both induction motors and synchronous motors.

Features

● The most advanced motor drive technology runs both induction and synchronous motors.
● Combining a synchronous motor with A1000 allows for servo lock and positioning control, without the use of a motor encoder.
● Combining a synchronous motor with A1000's Energy Saving control allows for even greater efficiency.
● Visual programming features in DriveWorksEZ makes it a breeze for the user to customize the drive.
● The first terminal block with built-in memory helps save valuable set up time in the event of an application breakdown.
● All components are carefully selected for long-life performance. Maintenance Monitors indicate that parts may need replacement.

Contact

Refer to http://www.e-mechatronics.com/en/「Sales Network」
<URL> http://www.e-mechatronics.com/en/

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	Refer to http://www.e-mechatronics.com/en/
Mass	Refer to http://www.e-mechatronics.com/en/

Yokogawa Electric Corporation — CC-Link — Inverter・Servo systems

Intelligent driver DrvP Ⅲ

Driver dedicated to direct drive motors "DYNASERV" and "LINEARSERV".

Features

● The same operation can drive both a rotating DD motor "DYNASERV" and a linear servo motor "LINEARSERV".

● "DYNASERV" is available in a wide range of about 40 models from the resolution of 420 thousand to 4.09 million pulses per rotation and from the torque of 4 to 500 N·m.

● The "LINEARSERV" is an all-in-one type linear motor that integrates a thrust generator, a linear encoder and linear motion guide bearings in a unit.

● A support tool is available that enables easy DD motor setup, automatic tuning, oscilloscope functions and operation without motor.

● Equipped with a variety of functions such as various filters, an operation table capable of positioning operation and m:n scaling functions.

Station type	Remote device station
Number of stations occupied	1 station or 2 stations (select to set)
CC-Link version	Ver.1.10
External dimensions	500 W: 60(W)×195(H)×150(D) mm 2 kW: 100(W)×195(H)×200(D) mm 4 kW: 200(W)×195(H)×200(D) mm
Mass	500 W: 1.2 kg　2 kW: 2.5 kg 4 kW: 6.5 kg

Matsutame Co., Ltd. — CC-Link — Inverter・Servo systems

Controller dedicated to super FA advanced series

This controller controls super FA actuators.
Choose the specifications that best suit your needs.

Features

● High performance
Integrating a 32-bit RISC CPU and an intelligent servo driver realizes high-speed and high accuracy.

● Sophisticated function
Sophisticated functions are of standard features.
・Multiple task control
・Real time automatic tuning
・Status monitoring

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	1 to 2 axes less than 200W: 262(W), 400W: 302(W)×195(H)×154 (D) 3 to 4 axes less than 200W: 362(W), 400W: 442(W)×195(H)×154 (D)
Mass	2.7 to 6.7kg

CKD Corporation — CC-Link — Inverter・Servo systems

AX-OPX-7G Slave Station for Absodex

Just connect it, and a network will be constructed.

Features

● By attaching this slave station to the I/O connector (CN3) of an H or S type driver, it can be connected to a field network CC-Link system of Mitsubishi Electric's MELSEC-A QnA series.

● Wiring can be drastically reduced.

● Number of I/O points: 16 input points and 14 output points

● Five baud rates can be set (156 kbps, 625 kbps, 2.5 Mbps, 5 Mbps, 10 Mbps).

● An output mode in case of communication errors can be selected (hold or clear).

● External emergency stop input (b-contact) can be connected to the emergency stop signal in series in serial communication.
・Absodex DD actuator AX series
CKD's Absodex is available with a maximum output torque of 6 to 500 N m according to the application.

Station type	
Number of stations occupied	1 station
CC-Link version	
External dimensions	W=25.5, H=70, L=83 (mm)
Mass	

PCON/ACON/SCON - Position Controllers for ROBO Cylinder

Position controllers for the electronic cylinder "ROBO Cylinder"

Features

● Just set positions to perform positioning. No program is necessary
● PCON and ACON are capable of positioning up to 768 points and SCON up to 512 points
● PCON and ACON allow the user to directly specify a position number. A variety of actuators can be used, such as rod, slider, table, gripper, and rotary types

Station type	Remote I/O station, Remote device station
Number of stations occupied	SCON : Remote I/O 1 station, PCON/ACON : Remote device 4 stations at the maximum
CC-Link version	Ver. 1.10
External dimensions	
Mass	

ROBONET - Field Network Dedicated Controller for ROBO Cylinder

The more space and wire-saving controller exclusively for networks

Features

● A compact design of width 34 mm × height 100 mm × depth 73 mm
● Capable of positioning up to 768 points
● Allows directly specifying a position number
● Only a single communication unit is needed to control 16 axes

Station type	Remote device station
Number of stations occupied	4 stations at the maximum
CC-Link version	Ver. 2.0
External dimensions	
Mass	

PSEL/ASEL/SSEL - Program Controllers for ROBO Cylinder

Program controllers for the electronic cylinder "ROBO Cylinder"

Features

● With SEL programs, the controllers can be operated without PLCs.
● Capable of positioning up to 1,500 points
● A variety of actuators can be used, such as rod, slider, table, gripper, and rotary types

Station type	Remote device station
Number of stations occupied	3 stations at the maximum
CC-Link version	Ver. 1.10
External dimensions	
Mass	

XSEL - Program Controller for Single Axis, Liner, Orthogonal Axis, and Scara Robots

The multi-axis program controller capable of controlling up to 6 axes

Features

● Provides high-performance while realizing simple settings by SEL language
● Capable of positioning up to 20,000 points
● Up to 128 programs available
● Up to 9,999 program steps available

Station type	Remote device station
Number of stations occupied	3 stations at the maximum
CC-Link version	Ver. 1.10
External dimensions	
Mass	

DSQC 378 CC-Link Interface for Robot Controller

The DSQC 378 unit offers an interface between the CC-Link bus and the ABB robot controller.

Features

● All ABB robots with S4 and IRC5 controllers can be connected to the CC-Link network as a remote device station
● The robots are designed for painting, sealing, welding, handling, palletizing etc.

Station type	Remote device station
Number of stations occupied	Configurable 1-4 stations
CC-Link version	Ver. 1.10
External dimensions	170(L)×115(W)×48(H) mm
Mass	

FANUC Robot *i* Series - Making Plants Intelligent, Robotized, and Networked for the 21st Century

The FANUC robot *i* series is a highly reliable intelligent robot controlled by the high-performance robot controller R-J3iB full of intelligent functions.

Features

● The robot controllers R-J3iB and R-J3iB Mate support a CC-Link communication function (slave) as an option.
This function provides communication complying with the CC-Link (Ver. 1.10).
● With the CC-Link communication function (slave), a robot, as a remote device station, can be connected to and communicate with a PLC.
● The robot controller R-J3iB supports Ethernet communication as a standard item.
These communication functions enable a single personal computer to control many robots or integrally control PLCs and peripheral devices.

Station type	Remote device station
Number of stations occupied	1 and 4 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

HNC-C580 Series Robot Controller

An ultra lightweight, compact body with no servo amplifier inside.

Features

● This is a simple, easy-to-use controller considering PLC control. To reduce wiring for PLCs, it is compatible with the CC-Link, etc.
● Robots can also be controlled from a PC via the RS-232C.
● A wide variety of motion patterns, including insertion/takeout and path PTP, can be set only with a single code.
● A controller is capable of controlling up to nine axes of a total of four robots as a multi-robot.
● A high-speed serial link is used to connect the controller to a servo amplifier, realizing wire saving.
● The controller weighs only 1.5 kg and measures just 80 mm x 110 mm x 240 mm.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	80×110×240 mm
Mass	1.5 kg

RP, RV-A, RH-A, RV-T Robot for Industrial Use

With upgraded network functions, this robot offers diversified systems.

Features

● A 64-bit RISC processor helps the robot move at high speed and with a high degree of accuracy and locus. Appropriate functions are available for each operation.
● Communication via the CC-Link can be established simply by inserting a CC-Link card in the option slot.
● You can easily access any device connected to the CC-Link by means of a robot-dedicated language (MELFA BASIC).

Station type	Intelligent device station
Number of stations occupied	1 to 4 stations
CC-Link version	
External dimensions	
Mass	

YASKAWA ELECTRIC CORPORATION — *CC-Link* | Robot

Industrial robot "MOTOMAN"

This robot boasts high expandability and is capable of constructing diversified systems.

Features

- Capable of controlling up to 36 axes (up to 4 manipulators)
- High-performance control unit integrating the latest operation control method.
- Excellently expandable, operational and safe.
- Compatible with various kinds of application software.
- Compatible with open communications that facilitate system construction.

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver.1.10
External dimensions	500 (W) × 900 (H) × 420 (D) mm
Mass	70 kg

YAMAHA MOTOR CO., LTD. — *CC-Link* | Robot

RCX142/RCX222 Yamaha Robot Controller

Highly functional multi-axes controller to fulfill full function of Yamaha robots

Features

- Complete absolute as the standard specifications
- Variable control such as capable of interpolation control of three dimensional circular arcs, area check output function, and torque limiting drive
- Compact despite equipped multi-functional and multi-axes controller

Station type	Remote device station
Number of stations occupied	1 to 61
CC-Link version	Ver. 1.10
External dimensions	
Mass	

YAMAHA MOTOR CO., LTD. — *CC-Link* | Robot

ERCX/SRCX/DRCX/SRCP/SRCD Series Robot Controller

A CC-Link-compatible controller for Yamaha's single-axis and orthogonal robots.

Features

- A complete absolute system makes the home position return of robots no longer necessary (ERCX/SRCX/DRCX).
- I/O devices connected to the parallel I/O ports of the controller, such as sensors, can be controlled from the sequencer without using any program.
- According to the motor output, the optimum driver model can be selected for each motor.
- The optimum gain and acceleration/deceleration can be automatically set simply by entering the mass of the object to be conveyed at the mass parameter.
- Even beginners can program the controller with ease because of BASIC-like commands.
  By only teaching points and then giving I/O move commands from the sequencer, the controller can be used without any program.
- A multitask function permits input/output control while a robot is moving.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver. 1.10
External dimensions	ERCX: 30(W) × 250(H) × 157(D) mm SRCX/SRCP/SRCD : 78(W) × 250(H) × 157(D) mm DRCX: 100(W) × 250(H) × 157(D) mm
Mass	ERCX: 0.9 kg, SRCX/SRCP/SRCD: 1.5 kg, DRCX: 2.1 kg

YAMAHA MOTOR CO., LTD. — *CC-Link* | Robot

SR1-P/SR1-X Yamaha Robot Controller

Compact highly-functional and advanced single-axis controller

Features

- High performance type single-axis controller with simple robot language, multi task, communication, and use of the field bus
- Compact design which height is made the same as the new type 2-axis controller RCX/222
- Lead free mounting PCB is used taking influence to the environment

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	Ver. 1.10
External dimensions	
Mass	

| CC-Link | **Robot**

Industrial DENSO Robot "HIGH SPEED & COMPACT"

The robot with a rich lineup corresponds to your various needs (VP, VS, VM, HS, HM, XR, and XYC-4 series).

【CC-Link board】

【VS series】 【RC7M】

Features

● The RC7M controller achieves a high extendibility to correspond to the user's needs.
● Attaching a special option board to the extension slot enables the CC-Link slave communication function.
● When the system is connected to peripherals such as PLC, man-hours necessary for wiring are reduced, and the installation and maintenance are easy.

Station type	Remote device station
Number of stations occupied	2 to 4 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

| CC-Link | **Barcode・ID**

NX-50CL CC-Link Compatible Network Controller

A network controller NX-50CL allows devices incorporating automatic identification function to be used in a network.

Features

● Barcode readers and RFID systems can be installed on CC-Link.
● Communication stability of automatic identification devices is visually recognizable in numerical values. This achieves higher efficiency.
● Barcodes and RFIDs can be installed together in a single system.
● Automatic identification function is available for IC tags. This optimizes communication characteristics.
● System integration software is provided. Manage multiple devices with one application.

Station type	Remote device station
Number of stations occupied	2 to 4 stations
CC-Link version	Ver. 2.00
External dimensions	
Mass	Approx. 300 g

| CC-Link | **Barcode・ID**

RFID protocol converter TCPRO-RFCV

RFID system can be readily provided in the FA environment!
A sequencer can be readily connected with RFID reading/writing unit!

Features

● Easy connection:
As the device can be easily connected with MELSEC CC-Link, RFID systems can be readily constructed.
● Compatibility with multiple frequencies:
The device can be connected with reading/writing unit for every frequency band with the use of the internal switches.
● From beginners to professionals: The device can read or write a single tag by providing a simple ladder. It can also read and write plural number of tags for professionals if so set.
● Serial connection: If necessary, it can be connected with a sequencer in the serial mode with the computer link unit connected via RS-232C interface.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.2
External dimensions	150(W) × 105(D) × 50(H)
Mass	

ID system processor / Basic type　BIS C-489-1_-KBT02

Sure data communications and various sizes of ID tags make it applicable to a variety of tasks such as controlling tools, pallets and processes.

Features

- Various code tags of BIS C series can be used Size phi 9mm miniature code tag to 80x40x22mm Memory capacitance up to 8k byte
- Data transmission is simultaneously performed on two channels
- In zone signal is output when a data carrier is in the communication area of an antenna
- Write protect function prevent rewriting carelessly
- Up to 16 units can connect to a master unit
- Transmitted data is assured by inductive coupling method and special checking algorithms.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	190(W)×100(H)×40(D) mm
Mass	750 g

ID system processor / Basic type　BIS S-404-30-KBT01

BIS ensures a reliable data-exchange between material flow and data processing in all areas of manufacturing where materials are being moved.

Features

- High-speed data transmission.
- Data transmission is simultaneously performed on two channels.
- In zone signal is output when a data carrier is in the communication area of an antenna
- Write protect function prevent rewriting carelessly
- Up to 16 units can connect to a master unit
- Transmitted data is assured by inductive coupling method and special checking algorithms.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	190(W)×100(H)×40(D) mm
Mass	750 g

ID system control module / low cost tag ver. BIS M-689-001

BIS M support ISO15693. Cost effective data carriers reduces initial introduction cost.

Features

- High data integrity:Transmitted data is assured by inductive coupling method and special checking software.
- 2-channel specification: Allows to connect two ID antennas for parallel processing.
- With an in-zone signal output function: Checks that the ID tag is within the area of communication.
- With a write protect function: Prevents unintentional overwriting to protect data.
- Connecting up to 16 modules: One master module can connect up to 16 modules.
- +COM type also available. Model number BIS M-689-001X (Antenna case is connected to +COM)

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	190(W)×100(H)×40(D) mm
Mass	750 g

ID system control module / low cost tag ver. BIS M-689-002

BIS M support ISO15693. Cost effective data carriers reduces initial introduction cost.

Features

- High data integrity:Transmitted data is assured by inductive coupling method and special checking software.
- 2-channel specification: Allows to connect two ID antennas for parallel processing.
- With an in-zone signal output function: Checks that the ID tag is within the area of communication.
- With a write protect function: Prevents unintentional overwriting to protect data.
- Connecting up to 16 modules: One master module can connect up to 16 modules.
- Interchangeable with commands for Mitsubishi Electric's AJ65BT-D35ID2.
- +COM type also available. Model number BIS M-689-002X (Antenna case is connected to +COM)

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	190(W)×100(H)×40(D) mm
Mass	750 g

AJ65BT-R2N RS-232C Interface Module

Features

● Start-up and adjustment possible by the side of the device: You can use GX Developer, which is MELSEC programming software, as well as GOT to make connection and to perform online operation. This enhances the work efficiency of debugging and maintenance.

● Compatible with the transmission speed of 38400 bps

● Easy setting for multiple connections: Sequence programming becomes much easier, enhancing the efficiency of program development.

Station type	Intelligent device station
Number of stations occupied	1 station
CC-Link version	Ver. 1
External dimensions	170(W)×80(H)×47(D) mm
Mass	0.4 kg

AC Power Contoroller [CC-SSR4]

4-channel Power Controller with Solid-State-Relay. (Phase control / Cycle control)

Features

● MVs from the PLC Using RS-485 Serial Communications, and Contorls Load Power with Using the SSR

● Cycle control and Phase control are changed by the serial data from PLC.

● It is possible to select suitable SSR matched with load current capacity.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

SQLC-110L Electronic Super Multi-meter

The digital meter with an easily visible screen which can measure 4 items simultaneously, bringing about the significant expansion of measuring ranges and increase of outputs.

Features

● 4 measuring indication consisting of 1 main monitoring and 3 submonitoring plus a bar graph display.

● It can measure higher harmonic currents and voltages.

● It can measure leak currents (excluding those for 3-phase 4 lines systems).

● It can output CC-Link communication, pulse, alarm, and CPU abnormality signals.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	110(W)×110(H)×104(D) mm
Mass	0.6 kg

X-Series (Electronic Multimeter)

The electronic multimeter for incoming and distribution panels can save wire, space, and cost. In addition, the multimeter is optimal for electric power measurement necessary for energy saving measures.

Features

- The color multi series is also added to the lineup. Its display color changes if a trouble occurs (green to red).
- The number of elements of electricity measured by the multimeter is at the highest level in the industry (12 elements). Harmonics are also measured. Four types of measurement are simultaneously displayed (1 analog display and 3 digital displays). Wide viewing angle (The viewing angle in the vertical direction is not restricted.)
- Common to phases and wires (single phase two wires, single phase three wires, three phases three wires), common to 110V and 220V
- Besides CC-Link outputs, pulses and alarms can be output (compatible with CC-Link Ver. 2.00).
- The external contact inputs (3 points) enable you to monitor the multimeter from the central control panel.
  (The color multi series changes its front side color from green to red.)
- The leak electric current measurement type and the zero-phase voltage measurement type are also available.

Station type	Remote device station
Number of stations occupied	1 station, 42 units at the maximum
CC-Link version	Ver.1.10, Ver.2.00
External dimensions	110(W)×110(H)×120(D) mm
Mass	600 g

Specifications

Model (type)	XM-110	XCM-110	XM-110-6	XCR-110	XM-110-5
(Specification 1: optional)	Liquid crystal type multimeter	Liquid crystal type color multimeter	Multimeter with the Io/Igr measurement function	Color multimeter with the Io/Igr measurement function	Zero-phase voltage measurement type
(Specification 2: optional)		Color multimeter		Color multimeter	
Station type	Remote device station				
Number of stations occupied	1 station, 42 units at the maximum				
CC-Link version	Ver.1.10, Ver.2.00				
External dimensions	110(W)×110(H)×120(D) mm				
Mass	600 g				

Mitsubishi MDU Circuit Breaker with Measurement/Display unit (MDU)

A circuit breaker and a measurement/display unit are integrated!
With built-in VT and CT, the circuit breaker requires less space and assists in reducing work and saving energy.

Features

- A low-voltage circuit breaker combines an MDU for measuring, displaying, and transmitting information on cable ways, and closely monitors energy consumption by measuring current, voltage, power, electric energy, harmonic current, leakage current, power factor, etc., to assist energy-saving.
- Prior warnings against current, leakage current, etc., aid preventive maintenance.
- Since the circuit breaker saves its tripping information (causes and current values), you can investigate the causes of accidents and correct them sooner.
- The circuit breaker comes with a wide range of ratings from 50 A (225 AF) to 6300 A (6300 AF).

*Some functions are not available depending on the model or ampere frame.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

EMU-C7P4-6-A Mitsubishi Multiple-circuit Power Measuring Module *EcoMonitor II*

It covers a wide range of applications, from on-site energy saving improvement and analysis to centralized monitoring through a network!
A single module is capable of measuring the current, voltage, power, and electric energy of up to six circuits (three single-phase wires/three three-phase wires).

Features

- The module is capable of measuring the current, voltage, power, and electric energy of plural low-voltage circuits (six circuits: three single-phase wires/three three-phase wires) at the same time and saving, displaying, and transmitting measured data, and contributes to space saving and work reduction.
- With the pulse input of up to four circuits, the production output to be used for unit requirement control can be counted, and the flow rates of energy of other power sources, such as steam and gas, can be metered.
- The module has a double logging function that consists of offline logging for on-site energy saving improvement and analysis, and online logging for central monitoring through a network.
- In offline logging, the module automatically saves the hourly electric energy and hourly pulse amount for up to 131 days (automatic logging and saving), and can also save detailed data at cycles of 250 ms to 30 minutes (selective logging and saving).

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	175(W)×100(H)×65(D) mm
Mass	0.7 kg

Mitsubishi Energy Measuring Module *EcoMonitorPro*

Energy-saving assisting units have entered the second generation!
The EcoMonitor series has evolved by "packaging and adding flexibility"!

Features

● The optimum packaging for each situation
・Each functional module is packaged for the optimum configuration. Modules for one, three, five, and seven circuits are available for efficient system configurations.
・Modules exclusively for low voltage and for low/high voltage are available so that a single module makes up a receiving circuit (high voltage) and a distributing circuit (low voltage).

● Flexible system configurations
・A single module can measure plural transformer systems (irregular voltage, irregular phase line).
・An optional display module can display plural circuits.
・Large-size options are also available.

● Cost/performance ratio
・The cost per circuit has been reduced by approximately 20% compared with our conventional modules (when *EcoMonitor Ⅱ* is compared with seven circuits for receiving/distribution monitoring).
・With a relay system using a current sensor cable, circuits can be adjusted to the optimum length by one meter for actual use, ensuring efficient, economical wiring.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	

MELPRO-D Series Digital Type Protective Relay for High Voltage and Special High Voltage

This relay, which is compatible with advanced communication networks, strongly assists the automation of power distribution.

Features

● The relay is accessible from a central control system (steady values, measured values, operating status, constant monitoring, time, etc.).

● A wide variety of models are designed to protect various high-voltage and special-high-voltage systems (receiving and distributing units, transformers, motors, generators, systems, etc.).

● Upgraded measuring functions (accident recording function, current, voltage, power, frequency, etc.) are used.

● Programmable contacts are adopted for output contacts, which can be optionally set according to OR logic.

● The relay offers high-accuracy protection based on the digital calculation expression for high-speed sampling.

● An advanced constant monitoring function contributes to improved reliability.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	D1 unit: Approx. 150 (W) × 250 (H) × 200 (D) mm D2 unit: Approx. 300 (W) × 250 (H) × 200 (D) mm
Mass	D1 unit: Approx. 3 kg D2 unit: Approx. 5 kg

LG-5F/LG-10F Mitsubishi Ground Fault Cluster Monitor unit

From "alarm monitoring" to "visible, continuous monitoring". CC-Link data transmission enables the host monitor system to monitor continuously. This provides the tendency of leakage currents for analyzing abnormalities and facilitating preventive maintenance of facilities.

Features

● The large-sized LCD displays ground fault levels in 10 circuits simultaneously while displaying leakage current digitally for each circuit.

● The CC-Link transmission enables to check alarm generation in each circuit and remotely monitor measurement values in each circuit.

● The ranges of setting are 30mA to 4A for sensitivity current and 0.1 to 5 seconds for operation time.

● Integrated with the integral circuit against high harmonics and surges, it does not operate erroneously or unexpectedly even if a ground fault current flows in the secondary circuit of the inverter.

● Complies with the high-speed type and time-delay characteristics of the leakage current relays specified in JIS C 8374.

● The integrated self-diagnosis functions generate an output of system alarm in system abnormalities such as when the built-in CPU runs away.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	□144×98mm
Mass	0.9kg

ME110NSR-C ELECTRONIC MULTI-MEASURING INSTRUMENT New-S Series

Mitsubishi Electronic Multi-measuring instrument New-S series features high performance and crystal clear display, supporting your measuring and monitoring systems.

Features

● High accuracy monitoring functions by our dedicated ASIC.

● Easy to read display functions. The bar graph indicator makes it possible to read easily.

● "High-tech, yet simple" operating functions. Simple setting and simple operations.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	□110×98mm
Mass	0.5kg

Power reception and distribution device

Inverter rectifier HVS series

HVS series output good waveform for plating and contribute to save electricity charges.

Features

- Low current ripple rate and high efficiency.
- Conservation of electric power design to save electricity charges.
- Lightweighting by new structure design.
- Protection alarms for over-current, overheating, and dead-short.
- Higher durablity and environmental resistance characteristics than previous series.
- Monitor function for upper and lower limit values which memories 20 settings of upper and lower limit value and detecting time.

Station type	Remote device station
Number of stations occupied	1 station (2 stations in ver.1.1.)
CC-Link version	Ver.2.0 or ver.1.1
External dimensions	Refer to product's URL below
Mass	Refer to product's URL below

Contact

Head office： TEL：052-821-6111　FAX：052-821-9154
Tokyo branch： TEL：03-3788-1571　FAX：03-3788-5481
Osaka branch： TEL：06-6974-6161　FAX：06-6974-0603
Sendai branch： TEL：022-291-3330　FAX：022-295-0335
Hiroshima branch： TEL：084-934-0949　FAX：084-934-0949
Fukuoka branch： TEL：092-414-2016　FAX：092-414-2021
<URL> http://www.chuo-seisakusho.co.jp/
　　　http://www.chuo-seisakusho.co.jp/product_int/pdf/power_05.pdf

CIF 50-CCS PCI CC-Link Slave Communication Interface Card

PCI type. Easy development of CC-Link Slave Station as plug and play.
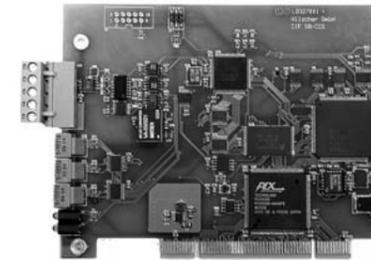
Features

- PCI card for use in the standard PC environment
- Drivers for Windows or Linux are available
- Fast "Time to Market"
- Cheaper than own development
- Easy to configure
- MFP3 technology

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	134 × 107 × 20mm
Mass	

Rectifier PMD series

PMD series are small multi-functional high quality rectifiers for functional plating used in electrical parts, noble metal plating, and research & development.

Features

- PMD outputs four-type waveforms: rectangular pulse, single phase full wave, triangular pulse, and low ripple direct current.
- "9steps, 9channels" sequence control which you can freely set waveform, intermittent time, up-slope time, and down-slope time.
- 42 sets of PMD can be connected together by using CC-Link ver.2.0.
- Voltage and current monitor function.
- Cumulative current monitor function.
- Monitor function for upper and lower limit values which memories 20 settings of upper and lower limit value and detecting time.

Station type	Remote device station
Number of stations occupied	1 station (2 stations in ver.1.1.)
CC-Link version	Ver.2.0 or ver.1.1
External dimensions	Refer to product's URL below
Mass	Refer to product's URL below

Contact

Head office： TEL：052-821-6111　FAX：052-821-9154
Tokyo branch： TEL：03-3788-1571　FAX：03-3788-5481
Osaka branch： TEL：06-6974-6161　FAX：06-6974-0603
Sendai branch： TEL：022-291-3330　FAX：022-295-0335
Hiroshima branch： TEL：084-934-0949　FAX：084-934-0949
Fukuoka branch： TEL：092-414-2016　FAX：092-414-2021
<URL> http://www.chuo-seisakusho.co.jp/
　　　http://www.chuo-seisakusho.co.jp/product_int/pdf/power_01.pdf

CIF 104-CCS PC/104 CC-Link Slave Communication Interface Card

PC/104 card type. CC-Link Slave station used directly in the automation level.
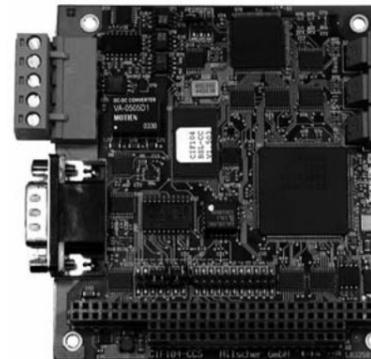
Features

- PC/104 card is suitable for use in PC-based controls
- Drivers for Windows or Linux are available
- Fast "Time to Market"
- Cheaper than own development
- Easy to configure
- MFP3 technology.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	90 × 96 × 25mm
Mass	

SST-CCS-PCU Interface Card for CC-Link PCI Slave

A high-performance, low-price CC-Link slave card with full functions, coming with the VxWorks driver as a standard feature.
The PCI (3.3/5V) card is most suitable for PC solutions.

Features

● Use of the latest CPU MCF5484 ensures high performance.
● Capable of CC-Link communication without disturbing the host CPU.
● The shared memory integrated in the card takes care of data communication.
● Windows and VxWorks 5.5 drivers are standard features.
● Enables to develop a custom-made driver.
● Available at an unprecedented low price.

Station type	Remote device station
Number of stations occupied	
CC-Link version	Ver.1.1
External dimensions	
Mass	

Mini-top® (linear motion type electronic actuator for CC-Link)

Actuator for small control valves directly connectable with the PLC mounted on CC-Link

Features

● Wiring costs can be reduced by the daisy-chain system using a single cable.
● It can be connected on the same cable with other CC-Link devices.

Station type	Remote device station
Number of stations occupied	1 station
CC-Link version	Ver.1.10
External dimensions	
Mass	Approx. 1.5 kg

[Handy2000 series] Handy Type Nut Runner

The next generation handheld nutrunner "Handy 2000". Compatible with various control needs such CC-Link.

Features

● High quality and accurate fastening tool based on ISO5393.
● No oil mist nor noise as generated by pneumatic nutrunners. Clean and quiet working environment.
● Handy2000 consumes about 1/20 the energy in comparison with pneumatic nutrunners.
● Versatile functions such as Job, Multi channels, and simplified PLC are included to further enhance efficiency in fastening.
● Estic's patented pulse technology reduces the reaction generated during fastening.
● 7 colors with the high-intensity LED lamps are visible at any angle regardless of the posture of the operator.

Station type	Remote device station
Number of stations occupied	1-4 station
CC-Link version	Ver.2.0
External dimensions	200(W)×270(D)× 300(H) mm
Mass	10 kg

Contact

2-5-9 Hashibahigashino-cho, Moriguchi City, Osaka 570-0031, Japan
ESTIC Corporation
International Dept.　Phone : (81)50-55233-7676　FAX : (81)6-6993-8881
<E-mail> int_dep@estic.co.jp

Image processing system XG-7000 series

Freely and easily builds advanced processing. New standard of custom image processing.

Features

- ●Freely builds image processing flow without programming
- ●Flexible and high customization with variable processing tools
- ●High affinity with PLC/PC controller
- ●Ultra high-speed hardware with "3+1" processor system
- ●Up to four megapixel cameras with the highest speed in the industry can be connected

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver2.00/Ver1.10
External dimensions	92.4×159×132.5 mm
Mass	Approx. 1250 g

LK-G5000 CMOS Laser Displacement Sensor

Max. 12-head connection
World's fastest sampling

Features

- ●World fastest 392 kHz sampling
- ●Industry best accuracy, ± 0.02 %
- ●0.01 μm of repeatability, that is highest in its class
- ●Simultaneous sampling with up to 12 heads
- ●High-compatibility with PLC/PC controller

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	Ver2.00/Ver1.10
External dimensions	91.3×130×128 mm
Mass	Approx. 0.9 kg

PHASE5/IWC5 Series Resistance-Welding Control Device

This small, high-performance resistance-welding control device can be connected to CC-Link.

Features

- ●You can connect the AC control device and the inverter control device to CC-Link.
- ●As it is very small, you can install the device in a small space.
- ●The inverter control device is compatible with an inverter transformer of 1800 Hz at the maximum.
- ●You can connect the device with your personal computer over Ethernet to enable the centralized control of welding data.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	
Mass	

CC-Link Compliant Remote Handy Operator Panel SROP-MC2

A standard operating panel that can be directly connected to the CC-Link.

Features

● Standard operating panel that can be held in the hand and replaces the conventional operating panel.
● Response to requirements of shortening of design time, cost reduction and reduction of installation space.
● CC-Link remote device station (4 stations occupied)
● Equipped with illuminated push-buttons, and a 7SEG display device
● Having an operating control power supply, emergency stop, and operation preparation circuit configured with hardware circuit separate from the CC-Link.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	320 × 110 × 55 mm
Mass	Approx. 1.6 kg

AFC1500 Nut Runner

This controller realizes the network control and wire saving of nut runners (bolt/nut fastening systems).

Features

● This controller can perform multiple control on up to 31 axes.
● Output allocation by the CC-Link can be made from the user console (operation software for Windows) as you desire.
  Systems can be constructed with more flexibility.
● The controller flexibly meets complex sequence control of nut runners and diversifying external communication requests.

Station type	Remote device station
Number of stations occupied	1 to 4 stations
CC-Link version	
External dimensions	265(H) × 70(W) × 160(D)
Mass	1.4 kg

LHE-C(T)3(B)CC-Link Signal Tower

Simple connection to CC-Link network with built-in CC-Link Signal Tower.

Features

● Varied information display with a combination of 3 colors of bright LED with an electronic sound buzzer
● Signal Tower of 70φ
● LED color modules are interchangeable and data bits remain same.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver1.10
External dimensions	
Mass	0.65 kg

WEP-C(T)3(B)CC-Link Signal Tower

Simple connection to CC-Link network with built-in CC-Link Signal Tower.

Features

● Varied information display with a combination of 3 colors of bright LED with an electronic sound buzzer
● Wall mounted Signal Tower offers seamless integration with equipment.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver1.10
External dimensions	
Mass	0.45 kg

LE-C(T)3(B)(P)(W)CC-Link Signal Tower

Simple connection to CC-Link network with built-in CC-Link Signal Tower

Features

● Varied information display with a combination of 3 colors of bright LED with an electronic sound buzzer.
● Signal Tower of 50φ
● LED color modules are interchangeable and data bits remain same.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	Ver1.10
External dimensions	
Mass	0.5 kg / 0.85 kg

AJ65BT-D62, AJ65BT-D62D, AJ65BT-D62D-S1 High-speed Counter Module

Features

● The counting range is wide, from 0 to 16777215 (24-bit binary).
● External input: 5/12/24 V DC (2 to 5 mA)
● Counted values can be multiplied.
● Switching the counting speed ensures accurate counting even at slow rising and falling.
● Four counter functions are available.
　・Latch counter function　　・Sampling counter function
　・Cyclic pulse counter function　・Count disable function

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	
External dimensions	
Mass	0.41 kg / 0.42 kg

Chainflex CFBUS.035 Flexible Cable Compatible with CC-Link ver. 1.10

The flexible CC-Link cable with high bending-resistant performance developed by a manufacturer of cable protection pipes
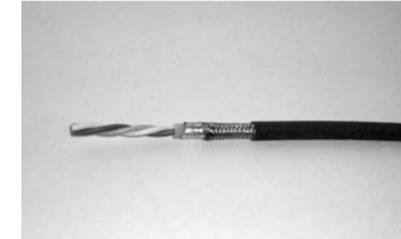
Features

The design possible only by a manufacturer of cable protection pipes is adopted for the twist, coat, and braided shield of the cable core. The cable is not easily broken even by continuous bending movement caused in cable protection pipes and has high data transfer performance.
● Especially bending-resistant fine-wire stranded conductor in short pitch
● A highly flexible braided copper shield, minimum bending radius 10 x d during operation
● A low-adhesion, flame-resistant mixture on the basis of TPE, abrasion-resistant and highly flexible, is used for the external cover.
● Excellent flame retardance (according to IEC3332-1, CEI20-35, and FT1)
● High oil-resistance (according to EN60811-2-1), bio-oil-resistance (according to VDMA24568)
● Conforming standard: UL, CSA, CE, and DESINA

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	Approx. 8.5 mm
Mass	90 kg/km

M12 Mold Type Connector

Connectorization for CC-Link! M12 connectors allow you to install the cable easy and quick.
Our products rated IP68 can offer a reliable solution in harsh environments.
Wide range of products is available such as molded and field attachable types, and receptacle connectors etc.

Features

● CC-Link cables with M12 connectorized solution.
● We keep stock of major items in Japan to deliver in 24 hours.
● Molded types, Field attachable types, and receptacle connectors and more items are available.
● Cables: FANC-110SBH Ver.1.10 cables supplied by Kuramo Electric Co., Ltd. Are used as our standard cables.
*See Kuramo's page for further details of the cable specifications.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

Miscellaneous

Cables・connectors

FANC-SB Series 0.5 mm^2×3 CC-Link-Dedicated Cable

A communication cable for CC-Link Ver. 1.00.
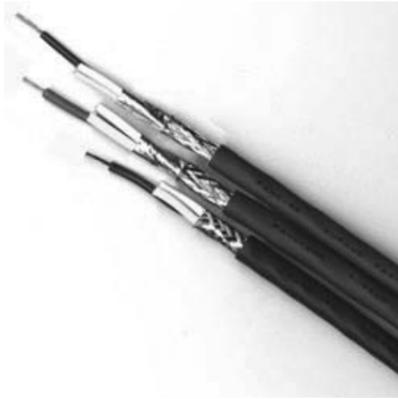
Features

●The cable can be used for high-speed transmission at 10 Mbps.
●The oil-resistant standard types FANC-SB and FANC-SBH, and the FANC-SBZ for movable portions are available.
●The FANC-SB and the FANC-SBH are a double shielded type consisting of aluminum polyester laminated tape and a tin-plated annealed copper wire braided wire.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.00
External dimensions	Cable outside diameter approx. 7.0 mm / approx. 8.0 mm
Mass	

FANC-110SBZ-5 0.5 mm^2×3 -Link Ver. 1.10-Compatible Cable for Movable Portions

A cable for movable portions compatible with CC-Link Ver. 1.10.

Features

●The cable uses a thinner annealed copper composite twisted wire as the conductor and is available for right-/left-bent portions, cable bearing caterpillars, and movable portions.
●For the outer sheath, an oil-resistant, heat-resistant vinyl mixture is used.
●The transmission distance is half of the CC-Link Ver. 1.10-compatible standard cable (e.g. FANC-110SBH) (50 meters at 10 Mbps).

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 8.0 mm
Mass	

FANC-110SBH Series 20AWG×3 CC-Link Ver. 1.10-Compatible Cable

A standard cable compatible with CC-Link Ver. 1.10.
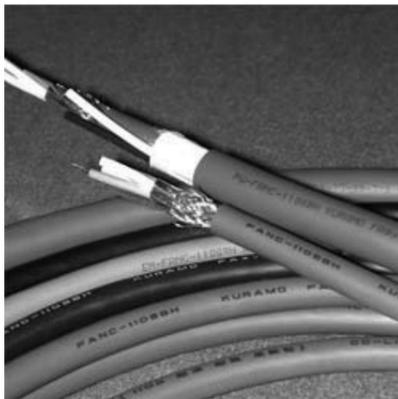
Features

●By using this cable together with a unit compatible with CC-Link Ver. 1.10, a network can be constructed with fewer restrictions on the station-to-station distance, the total extension distance of the network, etc. than the FANC-SB series.
●The cable can be used for high-speed transmission at 10 Mbps.
●You can select a suitable model for the working environment. The standard type FANC-110SBH complies with UL/c-ULAMW standards.
●The cable can be used in the same manner as the conventional FANC-SB when it is used together with a unit compatible with CC-Link Ver. 1.00.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 7.6 mm / approx. 8.1 mm / approx. 12 mm
Mass	

NFPA70/NFPA79 compliant, CC-Link Ver.1.10 compliant cable FANC-110SBH/CM

・NFPA70/NFPA79 compliant(UL444, NEC Type CM).
・Four jacket colors for wiring classification.
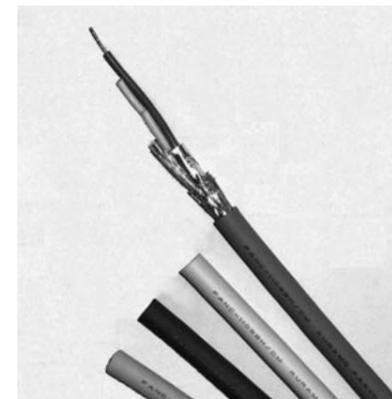
Features

●NFPA70/NFPA79 Compliant.
●UL Listed. (UL444, NEC Type CM)
●Oil resistance.
●Heat resistance. (75℃)
●Flame resistance. (UL1685 UL FLAME EXPOSURE(Vertical Tray Flame Test))
●Four jacket colors for wiring classification.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Outside diameter. Approx. 7.6mm
Mass	

Contact

(Tokyo Office)
13-10, Nihonbashi honcho 4-chome, Chuo-ku, Tokyo 103-0023, Japan
Tel：81-3-5644-7601　Fax：81-3-5644-8231
<URL> http://www.kuramo.co.jp/
<E-mail> tokyo1@kuramo.co.jp

Cables・connectors

U Clamp Series One-touch Connector for Sensor Cables (Sensor cable connector)

This small-sized connector offers excellent cable connection workability and long-term reliability.

Features

● Crimping, which ensures high reliability, is used for joining connectors to cables.
● No special tool is required.
● Peeling the sheath off cables or another pretreatment is not required. Cables can be connected using pliers available on the general market.
● Five types of connectors in different colors cover a wide variety of sensor cables.
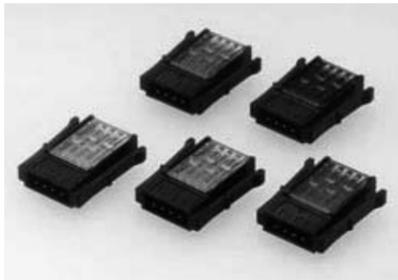
Station type	
Number of stations occupied	
CC-Link version	
External dimensions	26.0(L)×24.2(W)×7.1(H)
Mass	

Power Clamp Series One-touch Connector for CC-Link (Connector for CC-Link cables)

This small-sized connector for power and communication cables offers excellent cable connection workability and long-term reliability.

Features

● Crimping, which ensures high reliability, is used for the connection of connectors to cables.
● No special tool is required.
● Neither peeling the sheath off cables nor any other pretreatment is required. Cables can be connected using pliers available on the general market.
● Connectors for power cables and those for communication cables are color-coded, and they are equipped with a key for preventing wrong insertion.
● Both high-density packaging and a sufficient current capacity are achieved by 3 mm contact pitches.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	25.0(L)×7.4(W)×28.0(H)
Mass	

U Clamp Series One-touch Connector for Sensor Cables (Board side connector, relay/branch socket)

This small-sized connector offers excellent cable connection workability and long-term reliability.

Features

● No special tool is required.
● Peeling the sheath off cables or another pretreatment is not required. Cables can be connected using pliers available on the general market.
● Connectors to be connected to PC boards come in a rectangular type and a quadruple vertical type with which high-density packaging is achieved.
● Relay and branch sockets permit one-to-one cable relay connections and one-to-three signal branch connections.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	Four-row vertical type : 22.0(L)×30.2(W)×17.0(H) mm Rectangular type : 21.2(L)×22.0(W)×10.0(H) mm One-to-one relay : 34.5(L)×35.6(W)×10.0(H) mm Three-direction branch : 34.5(L)×35.6(W)×17.8(H) mm
Mass	

Power Clamp Series One-touch Connector for CC-Link (Board side connector, relay/branch socket)

This small-sized connector for power and communication cables offers excellent cable connection workability and long-term reliability.

Features

● No special tool is required.
● Neither peeling the sheath off cables nor any other pretreatment is required. Cables can be connected using pliers available on the general market.
● Both high-density packaging and a sufficient current capacity are achieved by 3 mm contact pitches.
● Relay sockets, which permit hot lines to be inserted and drawn out, are also available.
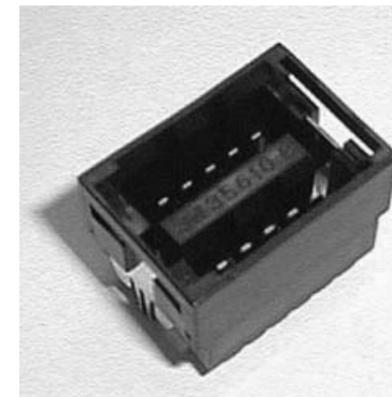
Station type	
Number of stations occupied	
CC-Link version	
External dimensions	25.4(L)×17.8(W)×16.5(H)
Mass	

CC-110 Cable for Fixed Wiring - Compatible with CC-Link Ver. 1.10 -

This cable for fixed wiring is intended for high-speed transmission on CC-Link Ver. 1.10.

Features

● The cable can be used for high-speed transmission at a maximum baud rate of 10 Mbps.
● An outer sheath with outstanding oil resistance and non-flammability is used.
● Double shielding provides the cable a high level of noise resistance.
● The cable is UL-certified (AWM Style 2464).
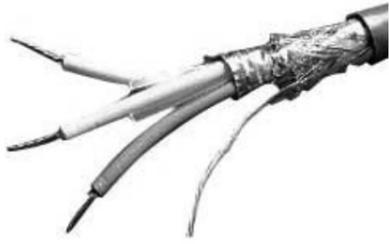
Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 7.9 (max8) mm
Mass	

CS-110 (PW) Cable for Fixed Wiring with Built-in Power Wire - Compatible with CC-Link Ver. 1.10 -

This cable can be used for high-speed transmission on the CC-Link and ensures a high-performance FA network.
Since the cable has a built-in power wire, power can be supplied to the entire network only with a single cable.
It can reduce wiring further than conventional wiring systems.

Features

● This is a round type of the CS-110 (CC-Link Ver. 1.10-compatible cable for fixed wiring) with a power wire.
● The cable can be used for high-speed transmission at a maximum baud rate of 10 MHz.
● An outer sheath with outstanding oil resistance and non-flammability is used.
● Double shielding provides the cable a high level of noise resistance.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 12 mm
Mass	

CC-110-5 Cable for Movable Portions - Compatible with CC-Link Ver. 1.10 -

This cable can be used for high-speed transmission on the CC-Link and ensures a high-performance FA network.

Features

● The cable can be used for high-speed transmission at a maximum baud rate of 10 MHz.
● An outer sheath with outstanding oil resistance and non-flammability is used.
● Long-serving shielding is used.
● The cable is UL-certified (AWM Style 2464).
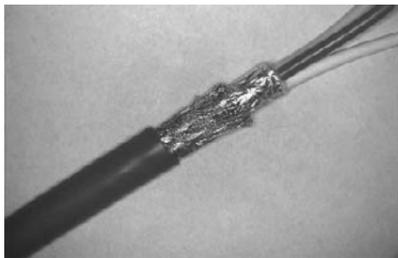
Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 9.6 mm
Mass	

α 3/TDCC 3×0.5SQ CC-Link Ver.1.10 Moving part use

Features

● An excellent material in flexibility is used.
● It excels in the conductor and flexibility and the bend thing areexcellent in a possible character because it makes it to the filamentation structure.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	cable outside dimeter approx. 8.0 mm
Mass	93 kg/km

Contact

6F Umeda 1 Bldg. Sonezaki 2-1-7 Kita Ward
Osaka P.O.530-0057 JAPAN
Taiyo Cabletec Corporation
TEL：06-6314-2551
<URL> http://www.taiyocable.co.jp

LAPP KABEL UNITRONIC® BUS CCL

CC-Link® Network cable for control and information data

Features

● U.I. Lapp GmbH is one of the foremost suppliers of cables and cable accessories worldwide. This is a big advantage for selling this UNITRONIC® BUS CCL to oversea countries because the End-users feel high reliability.

● In case you have any trouble, the global network support worldwide service.

● CC-Link cables of U.I. Lapp GmbH are UL/CSA approved (CM approval or PLTC)

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	Cable outside diameter 7.7mm
Mass	76.6kg/km

CC-Link-compatible M12 Waterproof Connector

A CC-Link-compatible, waterproof IP67 M12 size 4-pin connector.

Features

● M12 connector with Ver. 1.10-dedicated cable (Correns' original)
*1, 2, 3, 5, 10, 20 meters
 ・ Plug connector (male) on one end - Model: VA-4DBX*CCG4
 ・ Socket connector (female) on one end - Model: VA-4DSX*CCG4
 ・ Connector for extension (plug connector on one end + socket connector on one end) - Model: VA-4DSB*CCG

● Terminal resistance M12 connector (Correns' original)
 ・ Terminal resistance plug (resistance: 110Ω)- Model: VA-4DCC-110

● On-site assembled M12 connector - Germany: Hirschmann (Monopolistic import agency: Correns)
 ・ Plug type (male) - Model: ELST4012 PG9
 ・ Socket type (female) - Model: ELKA5012 PG9

● If you have any requests or questions about other wire-saving connectors for the CC-Link (branch types, receptacles, etc.), please do not hesitate to contact the following:

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	
Mass	

Type 430 and 630 Cable and Cordsets

CC-Link Communication Cable and Cordsets
Turck Part Numbers: Type 430 and Type 630
Compliant with CC-Link Specification 1.10, Capable of 10 Mbps Operation.

Type 430 Cable

Type 630 Cable
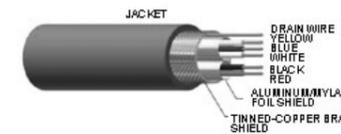
Specifications

Type	Approvals	Data Triad		Power Pair	Outer Jacket	Shields	Bulk Cable Part Number
		AWG Color Code	DCR (/1000 feet) Insulation	Power	Material Color Nominal O.D.	Type Drain Wire	
430 75℃ 300 Volts	NEC PLTC CEC [CMG] CLPA Cert.	3/20 AWG WH, YE, BU	11.4 Ohms PE		PVC BRN 7.7 mm (.305 in)	Foil/Braid 22 AWG	RB51126-*M
630 80℃ 300 Volts	NEC PLTC CEC [CMG] CLPA Cert.	3/20 AWG WH, YE, BU	11.4 Ohms PE	2/18 AWG RD, BLK	PVC BRN 10.5 mm (.413 in)	Foil/Braid 22 AWG	RB1127-*M

*indicates length in meters.

・ TURCK also provides cordsets and receptacles:
・ **minifast**® (7/8") male and female pre-molded connectors
・ **eurofast**® (M12) male and female pre-molded connectors
・ stainless steel coupling nuts available
・ standard cordsets cable lengths are 0.3, 0.5, 1.0, 2.0, 2.5, 3.0, 3.5, 4.0, 5.0, 6.0, 8.0, 10, 15...50M
・ standard cable length for panel mount receptacles is 0.5 meters

Connector Specifications

Housing	TPU (polyurethane)
Coupling Nut	Nickel-Plated CuZn or Stainless Steel
Contact Carrier	TPU (polyurethane)
Contacts	Gold-Plated CuZn
Protection	NEMA 1, 3, 4 6P and IEC IP 68
Rated Voltage	250 V
Rated Current	4 A
Ambient Temperature	-30 ℃ to +75

CCNC-SB Series CC-Link-Dedicated Cable Version 1.10-compatible

This dedicated cable to the CC-Link is excellent in environmental resistance and can be used for high-speed transmission.
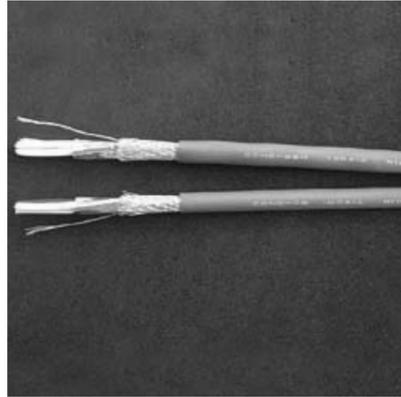
Features

● This cable utilizes a lead-free vinyl compound that features high flexibility, oil-resistance, and heat-resistance, and is now thinner to make wiring easy.
● The cable can be used for high-speed transmission at 10 Mbps and helps the CC-Link display full performance.
● Cables will be cut to your desired length and promptly delivered.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 7.0 mm, 8.0 mm
Mass	60 kg/km, 65 kg/km

CCNC-SB110H+PW

CC-Link Version 1.10-compatible Build-in Power Supply Wire Composite Cable

Features

● CCNC-SB110H (Version 1.10-compatible standard cable) and DC power supply wire are integrated, so transmission and power supply is achieved using one cable in a wire-saving system.
● Compatible with 10Mbps high-speed transmission and sufficient CC-Link Version 1.10 ability has been achieved.
● The outer sheath is made of a lead-free vinyl mixture with exceptional flexibility, heat-resistance and oil-resistance.
● Sold in coil lengths of 100m or multiples thereof.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 12 mm
Mass	

CCNC-SB110H Series CC-Link Ver. 1.10-compatible Cable
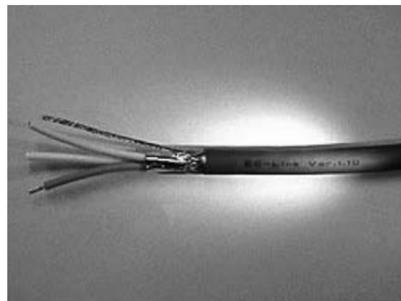
Features

● The cable is excellent in nonflammability, oil resistance, and heat resistance, and its flexibility and thinner size make wiring work easier.
● The cable can be used for high-speed transmission at 10 Mbps and helps CC-Link Ver. 1.10 display full performance.
● The standard cable length is 200 meters.
  However, cables will be cut to your desired length and promptly delivered.
● The cable complies with UL/c-UL standards (AWM Style 2464).

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 7.6 mm
Mass	70 kg/km

CCNC-SB110SF-5 CC-Link Version 1.10-compatible flexible cable
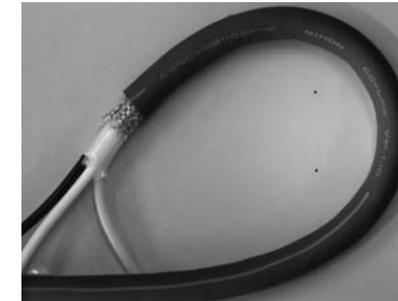
Features

● Complex soft copper twisted wires superior in flexibility is used for the conductor.
● Lead-free mixed vinyl, which is flexible and oil and heat resistant, is used for the sheath.
● The cable can be used for high-speed transmission at 10 Mbps and helps the CC-Link display full performance.
  The transmission distance is 50% of that of the standard cable. (Example: Max. 50m at 10Mbps)
● The standard cable length is 100 meters.
  However, cables will be cut to your desired length and promptly delivered.

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 8.0 mm
Mass	75 kg/km

Cables・connectors

DataCELL Field CC-Link cable with 24VDC power – Part Number FPLTC185C-002

Northwire, Inc., the leader in manufacturing rugged cables for industrial networking, now includes CC-Link cables in the DataCELL FIELD product line. Designed for use in tough plant environments utilizing networked discrete automation and control.

Features
●Fully shielded with tinned copper braid and full inner foil shield and drain.
●Industry standard red outer jacket or other colors.
●UL-listed and rated for factory floor power limited tray cable (PLTC) and CL2 installations.
●CSA CMX-Outdoor-CMG and FT4 rated.

Electrical Characteristics

Impedance at frequency 1 MHz	110 Ω ± 15 Ω
Impedance at frequency 5 MHz	110 Ω ± 6 Ω
Attenuation at frequency 1 MHz @20 ℃	1.6 dB/100 m Maximum
Attenuation at frequency 5 MHz @20 ℃	3.5 dB/100 m Maximum
Velocity of Propagation	75 %
Dielectric Withstand Voltage	500 V DC for 1 minute
Maximum DC Resistance (Per Conductor)	Triad Conductor: 37.4 Ω/km Pair Conductor: 22.6 Ω/km
Operating Capacitance	46 ηF/km Nominal

Physical Characteristics

Geometry	1 Shielded Twisted Triad; 1 Shielded Twisted Power Pair
Shield Type	65% Min. TC Braid Overall, Triad and Pair Individual Aluminum/Polyester Foil Shields - 100 % Coverage
Drain Wire	Common Shared 20 AWG 7 Strand Tinned Copper Outside Triad Shield
Cable Outside Diameter	0.413" (10.49 mm) Nominal
Jacket Marking/Agency Approvals	Northwire, Inc. DataCELL® FIELD - CC-Link FPLTC185C-002 18 AWG/2 20 AWG/3 (UL) PLTC 75℃ Sunlight Resistant E90625 or OR CL2 75℃ OR AWM 80℃ 300V or CSA CMX-Outdoor-CMG LL54185 75℃ or CSA AWM I/II A/B 80℃ 300V FT4 CE
Triad Conductor Size	20 AWG 10 Strand Bare Copper
Triad Conductor OD	0.093" (2.36 mm) Nominal
Power Pair Conductor Size	18 AWG 16 Strand Bare Copper
Power Pair Conductor OD	0.079" (2.01 mm) Nominal
Cable Core Diameter	0.305" (7.75 mm) Nominal

DataCELL Field CC-Link cable – Part Number FPLTC203-005

Northwire, Inc., the leader in manufacturing rugged cables for industrial networking, now includes CC-Link cables in the DataCELL FIELD product line. Designed for use in tough plant environments utilizing networked discrete automation and control.

Features
●Fully shielded with tinned copper braid and full inner foil shield and drain.
●Industry standard red outer jacket or other colors.
●UL-listed and rated for factory floor power limited tray cable (PLTC) and CL2 installations.
●CSA CMX-Outdoor-CMG and FT4 rated.

Electrical Characteristics

Impedance at frequency 1 MHz	110 Ω ± 15 Ω
Impedance at frequency 5 MHz	110 Ω ± 6 Ω
Attenuation at frequency 1 MHz @20 ℃	1.6 dB/100 m Maximum
Attenuation at frequency 5 MHz @20 ℃	3.5 dB/100 m Maximum
Velocity of Propagation	75 %
Dielectric Withstand Voltage	500 V DC for 1 minute
Maximum DC Resistance (Per Conductor)	37.4 Ω/km
Operating Capacitance	46 ηF/km Nominal

Physical Characteristics

Geometry	1 Shielded Twisted Triad
Shield Type	65% Min. TC Braid Over Aluminum/Polyester Foil - 100 % Coverage
Drain Wire	20 AWG 7 Strand Tinned Copper
Cable Outside Diameter	0.305" (7.75 mm) Nominal
Jacket Marking/Agency Approvals	Northwire, Inc. DataCELL® FIELD - CC-Link FPLTC203-005 20 AWG/3 (UL) PLTC 75℃ Sunlight Resistant E90625 or OR CL2 75℃ OR AWM 80℃ 300V or CSA CMX-Outdoor-CMG LL54185 75℃ or CSA AWM I/II A/B 80℃ 300V FT4 CE
Triad Conductor Size	20 AWG 10 Strand Bare Copper
Triad Conductor OD	0.093" (2.36 mm) Nominal
Cable Core Diameter	0.220" (5.59 mm) Nominal

BA1SJ61-P

CC-Link Communication Cable with Power Conductors
Mitsubishi Part Number: BA1SJ61-P
Compliant with CC-Link Specification 1.10, Capable of 10 Mbps Operation

Features

● Power Limited Tray Cable (5 conductor) with Three twisted #20 (7×28) AWG Bare Copper Conductors with Foam High Density Polyethylene Insulation, Aluminum Foil - Polyester Tape (Beldfoil) Shield with 100% Shield Coverage plus Tinned Copper Braid Shield with 78% Shield Coverage, and 22 AWG (19×34) Tinned Copper Drain Wire, PVC - Polyvinyl Chloride Inner Jacket, and Two #18 (7×26) Bare Copper Conductors with PVC Insulation and Polypropylene fillers, with an Overall PVC Jacket. Applicable Specifications: UL PLTC, UL 1581 Vertical Tray.

Electrical Characteristics

Max. Operating Voltage	300 V RMS
Nominal Capacitance Between Conductors at 1KHz	18.5 PF/Ft.
Nominal Impedance at 1 MHz	110 OHMS +/- 15 OHMS
Nominal Impedance at 5 MHz	110 OHMS +/- 6 OHMS
Nominal Conductor DC Resistance (20 AWG) at 20 Deg.C	9.5 OHMS/1000 Ft.
Nominal Conductor DC Resistance (18 AWG) at 20 Deg.C	5.8 OHMS/1000 Ft.
Nominal Shield DC Resistance at 20 Deg.C	8 OHMS/1000 Ft.
Nominal Attenuation at 1 MHz	0.49 DB/100 Ft.
Nominal Attenuation at 5 MHz	1.07 DB/100 Ft.
Insulation Resistance	10,000 M-OHMS/KM Minimum
Color Code (20 AWG)	Blue, Yellow, White
Color Code (18 AWG)	White, Black

Physical Characteristics

Temperature Rating	-30 to +105 Deg.C
Insulation Material & Diameter (18 AWG)	PVC, 0.091 Inch
Insulation Material & Diameter (20 AWG)	FPE, 0.094 Inch
Jacket Material & Color	PVC (Red) Sun Res.
Type of Shield & % Coverage	Foil (100%) + Braid (78%)
Min. Bending Radius	5.1 Inch
Overall Lay Length & Direction	6.0 Inch, Right-Hand Lay
Applicable Specifications	UL PLTC
Flame Resistance	UL 1581 Vertical Tray
Nominal Diameter	0.506 Inch

BA1SJ61-S

CC-Link Communication Cable
Mitsubishi Part Number: BA1SJ61-S
Compliant with CC-Link Specification 1.10, Capable of 10 Mbps Operation

Features

● Three twisted #20 (7×28) AWG Bare Copper Conductors with Foam High Density Polyethylene Insulation, Aluminum Foil - Polyester Tape (Beldfoil) Shield with 100% Shield Coverage plus Tinned Copper Braid Shield with 78% Shield Coverage, 22 AWG (19×34) Tinned Copper Drain Wire, PVC - Polyvinyl Chloride Outer Jacket. Applicable Specifications: NEC Type CM, UL 1581 Vertical Tray.

Electrical Characteristics

Max. Operating Voltage	300 V RMS
Nominal Capacitance Between Conductors at 1KHz	18.3 PF/Ft.
Nominal Impedance at 1 MHz	110 OHMS
Nominal Conductor DC Resistance at 20 Deg.C	11 OHMS/1000 Ft.
Nominal Attenuation at 1 MHz	0.49 DB/100 Ft.
Nominal Attenuation at 5 MHz	1.07 DB/100 Ft.
Insulation Resistance	10,000 M-OHMS/KM Minimum

Physical Characteristics

Temperature Rating	-20 to +60 Deg.C
Insulation Material	Datalene
Jacket Material & Color	PVC (Red)
Type of Shield & % Coverage	Foil (100%) + Braid (78%)
Min. Bending Radius	3.0 Inch
Applicable Specifications	N EC Type CM
Flame Resistance	UL 1581 Vertical Tray
Nominal Diameter	0.303 Inch
Max. Pulling Tension	42 Lbs.
Nominal Weight per 1000 ft.	57 Lbs.

CC-Link-dedicated Cable, Terminated Cable, Terminated Parts Set

A wide variety of CC-Link-dedicated cable, terminated cables, and terminated parts sets are available.

Features

● Both ends of the cable for the CC-Link are terminated, so that it can be connected without any treatment (with a round or Y-shaped crimping terminal, marker tube, insulation tube for shielding, and shrink tube).
● With a terminated part set, terminated parts for 50 cables can be prepared at a time.
● Six types of communication cables for the CC-Link are available (dedicated cable, high-performance cable, quakeproof cable, low temperature-resistant cable, Ver. 1.10-compatible cable, cable with built-in wire).

Specifications

Name	Dedicated cable	High-performance cable	Quake-resistant cable	Cold-resistant cable	110Ω cable	Cable with a power supply wire * *
Model name	FA-CBL200SB	FA-CBL200SBH	FA-CBL200SBZ	FA-CBL200LTSB	FA-CBL200PSBH	FA-CBL100PWPSBH
CC-Link version	Ver.1.00				Ver.1.10	Ver.1.10
External dimensions	Approx. 7.0mm	Approx. 8.0mm	Approx. 8.0mm	Approx. 7.0mm	Approx. 7.6mm	Approx. 12.0mm
Mass	Approx. 13kg/ 200m	Approx. 12kg/ 200m	Approx. 14kg/ 200m	Approx. 13kg/ 200m	Approx. 14kg/ 200m	Approx. 16kg/ 100m

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CC-Link dedicated cable compatible with Ver.1.10 (For fixed sections, for high movement sections, for movement sections, with built-in power)

Variations are available to match various working environments.
FANC-110SBH for fixed sections and SCC110-HMV-7 for high movement sections comply with UL Standards.
Use the Ver. 1.10 compatible cable when newly laying the CC-Link.

Features

● FANC-110SBH for fixed sections
Outstanding shielding properties are attained by using aluminum tape and tinned annealed copper braid.
● SCC110-HMV-7 for high movement sections
A high bending performance reaching 1,000,000 times *1 is realized with the insulator (ETFE) with outstanding bending performance and wire structure.
(*1 Value measured under specific conditions)
● FANC-110SBZ-5 for movement sections
Both bending properties and shielding properties are attained by enhancing the braid density.
● PW110SBH with built-in power
This compound type cable contains a power wire that can be wired to supply power to the unit.
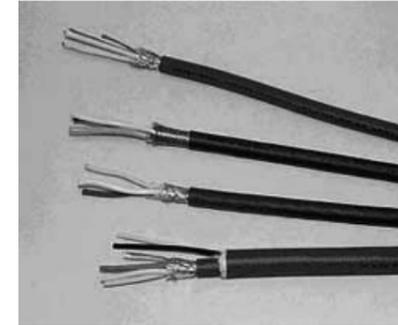
Station type	
Number of stations occupied	
CC-Link version	Ver.1.10 / Ver.2.00
External dimensions	Cable outside diameter approx. 7.6 mm, 8.0 mm, 12.0 mm
Mass	70 kg/km ~

CC-Link dedicated cable compatible with Ver.1.10 (Eco-cable, for fixed portion of outdoor piping, for low temperature fixed sections)

Variations are available to match various working environments.
Use the Ver. 1.10 compatible cable when newly laying the CC-Link.

Features

● EM110SBH Eco-cable
This environment-friendly cable incorporates flameretardant polyolefin for the outer sheath.
● WR110SBH for fixed portion of outdoor piping
This cable with outstanding weather resistance has a polyethylene outer sheath. (Applications: piping, outdoors, under eaves, etc.)
● LT110SBH for low temperature fixed sections
This cable with weather-resistant vinyl outer sheath does not harden easily even at low temperatures.
Working temperature range: -40 to 60℃
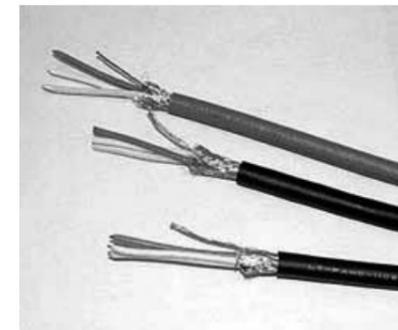
Station type	
Number of stations occupied	
CC-Link version	Ver.1.10 / Ver.2.00
External dimensions	Cable outside diameter approx. 7.6 mm, 8.1 mm
Mass	70 kg/km

CC-Link Compatible M12 Bus Connector SAC Series

Toughness for tolerating any environment with a broad range of variations

Features

- CC-Link compatible cable M12 connector SAC-4P- ... series
- Protection degree IP67
- On-site supporting spring-cage connection SACC-M12 ... series
- Wiring tools are prepared.
- Easy connection by a half turn based on "plug & turn" ; separately complying with the SPEEDCON specification

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	Cable outside diameter approx. 7.7 mm
Mass	

RIV-S050C03S-7 CC-Link Version 1.10-compatible cable (high flexible cable)

Maintaining a high level of durability, this high-spec cable achieves a transmission distance of 70% of a standard cable.

Features

- Transmission distance is 70% of a Version 1.10 standard cable. (Max. 70m for 10 Mbps).
- Increased bend-resistance
  Results of ±90° reciprocal bending cycles: Over 1,000,000 times (suspension rod φ10, load 1kg)
- Recommended bending radius R for applications such as U-shaped moving bend (cable, chain, etc.) : 7d or above (d : cable o.b.)
- Superior oil resistant, heat resistant and fire resistant specification

Station type	
Number of stations occupied	
CC-Link version	Ver.1.10
External dimensions	Cable outside diameter approx. 8 mm
Mass	

1348A

CC-Link Communication Cable
Belden Part Number: 1348A (previous number was YR47205)
Compliant with CC-Link Specification 1.10, Capable of 10 Mbps Operation

Features

- Three twisted #20 (7×28) AWG Bare Copper Conductors with Foam High Density Polyethylene Insulation, Aluminum Foil - Polyester Tape (Beldfoil) Shield with 100% Shield Coverage plus Tinned Copper Braid Shield with 78% Shield Coverage, 22 AWG (19×34) Tinned Copper Drain Wire, PVC - Polyvinyl Chloride Outer Jacket. Applicable Specifications: NEC Type CM, UL 1581 Vertical Tray.

Electrical Characteristics

Max. Operating Voltage	300 V RMS
Nominal Capacitance Between Conductors at 1KHz	18.3 PF/Ft.
Nominal Impedance at 1 MHz	110 OHMS
Nominal Conductor DC Resistance at 20 Deg.C	11 OHMS/1000 Ft.
Nominal Attenuation at 1 MHz	0.49 DB/100 Ft.
Nominal Attenuation at 5 MHz	1.07 DB/100 Ft.
Insulation Resistance	10,000 M-OHMS/KM Minimum

Physical Characteristics

Temperature Rating	-20 to +60 Deg.C
Insulation Material	Datalene
Jacket Material & Color	PVC (Red)
Type of Shield & % Coverage	Foil (100%) + Braid (78%)
Min. Bending Radius	3.0 Inch
Applicable Specifications	NEC Type CM
Flame Resistance	UL 1581 Vertical Tray
Nominal Diameter	0.303 Inch
Max. Pulling Tension	42 Lbs.
Nominal Mass per 1000 ft.	57 Lbs.

1349A

CC-Link Communication Cable with Power Conductors
Belden Part Number: 1349A (previous number was YR47198)
Compliant with CC-Link Specification 1.10, Capable of 10 Mbps Operation

Features

● Power Limited Tray Cable (5 conductor) with Three twisted #20 (7×28) AWG Bare Copper Conductors with Foam High Density Polyethylene Insulation, Aluminum Foil - Polyester Tape (Beldfoil) Shield with 100% Shield Coverage plus Tinned Copper Braid Shield with 78% Shield Coverage, and 22 AWG (19×34) Tinned Copper Drain Wire, PVC - Polyvinyl Chloride Inner Jacket, and Two #18 (7×26) Bare Copper Conductors with PVC Insulation and Polypropylene fillers, with an Overall PVC Jacket. Applicable Specifications: UL PLTC, UL 1581 Vertical Tray.

Electrical Characteristics

Max. Operating Voltage	300 V RMS
Nominal Capacitance Between Conductors at 1KHz	18.5 PF/Ft.
Nominal Impedance at 1 MHz	110 OHMS +/- 15 OHMS
Nominal Impedance at 5 MHz	110 OHMS +/- 6 OHMS
Nominal Conductor DC Resistance (20 AWG) at 20 Deg.C	9.5 OHMS/1000 Ft.
Nominal Conductor DC Resistance (18 AWG) at 20 Deg.C	5.8 OHMS/1000 Ft.
Nominal Shield DC Resistance at 20 Deg.C	8 OHMS/1000 Ft.
Nominal Attenuation at 1 MHz	0.49 DB/100 Ft.
Nominal Attenuation at 5 MHz	1.07 DB/100 Ft.
Insulation Resistance	10,000 M-OHMS/KM Minimum
Color Code (20 AWG)	Blue, Yellow, White
Color Code (18 AWG)	White, Black

Physical Characteristics

Temperature Rating	-30 to +105 Deg.C
Insulation Material & Diameter (18 AWG)	PVC, 0.091 Inch
Insulation Material & Diameter (20 AWG)	FPE, 0.094 Inch
Jacket Material & Color	PVC (Red) Sun Res.
Type of Shield & % Coverage	Foil (100%) + Braid (78%)
Min. Bending Radius	5.1 Inch
Overall Lay Length & Direction	6.0 Inch, Right-Hand Lay
Applicable Specifications	UL PLTC
Flame Resistance	UL 1581 Vertical Tray
Nominal Diameter	0.506 Inch

L45467-Y19-C15

**CC-Link Communication Cable**
LEONI Part Number: L45467-Y19-C15
Compliant with CC-Link Specification 1.10, Capable of 10 Mbps Operation

Features

● Three twisted #20 (7×28) AWG Bare Copper Conductors with Foam High Density Polyethylene Insulation, Aluminum Foil - Polyester Tape (Beldfoil) Shield with 100% Shield Coverage plus Tinned Copper Braid Shield with about 80% Shield Coverage, 22 AWG (19×34) Tinned Copper Drain Wire, PVC - Polyvinyl Chloride Outer Jacket. Applicable Specifications: NEC Type CM

www.leoni-special-cables.com

Electrical Characteristics

Max. Operating Voltage	300 V RMS
Nominal Capacitance Between Conductors at 1KHz	≤18.3 PF/Ft.
Nominal Impedance at 1 MHz	110 OHMS
Nominal Conductor DC Resistance at 20 Deg.C	11 OHMS/1000 Ft.
Nominal Attenuation at 1 MHz	0.49 DB/100 Ft.
Nominal Attenuation at 5 MHz	1.07 DB/100 Ft.
Insulation Resistance	10,000 M-OHMS/KM Minimum

Physical Characteristics

Temperature Rating	-40 to +70 Deg.C
Insulation Material	Foamed Polyethylen (PE)
Jacket Material & Color	PVC (Red)
Type of Shield & % Coverage	Foil (100%) + Braid (80%)
Min. Bending Radius	2.5 Inch
Applicable Specifications	NEC Type CM
Flame Resistance	UL 1581 Vertical Tray
Nominal Diameter	0.303 Inch
Max. Pulling Tension	42 Lbs.
Nominal Weight per 1000 ft.	57 Lbs.

MELSEC OPC Server

An OPC server compatible with CC-Link boards.

Features

● The OPC server is compatible with OPCDataAccess 2.0 and conforms to its specifications.
● The OPC server is compatible with Mitsubishi Electric's CC-Link boards (A80BD-J61BT11/13).
● Besides the CC-Link, Ethernet and computer links can also be connected to the server.
● The OPC server can be used together with SCADAs compatible with it.
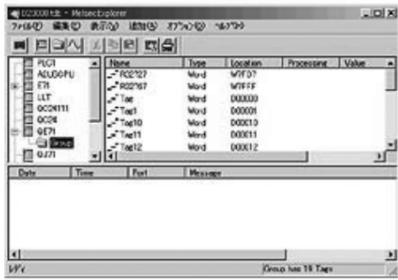
Station type	
Number of stations occupied	1 to 4 stations
CC-Link version	
External dimensions	
Mass	

MELSEC Interface Board-compatible I/O Server

This CC-Link communication drive is compatible with Wonderware InTouch/InSQL.

Features

● The server accesses not only the CC-Link device Ww/Wr but also sequencer devices.
● The server is compatible with SCADA "InTouch" of Wonderware, the U.S., and the high-speed relational database "InSQL. " Visual Basic and Excel are also available.
● The server is compatible with the MELSECNET10/H, A-BUS boards, and ACPU boards.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

Software Monitor Maker Mitaro32 for HMI Development

This tool offers strong support to Web monitoring and remote maintenance systems.

Features

● Data can be smoothly shared with the CC-Link at high speed.
● Graphics can be monitored and collected data can be browsed on the Web.
● E-mail alarms can be transmitted and remote-operated.
● User-created programs can be pasted on graphic screens.
● Documents can be easily created without using any program.
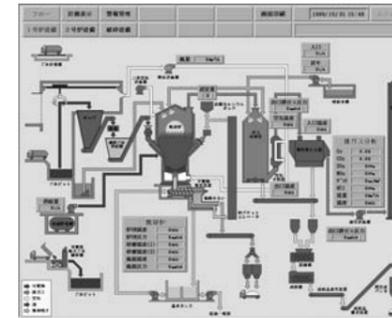
Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

CC-Link V2 Line Monitor HM-CC90 (CC Miechan)

The world's first full-fledged CC-Link V2 lint monitor.
This tool is indispensable for all CC-Link V2 node developers! Use it in designing or constructing CC-Link V2 lines or for problem analysis in operation!

Features

● The monitor is compact and lightweight and requires no special power supply.
● The screen display conforms to the excellent PC-shared type CC-Link basic format.
● The monitor has a help function with which the user can understand the protocol.
● The monitor displays Ver. 2.0-compatible nodes and error frames in different colors for easy identification.
● The monitor can capture the situation (in a noninterference manner) without exerting adverse effects on the line.
● The monitor is equipped with a large-capacity (up to one billion frames) capture function.
● All frames can be captured, and non-frame data can also be displayed.
● A μs-order time stamp is used.

Station type	
Number of stations occupied	
CC-Link version	Ver. 1.00/1.10/1.11/2.0 (also compatible with compound systems)
External dimensions	Approx. 29(H)×92(W)×61.4(D) mm
Mass	Approx. 150 g

Peripheral software

GX Configurator - CC SW☐D5C-J61P Configurator for CC-Link

Features

● The master parameters for A series master modules can be set.
● The configurator can upload, download, monitor, and test the parameters for the remote device stations connected to a Q, QnA, or A series master module.
● The buffer memory for the AJ65BT-R2 can be set via an A series master module.
● The configurator incorporates a variety of diagnosis functions.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

GX Developer SW☐D5C-GPPW MELSEC Programming Software

Features

● On the QCPU (Q mode) or QnA series, parameters can be set without using any sequence program by setting them at "Network parameters (CC-Link) " of GX Developer.
● On the Q, QnA, or A series, networks can be monitored using "CC-Link diagnosis" of GX Developer.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

MP1-DAQ Mitsubishi General-purpose PLC MELSEC-compatible Data Collection Personal Computer Software Package

This is the logger most suitable for FA/PA equipment and ready for practical use.

Features

● The package is ready to use for various applications and ensures data collection at high speed.
● Data is written to databases in real time.
● The package has diverse CSV file outputs.
● Graphic screens can be created with ease.
● The package can be connected to different PLC networks (MELSEC/10, MELSECNET/H, Ethernet, CC-Link, RS-232C).
● The package selects and displays the appropriate recovery manual, recipe, etc. for the warning issued.
☆ "MP1-DAQ-HS," which can collect data in only 0.1 second, has been introduced to the line!

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

Peripheral software

Peripheral software

CC-Link-compatible EHLT02 handy line tester

Supports to start the CC-Link system.
Checking the operation of remote station is enabled without master station.

Features

●Master function
For systems without master station, monitoring the input signal (RX, RWr) of the connected child station and test of the output signal (RY, RWw) are enabled. Monitor and test of the buffer memory are also enabled.

●Monitor/test by station
Indicating by station (unit) makes checking easier than indication of complicated and large number of device No.

●Variable format of monitor/test
Monitors and tests the device data in binary form, octal number, decimal number, hexadecimal number, binary-coded decimal (BCD) number, of character string (indication only). 32-bit (2-word) data is also processed.

●Automatic CC-Link function
Automatically identifies the connected system configuration without parameter setting, and starts the data link. (Operation in the remote net Ver.1 mode)

●CC-Link diagnosis
Checks the data link status of the connected units and also the cause of error state.
[CC-Link diagnosis items]
Local station monitor, remote station monitor, all station line test, and specified station line test

●Registers remote device station initialization procedure
Processes the remote device station as equivalent of the initial setting with the sequence program when data link starts. Up to 32 procedures can be set for one remote device station.

●Storing parameters
The set parameters, which can be stored up to 10, save the trouble of setting parameters to be used in the same system.

Station type	
Number of stations occupied	
CC-Link version	Corresponds to Ver.1/Ver.2 (Connects the CC-Link dedicated cable to attachment connector.)
External dimensions	96(W)×188(H)×36.5(D) mm
Mass	0.39 kg

AJ65BT-G4-S3 Peripheral Device ConnectionF Unit

Features

●Any device connected to the unit can be remote-operated via the CC-Link.
Online operations, from a peripheral device such as data writing to the PC, data reading from the PC, monitoring, and testing, can be performed on any QCPU, QnACPU, or ACPU separately installed on the CC-Link.

●Any type of peripheral device can be connected to the unit.
Peripheral devices with the MELSEC PLC programming software installed can be connected.

Station type	Intelligent device station
Number of stations occupied	1 station
CC-Link version	
External dimensions	80(W)×170(H)×63.5(D) mm
Mass	0.36 kg

Model S_AP07_ (DC Version) CC-Link-compatible Slip Ring

This slip ring system offers reliable communication with a rotating body.

Features

● Reliable communications, through continuous 360 degree rotation, between rotating and stationary portion of equipment.
● Horizontal or vertical mount.
● Double Pivot Brush design, with (2) brush contacts per circuit. This provides contact pressure and superior cleaning action.
● Slip Ring Assembly rated from -40℉ to 200℉ (-40℃ to 93℃)
● Sliver graphite brushes on communication circuits rated to 25,000,000 revolutions
● Brushes easily replaced.
● Power and Communication Circuits separated by RFI shield.
● Optional Mounting flanges and cable lengths available.

Type	S_AP07_
Number of poles	Seven poles
Supply power	5 V to 24 V DC
Transmission speed	Compatible with 156 kbps/625 kbps/2.5 Mbps/5 Mbps/10 Mbps
Speed	90 rpm
Operating environment	Indoor use
External dimensions	φ 7.63" (194mm) × 6.75" (171mm)
*Inside diameter	φ 1.50" (38.1mm) Standard Other sizes available
Mass	Approx. 5 lbs. (without cable)

	Center leads	Cable	Wire color	Brush leads	
#1	(+24V)	16/3	Black	(+24V)	
#2	(24G)	SOW	White	(24G)	
#3	(Ground)	Cable	Green	(Ground)	RFI shield
#3	(Ground)		Green shield	(Ground)	
#4	(SLD)	Mitsubishi		(SLD)	
#5	(DG)	BA1SJ61-S	Yellow	(DG)	
#6	(DB)	Shielded cable	White	(DB)	
#7	(DA)	3 × 20 AWG	Blue	(DA)	

This product is available in different sizes from the standard specifications. Please feel free to contact us to discuss your needs.

Baumcoupler 3TA, 3TB series (Slip-ring for CC-Link)

Features

● Baumcoupler is a custom slip-ring; therefore, we can build a machine considering with your space and electrical specification.
● It is possible to send the electricity from a very small signal (communication signal) to power line (motor power supply and etc...) with a silver alloy contact point system.
● Maintenance is not required to 1 million rotations. Moreover, it can be used the maximum of 20 million rotations by the periodic application of contact grease.
● The maximum number of pole is 200.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	

SRC-CC7P CC-Link-compatible Slip Ring System

This slip ring system offers reliable communication with a rotating body and power supply.

Features

● The system can transmit signals to and communicate with a rotating body.
● Sensors or I/O units become available for a rotating body upon receipt of a command from the CC-Link master station.
● The system can transfer data to a rotating body at high speed.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	φ180×140 L
Mass	Approx. 3 kg

Wiring parts

KEC-NS0604 4P Terminal Block with Mounted Circuit Board

This is a PC board-packeged type 4pins terminal block for CC-Link-connected units.

Features

●The terminal block is a two-piece & right-angle type.
●The two-piece detachable structure improves work efficiency.
●A right-angle design to be installed in panels.
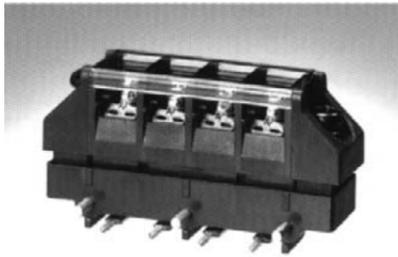
Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	51.5mm(H)×25.5mm(W)×12mm(D)
Mass	

KEC-NS0707 7P Terminal Block with Mounted Circuit Board

This is a PC board-packeged type 7pins terminal block for CC-Link-connected units.

Features

●The terminal block is a two-piece type.
●The two-piece detachable structure improves work efficiency.
 [The main body has no cover.]

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	46.9mm(H)×31.5mm(W)×23mm(D)
Mass	

KEC-U229-7A 7P Terminal Block with Mounted Circuit Board

This is a PC board-packeged type 7pins terminal block for CC-Link-connected units.

Features

●The terminal block is a screw-up, two-piece type.
●The screw-up system can significantly reduce labor, saving in wiring work.
●The two-piece detachable structure improves work efficiency.
●The terminal block ensures a higher level of safety by incorporating a finger protector.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	37.12mm(H)×29.5mm(W)×22mm(D)
Mass	

Wiring parts

AJ65BTS-RPH Spring Clamp Terminal Block Type Repeater Hub Module

Star wiring, extension of bus lines, spring clamp terminal block type

Features

● Based on overall communication speed of the CC-Link a maximum of an 8 branch (segment) star wiring (T-branch) connection is possible.
● Achieving extension of transmission distance of the CC-Link system: You can use a plurality of units to extend the transmission distance up to two steps.
● Achieving workload saving by the spring clamp terminal block: Because you do not need to fasten any screw, your man-hours can be considerably reduced.
  The terminal block can be removed from the module. So, maintenance cost can be reduced, and maintenance performance can be enhanced.
● Improving maintenance performance by separating the system: You can quickly find the very cause of a trouble. As the system can be separated, you can reduce its influence on the entire system even if a trouble has occurred.

Station type	—
Number of stations occupied	—
CC-Link version	—
External dimensions	197.5(W)×65(H)×66(D) mm
Mass	

AJ65SBT-RPS/AJ65SBT-PRG type optical repeater module

Features

● The module can extend the transmission distance of CC-Link systems. The transmission distance for CC-Link systems can be extended if two sets of AJ65SBT-RPS type (for SI/GSI type optical fiber cables) or AJ65SBT-RPG (for GI type optical fiber cables) are used together in combination. The transmission distance can be extended in three steps at the maximum (in two steps at the maximum if AJ65SBT-RPG type is used) if the repeaters are used together in plural number.
● The module makes T-branch wiring possible in CC-Link systems. If the module is connected between the units in CC-Link system, the T-branch wiring becomes possible.
● Stable system resistant to noses
  Optical fiber cables help to avoid troubles caused by noises and improve the stability of systems if the optical fiber cables are used for brancing or extending circuits.

Station type	no point occupied by station
Number of stations occupied	—
CC-Link version	
External dimensions	118(W)×54(H)×40(D) mm
Mass	0.2 kg

AJ65SBT-RPT Repeater (T-branch) Module

Features

● T-branch wiring can be made on a CC-Link system. By placing this module between modules on a CC-Link system, T-branch wiring can be made on it at all baud rates (10 Mbps, 5 Mbps, 2.5 Mbps, 625 kbps, 156 kbps).
● The transmission distance of a CC-Link system can be extended. With this module, the transmission distance of a CC-Link system can be extended. Additionally, the transmission distance can be extended up to ten stages if two or more modules are used.

Station type	no point occupied by station
Number of stations occupied	—
CC-Link version	
External dimensions	87.3(W)×54(H)×40(D) mm
Mass	0.2 kg

AJ65FBTA-RPH Thin Waterproof Type Repeater Hub

Features

● 8 branch star wiring can be used with 1 module
  Based on overall communication speed of the CC-Link a maximum of an 8 branch (segment) star wiring connection is possible.
● maximum of 1200 m per branch based on the repeater function, and furthermore extension is possible using a 2 stage connection.
  The maximum transmission distance per branch (segment) can be extended to 1200 m (for 156 kbps). By connecting a hub to each branch, it is possible to extend further.
● Water proof construction enables outside installation.
  Through waterproof and dustproof construction the IP67 can be set up outside enabling enhancement of construction and reduction of installation cost.
● Addition to existing equipment can be performed easily.
  Can be added to existing equipment and a flexible network can be configured.

Station type	no point occupied by station
Number of stations occupied	—
CC-Link version	
External dimensions	60(W)×200(H)×48(D) mm
Mass	0.31 kg

Wiring parts

Wiring parts

Waterproof Type T-branch Module, Waterproof Type Connector, Cable with Waterproof Type Connector

With waterproof dedicated cables to the CC-Link, T-branching and various wiring patterns can be realized.

Features

●The waterproof type T-branch module comes in two types; for communication lines and for cables with a power wire.
●The waterproof type T-branch module can be installed in horizontal and vertical directions with screws.
●The wires and cables from a control panel can be relayed with a waterproof connector (IP67).
●The waterproof connectors are easy to attach and detach.

Specifications

Model name	General-purpose waterproof type T-branch module	
	For four-core cables	For seven-core cables
Type	FA-TW43	FA-TW73
Mass	170 g	

General-purpose waterproof connector model

FA-20☐ ☐☐ ✳ Symbol Outside diameter of cable used

6 : φ5.5~φ6.3
8 : φ7.0~φ8.5
10 : φ8.6~φ10.5
12 : φ10.6~φ12.5
M : Male
F : Female
P : Plug (for control panel cable)
R : Receptacle (for control panel)(Note)
Ad : Adapter (for cable relays)
4 : For four-core cables.
7 : For seven-core cables

Model name

Note) When placing an order, enter the symbol matching the cable outside diameter used. The receptacle does not need any cable outside diameter symbol. Example) FA-207-AdF12

Specifications of cables with a waterproof connector

FA-CBL☐☐ ☐☐☐☐ ☐ ☐☐

M : With a male connector at one end
F : With a female connector at one end
MF : With a male connector at one end and a female connector at the other end
4 : With a four-pin connector
7 : With a seven-pin connector

SB : Cable exclusively for the CC-Link
SBH : High-performance cable exclusively for the CC-Link
PSBH : 110Ω cable exclusively for the CC-Link Compatible with Ver.1.10
PWSB : Cable containing a power supply wire exclusively for the CC-Link

01 : 1m
03 : 3m
05 : 5m
10 : 10m
20 : 20m
30 : 30m

Model name

Example 2) FA-CBL01PWSB7MF (1-m cable with CC-Link-dedicated power line containing seven-pin male and female connectors at ends)

Cable length type	1/3/5/10/20/30 m

FA-TK72 Simplified Type T-branch Module

This branch module is compatible with diversified CC-Link cables.

Features

●Three-core and five-core dedicated cables to the CC-Link can be T-branched.
●A power supply of up to 8 A is available when a cable with a built-in power wire is used.
●Terminal resistance can be easily set by operating the switches.
●The terminal blocks are independently detachable.
●The module can be mounted with screws or on a DIN rail.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	
Mass	115 g

One-touch Type Conversion Module FA-CB*

The man-hours required for wiring a connector type I/O module for the CC-Link (input module: AJ65SBTCF1-32D or AJ65BTC1-32D, output module: AJ65SBTCF1-32T or AJ65BTC1-32T) to a sensor or load have been drastically reduced.

Features

●Thirty-two input/output signal points can be connected with only one cable. They can be divided into blocks of eight or 16 points for distributed arrangement.
●One-touch connectors make the connection and disconnection of sensors, etc. easy. Wires can be crimped without peeling the sheath.
●Both two-wire type and three-wire type sensors can be connected to the module.
●The module can be mounted with screws or on a DIN rail.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	FA-CB8XY* : 90(W)×50(H)×41(D) mm FA-CB16XY*: 148(W)×50(H)×41(D) mm
Mass	FA-CB8XY*: 80 (g), FA-CB16XY*: 114 (g)

Wiring parts

Terminal Block Type Conversion Module FA-TB*

This terminal block type module is for connecting a CC-Link connector type I/O module (input module: AJ65SBTCF1-32D or AJ65BTC1-32D, output module: AJ65SBTCF1-32T or AJ65BTC1-32T, input/output module: AJ65SBTCF1-32DT or AJ65VBTCF1-32DT) to a sensor and a load.

Features

● Thirty-two input/output signal points can be divided into blocks of eight or 16 points for distributed arrangement (eight-point and 16-point distributed types).
● Self-up screws make the connection of round type crimping terminals easy.
● Both two-wire type and three-wire type sensors can be connected directly to the module
(eight-point and 16-point distributed types).
● The module can be mounted with screws or on a DIN rail.

Station type	
Number of stations occupied	
CC-Link version	
External dimensions	FA-TB8XY*: 90(W)×50(H)×41.5(D) mm FA-TB16XY*: 148(W)×50(H)×41.5(D) mm FA-TB32XY/16X16Y: 156(W)×40(H)×42.5(D) mm
Mass	FA-TB8XY*: 114(g), FA-TB16XY*: 177(g), FA-TB32XY/16X16Y: 156(g)

MFP1N/MFP2N/MFP3N Communication LSI Dedicated to CC-Link

This LSI makes the development of CC-Link-compatible units easy.

Features

● MFP1N (for master/local stations and intelligent device stations) The LSI incorporates the communication protocol, network management function, etc, and can be utilized for development of controllers, such as master devices controlling CC-Link, and communication devices exchanging messages.
● MFP2N (for remote I/O stations)
Since the LSI incorporates all communication protocols, it is easy to develop a unit capable to handing bit information (digital input/output) without a CPU.
● MFP3N (for remote device stations)
Since the LSI incorporates the communication protocol, it is easy to develop a unit capable of handling bit information (digital input/output) and word information (remote register), regardless of the protocol, simply by accessing an external CPU via the two-port RAM.

Specifications

Description	MFP1N		MFP2N		MFP3N	
Type name for order	A6GA-CCMFP1NN 60F	A6GA-CCMFP1NN 300F	A6GA-CCMFP2NN 60F	A6GA-CCMFP2NN 300F	A6GA-CCMFP3NN 60F	A6GA-CCMFP3NN 300F
Application	Master station, local station, intelligent device station		For remote I/O stations		For remote device stations	
Package unit	60 pieces contained	300 pieces contained	60 pieces contained	300 pieces contained	60 pieces contained	300 pieces contained
LSI appearance	QFP (Quad FLAT Package) 100 pins 20×14 mm, 0.65 mm across body pins		QFP (Quad FLAT Package) 100 pins 14×14 mm, 0.5 mm across body pins			

MFP : Mitsubishi Field-network Processor

Notes

■ You are requested to become a member of the CC-Link Partner Association (CLPA) to purchase this communication LSI.
■ The MFP1N requires an additional license agreement.

AJ65MBTL1N-□ Built-in Type I/O Module

An ultra small type mounted directly on a PC board, this module helps flexible, efficient design.

Features

- The module is an ultra small type.
- The module can be mounted with a pin header.
- Cascade connection is possible.
- Measures, such as adding a noise filter, can further protect against problems.
- The power supply is isolated by a transformer, and the connections with external I/O are isolated by a photocoupler.
- Protective functions are upgraded.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	
External dimensions	53(W)×31.5(H)×22(D) mm
Mass	0.03 kg

Q50BD-CCV2 type interface board

Features

- Master stations, stand-by master stations, local stations, and intelligent device stations can be easily developed with the board. Functions necessary for the master stations, stand-by master stations, local stations, and intelligent device stations can be materialized with the interface board mounted on customer boards.
- Compatibility with CC-Link Ver.2
  The compatibility with CC-Link Ver.2 enables the cyclic point to be increased to 8192 for RX/RY and 2048 words for RWr/RWw per network at a maximum. It is also compatible with the old specification (ver.1).
- Space saving
  The board is in the small size of 70 mm × 80 mm.
- It can readily communicate with circuits on user boards via a general purpose interface bus. As the interface between the user boards and interface board is carried out with general memory control signals (address, data, and read/write buses, etc.), communication with the user boards is easy.

Station type	Master station, local station, intelligent device station
Number of stations occupied	
CC-Link version	Ver.2
External dimensions	70.0×80.0 mm
Mass	0.03 kg

COM-CA-CCS CC-Link Slave Embedded Communication Module

OEM embedded communication module. Fast and low cost development for CC-Link slave devices

Features

- Extremely compact size (70×30×16mm) and Robust housing design
- Fieldbus connector and LED can be placed on the module or host board
- Dual Color LEDs
- Fast "Time to Market"
- Cheaper than own development
- Easy to configure
- MFP3 technology
- 3.3V low power consumption

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	Ver.1.10
External dimensions	70×30×15 mm
Mass	

ABS-CCL Anybus CC-Link Slave Module

This unit-integrated type module streamlines the development of CC-Link slave units.

Features

- The module is compact, equivalent to the size of a credit card (86 mm×54 mm×15 mm).
- The module supports all profiles for remote devices.
- The module supports 128 points of I/O data and 16 words of I/O data.(CC-Link Version 1.00)
  The module supports 896 points of I/O data and 128 words of I/O data.(CC-Link Version 2.00)
- Number of occupied stations: 1 to 4.
- The module supports data saving in flash memory and load configuration.
- Baud rate: 156 kbit/s to 10 Mbit/s.

Station type	
Number of stations occupied	1 to 4
CC-Link version	Ver.1.00/Ver.2.00
External dimensions	15(H)×86(W)×54(D)
Mass	43 g

Model FX2N-64CL-M Master Module

This module transforms an FX PLC into the master station for a CC-Link/LT system.

Features

- Each remote I/O module can be easily connected to the master module using a dedicated connector, thus reducing wiring.
- Up to 64 remote I/O modules can be connected.
- General X (input) and Y (output) devices are allocated to remote I/O modules and can operate with the same program as that for general-purpose input/output.
- Since serial device numbers are assigned even if two-point and four-point remote I/O modules are used, I/O allocation can be efficiently performed.

Station type	Master station
Number of stations occupied	
CC-Link version	—
External dimensions	90×43×87 mm
Mass	0.15 kg

Anybus CompactCom CC-Link Plug-in Module

A CC-Link slave module, providing a total of 128 I/O points (bit) and 16 words IN/OUT data, with instant connectivity via the uniform Anybus-CompactCom host interface.

Features

- Supports all profiles for a Remote Device (default Anybus Interface profile)
- Total 128 I/O points (bit) and 16 words IN/OUT data (CC-Link version 1)
- No of occupied stations: 1-4
- Selectable baud rates from 156kbit/s to 10 Mbit/s
- Optically isolated CC-Link interface
- Complete CC-Link functionality & Conformance tested
- Support for CC-Link version 2.0 with extended data
- CE pre-compliance, UL & RoHS conformance

Size	52 mm x 50 mm x 22 mm
Power supply	3.3 Volt
Temperature	-40 to +70 ℃
Baud rate	156kbit/s to 10Mbit/s
Config method	Application interface (switch 1&2)
Appl interface	Parallel and serial
Order code	AB6211

Model FX3UC-32MT-LT micro PLC

Equipped with a master function for CC-Link/LT as a standard item, this high-speed, high-performance PLC is far beyond the established image of micro PLCs.

Features

- The basic performance has been significantly improved.
- The basic and applied commands are refined. The calculation performance has been accelerated. Additionally, 64-k step RAM memory is incorporated as a standard item to deal with large programs.
- A series of functions of the highest level in the industry have been integrated Independent positioning of three axes at up to 100 kHz and six-point simultaneous high-speed counting at 100 kHz are integrated.
- A Chinese character display module has been included for the first time as a standard item.
- The analog functions upgraded
  Four special adapters for analog input/output can be connected, which are capable of performing analog control without using any program. Besides the PID commands, the numerical calculation function has been significantly upgraded.
- The communication function has been upgraded
  With two additional general-purpose communication ports for serial communication, a total of three communication ports are available.
- General X (input) and Y (output) devices are allocated to remote I/O modules and can operate with the same program as that for general-purpose input/output.

Station type	Master station
Number of stations occupied	
CC-Link version	—
External dimensions	90(H)×55(W)×87(D) mm
Mass	0.25 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link/LT | **PLC**

Master Module for Q Series QJ61CL12

Features

● High-speed response: 1.2 ms (at 2.5 Mbps)
● The module can control large-capacity I/O.
  It can control up to 2048 I/O points.

Station type	Master station
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	0.09 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link/LT | **Digital I/O**

Screw Terminal Block Type Remote I/O Module

Features

● The module is one of the smallest units in the class in the industry.
● The module bears a terminal cover with nameplates with which connection destinations can be instantaneously identified.
● The input module adopts a +COM/-COM shared input form.
● The terminal block is designed to be connected directly with a two-wire type sensor or load.
● Mountable in 6 directions.

Station type	Remote I/O station
Number of stations occupied	4 point mode: 2 stations 8 point, 16 point mode: 1 station
CC-Link version	—
External dimensions	64(W)×49(H)×40(D) mm
Mass	0.09 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link/LT | **PLC**

Bridge Module (for CC-Link) AJ65SBT-CLB

Features

● The optimum network for each tier is configured by combining the CC-Link and the CC-Link/LT.
● The CC-Link/LT is available for the A and QnA series.

Station type	Remote device station (CC-Link side)
Number of stations occupied	2 stations/4 stations/8 stations (CC-Link side)
CC-Link version	—
External dimensions	
Mass	0.09 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link/LT | **Digital I/O**

Sensor Connector Type (e-CON) Remote I/O Module

Features

● The module is one of the smallest units in its industry class.
● An open sensor connector is used, which permits easy installation of a sensor.
● The module can be replaced simply by disconnecting the communication connector.
● Mountable in 6 directions.

Station type	Remote I/O station
Number of stations occupied	4 point mode: 2 stations 8 point, 16 point mode: 1 station
CC-Link version	—
External dimensions	24(W)×85(H)×39(D) mm
Mass	0.05 kg

MIL Connector Type Remote I/O Module

Features

- The module is one of the smallest units in its industry class.
- An MIL connector is adopted, which is easy to connect to a relay terminal or terminal block replacement module.
- The module can be replaced simply by disconnecting the communication connector.
- Mountable in 6 directions.

Station type	Remote I/O station
Number of stations occupied	4 point mode: 4 stations 8 point mode: 2 stations 16 point mode: 1 station
CC-Link version	—
External dimensions	24(W)×85(H)×53(D) mm
Mass	0.05 kg

Cable Type Remote I/O Module

Features

- The module is one of the smallest units in its industry class.
- Like cables, the module can be housed within a duct.
- The integrated design of the communication cable and the external unit connecting cable makes wiring easy.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	65(H)×20(W)×12(D) mm
Mass	0.07 kg

CL2AD4-B Screw Terminal Board Type Analog - Digital Conversion Module

Features

- Smaller than CC-Link D/A conversion module.
- Input range can be changed for each channel.
- Four conversion methods.
- Number of I/O points (number of occupied stations) can be changed.
- Enhancement of operability and maintenance.
- Enhancement of reliability through simple dustproof shape.
- Module can be mounted in 6 directions.

Station type	Remote device station
Number of stations occupied	4 stations
CC-Link version	—
External dimensions	
Mass	0.15 kg

CL2DA2-B Screw Terminal Board Type Digital - Analog Conversion Module

Features

- Smaller than CC-Link D/A conversion module.
- Output range can be changed for each channel.
- Maintaining/clearing of analog output can be set for when communications are cut.
- Number of I/O points (number of occupied stations) can be changed.
- Enhancement of operability and maintenance.
- Enhancement of reliability through simple dustproof shape.
- Module can be mounted in 6 directions.

Station type	Remote device station
Number of stations occupied	2 stations
CC-Link version	—
External dimensions	
Mass	0.15 kg

CC-Link/LT Picking Terminal ALT27XB-02G-P

A must-have picking system for sorting and assembling in all fields of industry.
An easy-to-install "reduced wiring Picking Terminal" is here for you to use as if it were the D-I/O of a PLC.
The handy, reduced wiring CC-Link/LT allows you to build up a simple picking system.

Features

●Easy to install
 ・Make it simple and reduce wiring with the CC-Link/LT.
 ・The crimp type link connector makes it easy to install.
●Enables you to build up a system with a high level of flexibility and extension.
●The terminal that incorporates the demands from work sites
 ・A bright, esthetic LED lamp and display (milky white when it is off).
 ・A lever switch covered with rubber for rough operation (with a mechanical life of one million switching operations).
 ・A terminal that allows you to easily define node numbers at a site.
 ・Can be installed at a higher location as you can tie a cord to the takeout check switch.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	—
Mass	0.075 kg

FANC-Z/LT 40.75 mm^2 CC-Link/LT-compatible Cable for Movable Portions

A cable for movable portions compatible with the CC-Link/LT.

Features

●The cable uses a thinner annealed copper composite twisted wire as the conductor and is available for right-/left-bent portions, cable bearing caterpillars, and movable portions.
●For the outer sheath, an oil-resistant, heat-resistant vinyl mixture is used.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	Cable outside diameter approx. 6.9 mm
Mass	

CM/LT (2586) Cable for Movable Portions Compatible with CC-Link/LT

This cable movable portions is compatible with the CC-Link/LT.
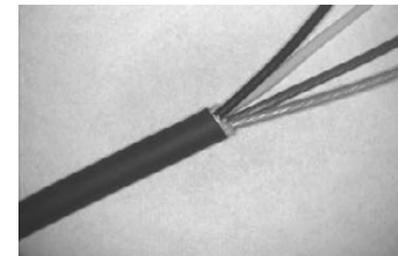
Features

●The cable is UL-certified (AWM Style 2586).
●An outer sheath with outstanding oil resistance and non-flammability is used.
●The cable has the same level of bending performance as robot cables.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	Cable outside diameter approx. 7 mm
Mass	

Dedicated flat cable CL9-FL4-18

Features

●Reduced costs
　By using the dedicated flat cable, wiring processes can be reduced, and wiring costs can be reduced.

●Prevent miswiring
　The cable shape is asymmetrical on the front and back so the connector will not snap in if it is connected in reverse.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	

Connection connector for flat cables CL9-CNF-18

Features

●Easy operation
　・Connectors can be easily crimped using a special crimping tool (model name: L-TOOL-N). Pliers available on the market are also available.

●Wrong wiring prevented
　・Each connector is equipped with a window for checking wiring. The wiring is wrong if the orange cable is visible through the window.

●Multiple functions
　・By cutting the resin at the end of the cover with nippers, the connector can be used as a connector for branch connection.
　・The male and female halves have the same body. Connectors can be engaged if they are the same type.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	

Dedicated movable cable CL9-MV4-075

Features

●A bending performance of 4,000,000 or more bends [1] is realized by using insulator (ETFE) and wire structure with outstanding bending characteristics.
　*1 Value measured under specified conditions.

●Sheath with outstanding oil resistance enables use in environment where cutting oil or lubrication oil could come in contact.
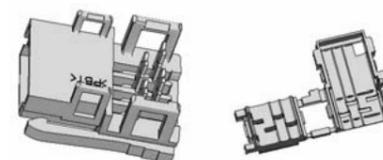
Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	

Connection connector for VCTF cables, movable cables CL9-CNR-23 CL9-CNR-20

Features

●Easy operation
　・Connectors can be easily crimped using a special crimping tool (model name: L-TOOL-N). Pliers available on the market are also available.

●Wrong wiring prevented
　・Each connector is equipped with a window for checking wiring. The wiring is wrong if the red, white or black cable is visible through the window.
　・To prevent wrong wiring, a color marking is on the cover of the connector that a VCTF movable cable is connected to.

●Multiple functions
　・By cutting the resin at the end of the cover with nippers, the connector can be used as a connector for branch connection.
　・The male and female halves have the same body. Connectors can be engaged if they are the same type.
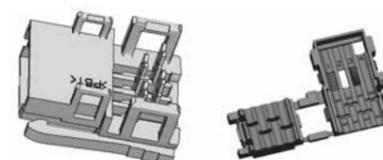
Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	

Cables・connectors

Open sensor connector (e-CON) ENC-A* ENC-M*

Features

● Easy work
・Attach the connector easily by crimping with a dedicated crimping tool (model name: e-TOOL-N). Connectors can also be attached with pliers come on to the market.
・No waste is generated as the wires do not need to be pre-treated.
● Reliability
The wires are connected with crimping, eliminating trouble caused by poor contact.
● Reliability
・A diverse lineup of applicable wire sizes from 0.08 to 0.50mm^2 (AWG28 to 20).
・Using the conductivity check window, the conductivity can be checked with a tester even while wires are energized.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	

CRFV-A075C04-LT CC-Link/LT-compatible Cable Dedicated to Movable Portions

This is the optimum choice for the movable portions of industrial robots, labor-saving machines, etc.

Features

● Cable with improved bending resistance
Result of bending to ±90° in right and left directions: Four million times or more (supporting bar: φ60, load: 500 g). Our recommended bending radius when the cable is to be bent to a U-shape and used in a movable portion is 7d or more (d: cable outer diameter).
● The cable is oil-resistant, heat-resistant, and nonflammable.
*The specifications may be changed depending on the working conditions after consultation.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	Cable outside diameter approx. 7.2 mm
Mass	

Model CL1PSU-2A Power Supply Dedicated to CC-Link/LT

Features

● This power supply with a built-in power supply adapter is designed exclusively for CC-Link/LT systems.
● The input power supply is free between 85 C AC and 264 V AC.

Station type	Power Supply Dedicated
Number of stations occupied	
CC-Link version	—
External dimensions	90(H)×90(W)×90(D) mm
Mass	0.40 kg

Model CL1PAD1 Power Supply Adapter

Features

● When a CC-Link/LT system is powered by an external power supply, this power supply stabilizes the entire system.

Station type	Power Supply Adapter
Number of stations occupied	
CC-Link version	—
External dimensions	85(H)×66(W)×90(D) mm
Mass	0.26 kg

Cables・connectors

Power supply

Model PS2C CC-Link/LT Switching Power Supply

A switching power supply, which combine/integrates a power adapter, exclusively for the CC-Link/LT. An AC free input (100 to 240 V AC) makes the unit applicable to all units available worldwide.

Features

- The power supply contains a power supply adapter for the CC-Link/LT.
- Besides the power supply for the CC-Link/LT, a model equipped with a general-purpose 24 V auxiliary output power supply is also available.
- The power supply can operate at an ambient temperature of up to 50 with a cover attached and without derating.
- In addition to the terminal block type, a power supply complete with a finger protection mechanism is also available, and has been introduced to the worldwide market.
- The power supply conforms to FCC class A and VCCI class A.
- The power supply complies with harmonic current regulations.

Specifications

■Terminal block types

Output capacity	120W					
Specification for installation	Mounting on DIN rails (mounting direction: front)		Direct mounting		Mounting on DIN rails (mounting direction: side)	
Auxiliary output	Not available	Available	Not available	Available	Not available	Available
Model number	PS2C-F24AFCW	PS2C-F24AFCWP	PS2C-F24AFC	PS2C-F24AFCP	PS2C-F24AFCT	PS2C-F24AFCTP
External dimension	107(H)×63.6(W)×224.2(H) mm		97(H)×62(W)×212.5(H) mm		97(H)×70.5(W)×212.5(H) mm	
Mass	Approx. 1,010g		Approx. 850g		Approx. 970g	

■Finger protection types

Output capacity	120W					
Specification for installation	Mounting on DIN rails (mounting direction: front)		Direct mounting		Mounting on DIN rails (mounting direction: side)	
Auxiliary output	Not available	Available	Not available	Available	Not available	Available
Model number	PS2C-F24AFFW	PS2C-F24AFFWP	PS2C-F24AFF	PS2C-F24AFFP	PS2C-F24AFFT	PS2C-F24AFFTP
External dimension	107(H)×63.6(W)×211.7(H) mm	107(H)×63.6(W)×221.7(H) mm	97(H)×62(W)×200(H) mm	97(H)×62(W)×210(H) mm	97(H)×70.5(W)×200(H) mm	97(H)×70.5(W)×210(H) mm
Mass	Approx. 1,000g		Approx. 840g		Approx. 960g	

Model EHLT01 Handy Line Tester Compatible with CC-Link/LT

By being directly connected to a CC-Link/LT system, the tester can monitor the communication status of the CC-Link/LT or remote station input/output or test output ON/OFF.

Features

- Master functions incorporated
  Since the EHLT01 itself can function as the master module, it is capable of performing I/O checks, including input/output monitoring and output ON/OFF testing, without a master module.
- CC-Link/LT diagnosis possible
  The tester is capable of diagnosing and monitoring the CC-Link/LT, including I/O checking, error detection, and remote station information and system information display.
- Easy CC-Link/LT system startup
  The EHLT01 itself has a power supply function, and power can, therefore, be supplied to the CC-Link/LT system via the EHLT01 if a general-purpose power supply (24 V) is available when the system is turned on.

Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	188mm(H)×96mm(W)×36.5mm(D)
Mass	0.42 kg

Terminal Resistor CL9-TERM

Voltage check window

Features

● The terminal resistor is compact and can be mounted by one-touch operation. The voltage of the main line can be checked through the voltage checking window.

● Available for constructing a system with a dedicated flat, VCTF or movable cable alone, or with a mixture of a dedicated flat, VCTF or movable cable.

*Use terminal resistors of the same model for both ends of the main line.
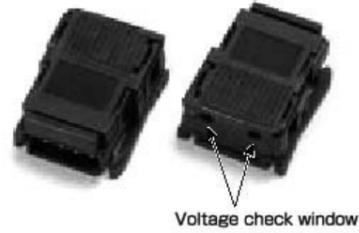
Station type	
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	

Communication LSI Dedicated to CC-Link/LT

Features

● [CLC13] (Master station) Since the LSI incorporates the communication protocol, units which control data communication and remote stations can be developed by reading and writing data from/to an external CPU, irrespective of the protocol

● [CLC12] (Remote I/O station) Since the LSI incorporates the communication protocol, units handling bit data without using any external CPU (program) can be easily developed.

● [CLC31] (Remote device station) The incorporated communication protocol requires no preparation for communication protocols. The protocol allows users to access external CPUs via 2-port RAM, making development of bit- (digital I/O) and word-data (remote register) equipment easier.

Specifications

Description	CLC13	CLC21		CLC31
Type name for order	CL2GA13-60	CL2GA21-60	CL2GA21-300	CL2GA31-60
Package unit	60 pieces	60 pieces	300 pieces	60 pieces
Special application	Master station	Remote I/O station		Remote device station

CLC: CC-Link/LT Controller

Wiring parts

Parts built into devices・ASIC

MITSUBISHI ELECTRIC CORPORATION | CC-Link Safety | **PLC**

MITSUBISHI SAFETY PLC MELSEC-QS SERIES MASTER MODULE QS0J61BT12

Newly available is a CC-Link Safety system master module compatible with the Mitsubishi safety PLC MELSEC-QS series.

Features

● The module is approved by the certification of the highest safety level (IEC61508 SIL3, EN954-1 category 4, ISO13849-1 Ple) in the PLC category.
● Safety remote stations and standard remote stations can be installed together on the same network. With GX Developer, safety remote station parameters can be set easily.
● Error information received and detected during the communication with safety remote stations are registered to the error history in the safety CPU.

Station type	Master station
Number of stations occupied	
CC-Link version	—
External dimensions	
Mass	0.12 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link Safety | **Digital I/O**

QS0J65BTS2-4T Safety Remote I/O Module

The system of EN954-1 category 3 or category 4 can be configured according to the combination of wiring and parameters. Dark tests (diagnosis of stuck failure of junctions) can diagnose a failure, covering external safety devices.

Features

● The remote I/O unit is authorized by certifications at the highest safety level (IEC61508 SIL3, EN954-1/ISO13849-1 category 4) that can be given to PLCs.
● If a failure occurs inside the module, self-diagnostics detect the failure to turn off outputs.
● Dark tests (diagnosis of stuck failure of junctions) can diagnose a failure, covering external safety devices.
● Self-diagnostics include memory diagnosis, circuit block diagnosis, etc.
● The parameter setting screen of the programming tool enables you to easily make the settings of the safety remote I/O module.
● If a trouble occurs in the module, the module alone can be reset without turning off and on the power supply.

Station type	Safety remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	197(W)×65(H)×74.5(D) mm
Mass	0.45 kg

MITSUBISHI ELECTRIC CORPORATION | CC-Link Safety | **Digital I/O**

QS0J65BTS2-8D Safety Remote I/O Module

The system of EN954-1 category 3 or category 4 can be configured according to the combination of wiring and parameters. Dark tests (diagnosis of stuck failure of junctions) can diagnose a failure, covering external safety devices.

Features

● The remote I/O unit is authorized by certifications at the highest safety level (IEC61508 SIL3, EN954-1/ISO13849-1 category 4) that can be given to PLCs.
● If a failure occurs inside the module, self-diagnostics detect the failure to turn off outputs.
● Dark tests (diagnosis of stuck failure of junctions) can diagnose a failure, covering external safety devices.
● Self-diagnostics include memory diagnosis, circuit block diagnosis, etc.
● The parameter setting screen of the programming tool enables you to easily make the settings of the safety remote I/O module.
● If a trouble occurs in the module, the module alone can be reset without turning off and on the power supply.

Station type	Safety remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	197(W)×65(H)×74.5(D) mm
Mass	0.46 kg

QS0J65BTB2-12DT Safety Remote I/O Module

The system of EN954-1 category 3 or category 4 can be configured according to the combination of wiring and parameters. Self-diagnostics can detect failures inside the module to turn off outputs.

Features

- The remote I/O module is authorized by certifications at the highest safety level (IEC61508 SIL3, EN954-1/ISO13849-1 category 4) that can be given to PLCs.
- If a failure occurs inside the module, self-diagnostics detect the failure to turn off outputs.
- Dark tests (diagnosis of stuck failure of junctions) can diagnose a failure, covering external safety devices.
- Self-diagnostics include memory diagnosis, circuit block diagnosis, etc.
- The parameter setting screen of the programming tool enables you to easily make the settings of the safety remote I/O module.
- If a trouble occurs in the module, the module alone can be reset without turning off and on the power supply.

Station type	Safety remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	163(W)×98(H)×85(D) mm
Mass	0.67 kg

QJ71GP21-SX MELSEC Q Series Interface Module

A high-speed, large-capacity network is achieved on your production site.

Features

- Achieving high-speed and large data capacity devices and facilities: The gigabit Ethernet technology is adopted to enable the communication speed of 1 Gbps and the network type shared memory of 256 Kbytes (word data). High-speed devices and large-capacity data transmission are achieved.
- Reducing installation cost and maintenance cost: You can use commercially available Ethernet cables and network analyzers to reduce the network installation cost, maintenance cost, etc.
- Simplifying network construction by the network type shared memory method: The "network type shared memory method" is adopted to automatically refresh (update) communication between the shared memory and the PLC device. Thus, you can easily construct a network to make possible decentralized control of the controller.

External dimensions	98(H)×27.4(W)×90(D) mm
Mass	0.18 kg

SF-CL1T264T

Reduces the burden of designing complex safety circuits! The SF-CL1T264T provides total solution to safety systems.
It realizes networking light curtains and safety devices with reduced wiring.

Features

- Connecting the I/O of light curtains and safety devices to the field network CC-Link Safety enables to transmit safety circuit signals collectively for network control.
- Allows to readily connect up to two sets of series SF4B light curtains with connectors.
- Programmed muting control of light curtains is also available where the line stops only when a human body is passing through the light curtain while it keeps running when a work piece is passing through.
- Cables stay connected while detaching the terminal block, contributing to reducing maintenance man hours.

Station type	Remote I/O station
Number of stations occupied	1 station
CC-Link version	—
External dimensions	190(W)×83(H)×98(D) mm
Mass	Approx. 700 g

QJ71GP21S-SX MELSEC Q Series Interface Module with External Power Source Function

A high-speed, large-capacity network is achieved on your production site.

Features

- Achieving high-speed and large data capacity devices and facilities: The gigabit Ethernet technology is adopted to enable the communication speed of 1 Gbps and the network type shared memory of 256 Kbytes (word data). High-speed devices and large-capacity data transmission are achieved.
- Reducing installation cost and maintenance cost: You can use commercially available Ethernet cables and network analyzers to reduce the network installation cost, maintenance cost, etc.
- Simplifying network construction by the network type shared memory method: The "network type shared memory method" is adopted to automatically refresh (update) communication between the shared memory and the PLC device. Thus, you can easily construct a network to make possible decentralized control of the controller.
- Stable operation by the external power source: Communications can be maintained without performing a loopback when the PLC CPU is terminated.

External dimensions	98(H)×55.2(W)×90(D) mm
Mass	0.28 kg

Q80BD-J71GP21-SX/Q80BD-J71GP21S-SX CC-Link IE Controller Network interface board

The CC-Link IE Controller network board allows connection of a personal computer to a CC-Link IE Controller network system.

Features

● Personal computer can be incorporated into CC-Link IE Controller Network.
● Supporting universal PCI
● Using the CC IE Control utility, various settings such as channel numbers and station numbers can be configured easily.

External dimensions	181(W)×121(H)×18.5(D) mm
Mass	0.12 kg/0.14 kg

GT15-J71GP23-SX CC-Link IE Controller Network Communication Module for GOT1000

The communication module can be used in CC-Link IE controller networks that support a transmission speed of 1 Gbps and a large-capacity of 256 Kbytes for network type shared memory. Utilize the communication module across the system including data systems and production sites.

Features

● Achieving high-speed communication system
● Complying with the GOT multichannel
● Large-scale, flexible system configuration
● Rich RAS functions
● Adding network diagnostics on the GOT main body
● Communication with other networks (routing function)

External dimensions	136(W)×44(H)×120(D) mm
Mass	0.28 kg

Specifications

The table below lists performance specifications of CC-Link IE Controller Network.
For general specifications of CC-Link IE Controller Network, see the manual of the GT15 main body.

Item		CC-Link IE Controller Network Controller
Max. number of link points per network	LB	32K points (32768 points, 4 Kbyte)
	LW	128K points (131072 points, 256 Kbyte)
Max. number of link points per station	LB	16K points (16384 points, 2 Kbyte)
	LW	16K points (16384 points, 32 Kbyte)
Communication speed		1 Gbps
Number of connected stations per network		Max. 120 stations
Connecting cable		Optical fiber cable (multimode fiber)
Total extension distance (total extension distance of optical cables)		66 km (with 120 stations connected)
Distance between stations	Min.	2 m
	Max.	550 m
Max. number of networks		239
Max. number of groups		32
Transmission path form		Double loop

＊GT15-J71GP23-SX CC-Link IE Network Controller is compatible with normal stations.

CC-Link IE Controller Network Compatible Optical Fiber Cable (Inside panel, Indoors, Outdoors, Reinforced type for outdoors)

CC-Link IE Controller Network Compatible Optical Fiber Cable
(With our original Protective holder)

Recommended product

Features

●Abundant lineups of cables is available, including types for use inside panels, indoors, outdoors, and reinforced type for outdoors, allowing use in a various environments.
●Thin Cable (for indoor and outdoor use) incorporates a cord bundling structure, allowing safe use even in small factory cable-laying environments.
●The indoor use and outdoor use cables are free of tension members, and have an allowable tension equivalent to the reinforced type for outdoor use.
●The outdoor use cable is waterploof, and can be used even in flooded or temporary submerged areas.
●By attaching the enclosed protective holder, breakage at the connector base can be prevented and space in the panel can be saved.
●This cable has reinforced bending characteristics.

External dimensions	
Mass	

CC-Link IE object development

The CC-Link IE development tool with object software supports the development of CC-Link IE controller compatible network products.

Features

●The CC-Link IE development tool with object software is composed of the object code and reference manual.
●This function is made up using a device kit.

External dimensions	
Mass	

CC-Link IE Controller Network Compatible Connecting Terminal SC-ECT-P3

This product enables to add units between stations and gradual set-up without changing the existing installed cables.

Recommended product

Features

●Enables to add 3 units as maximum by installing connecting terminal between stations. (No more than 4 units)
●Enables gradual set-up without changing the existing installed cables. (1 four-core cable laying per additional unit)
●Possible to install with screws or to DIN rail

External dimensions	W151×H65×D64 mm
Mass	0.3 kg

Contact

MITSUBISHI ELECTRIC SYSTEM & SERVICE CO., LTD.
FA PRODUCT DIVISION
<URL> http://www.melsc.co.jp (Japanese Only)
<E-mail> oss-ip@melsc.jp

CC-Link IE Controller Network Compatible Optical Media Converter DMC-1000SL

Communication between 1000BASE-SX module and 1000BASE-LX module. Recommended product

Features

● Greater distance between stations of a CC-Link IE controller network. Increase the distance between stations to 15km.
● Communication between 1000BASE-SX and 1000BASE-LX modules is possible by installing this product between those modules.
● A cascade connection of up two steps is possible by relaying a low-jitter signal with the 3R regeneration format.
● This product transmits received sigals as they are, without creating auto-negotiation signals.

External dimensions	52(W)×26(H)×74(D) mm
Mass	100 g

Wind River offers software platforms and services for the development of industrial units.

### Industry's standard integrated development environment

Real-time OS VxWorks, development environment Tornado, and other industrial protocols are integrated.

Services

Developing CC-Link drivers and BPSs (board support packages)
Integration & customization, project outsourcing, technical consulting

Image diagram showing products and services offered

Solution package for the development of industrial units
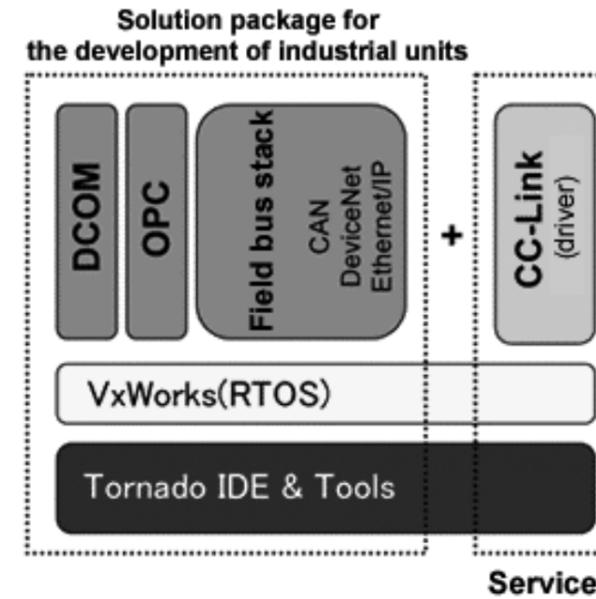
Development support of CC-Link Ver. 2

We support software development using the source codes (SW1D5C-CCV2SRC) compatible with the CC-Link Version 2 marketed by Mitsubishi Electric Corporation while providing software technical support.

Contracted activities

1. Supporting software development
   For developing software programs to meet customers' products, we customize source codes for master, local and intelligent device stations.

2. Software technical support
   We provide technical information and development consulting services for customers' products to be compatible with the CC-Link by utilizing the CC-Link Version 2 source codes.

Development contract and consulting services

▶ Software development support
▶ Software technical support

Flash ROM

Products compatible with CC-Link Version 2

Hardware development (customers)

SW1D5C-CCV2SRC

Reference manuals

Purchased from Mitsubishi Electric Corporation

Communications LSI (MFP1N)
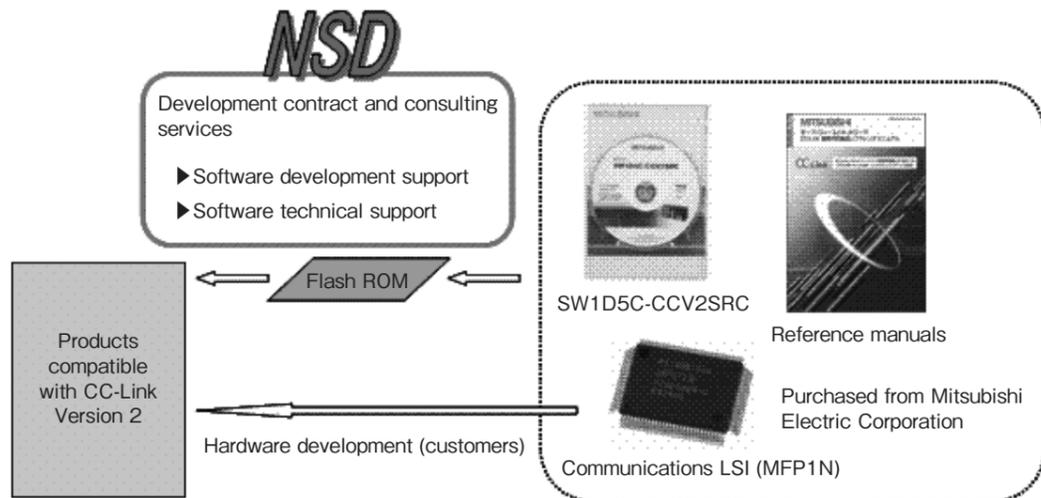
Developing products for CC-Link Partner Association member companies by contract

Mitsubishi Electric Engineering Co., Ltd. helps CC-Link Partner Association member companies enrich their lines of products compatible with the CC-Link.

Contracted activities

1. Mitsubishi Electric Engineering has long been engaged in the development of MELSEC PLC products, and offers long-accumulated development technology

   Hardware design (circuit design, PC board design, ASIC development, FPGA development, logic verification, transmission channel analysis, etc.)

   Software design (Visual C++, C language, etc.)

   Enclosure design (efficient design by 3D-CAD, CAE analysis, rapid prototype making, etc.)

2. The Development and Prototyping Center (located in the city of Kasugai, Aichi Prefecture) offers services from prototype making to prototype evaluation and improvement proposals

   Function, characteristic, safety, environmental, limit tests, etc.

   Noise and surge tests (EMC evaluation and improvement proposals, conformance tests and improvement proposals, etc.)

3. Mitsubishi Electric Engineering mass-produces products on an outsourcing basis.

   We can provide inexpensive products in collaboration with EMS companies.

   You have a choice to cover development costs through the manufacture of mass-produced products.

We can commercialize interface boards, units, devices, and other products compatible with the CC-Link by contract.

Solenoid valves, indicators, temperature controllers, barcodes, FA personal computer I/F boards, LEDs, display units (including those for picking systems)

Scales, MFCs (mass flow controllers), flow meters

Power monitors, cPCI bus boards, VME bus boards

PC104 bus modes, OA appliance-related units

Even if you cannot find the product you desire in the list above, please do not hesitate to consult us.

Entrusted
Development

MITSUBISHI ELECTRIC MECHATRONICS
SOFTWARE CORPORATION

CLPA

Entrusted Development

Contracted development of software programs for CC-Link Partner Association partner companies

By contract, we develop various kinds of software programs for CC-Link related products and firmware including hardware.

Features

With accumulated technology and established reliability for over 20 years, Mitsubishi Electric mechatronics Software Corporation develops by contract CC-Link related products that meet the needs of our customers. Accredited by ISO 9001-2000, we develop, design and evaluate CC-Link related products with our excellent technology and consistent quality.
Our contracted activities include:
(1) Developing, designing and evaluating firmware for CC-Link master stations, local stations and intelligent stations;
(2) Developing, designing and evaluating firmware for remote device stations;
(3) Developing, designing and evaluating interface drivers for the CC-Link; and
(4) Developing, designing and evaluating software packages for the CC-Link.

CC-Link

(3), (4)

Application

Driver

OS   ← Actual
                        • Windows
PCI bus   • VxWorks

(2)

Application

Cyclic

CC-Link data link
protocol &
communications
driver

MFP3

(1)

Application

Cyclic | Transient

CC-Link data link
protocol

Communications driver

MFP1

CC-Link Specification

Item			Specification				
			Ver. 1.10	Ver. 2.00			
The maximum number of link points	Remote I/O(RX, RY)		2048 points each	8192 points each			
	Remote register (RWr)		256 words	2048 words (Slave station to Master station)			
	Remote register(RWw)		256 words	2048 words (Master station to Slave station)			
Extended cyclic setting			—	1 time setting	2 time setting	4 time setting	8 time setting
The number of link points per unit	1 station occupied	RX, RY	32 points each	32 points each	64 points each	128 points each	
		RWr, RWw	4 words each	8 words each	16 words each	32 words each	
	2 stations occupied	RX, RY	64 points each	96 points each	192 points each	384 points each	
		RWr, RWw	8 words each	16 words each	32 words each	64 words each	
	3 stations occupied	RX, RY	96 points each	160 points each	320 points each	640 points each	
		RWr, RWw	12 words each	24 words each	48 words each	96 words each	
	4 stations occupied	RX, RY	128 points each	224 points each	448 points each	896 points each	
		RWr, RWw	16 words each	32 words each	64 words each	128 words each	
The maximum number of occupied stations			4 stations				
Communication speed			10M / 5M / 2.5M / 625k / 156kbps				
Communication system			Broadcast polling system				
Synchronization system			Frame synchronization system				
Encoding system			NRZI				
Transmission path format			Bus format (EIA RS485 conformance)				
Transmission format			HDLC conformance				
Error control system			CRC ($X^{16}+X^{12}+X^5+1$)				
Max. number of units connected			64 units				
The number of slave station			1-64				

Control specification

Communication specification

Max. overall cable extension length and inter-station cable length

| Master station | Remote I/O station or Remote device station | Remote I/O station or Remote device station | Local station or Intelligent device station | Local station or Intelligent device station |

Inter-station cable length

Max. overall cable extension length

CC-Link Ver. 1.10 compatible cable (Using 110Ω terminators)

Communication speed	inter-stationcable length	Max. overall cable extension length
156Kbps		1200m
625Kbps		900m
2.5Mbps	20 cm or longer	400m
5Mbps		160m
10Mbps		100m

If a system uses modules compatible with Ver. 1.00, 1.10 and Ver. 2.00, and cables compatible with Ver. 1.00 and 1.10, then follow the Ver. 1.00 specification for maximum overall cable extension length and inter-station cable length.

| Connection cable | CC-Link Ver. 1.10 compatible cable (Shielded, 3-core twisted pair cable) * Mixture of different brand cables is possible only when they are all Ver. 1.10 compatible cables. |

Difference between CC-Link Ver.1.10 and Ver.2.00 in the number of connected units

	Number of units connected
Ver.1.10	Max. 64 stations. But it should satisfy the conditions below 1. Number of all stations $a+b\times2+c\times3+d\times4\leq64$ a : Number of units that occupies 1 station, b : Number of units that occupies 2 stations c : Number of units that occupies 3 stations, d : Number of units that occupies 4 stations 2. Number of units connected $16\times A+54\times B+88\ C\leq2304$ A : Number of remote I/O station units ··· Max. 64 units B : Number of remote device station units ··· Max. 42 units C : Number of local station, stand by master station and intelligent device station units ···· Max. 26 units
Ver.2.00	Max. 64 stations. But it should satisfy the conditions below 1. Number of all stations $(a+a2+a4+a8)+(b+b2+b4+b8)\times2+(c+c2+c4+c8)\times3+(d+d2+d4+d8)\times4\leq64$ 2. Total number of remote I/O points $(a\times32+a2\times32+a4\times64+a8\times128)+(b\times64+b2\times96+b4\times192+b8\times384)$ $+(c\times96+c2\times160+c4\times320+c8\times640)+(d\times128+d2\times224+d4\times448+d8\times896)\leq8192$ 3. Total number of remote register points $(a\times4+a2\times8+a4\times16+a8\times32)+(b\times8+b2\times16+b4\times32+b8\times64)$ $+(c\times12+c2\times24+c4\times48+c8\times96)+(d\times16+d2\times32+d4\times64+d8\times128)\leq2048$ a : The number of units with 1 station occupied and 1 time setting b : The number of units with 2 stations occupied and 1 time setting c : The number of units with 3 stations occupied and 1 time setting d : The number of units with 4 stations occupied and 1 time setting a2: The number of units with 1 station occupied and 2 times setting b2: The number of units with 2 stations occupied and 2 times setting c2: The number of units with 3 stations occupied and 2 times setting d2: The number of units with 4 stations occupied and 2 times setting a4: The number of units with 1 station occupied and 4 times setting b4: The number of units with 2 stations occupied and 4 times setting c4: The number of units with 3 stations occupied and 4 times setting d4: The number of units with 4 stations occupied and 4 times setting a8: The number of units with 1 station occupied and 8 times setting b8: The number of units with 2 stations occupied and 8 times setting c8: The number of units with 3 stations occupied and 8 times setting d8: The number of units with 4 stations occupied and 8 times setting 4. Number of units connected $16\times A+54\times B+88\times C\leq2304$ A : Number of remote I/O station units ·································· Max. 64 units B : Number of remote device station units ·························· Max. 42 units C : Number of local station, stand by master station and intelligent device station units ····· Max. 26 units *In the case of units compatible with Ver. 1, the number is calculated with one time setting.

CC-Link Ver. 1.00 model (differences from Ver. 1.10)

There are two differences in specifications between CC-Link Ver. 1.10 and Ver. 1.00 as shown below.
● Max. overall cable extension length and inter-station cable length
● Connection cable

Item	Specification
Max. overall cable extension length and inter-station cable length	 *1: Inter-station cable length between remote I/O or remote device stations *2: Inter-station cable length between the master station and a local station or between an intelligent device station and the preceding or following station CC-Link Ver. 1.10 compatible cable (Using 110Ω terminators) (table below) (A): 1 m or longer: In the case of a system comprising only remote I/O or remote device stations (B): 2 m or longer: In the case of a system comprising local and intelligent device stations *: If even a cable between remote I/O or remote device stations is to be wired within this range, the maximum overall cable length shown above applies.
Connection cable	CC-Link Ver. 1.10 compatible cable (Shielded, 3-core twisted pair cable) * Cables of different manufacturers cannot be used together.

Communication speed	inter-station cable length *1	inter-station cable length *2	Max. overall cable extension length
156Kbps	30 cm or over	1 m or over (A) / 2 m or over (B)	1200 m
625Kbps	30 cm or over	1 m or over (A) / 2 m or over (B)	600 m
2.5Mbps	30 cm or over	1 m or over (A) / 2 m or over (B)	200 m
5Mbps	30 cm to 59 cm*	1 m or over (A) / 2 m or over (B)	110 m
5Mbps	60 cm or over	1 m or over (A) / 2 m or over (B)	150 m
10Mbps	30 cm to 59 cm*	1 m or over (A) / 2 m or over (B)	50 m
10Mbps	30 cm to 59 cm*	1 m or over (A) / 2 m or over (B)	80 m
10Mbps	1 m or over	1 m or over (A) / 2 m or over (B)	100 m

CC-Link/LT specification

			4-point mode	8-point mode	16-point mode
CC-Link/LT specification	Max. number of link points		256 points (512 points) *	512 points (1024 points) *	1024 points (2048 points) *
	Number of link points per station		4 points (8 points) *	8 points (16 points) *	16 points (32 points) *
	Link scan time (ms)	When 32 stations are connected	Number of points 128 points	256 points	512 points
			2.5Mbps 0.7	0.8	1.0
			625Kbps 2.2	2.7	3.8
			156Kbps 8.0	10.0	14.1
		When 64 stations are connected	Number of points 256 points	512 points	1024 points
			2.5Mbps 1.2	1.5	2.0
			625Kbps 4.3	5.4	7.4
			156Kbps 15.6	20.0	27.8

Communication specification	Communication speed	2.5 Mbps/625 kbps/156 kbps
	Communication system	BITR method (Broadcastpolling + Interval Timed Response)
	Transmission path format	T-branch format
	Error control system	CRC
	Max. number of units connected	64 units
	Slave station number	1 to 64
	Max. number of connected modules to branch line	8 units / Branch
	Inter station length	Unlimited
	Inter T-branch length	Unlimited
	Master station connection position	Connected to the end of the main line.
	RAS function	Network diagnosis, internal loopback diagnosis, slave station disconnection, and automatic return
	Connection cable	Dedicated flat cable (0.75mm^2×4), Dedicated high flexible cable (0.75mm^2×4), VCTF cable (JIS C 3306 conformance, 0.75mm^2×4)

* This is the address numbers of link s in case of using the same address numbers for input and output.

● CC-Link/LT wiring specification
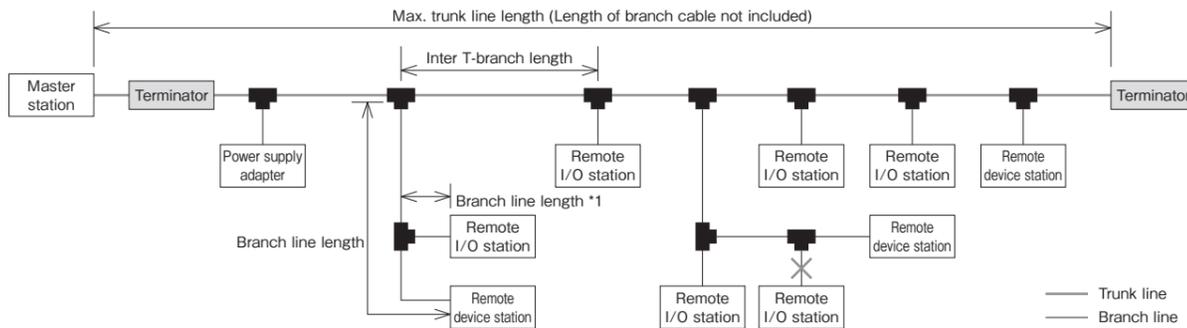
Item	Specification			Remarks
Communication speed	2.5 Mbps	625 Kbps	156 Kbps	
Inter station length	Unlimited			
Max. number of connected modules to branch line	8 units / Branch			
Max trunk line length	35 m	100 m	500 m	Cable length between terminators (Length of branch cable not included)
Inter T-branch length	Unlimited			
Max. branch line length	4 m	16 m	60 m	Overall cable length for one branch line
Ovarall branch line length	15 m	50 m	200 m	Overall length of all the branch lines

· Branch lines can be used together with dedicated flat cables, VCTF cables or cables exclusively for movable portions.
· Different types of cables cannot be used together within the main line.
· Different types of cables cannot be used together within the same branch line.
· Install the master station at either end of the main line.
· Install a terminating resistor within 20 cm from the master station.
*1 : Include the length of any branch from any branch line in the overall branch line length.
*2 : Branch lines cannot be wired from any branch line.

CC-Link Safety specification

	Specifications	
	Ver. 1.12 (CC-Link Safety)	Ver. 1.00 (Reference)
Communication speed	10M/5M/2.5M/625K/156Kbps	
Communication method	Broadcast polling	
Synchronization method	Frame synchronization method	
Encoding method	NRZI	
Transmission path format	Bus format (EIA RS485 compliant)	
Transmission format	HDLC compliant	
Error control system	CRC16 (X^{16}+X^{12}+X^5+1))	
	CRC32^{*1}	—
Maximum number of link points	S-RY: 2,048 bits S-RX: 2,048 bits S-RWw: 128 words S-RWr: 128 words Note: When the system configuration includes standard stations, the maximum number of safety station link points decreases. (Refer to the next page.)	RY: 2,048 bits RX: 2,048 bits RWw: 256 words RWr: 256 words
Number of link points per module	Refer to Table 5.7.	Refer to Table 5.8.
Maximum number of occupied stations	2 stations	4 stations
Transient transmission (per 1 LS)	Not applicable	960 bytes, maximum [150 byte M^{*2} ID/L^{*3}], 34 bytes (ID/L M)]
Number. of connected modules	(1×a)+(2×b)+(3×c)+(4×d)≤ 64 stations a: No. of modules with 1 occupied station, b: No. of modules with 2 occupied stations, c: No. of modules with 3 occupied stations, d: No. of modules with 4 occupied stations	
	(16×A)+[54×(B+D+E)]≤ 2,304 A: No. of standard remote I/O stations B: No. of standard remote device stations D: No. of safety remote I/O stations E: No. of safety remote device stations Note: With a configuration of safety stations only, the maximum number of connected stations is 42.	(16×A)+(54×B)+(88×C)≤ 2,304 A: No. of standard remote I/O stations B: No. of standard remote device stations C: No. of standard local stations and standard intelligent device stations
Slave station numbers	1 to 64	
Cable	CC-Link dedicated cable (shielded 3-wire twisted pair cable)	

1: CRC32 generating polynomial: X^{32}+X^{26}+X^{23}+X^{22}+X^{16}+X^{12}+X^{11}+X^{10}+X^8+X^7+X^5+X^4+X^2+X+1 (identical to IEEE802.3)
2: Standard master station
3: Standard intelligent device station / Standard local station
 Of the above-described specifications, the communication speed and number of connected modules do not necessarily require all the specification elements stated.

Table 5.6 Station Configuration and No. of Link Points (Example)

Station Configuration	No. of Link Points
Link points with only safety stations connected (Case 1) →32 safety stations (with 2 stations occupied for each) are connected	＊Link points of S-RY/S-RX: 64 bits x 32 modules = 2,048 bits ＊Link points of S-RWw/S-RWr: 4 words x 32 modules = 128 words
Link points with only safety stations connected (Case 2) →42 safety stations (with 1 station occupied for each) are connected	＊Link points of S-RY/S-RX: 32 bits x 42 modules = 1,344 bits ＊Link points of S-RWw/S-RWr: 0 word x 42 modules = 0 word
Link points with safety stations and standard stations →1 standard station and 30 stations (both with 2 stations occupied) are connected	＊Link points of S-RY/S-RX: 64 bits x 30 modules = 1,920 bits ＊Link points of RY/RX: 64 bits x 1 module = 64 bits ＊Link points of S-RWw/S-RWr: 4 words x 30 modules = 120 words ＊Link points of RWw/RWr: 8 words x 1 module = 8 words

Table 5.7 No. of Link Points per Safety Slave Station in CC-Link Safety (Ver.1.12, Ver.1.13)

Device	1 Occupied Station	2 Occupied Stations
S-RX/S-RY	32 bits each	64 bits each
S-RWw/S-RWr		4 words each

Table 5.8 No. of Link Points per Slave Station in CC-Link (Ver.1.10)

Device	1 Occupied Station	2 Occupied Stations	3 Occupied Stations	4 Occupied Stations
RX/RY	32 bits each	64 bits each	96 bits each	128 bits each
RWw/RWr	4 words each	8 words each	12 words each	16 words each

CC-Link IE Controller Network specification

| Item		Specification
Max. number of link points per network	LB	32768 points
	LW	131072 words
	LX	8192 points
	LY	8192 points
Max. number of link points per station	LB	16384 points
	LW	16384 words
	LX	8192 points
	LY	8192 points
Communication speed		1 Gbps
Number of connected stations per network		Max. 120 stations
Optical fiber specifications		Optical fiber cable compatible with 1000BASE-SX (MMF)
	Standard	IEC60793-2-10Types A1a.1（50/125 μm multimode)
	Transmission loss (max)	3.5 (dB/km) or less (λ=850 nm)
	Transmission band (min)	500 (MHz·km) or higher (λ=850 nm)
Total extension distance (total extension distance of optical cables)		66 km (with 120 stations connected)
Distance between stations (max)		550 m (core/clad =50/125 (μm))
Connector specifications		Dual LC type connector
	Standard	IEC61754-20: TypeLC connector
	Connection loss	0.3 (db) or less
	Polished face	PC polishing
Max. number of networks		239
Max. number of groups		32
Transmission path form		Double loop

CC-Link IE Controller Networks achieve the communication speed of 1 Gbps. Here, the token method is adopted as the data transfer control method. The token method does not cause any collision of frames in the transmission path, improving the throughput of communication. Therefore, it is optimal for networks where regular schedule communication is required.

CC-Link IE Field Network specification

Item	Specification	
Communication speed / Data link control	1 Gbps / Ethernet standard	
Communication media	Metal cable	Shielded, RJ-45
Data transmission control method	Token passing	
Network topology	Star, Line (Star and Line can be mixed), Ring	HUB can be used

http://www.cc-link.org

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5

6

Higashi-ozone

Ozone-eki

**CLPA
Secretariat**

(Meiji Yasuda
Seimei Ozone Bldg.)

4

1

2

3

Meitetsu Railway
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Ozone st.

Yutorito-line
Ozone st.

Meieki 14
route bus stop

JR (Chuo - main line)
Ozone st.
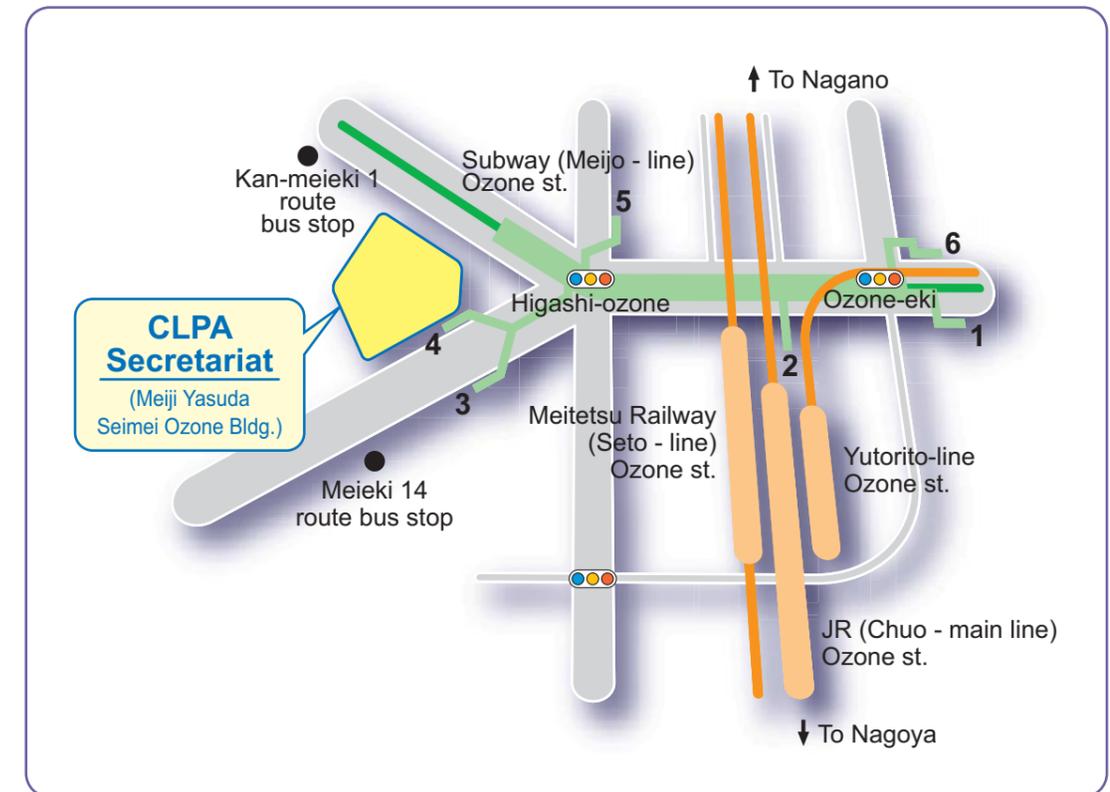
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Specifications subject to change without notice

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