

GRÄSSLIN
YOUR SENSES. OUR SOLUTIONS.

Trade Program 2014/2015

**INNOVATIVE ENERGY SOLUTIONS
FOR TIME, TEMPERATURE AND LIGHT.**



Grässlin GmbH

THE COMPANY

In 1956 design engineer Dieter Grässlin realised his vision and founded his own company in a laundry in the heart of the Black Forest.

Now, almost 60 years later, the four-person family owned company became a global player, its success still driven by ambitious visions.

Thanks to numerous product innovations in the fields of time switch technology, temperature and light control, Grässlin very soon establishes himself as an internationally successful specialist and is now a global partner chosen for innovative energy control solutions. New

technologies on a regular basis and highest quality standards have become the company's distinctive feature and still shape the mission statement of Grässlin GmbH.

Since 2007, Grässlin has been part of the Intermatic Group headquartered in Spring Grove, Illinois, USA. The family enterprise founded in 1891 is the leading manufacturer of energy control systems and outside lighting in North America.

The leading brand
in energy savings
solutions

Globally present
and known

Environmentally
friendly products and
work processes

Communication,
honesty,
reliability

Partnership,
trust,
mutual respect

Smart products,
customer specific
solutions

Tested quality down to the finest detail.

PRECISION MADE IN GERMANY.

The core competency of Grässlin GmbH is the development and production of solution-oriented and market-driven products in the fields of time switch technology, light and temperature controls. Besides the proven classic analog time switches, our extensive range of products includes digital devices with daily, weekly, and annual programs. By now our standard range includes a pulse and cycle function, vacation programs, Astro programs, and automatic daylight saving changeover.

In recent years, the focus has increasingly been on the field of communication technology. In doing so, different communication platforms like Powerline, LAN and radio connections and OpenTherm were created and have been implemented in different product groups. Furthermore, Grässlin offers a sound selection of light control products. In addition to the widely-used staircase lighting time switches and twilight switches, a

wide choice of movement and presence detectors is now available.

In the field of room thermostats, Grässlin has been able to continuously expand its range of products in the last few years. From simple temperature control to efficient combined time and temperature controls, the products have constantly been adapted to the users' needs. The Grässlin range of products is rounded off by energy meters for various home or work applications. Furthermore, we still offer time switch modules with synchronous or quartz motors and daily or weekly programs for a wide range of applications.

By combining easy handling, environmental friendliness and highest precision, our products meet highest quality expectations.

Very high quality, innovation and user-friendly products as well as our experience from the last decades provide the basis for continuous growth.



Grässlin eLearning Portal.

CLEARLY ARRANGED PRODUCT INFORMATION AT A CLICK!

Alongside our high standard of quality, we have set ourselves the goal of helping our customers with a simple, clearly arranged operating philosophy for our products. In order to meet this requirement, we have set up a training portal on our website at www.graesslin.de/eLearning.

The Grässlin eLearning portal comprises three areas, designed to suit the individual needs of our customers. Detailed product training helps customers to familiarise

themselves with the Grässlin product world. Users have the benefit of being able to inform themselves comfortably at their PC about the operating philosophy, the diverse functions, and application examples relating to our products. Clearly arranged product simulations additionally assist in trying out the newly acquired information directly on a virtual product. For particular questions or suggestions, a contact form is available for our customers under „Individual needs“.

Product training



Product simulations



Individual needs



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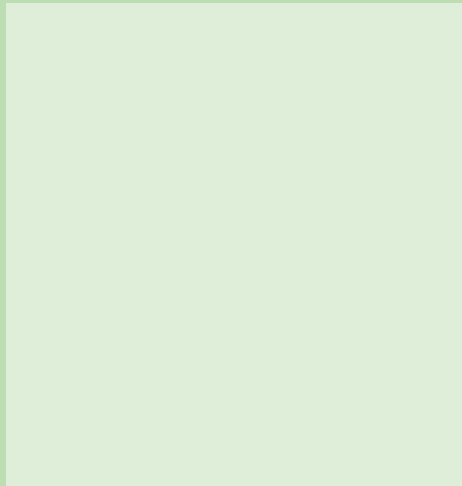
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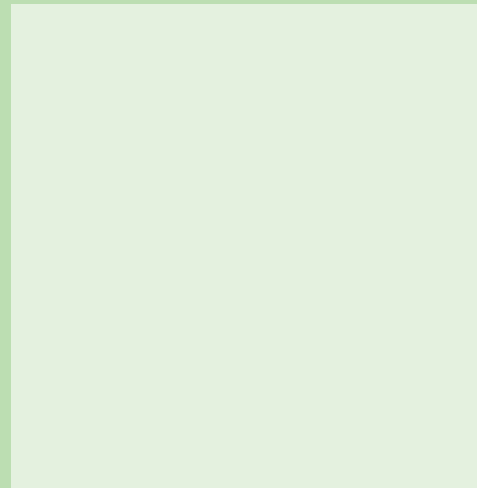
You will find a list of follow-up types on our website at
www.graesslin.de/follow-up-types

DIN rail time switches, universal time switches

Intelligent time switch technology



Street lighting
Shop window lighting
Parking spaces
Car parks



Control of:
Devices, motors, pumps
Rolling shutters
Household appliances









talento DIN rail time switches





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Universal time switches / time switch modules

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Overview digital DIN rail time switches

	talento 371 mini pro	talento 371 pro talento 372 pro	talento 751 pro talento 752 pro	talento 471 pro talento 472 pro
				
Channels	1	1 2	1 2	1 2
Memory spaces	70	70	70	100
Display lighting	–	•	•	•
PIN-Code	•	•	•	•
Hour counter with service function	•	•	•	•
External input: – Override ON/OFF – Countdown – Pulse counter	– – –	– – –	– – –	• • •
Random switching	–	–	–	•
12h/24h time setting	•	•	•	•
Weekly program – ON/OFF – Pulse – Cycle	• – –	• – –	– – –	• • •
Annual program – ON/OFF – Pulse – Cycle – OFF	– – – –	– – – –	– – – –	– – – –
Holiday program – ON/OFF – Pulse – Cycle – OFF	• – – •	• – – •	• – – •	• • • •
Astro program	–	–	•	–
Powerline communication	–	–	–	–
LAN, internet communication	–	–	–	–
Data transmission (taxi)	–	–	–	•
PC programming	–	–	–	•
Shortest switching time	1 min.	1 min.	1 min.	1 sec.
Programmable	every minute	every minute	every minute	every minute
Block formation of weekdays	free assignment	free assignment	free assignment	free assignment
Manual switch	automatic / override / fix ON/OFF	automatic / override / fix ON/OFF	automatic / override / fix ON/OFF	automatic / override / fix ON/OFF
Daylight saving changeover	automatic / free selectable / OFF	automatic / free selectable / OFF	automatic / free selectable / OFF	automatic / free selectable / OFF
Switching state display	•	•	•	•
Antenna input	–	–	–	–
Sealable	•	•	•	•

talento 791 pro talento 792 pro		talento 881 pro talento 882 pro		talento 892 pro talento 992 pro		talento CE pro		talento LAN pro	
									
1	2	1	2	2		2		-	
100		400		800		-		-	
●		●		●		-		-	
●		●		●		-		-	
●		●		●		-		-	
●		●		●		-		-	
●		●		●		● *		-	
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-		-		●		● *		-	
●		●		-		-		-	
●		●		-		-		-	
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●		●		-		-		-	
●		●		-		-		-	
●		●		-		-		-	
●		●		-		-		-	
1 sec.		1 sec.		1 sec.		-		-	
every minute		every minute		every minute		-		-	
free assignment		free assignment		free assignment		-		-	
automatic / override / fix ON/OFF		automatic / override / fix ON/OFF		automatic / override / fix ON/OFF		automatic / override / fix ON/OFF		-	
automatic / free selectable / OFF		automatic / free selectable / OFF		automatic / free selectable / OFF		-		-	
●		●		●		●		-	
-		-		-		-		-	
●		●		●		●		-	

* in connection with talento 892/992 pro

Time switches

DIN rail time switches

Features

- Autom. daylight saving changeover: automatic / freely selectable / OFF
- 12h/24h time setting
- Switching state display
- Sealable
- Non-volatile memory (EEPROM)

Applications

- Advertising signs
- Street lighting
- Shop window lighting
- Home & work environment
- Devices, motors and pumps control



Voltage	EAN-Code 4010940	Ord.-No.	Languages operating manual
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talento 371 mini pro (1 channel)

230 V / 50-60 Hz	028718	03.90.0002.1	Available from the second half of 2014
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- 70 memory spaces
- Weekly program (ON/OFF)
- Holiday program (ON/OFF, OFF)
- Shortest switching time: 1 min.
- Manual switch: fix ON/OFF



talento 371 pro (1 channel)

110-230 V AC	041953	03.96.0002.1	DE, EN, FR, IT, CS, HU
110-230 V AC	042349	03.96.0006.1	ES, PT, NL, PL, NO, SV, DA, FI

talento 372 pro (2 channels)

110-230 V AC	041960	03.96.0003.1	DE, EN, FR, IT, CS, HU
110-230 V AC	042356	03.96.0007.1	ES, PT, NL, PL, NO, SV, DA, FI

talento 371 pro, talento 372 pro

- 70 memory spaces
- Backlight
- PIN-Code
- Hour counter with service function
- Weekly program (ON/OFF)
- Holiday program (ON/OFF, OFF)
- Shortest switching time: 1 min.
- Free weekday block formation
- Manual switch: Automatic / Override / fix ON/OFF



talento 751 pro (1 channel)

110-230 V AC	041977	03.96.0004.1	DE, EN, FR, IT, CS, HU
110-230 V AC	042363	03.96.0008.1	ES, PT, NL, PL, NO, SV, DA, FI

talento 752 pro (2 channels)

110-230 V AC	041984	03.96.0005.1	DE, EN, FR, IT, CS, HU
110-230 V AC	042370	03.96.0009.1	ES, PT, NL, PL, NO, SV, DA, FI

talento 751 pro, talento 752 pro

- 70 memory spaces
- Backlight
- PIN-Code
- Hour counter with service function
- Holiday program (ON/OFF, OFF)
- Astro program
- Shortest switching time: 1 min.
- Free weekday block formation
- Manual switch: Automatic / Override / fix ON/OFF

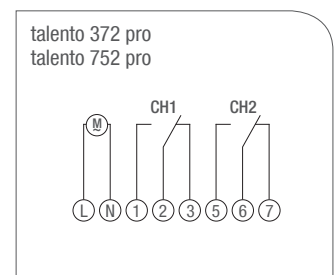
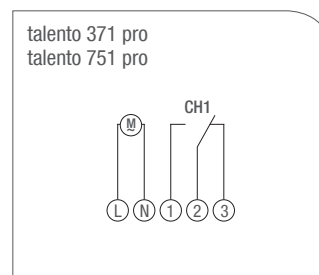
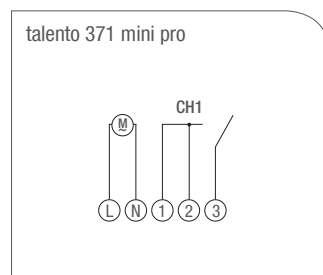
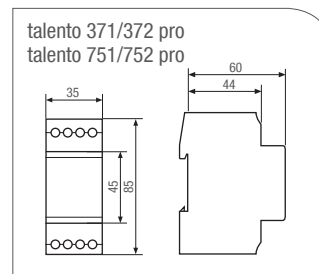
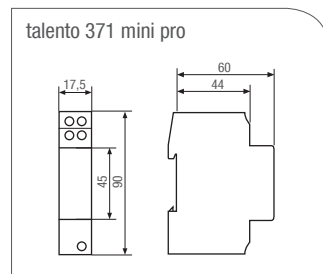
Technical data

	talento 371 mini pro	talento 371/372 pro	talento 751/752 pro		
Dimensions H x W x D (mm)	45 x 17,5 x 60	45 x 35 x 60			
Width	1 module	2 modules			
Distributor cut-out (mm)	46 x 18	46 x 36			
Installation type	DIN-rail	DIN-rail			
Weight (g) approx.	100	170			
Connection voltage	230 V / 50-60 Hz	110 - 230 V AC / 50-60 Hz			
Power consumption at 230 V~ (AC)	3 VA	1 VA			
Switch contacts	1 NO	1 CO	2 CO	1 CO	2 CO
Switching output	phase-independent	phase-independent (zero cross switching)			
Opening width	< 3 mm	< 3 mm			
Lamp type					
– Resistive	16 A / 250 V AC	16 A / 250 V, cos φ = 1			
– Inductive	8 A / 250 V AC	10 A / 250 V, cos φ = 0,6			
– Incandescent	1000 W	2600 W			
– Fluorescent					
Uncorrected	–	1000 VA			
Serial corrected	–	1000 VA			
Parallel corrected	–	730 VA (80 µF)			
Lead-lag (duo)	–	1000 VA			
– Halogen lamp load	–	2600 W			
– Compact fluorescent lamp	–	22x7 W, 18x11 W, 16x15 W, 16x20 W, 14x23 W			
– Energy saving lamps 230 V	–	37x7 W, 30x11 W, 26x15 W, 26x20 W, 11x23 W			
Rated load AC1/AC15	–	4000 VA / 750 VA			
Min. switching load	–	300 mW			
DC Switching capacity (24V-/50V-/220V-)	800 mA / 300 mA / 150 mA	800 mA / 300 mA / 150 mA			
Housing and insulation material	high-temperature resistant, self-extinguishing thermoplastic	high-temperature resistant, self-extinguishing thermoplastic			
Ambient temperature	-10°C ... +55°C	-25°C* ... +55°C			
Protection class (EN60730-1)	II	II			
Type of protection (EN60529)	IP20	IP20			
Accuracy	Typ ± 1 sec./day at +20°C	Typ ± 0,5 sec./day at +20°C			
Time basis	quartz	quartz			
Power reserve	3 years ex works at +20°C (Replaceable battery CR2032)	3 years ex works at +20°C (Replaceable battery CR2032)			
Max. terminal capacity	2,5 mm ²	1 - 4 mm ²			
Connection type	Captive ± screw terminal	Captive ± screw terminal			
Battery type	CR2032	CR2450			

Accessories		
Assembly accessories	see page 28	see page 28

* Limited display readability possible, however full functionality guaranteed.

Dimensional drawings / circuit diagrams:



DIN rail time switches

Features

- Backlight
- PIN-Code
- Hour counter with service function
- External input
- 12h/24h time setting
- Switching state display
- Weekly program (ON/OFF, pulse, cycle)
- Holiday program (ON/OFF, pulse, cycle, OFF)
- Data transmission (talento taxi)

- Shortest switching time: 1 sec.
- Autom. summertime / wintertime changeover: automatic / free selectable / OFF
- Manual switch: Automatic / Override / fix ON/OFF
- Free weekday block formation
- Random generator
- Sealable
- Non-volatile memory (EEPROM)

Applications

- Advertising signs
- Street lighting
- Shop window lighting
- Home & work environment
- Devices, motors and pumps control
- Shutters control
- Simulation of home presence

	Voltage	EAN-Code 4010940	Ord.-No.	Languages operating manual	
	talento 471 pro (1 channel)				
	24 V DC / 24-230 V AC	041991	03.98.0001.1	DE, FR, IT, CS, HU	
	24 V DC / 24-230 V AC	042387	03.98.0009.1	EN, ES, PT, NL, PL	
	24 V DC / 24-230 V AC	042806	03.98.0017.1	NO, SV, DA, FI	
	talento 472 pro (2 channels)				
	24 V DC / 24-230 V AC	042004	03.98.0002.1	DE, FR, IT, CS, HU	
	24 V DC / 24-230 V AC	042394	03.98.0010.1	EN, ES, PT, NL, PL	
	24 V DC / 24-230 V AC	042813	03.98.0018.1	NO, SV, DA, FI	
	12 V AC/DC	042011	03.98.0003.1	DE, FR, IT, CS, HU	
	12 V AC/DC	042400	03.98.0011.1	EN, ES, PT, NL, PL	
12 V AC/DC	042820	03.98.0019.1	NO, SV, DA, FI		
talento 471 pro, talento 472 pro					
• 100 memory spaces					
	talento 791 pro (1 channel)				
	24 V DC / 24-230 V AC	042028	03.98.0004.1	DE, FR, IT, CS, HU	
	24 V DC / 24-230 V AC	042417	03.98.0012.1	EN, ES, PT, NL, PL	
	24 V DC / 24-230 V AC	042837	03.98.0020.1	NO, SV, DA, FI	
	talento 792 pro (2 channels)				
	24 V DC / 24-230 V AC	042035	03.98.0005.1	DE, FR, IT, CS, HU	
	24 V DC / 24-230 V AC	042424	03.98.0013.1	EN, ES, PT, NL, PL	
	24 V DC / 24-230 V AC	042844	03.98.0021.1	NO, SV, DA, FI	
	talento 791 pro, talento 792 pro				
	• 100 memory spaces				
• Astro program					
	talento 881 pro (1 channel)				
	24 V DC / 24-230 V AC	042042	03.98.0006.1	DE, FR, IT, CS, HU	
	24 V DC / 24-230 V AC	042431	03.98.0014.1	EN, ES, PT, NL, PL	
	24 V DC / 24-230 V AC	042851	03.98.0022.1	NO, SV, DA, FI	
	talento 882 pro (2 channels)				
	24 V DC / 24-230 V AC	042059	03.98.0007.1	DE, FR, IT, CS, HU	
	24 V DC / 24-230 V AC	042448	03.98.0015.1	EN, ES, PT, NL, PL	
	24 V DC / 24-230 V AC	042868	03.98.0023.1	NO, SV, DA, FI	
	12 V AC/DC	042066	03.98.0008.1	DE, FR, IT, CS, HU	
	12 V AC/DC	042455	03.98.0016.1	EN, ES, PT, NL, PL	
12 V AC/DC	042875	03.98.0024.1	NO, SV, DA, FI		
talento 881 pro, talento 882 pro					
• 400 memory spaces					
• Astro program					
• Annual program (ON/OFF, pulse, cycle)					

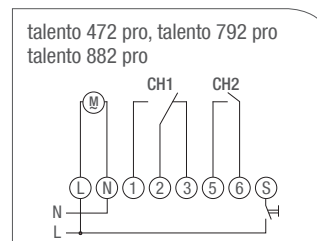
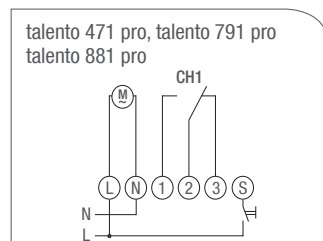
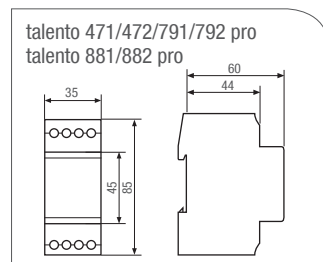
Technical data

	talento 471/472 pro		talento 791/792 pro		talento 881/882 pro	
Dimensions H x W x D (mm)	45 x 35 x 60					
Width	2 modules					
Distributor cut-out (mm)	46 x 36					
Installation type	DIN-rail					
Weight (g) approx.	170					
Connection voltage	24 V DC, 24-230 V AC / 50-60 Hz	12 V AC/DC, 24 V DC, 24-230 V AC / 50-60 Hz	24 V DC, 24-230 V AC / 50-60 Hz	24 V DC, 24-230 V AC / 50-60 Hz	12 V AC/DC, 24 V DC, 24-230 V AC / 50-60 Hz	
Power consumption at 230 V~ (AC)	1 VA					
Switch contacts	1 CO	1 CO + 1 NO	1 CO	1 CO + 1 NO	1 CO	1 CO + 1 NO
Switching output	phase-independent (zero cross switching)					
Opening width	< 3 mm					
Lamp type – Resistive – Inductive – Incandescent – Fluorescent	16 A / 250 V, $\cos \varphi = 1$ 10 A / 250 V, $\cos \varphi = 0,6$ 2600 W					
Uncorrected	1000 VA					
Serial corrected	1000 VA					
Parallel corrected	730 VA (80 μ F)					
Lead-lag (duo)	1000 VA 2600 W					
– Halogen lamp load	22x7 W, 18x11 W, 16x15 W, 16x20 W, 14x23 W					
– Compact fluorescent lamp	37x7 W, 30x11 W, 26x15 W, 26x20 W, 11x23 W					
– Energy saving lamps 230 V						
Rated load AC1/AC15	4000 VA / 750 VA					
Min. switching load	300 mW					
DC Switching capacity (24V-/50V-/220V-)	800 mA / 300 mA / 150 mA					
Housing and insulation material	high-temperature resistant, self-extinguishing thermoplastic					
Ambient temperature	-25°C* ... +55°C					
Protection class (EN60730-1)	II					
Type of protection (EN60529)	IP 20					
Accuracy	Typ $\pm 0,3$ sec./day at +20°C					
Time basis	Quartz					
Power reserve	10 years ex works at +20°C (Replaceable battery CR2450)					
Max. terminal capacity	1-4 mm ²					
Connection type	Captive \pm screw terminal					
Battery type	CR2450					

Accessories	
Handheld programming device / PC-software	see page 20
Assembly accessories	see page 28

* Limited display readability possible, however full functionality guaranteed.

Dimensional drawings / circuit diagrams:



DIN rail time switches

Features

- 800 memory spaces
- Daily, weekly and annual program (ON/OFF, pulse, cycle)
- Backlight
- PIN-Code
- Hour counter with service function
- External input
- 12h/24h time setting
- Switching state display
- Data transmission (talento taxi)
- Shortest switching time: 1 sec.
- Autom. daylight saving changeover: automatic / free selectable / OFF
- Manual switch: Automatic / Override / fix ON/OFF
- Free weekday block formation
- Random generator
- Sealable
- Non-volatile memory (EEPROM)
- Powerline communication
- LAN, internet communication

Applications

- Advertising signs
- Street lighting
- Shop window lighting
- Home & work environment
- Devices, motors and pumps control
- Sun blinds and shutters control
- Simulation of home presence

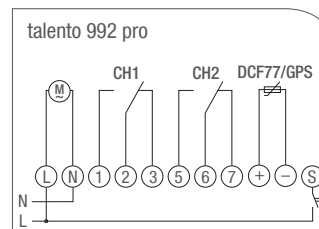
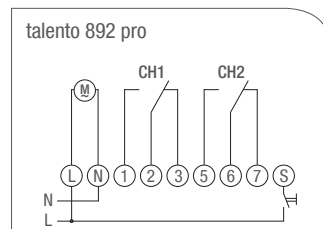
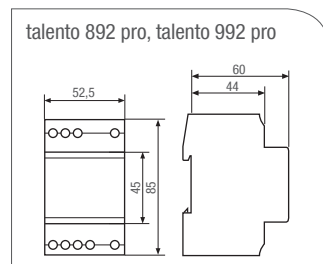
	Voltage	EAN-Code 4010940	Ord.-No.	Languages operating manual
	talento 892 pro (2 channels)			
	110 - 230 V / 50-60 Hz	044329	03.76.0021.1	DE, EN, FR, IT, ES, PT, NL, CS, SV, NO, DA, FI, PL, HU
	talento 992 pro (2 channels)			
	230 V / 50-60 Hz	044312	03.76.0020.1	DE, EN, FR, IT, ES, PT, NL, CS, SV, NO, DA, FI, PL, HU
	<ul style="list-style-type: none"> • For radio antenna DCF 77 			

Technical data

	talento 892 pro	talento 992 pro
Dimensions H x W x D (mm)	45 x 52,5 x 60	
Width	3 modules	
Distributor cut-out (mm)	46 x 54	
Installation type	DIN-rail	
Weight (g) approx.	180	250
Connection voltage	110 - 230 V / 50-60 Hz	230 V / 50-60 Hz
Power consumption at 230 V~ (AC)	5 VA	
Switch contacts	2 changeover contacts	
Switching output	phase-independent (zero cross switching)	
Opening width	< 3 mm	
Lamp type		
– Resistive	16 A / 250 V AC	
– Inductive	10 A / 250 V AC	
– Incandescent	2600 W	
– Fluorescent		
Uncorrected	1000 VA	
Serial corrected	1000 VA	
Parallel corrected	730 VA (80 µF)	
Lead-lag (duo)	1000 VA	
– Halogen lamp load	2600 W	
– Compact fluorescent lamp	22x7 W, 18x11 W, 16x15 W, 16x20 W, 14x23 W	
– Energy saving lamps 230 V	37x7 W, 30x11 W, 26x15 W, 26x20 W, 11x23 W	
Rated load AC1/AC15	3700 VA / 750 VA	
Min. switching load	500 mW	
DC Switching capacity (24V-/50V-/220V-)	800 mA / 300 mA / 150 mA	
Housing and insulation material	high-temperature resistant, self-extinguishing thermoplastic	
Ambiente temperature	-10°C ... +55°C	
Protection class (EN60730-1)	II	
Protection type (EN60529)	IP 20	
Accuracy	Typ ± 1 sec./day at +20°C	
Time basis	Quartz	
Power reserve	3 years ex works at +20°C	
Max. terminal capacity	1 - 4 mm²	
Connecting type	captive ± screw terminals	
Battery type	CR2032	

Accessories	
Channel extension – talento CE pro –	see page 18
LAN-Module – talento LAN pro –	see page 18
Radio antenna DCF77	see page 20
Handheld programming device / PC-software	see page 20
Assembly accessories	see page 28

Dimensional drawings / circuit diagrams:



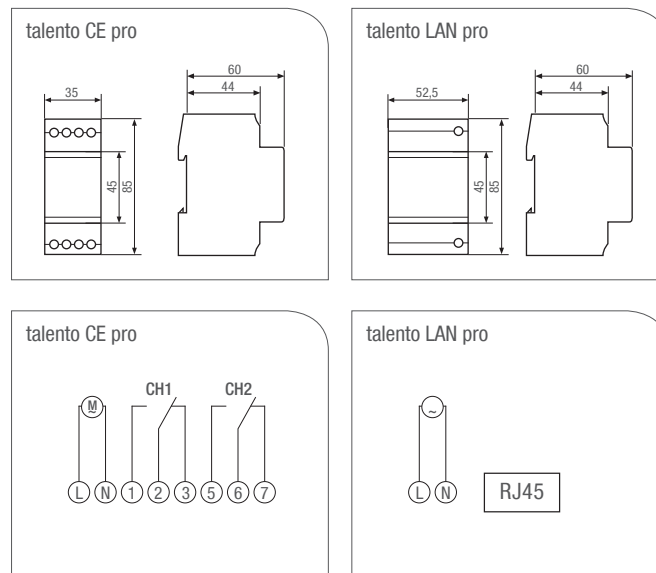
Accessories – DIN rail time switches talento pro Top

	Voltage	EAN-Code 4010940	Ord.-No.
	talento CE pro (channel extension)		
	110 - 230 V / 50-60 Hz	034764	07.75.0003.1
	<ul style="list-style-type: none"> Powerline communication enables positioning on different dividers 		
	talento LAN pro (LAN module)		
	230 V / 50-60 Hz	034894	07.75.0009.1
	<ul style="list-style-type: none"> Module for connecting the talento 892/992 pro to a local area network or the internet for program transfer 		
	Properties: <ul style="list-style-type: none"> Communication with talento 892/992 pro via Powerline Integrated web server LAN / Internet communication Static and dynamic IP addressing Ethernet Port: 10Base T Ethernet connection: RJ-45 Supported network protocols: TCP, UDP, ARP, ICMP, T FTP, DHCP, NBNS, HTTP, SMTP and NTP 		




Technical data

	talento CE pro	talento LAN pro
Dimensions H x W x D (mm)	45 x 35 x 60	45 x 52,5 x 60
Width	2 modules	3 modules
Distributor cut-out (mm)	46 x 36	46 x 54
Installation type	DIN-rail	DIN-rail
Weight (g) approx.	250	200
Connection voltage	110 - 230 V / 50-60 Hz	230 V / 50-60 Hz
Power consumption at 230 V~ (AC)	5 VA	5 VA
Switch contacts	2 changeover contacts	–
Switching output	phase-independent (zero cross switching)	–
Opening width	< 3 mm	–
Lamp type		
– Resistive	16 A / 250 V AC	–
– Inductive	10 A / 250 V AC	–
– Incandescent	2600 W	–
– Fluorescent		
Uncorrected	1000 VA	–
Serial corrected	1000 VA	–
Parallel corrected	730 VA (80 µF)	–
Lead-lag (duo)	1000 VA	–
– Halogen lamp load	2600 W	–
– Compact fluorescent lamp	22x7 W, 18x11 W, 16x15 W, 16x20 W, 14x23 W	–
– Energy saving lamps 230 V	37x7 W, 30x11 W, 26x15 W, 26x20 W, 11x23 W	–
Rated load AC1/AC15	3700 VA / 750 VA	–
Min. switching load	500 mW	–
DC Switching capacity (24V-/50V-/220V-)	800 mA / 300 mA / 150 mA	–
Housing and insulation material	high-temperature resistant, self-extinguishing thermoplastic	high-temperature resistant, self-extinguishing thermoplastic
Ambiente temperature	-10°C ... +55°C	0°C ... +55°C
Protection class (EN60730-1)	II	II
Protection type (EN60529)	IP 20	IP 20
Max. terminal capacity	1-4 mm ²	1-4 mm ²
Connecting type	captive ± screw terminals	captive ± screw terminals

Dimensional drawings / circuit diagrams:



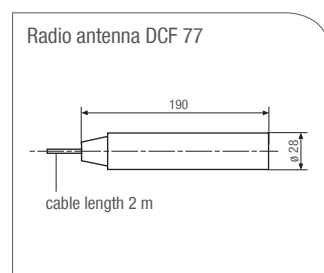
Accessories – DIN rail time switches

	Voltage	EAN-Code 4010940	Ord.-No.
	Radio antenna DCF 77		
	–	021184	07.01.0028.1
<ul style="list-style-type: none"> • Optional/surface-mounted installation • Cable length on device: 2 metres • Maximum cable length: 300 metres • Can be used outdoors (IP 54) 			
	talento taxi		
	–	034917	07.75.0011.1
<ul style="list-style-type: none"> • Handheld programming device, transfers date/time and a maximum of 4 programs • Stores programs in EEPROM; bidirectional serial port • Transmission/reception of programs • Replaceable battery • Transfer of programs from time switch to time switch via talento taxi 			
	Set talento taxi		
	–	034924	07.75.0012.1
<p>Consisting of:</p> <ul style="list-style-type: none"> – PC software „talento dialog“ – talento taxi handheld programming device to program the DIN-rail time switches talento 471/472 pro, talento 791/792 pro, talento 881/882 pro, talento 892/992 pro, – Connection cable for connecting PC to a talento taxi 			

Technical data

	Radio antenna DCF 77
Dimensions H x W x D (mm)	d = 28 x 190
Weight (g) approx.	230
Connection to time switch	10 mA DC
Power consumption	3 mW
Reception sensitivity	< 75 μ V/m at +25°C
Ambient temperature	-20°C ... +60°C
Protection type	IP 54
Cable length on device	2 m
Installation cable length	max. 300m / 2 x 1,5 mm ²
Power supply	–

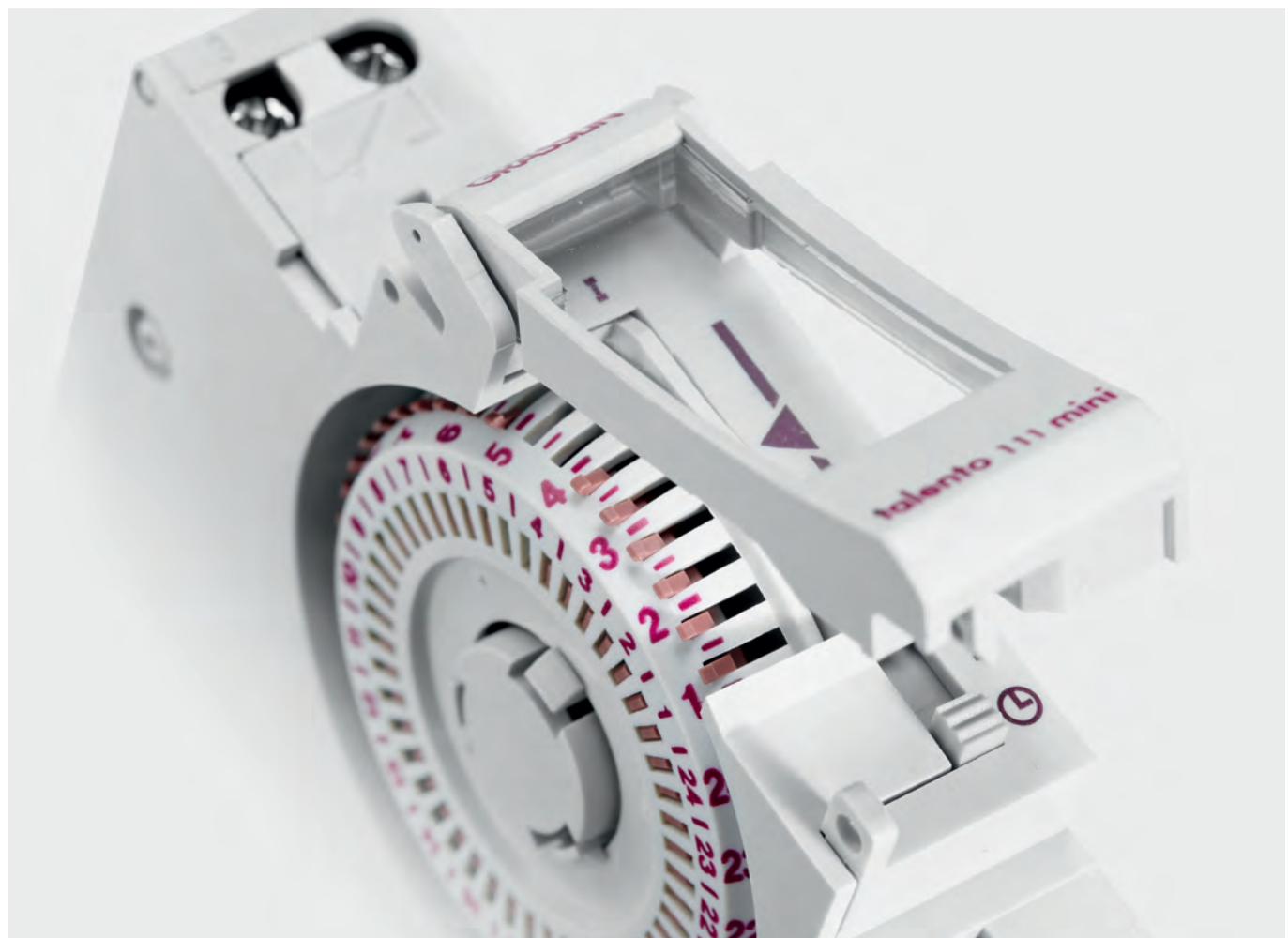
Dimensional drawings /
circuit diagrams:






Overview analog DIN rail time switches

	talento 111 mini	talento 111	talento 171	talento 121
				
Channels	1		1	
Switching programs	Daily program	Daily program	Weekly program	1h-program
Shortest switching time	30 min.	30 min.	3 h	1,25 min.
Programmable	every 30 min.	every 30 min.	every 3 h	every 1,25 min.
Synchronous drive	●		●	
Quartz drive	–		–	
Manual switch	Automatic / fix ON		Automatic / fix ON/OFF	
Clock face	–		●	
Sealable	●		●	

Page	p. 24	p. 24
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talento 211 mini	talento 211	talento 271	talento 212	talento 202
				
1	1		2	
Daily program 30 min. every 30 min.	Daily program 30 min. every 30 min.	Weekly program 3 h every 3 h	Daily program 30 min. every 30 min.	Daily and weekly program 30 min. / 3 h every 30 min. / 3 h
–	–	–	–	–
•	•	•	•	•
Automatic / fix ON	Automatic / fix ON/OFF		Automatic / fix ON/OFF	
–	•	•	–	•
•	•		•	
p. 26	p. 26		p. 26	



Analog DIN rail time switches

Features

- Daily or weekly program
- Synchronous
- Sealable

Applications

- Advertising signs
- Street lighting
- Shop window lighting
- Home & work environment
- Devices, motors and pumps control

Voltage	EAN-Code 4010940	Ord.-No.
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talento 111 mini		
220-240 V / 50 Hz	022556	01.06.0004.1
<ul style="list-style-type: none"> • Daily program • Shortest switching time: 30 min. • Programmable: every 30 min. 		



talento 111		
220-240 V / 50 Hz	020668	01.28.0001.1

talento 171		
220-240 V / 50 Hz	020675	01.28.0002.1

talento 121		
220-240 V / 50 Hz	020682	01.28.0003.1

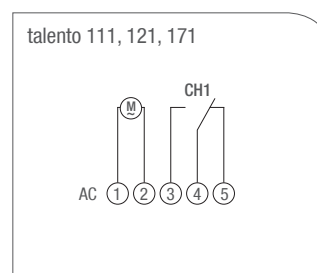
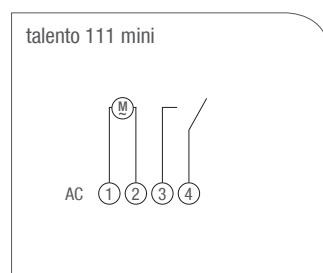
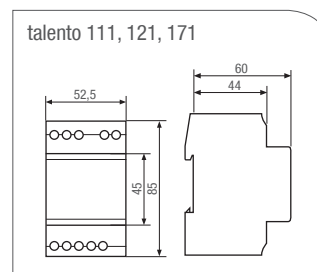
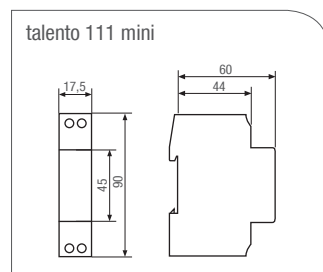
talento 111	talento 171	talento 121
<ul style="list-style-type: none"> • Daily program • Shortest switching time: 30 min. • Programmable: every 30 min. • Clock face 	<ul style="list-style-type: none"> • Weekly program • Shortest switching time: 3 h • Programmable: every 3 h • Clock face 	<ul style="list-style-type: none"> • 1h-program • Shortest switching time: 1,25 min. • Programmable: every 1,25 min. • Clock face

Technical data

	talento 111 mini	talento 111, 171, 121
Dimensions H x W x D (mm)	45 x 17,5 x 60	45 x 52,5 x 60
Width	1 module	3 modules
Distributor cut-out (mm)	46 x 18	46 x 54
Installation type	DIN-rail	DIN-rail
Weight (g) approx.	100	170
Connection voltage	220-240 V / 50 Hz	220-240 V / 50 Hz
Power consumption at 230 V~ (AC)	approx. 1 VA	approx. 1 VA
Switch contacts	1 changeover contact	1 changeover contact
Switching output	potential-free	potential-free
AC switching capacity		
– ohmic load (VDE, IEC)	16 A / 250 V AC	16 A / 250 V AC
– inductive load cos. φ 0.6	4 A / 250 V AC	4 A / 250 V AC
– Incandescent lamp load	1000 W	1350 W
Ambient temperature	-25°C ... +55°C	-25°C ... +55°C
Protection class (EN 60730-1)	II	II
Protection type (EN 60529)	IP 20	IP 20
Accuracy	synchronic to network	synchronic to network
Power reserve	–	–
Max. terminal capacity	1-4 mm ²	1-4 mm ²
Connecting type	captive ± screw terminals	captive ± screw terminals

Accessories		
Assembly accessories	see page 28	see page 28

Dimensional drawings / circuit diagrams:



Analog DIN rail time switches

Features

- Manual switch: Automatic / fix ON/OFF
- Quartz
- Sealable

Applications

- Advertising signs
- Street lighting
- Shop window lighting
- Home & work environment
- Devices, motors and pumps controls

Voltage	EAN-Code 4010940	Ord.-No.
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talento 211 mini		
230 V AC / 130 V DC	022563	02.03.0003.1
<ul style="list-style-type: none"> • Daily program • Shortest switching time: 30 min. • Programmable: every 30 min. 		



talento 211		
230 V AC / 130 V DC	020750	02.28.0001.1
130 V AC / 60 V DC	020743	02.28.0002.1
30 V AC / 12 V DC	020736	02.28.0003.1

talento 271		
230 V AC / 130 V DC	020729	02.28.0004.1
130 V AC / 60 V DC	020712	02.28.0005.1
30 V AC / 12 V DC	020705	02.28.0006.1

- talento 211**
- Daily program
 - Shortest switching time: 30 min
 - Programmable: every 30 min.
 - Clock face

- talento 271**
- Weekly program
 - Shortest switching time: 3 h
 - Programmable: every 3 h
 - Clock face



talento 212		
230 V AC / 130 V DC	020699	02.28.0007.1

talento 202		
230 V AC / 130 V DC	020767	02.28.0008.1

- talento 212**
- Daily program
 - Shortest switching time: 30 min
 - Programmable: every 30 min.
 - Clock face

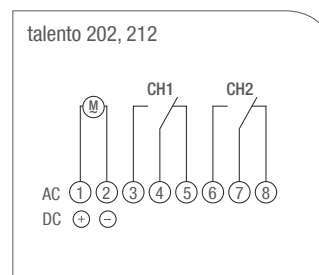
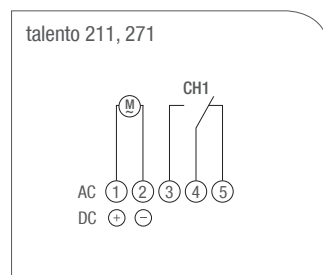
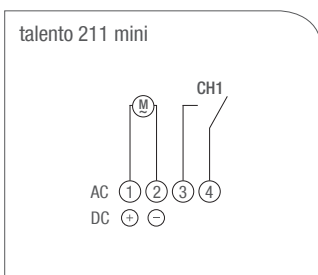
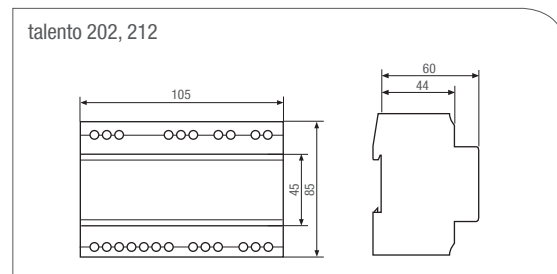
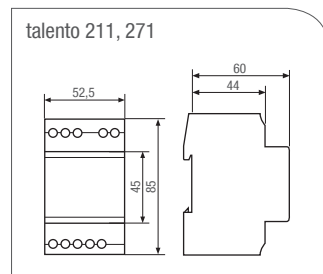
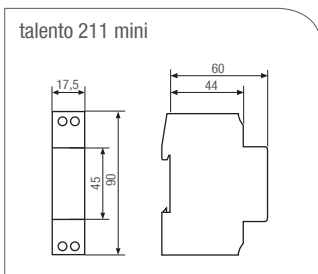
- talento 202**
- Daily and weekly program
 - Shortest switching time: 30 min. / 3 h
 - Programmable: every 30 min. / 3h
 - Clockface

Technical data



	talento 211 mini	talento 211 talento 271	talento 202 talento 212
Dimensions H x W x D (mm)	45 x 17,5 x 60	45 x 52,5 x 60	45 x 105 x 60
Width	1 module	3 modules	6 modules
Distributor cut-out (mm)	46 x 18	46 x 54	46 x 108
Installation type	DIN-rail	DIN-rail	DIN-rail
Weight (g) approx.	110	170	220
Connection voltage	230 V AC / 130 V DC	230 V AC / 130 V DC 130 V AC/60 V DC 30 V AC/12 V DC	– –
Power consumption at 230 V~ (AC)	approx. 1 VA	approx. 1 VA	
Switch contacts	1 NO	1 CO	2 CO
Switching output	potential-free	potential-free	
AC switching capacity – ohmic load (VDE, IEC) – inductive load cos. φ 0.6 – Incandescent lamp load	16 A / 250 V AC 4 A / 250 V AC 1000 W	16 A / 250 V AC 4 A / 250 V AC 1350 W	
Ambient temperature	-20°C ... +55°C	-20°C ... +55°C	
Protection class (EN60730-1)	II	II	
Protection type (EN60529)	IP 20	IP 20	
Accuracy	typ ± 2,5 sec./day at +20°C	typ ± 2,5 sec./day at +20°C	
Power reserve	50 h	150 h	
Charging time	100 h	70 h	
Connection type	captive ± screw terminals	captive ± screw terminals	

Accessories			
Assembly accessories	see page 28	see page 28	

Dimensional drawings / circuit diagrams:

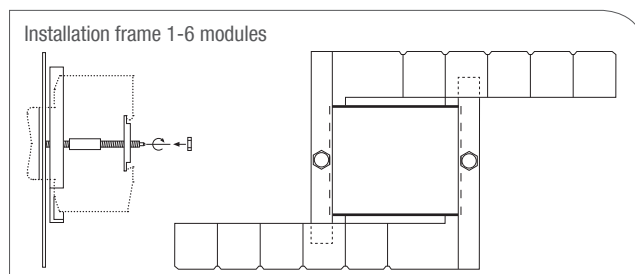
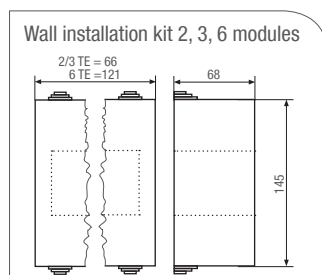
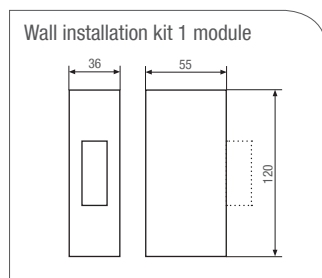


Accessories – DIN rail time switches




	for	EAN-Code 4010940	Ord.-No.
	Wall installation kit 1 module		
	talento 111 mini	002657	18.01.0004.2
	talento 211 mini		
	talento 371 mini pro		
	Wall installation kit 2-3 modules		
	talento 111, 121, 171	021719	03.53.0083.2
	talento 211, 271		
	talento 3xx pro		
	talento 4xx pro		
	talento 7xx pro		
talento 892 pro			
talento 992 pro			
talento CE pro			
talento LAN pro			
Wall installation kit 6 modules			
talento 202, 212	021733	03.59.0046.2	
	Installation frame up to 6 modules		
	talento pro	021726	03.59.0047.2
Lithium Batterie type CR2032			
talento 371 mini pro	032821	09.02.0012.8	
talento 892/992 pro			

Technical data

Dimensional drawings / circuit diagrams:



Overview analog universal time switches / time switch modules

	tactic 111.1 tactic 171.1 Universal time switch		tactic 211.1 tactic 271.1 Universal time switch		tactic 814.1 tactic 815.1 Universal time switch	
						
Channels	1		1		1	
Memory spaces	–		–		–	
Central European Time (CET)	–		–		–	
Switching programs	Daily program	Weekly program	Daily program	Weekly program	Daily program	
Shortest switching time	15 min.	2 h	15 min.	2 h	15 min.	
Programmable	every 15 min.	every 2 h	every 15 min.	every 2 h	every 15 min.	
Text programming	–		–		–	
12h/24h time setting	–		–		–	
Daylight saving changeover	–		–		–	
Block formation of weekdays	–		–		–	
Synchronous drive	●		–		●	
Quartz drive	–		●		–	
Manual switch	Automatic / fix ON/OFF		Automatic / fix ON/OFF		Automatic / fix ON/OFF	
Clock face	●		●		●	
Switching state display	–		–		–	
Pre-selection switching (Override)	–		–		–	

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tactic 824.1 Universal time switch		FM/1 STuZH Time switch module		FM/1 QRTuZH Time switch module	
					
1		1		1	
-		-		-	
-		-		-	
Daily program		Daily program	Weekly program	Daily program	Weekly program
15 min.		15 min.	2 h	15 min.	2 h
every 15 min.		every 15 min.	every 2 h	every 15 min.	every 2 h
-		-		-	
-		-		-	
-		-		-	
-		-		-	
-		●		-	
●		-		●	
Automatic / fix ON/OFF		Automatic / fix ON/OFF		Automatic / fix ON/OFF	
●		●		●	
-		-		-	
-		-		-	

Overview analog universal time switches / time switch modules

	tactic 371.1 plus Universal time switch		tactic 372.1 plus Universal time switch		tactic 571.1 plus Universal time switch		tactic 572.1 plus Universal time switch		FMD 120 Time switch module	FMD 220 Time switch module
										
Channels	1	2	1	2	1	2	1	2	1	2
Memory spaces	20		20		50		50		20	
Central European Time (CET)	-		-		●		●		-	
Switching programs	Daily, weekly program		Daily, weekly program		Daily, weekly program		Daily, weekly program		Daily, weekly program	
Shortest switching time	1 min.		1 min.		1 min.		1 min.		1 min.	
Programmable	every minute		every minute		every minute		every minute		every minute	
Text programming	-		-		●		●		-	
12h/24h time setting	●		●		●		●		●	
Daylight saving changeover	manual		manual		automatic		automatic		manual	
Block formation of weekdays	single days or weekday block formation predetermined		single days or weekday block formation predetermined		●		●		single days or weekday block formation predetermined	
Synchronous drive	-		-		-		-		-	
Quartz drive	-		-		-		-		-	
Manual switch	Automatic / fix ON/OFF		Automatic / fix ON/OFF		Automatic / fix ON/OFF		Automatic / fix ON/OFF		-	
Clock face	-		-		-		-		-	
Switching state display	●		●		●		●		●	
Pre-selection switching (Override)	-		-		-		-		●	
Page	p. 40		p. 40		p. 40		p. 40		p. 42	

FMD 150 Time switch module	EMD 120 EMD 220 Time switch module		EMD 250 Time switch module
			
1	1	2	2
50	20		50
●	-		●
Daily, weekly program	Daily, weekly program		Daily, weekly program
1 min.	1 min.		1 min.
every minute	every minute		every minute
●	-		●
●	●		●
automatic	manual		automatic
●	single days or weekday block formation predetermined		●
-	-		-
-	-		-
-	-		-
-	-		-
●	●		●
●	●		●

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Analog universal time switches

Features

- Daily or weekly program
- 1 channel
- Manual switch: Automatic / fix ON/OFF
- Clock face

Applications

- Machinery control
- Heating systems control
- Devices, motors and pumps controls



tactic 111.1

Voltage	EAN-Code 4010940	Ord.-No.
220-240 V / 50 Hz	003975	01.80.0001.1

tactic 171.1

220-240 V / 50 Hz	003982	01.80.0002.1
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tactic 111.1

- Daily program
- Shortest switching time: 15 min.
- Programmable: every 15 min.
- Synchronous drive

tactic 171.1

- Weekly program
- Shortest switching time: 2h
- Programmable: every 2h
- Synchronous drive



tactic 211.1

230 V AC / 130 V DC	004019	02.80.0001.1
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tactic 271.1

230 V AC / 130 V DC	004026	02.80.0002.1
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tactic 211.1

- Daily program
- Shortest switching time: 15 min.
- Programmable: every 15 min.
- Quartz drive

tactic 271.1

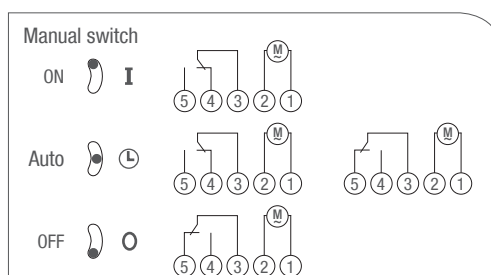
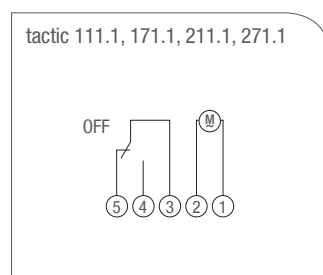
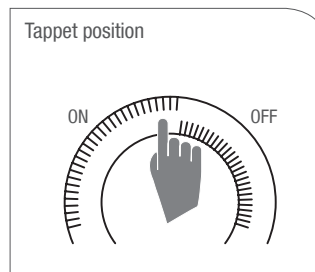
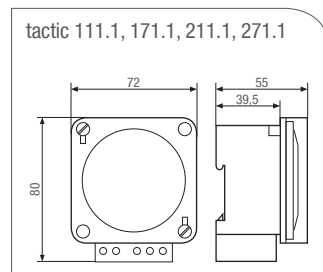
- Weekly program
- Shortest switching time: 2h
- Programmable: every 2h
- Quartz drive

Technical data

	tactic 111.1 tactic 171.1	tactic 211.1 tactic 271.1
Dimensions H x W x D (mm)	72 x 72 x 55	72 x 72 x 55
Distributor cut-out (mm)	68 x 68	68 x 68
Dimensions of front frame (mm)	72 x 72	72 x 72
Fitting depth (mm)	39,5	39,5
Weight (g) approx.	155	165
Nominal voltage	220-240 V AC / 50 Hz	230 V AC / 130 V DC
Power consumption at 230 V~ (AC)	1 VA	2 VA
Current output – relay	changeover contact, potential-free	changeover contact, potential-free
Switching current AC – ohmic load (VDE, IEC) – ohmic load (UL) – inductive load cos. φ 0.6 – incandescent lamp load	16 A / 250 V AC 21 A / 250 V AC 8 A / 250 V AC 1300 W	16 A / 250 V AC 21 A / 250 V AC 8 A / 250 V AC 1300 W
Minimum switching current AC	100 mA / 20 V AC	100 mA / 20 V AC
Minimum switching current DC	100 mA / 20 V DC	100 mA / 20 V DC
Power reserve	–	150 h
Battery charge time	–	70 h
Accuracy	synchronic to network	typ ± 1,5 sec./day at +20°C
Ambient temperature	-20°C ... +55°C	-20°C ... +55°C
Protection class	II	II
Sealable	possible	possible
According to	EN 60730-1 EN 60730-2-7	EN 60730-1 EN 60730-2-7
Type of connection	flat DIN 6.3 mm Fitted socket (Accessories)	flat DIN 6.3 mm Fitted socket (Accessories)

Accessories		
Accessories	see page 47	see page 47

Dimensional drawings /
circuit diagrams:



Analog universal time switches

Features

- Daily or weekly program
- 1 channel
- Manual switch: Automatic / fix ON/OFF
- Clock face

Applications

- Machinery control
- Heating systems control
- Devices, motors and pumps controls
- Cooling devices control



Voltage	EAN-Code 4010940	Ord.-No.
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tactic 814.1

220-240 V / 60 Hz	041526	01.80.0005.1
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tactic 815.1

220-240 V / 60 Hz	041533	01.80.0006.1
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tactic 814.1

- Daily program
- Shortest switching time: 15 min.
- Synchronous drive
- Switch contact: normally open

tactic 815.1

- Daily program
- Shortest switching time: 15 min.
- Synchronous drive
- Switch contact: changeover



Voltage	EAN-Code 4010940	Ord.-No.
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tactic 824.1

230 V AC / 130 V DC	041540	02.80.0006.1
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tactic 825.1

230 V AC / 130 V DC	041557	02.80.0007.1
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tactic 824.1

- Daily program
- Shortest switching time: 15 min.
- Quartz drive
- Switch contact: normally open

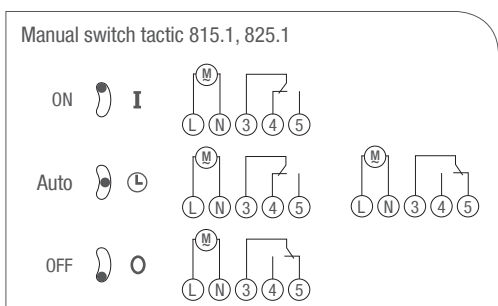
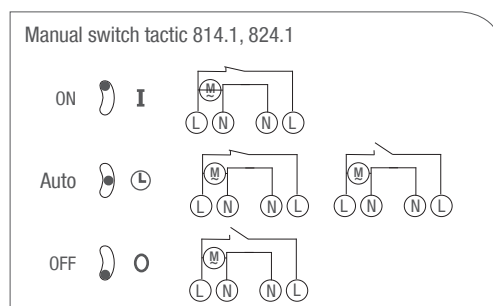
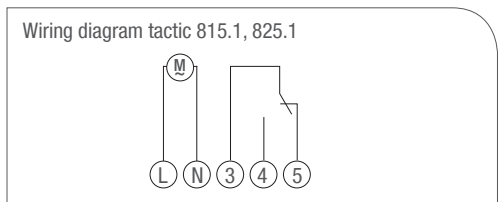
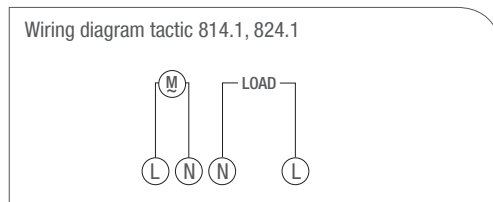
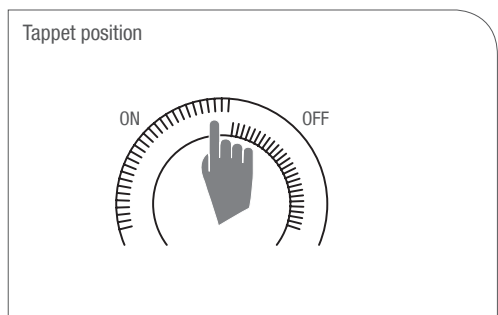
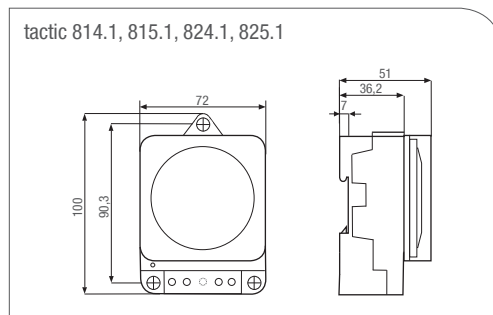
tactic 825.1

- Daily program
- Shortest switching time: 15 min.
- Quartz drive
- Switch contact: changeover

Technical data

	tactic 814.1 tactic 815.1	tactic 824.1 tactic 825.1
Dimensions H x W x D (mm)	100 x 72 x 51	100 x 72 x 51
Dimensions of front frame (mm)	72 x 72	72 x 72
Fitting depth (mm)	36	36
Weight (g) approx.	155	155
Nominal voltage	220-240 V AC / 60 Hz	230 V AC / 130 V DC
Power consumption at 230 V~ (AC)	1 VA	2 VA
Current output – Relay	NO, not potential-free (tactic 814.1) CO, potential-free (tactic 815.1)	NO, not potential-free (tactic 824.1) CO, potential-free (tactic 825.1)
Switching current AC – ohmic load (VDE, IEC) – ohmic load (UL) – inductive load cos. φ 0.6 – incandescent lamp load	20 A / 250 V AC 21 A / 250 V AC 8 A / 250 V AC 1300 W	20 A / 250 V AC 21 A / 250 V AC 8 A / 250 V AC 1300 W
Minimum switching current AC	100 mA / 20 V AC	100 mA / 20 V AC
Minimum switching current DC	100 mA / 20 V DC	100 mA / 20 V DC
Power reserve	–	150 h
Battery charge time	–	70 h
Accuracy	synchronic to network	± 1,5 sec./day at +20°C
Ambient temperature	-20°C ... +55°C	-20°C ... +55°C
Protection class	II	II
Type of connection	power box 4mm ²	power box 4mm ²

Dimensional drawings / circuit diagrams:



Analog time switch modules

Features

- Daily or weekly program
- 1 channel
- Manual switch: Automatic / fix ON/OFF
- Clock face
- Only for fitted mounting

Applications

- Appliances control
- Gas boilers control
- Devices, motors and pumps controls

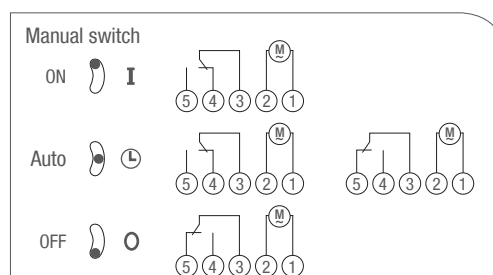
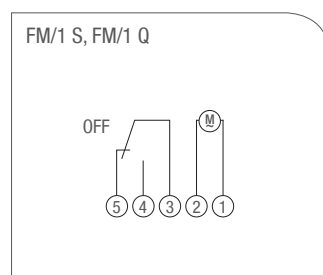
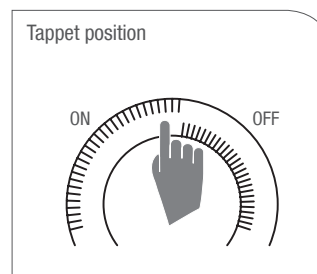
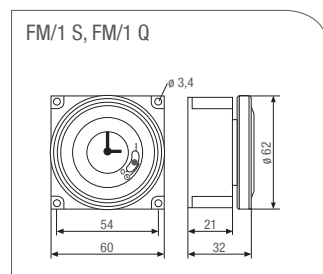
	Voltage	EAN-Code 4010940	Ord.-No.
	FM/1 STuZH		
	220-240 V / 50 Hz	000264	01.76.0088.1
	FM/1 SWuZH		
	220-240 V / 50 Hz	000271	01.76.0089.1
	FM/1 STuZH	FM/1 SWuZH	
	<ul style="list-style-type: none"> • Daily program • Shortest switching time: 15 min. • Programmable: every 15 min. • Synchronous drive 	<ul style="list-style-type: none"> • Weekly program • Shortest switching time: 2h • Programmable: every 2h • Synchronous drive 	
	FM/1 QRTuZH		
	230 V AC / 130 V DC	000592	02.76.0075.1
	FM/1 QRWuZH		
	230 V AC / 130 V DC	000608	02.76.0076.1
	FM/1 QRTuZH	FM/1 QRWuZH	
	<ul style="list-style-type: none"> • Daily program • Shortest switching time: 15 min. • Programmable: every 15 min. • Quartz drive 	<ul style="list-style-type: none"> • Weekly program • Shortest switching time: 2h • Programmable: every 2h • Quartz drive 	

Technical data

	FM/1 S	FM/1 Q
Dimensions H x W x D (mm)	60 x 60 x 32	60 x 60 x 32
Distributor cut-out (mm)	∅ 64	∅ 64
Fitting depth (mm)	21	21
Weight (g) approx.	75	75
Nominal voltage	220-240 V AC / 50 Hz	230 V AC / 130 V DC
Power consumption at 230 V~ (AC)	1 VA	2 VA
Current output – relay	changeover contact, potential-free	changeover contact, potential-free
Switching current AC – ohmic load (VDE, IEC) – ohmic load (UL) – inductive load cos. φ 0.6 – incandescent lamp load	16 A / 250 V AC 21 A / 250 V AC 8 A / 250 V AC 1350 W	16 A / 250 V AC 21 A / 250 V AC 8 A / 250 V AC 1350 W
Minimum switching current AC	100 mA / 20 V AC	100 mA / 20 V AC
Minimum switching current DC	100 mA / 20 V DC	100 mA / 20 V DC
Power reserve	–	150 h
Battery charge time	–	70 h
Accuracy	synchronic to network	typ ± 1,5 sec./day at +20°C
Ambient temperature	-40°C ... +85°C	-20°C ... +55°C
Protection class	II	II
According to	EN 60730-1 EN 60730-2-7	EN 60730-1 EN 60730-2-7
Type of connection	Fitted socket DIN 6,3	Fitted socket DIN 6,3

Accessories		
Accessories	see page 47	see page 47

Dimensional drawings /
circuit diagrams:



Digital universal time switches

Features

- Daily and weekly program
- Manual switch: Automatic / fix ON/OFF
- 12h/24h time setting
- Shortest switching time: 1 min.
- Programmable: every minute
- Compatible fitting with mechanical universal time switches tactic 1xx and 2xx
- Switching state display

Applications

- Machinery control
- Heating systems
- Devices, motors and pumps controls

Voltage	EAN-Code 4010940	Ord.-No.	Languages
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tactic 371.1 plus (1 channel)

230 V / 50-60 Hz	038007	03.62.0001.1	
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tactic 372.1 plus (2 channels)

230 V / 50-60 Hz	038014	03.62.0002.1	
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tactic 371.1 plus, tactic 372.1 plus

- 20 memory spaces
- Menu-led programming with flexible and fixed programs
- Manual daylight saving changeover (button \pm 1 h)
- Single days or weekday block formation predetermined



tactic 571.1 plus (1 channel)

230 V / 50-60 Hz	038021	03.87.0001.1	DE, EN, FR, IT, ES, PT, CS, HU
24 V AC / DC	038038	03.87.0002.1	DE, EN, FR, IT, ES, PT, CS, HU

tactic 572.1 plus (2 channels)

230 V / 50-60 Hz	038045	03.87.0003.1	DE, EN, FR, IT, ES, PT, CS, HU
110-120 V / 50-60 Hz	038052	03.87.0004.1	DE, EN, FR, IT, ES, PT, CS, HU
24 V AC/DC	038069	03.87.0005.1	DE, EN, FR, IT, ES, PT, CS, HU
12 V AC/DC	038076	03.87.0006.1	DE, EN, FR, IT, ES, PT, CS, HU

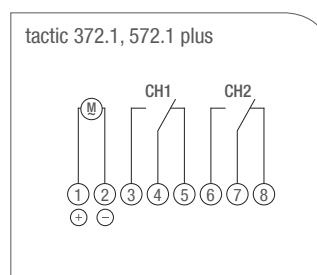
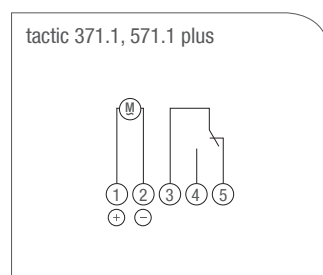
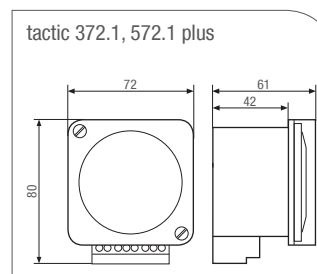
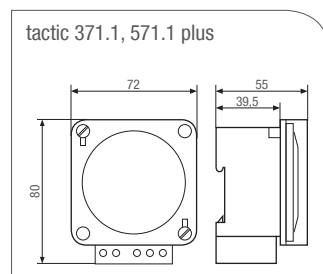
tactic 571.1 plus, tactic 572.1 plus

- 50 memory spaces
- Text programming
- Automatic daylight saving changeover
- Free assignment and block formation of weekdays

Technical data

	tactic 371.1 plus	tactic 571.1 plus	tactic 372.1 plus	tactic 572.1 plus
Dimensions H x W x D (mm)	72 x 72 x 55	72 x 72 x 55	72 x 72 x 61	72 x 72 x 61
Distributor cut-out (mm)	68 x 68		68 x 68	
Fitting depth (mm)	39,5		42	
Frame dimensions DIN 43700 (mm)	72 x 72		72 x 72	
Weight (g) approx.	170		190	
Nominal voltage	230 V AC / 50-60 Hz		230 V AC / 50-60 Hz	
	-	-	-	110-120 V / 50-60 Hz
	-	24 V AC/DC	-	24 V AC/DC
	-	-	-	12 V DC
Power consumption at 230 V~ (AC)	4,4 VA		4,4 VA	
Current output - relay	1 changeover contact, potential-free		2 changeover contacts, potential-free	
Switching current AC - ohmic load (VDE, IEC)	16 A / 250 V AC		16 A / 250 V AC	
- inductive load cos. φ 0.6	4 A / 250 V AC 8 A / 250 V AC		2,5 A / 250 V AC	
- incandescent lamp load	1000 W		500 W	
Switching current DC	10 A / 24 V DC 3 A / 60 V DC 1 A / 100 V DC		1,3 A / 24 V DC 0,7 A / 60 V DC 0,3 A / 100 V DC	
Minimum switching current AC	100 mA / 20 V AC		100 mA / 20 V AC	
Minimum switching current DC	100 mA / 20 V DC		100 mA / 20 V DC	
Power reserve	3 years ex works at +20°C		3 years ex works at +20°C	
Accuracy	typ ± 1 sec./day at +20°C		typ ± 1 sec./day at +20°C	
Ambient temperature	-10°C ... +55°C		-10°C ... +55°C	
According to	EN 60730-1 EN 60730-2-7		EN 60730-1 EN 60730-2-7	
Accessories				
Accessories	see page 47		see page 47	

Dimensional drawings /
circuit diagrams:





Digital time switch modules

Features

- Daily and weekly program
- Override
- 12h/24h time setting
- Shortest switching time: 1 min.
- Programmable: every minute
- Switching state display
- Compatible fitting with mechanical time switch modules FM
- Only for fitted mounting

Applications

- Appliances control
- Gas boilers control
- Devices, motors and pumps controls

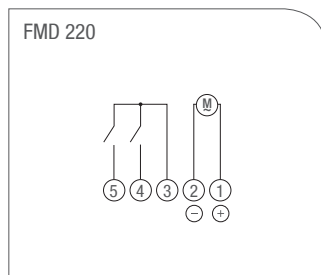
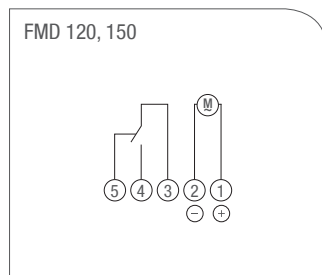
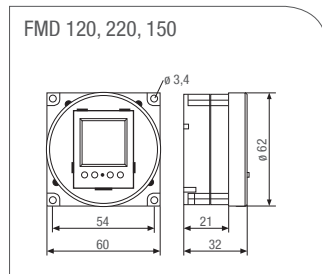
	Voltage	EAN-Code 4010940	Ord.-No.	Languages
	FMD 120 (1 channel)			
	230 V / 50-60 Hz	037949	03.58.0017.1	
	FMD 220 (2 channels)			
	230 V / 50-60 Hz	037963	03.58.0019.1	
	FMD 120, FMD 220			
	<ul style="list-style-type: none"> • 20 memory spaces • Menu-led programming with flexible and fixed programs • Manual daylight saving changeover (button \pm 1 h) • Single days or weekday block formation predetermined • Further voltage types on request 			
	FMD 150 (1 channel)			
	230 V / 50-60 Hz	037970	03.60.0011.1	DE, EN, FR, IT, ES, PT, CS, HU
	<ul style="list-style-type: none"> • 50 memory spaces • Text programming • Automatic daylight saving changeover • Free assignment and block formation of weekdays • Further voltage types on request 			

Technical data

	FMD 120	FMD 220	FMD 150
	Relais		Relais
Dimensions H x W x D (mm)	60 x 60 x 32		60 x 60 x 32
Distributor cut-out (mm)	ø 64		ø 64
Fitting depth (mm)	21		21
Weight (g) approx.	90		90
Nominal voltage	230 V AC / 50-60 Hz		230 V AC / 50-60 Hz
Power consumption at 230 V~ (AC)	4,4 VA		4,4 VA
Current consumption without load	0,015 mA		0,015 mA
Switching current – relay	1 CO	2 NO	1 CO
	potential-free		potential-free
Switching current AC			
– ohmic load (VDE, IEC)	16 A / 250 V AC	5 A / 250 V AC	16 A / 250 V AC
– ohmic load (UL)	16 A / 250 V AC	–	16 A / 250 V AC
– inductive load cos. φ 0.6	4 A / 250 V AC	1 A / 250 V AC	8 A / 250 V AC
– incandescent lamp load	1000 W	–	1000 W
Switching current DC			
	10 A / 24 V DC	2 A / 24 V DC	10 A / 24 V DC
	3 A / 60 V DC	0,3 A / 60 V DC	3 A / 60 V DC
	1 A / 100 V DC	0,1 A / 100 V DC	1 A / 100 V DC
Minimum switching current AC	100 mA / 20 V AC		100 mA / 20 V AC
Minimum switching current DC	100 mA / 20 V DC		100 mA / 20 V DC
Power reserve	3 years ex works at +20°C		3 years ex works at +20°C
Accuracy	typ ± 1 sec./day at +20°C		typ ± 1 sec./day at +20°C
Ambient temperature	-10°C ... +55°C		-10°C ... +55°C
Type of connection	DIN fitted socket 6,3 mm*		DIN fitted socket 6,3 mm*
According to	EN 60730-1 EN 60730-2-7		EN 60730-1 EN 60730-2-7

* Further connection types on request

Dimensional drawings / circuit diagrams:



Digital time switch modules

Features

- Daily and weekly program
- Override
- 12h/24h time setting
- Shortest switching time: 1 min.
- Programmable: every minute
- Switching state display
- Only for fitted mounting

Applications

- Appliances control
- Gas boilers control
- Devices, motors and pumps controls

Voltage

EAN-Code 4010940

Ord.-No.



EMD 120 (1 channel)

3,4-6 V DC	039424	03.85.0003.1
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EMD 220 (2 channels)

3,4-6 V DC	040123	03.85.0005.1
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EMD 120, EMD 220

- 20 memory spaces
- Menu-led programming with flexible and fixed programs
- Manual daylight saving changeover (button \pm 1 h)



EMD 250 (2 channels)

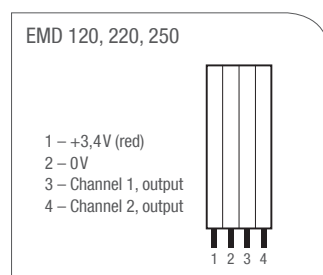
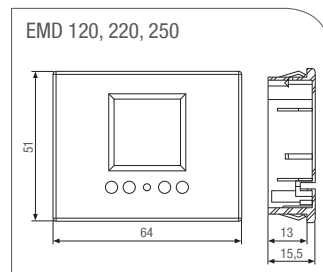
3,4-6 V DC	039448	03.86.0003.1
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- 50 memory spaces
- Text programming
- Automatic daylight saving changeover
- Free assignment and block formation of weekdays


Technical data

	EMD 120	EMD 220	EMD 250
Dimensions H x W x D (mm)	51 x 64 x 15,5		51 x 64 x 15,5
Distributor cut-out (mm)	47 x 60		47 x 60
Fitting depth (mm)	13		13
Weight (g) approx.	22		22
Nominal voltage	3,4 - 6 V DC		3,4 - 6 V DC
Current consumption without load	0,03 mA at 3,4 V DC		0,03 mA at 3,4 V DC
Current output	CMOS		CMOS
Switching current DC	0,1 mA at 3,4 V DC		0,1 mA at 3,4 V DC
Power reserve	3 years ex works at +20°C		3 years ex works at +20°C
Accuracy	typ ± 1 sec./day at +20°C		typ ± 1 sec./day at +20°C
Type of connection	4-pole flat cable		4-pole flat cable
According to	EN 60730-1 EN 60730-2-7		EN 60730-1 EN 60730-2-7

Dimensional drawings /
circuit diagrams:



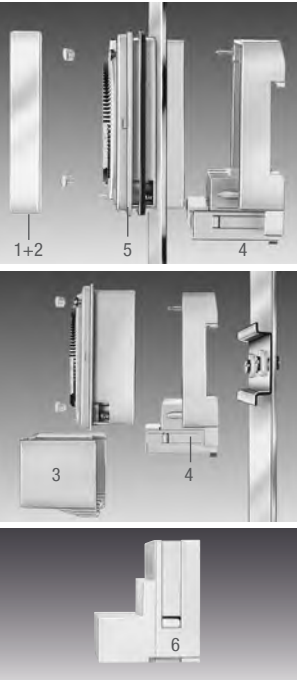
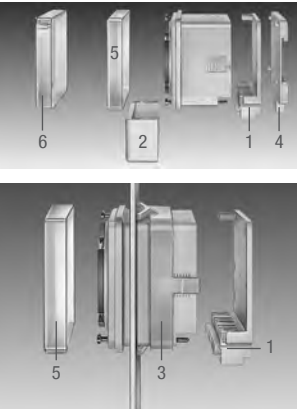

UNI 45 – Backup devices for digi 56-72/1, digi 16-72/1, MIL /1 digi 42, mil 2008 and SU (type series for assembling on existing sockets)

	Type / equipment	Voltage	EAN-Code 4010940	Ord.-No.	
	UNI 45 TA+E – Surface and flush mounting				
	daily program	230-240 V / 50 Hz	004873	01.50.0075.1	
	UNI 45 WA+E – Surface and flush mounting				
	weekly program	230-240 V / 50 Hz	003333	01.50.0076.1	
	UNI 45 1hE – Flush mounting				
	1h short-time program	230-240 V / 50 Hz	000226	01.50.0013.1	
	MIL D150 – 1 channel / power reserve / without base				
	daily/weekly program	220-240 V / 50-60 Hz	038588	03.87.0011.1	
	50 memory spaces				
	Replace- ment for:	digi 56-72/1 – 1 channel / power reserve		digi 16-72/1 – 1 channel / power reserve	
		daily/weekly program	220 V / 50-60 Hz	daily/weekly program	220-240 V / 50-60 Hz
	56 memory spaces	120 V / 50-60 Hz	16 memory spaces		
	MIL/1 QRTuZH – 1 channel / Quartz with running reserve / without base				
	daily program	230 V AC / 130 V DC	015671	02.45.0001.1	
		30 V AC / 12 V DC	015695	02.45.0003.1	
	MIL/1 QRWuZH – 1 channel / Quartz with running reserve / without base				
	weekly program	230 V AC / 130 V DC	016142	02.45.0004.1	
	Replace- ment for:	MIL 2008 SFTu – 1 channel		MIL 2008 QFRTu – 1 channel / power reserve	
		daily program	220-240 V / 50 Hz	daily program	230 V AC / 130 V DC 30 V AC / 12 V DC
		MIL 2008 SFWu – 1 channel		MIL 2008 QFRWu – 1 channel / power reserve	
	weekly program	220-240 V / 50 Hz	weekly program	230 V AC / 130 V DC	
		SU/1 QRTuZH – Quartz with running reserve / without base			
daily program		220-240 V / 50-60 Hz	004347	02.05.0001.1	
Device is assembled on an already installed socket					

Scope of delivery / Accessories

	Product	L = scope of delivery EZ = spare parts/accessories	EAN-Code 4010940	Ord.-No.
UNI 45				
	Base	L / EZ	003265	50.92.0013.4
	Frame	L / EZ	003272	50.13.0002.4
	Attachment screw	L / EZ	003296	50.22.0001.5
	Glass	L / EZ	003302	50.13.0001.3
	Ratchet clamp	L / EZ	002886	15.27.0011.4

Universal time switches / time switch modules – Accessories

	Product	L = scope of delivery EZ = spare parts/accessories	EAN-Code 4010940	Ord.-No.
	for tactic 111.1, tactic 171.1, tactic 211.1, tactic 271.1			
	1 - Glass	L / EZ	037567	01.46.0082.6
	2 - Sealing glass	- / EZ	003210	46.13.0002.4
	3 - Terminal cover	L / EZ	002817	01.78.0004.6
	4 - Base	L / EZ	003340	01.78.0002.2
	5 - Seal	- / EZ	002848	01.45.0017.6
	6 - Flush mounting socket (For front panel mounting if the sheet thickness is > 1.5 mm)	- / EZ	002831	01.79.0002.2
	for tactic 371.1 plus, tactic 372.1 plus, tactic 571.1 plus, tactic 572.1 plus			
	1 - Base (1 channel)	L / EZ	003340	01.78.0002.2
	(2 channels)	L / EZ	002718	03.52.0003.2
	2 - Terminal cover (1 channel)	L / EZ	002817	01.78.0004.6
	(2 channels)	L / EZ	002749	01.96.0043.6
	3 - Frame (2 channels)	L / EZ	002763	03.52.0006.6
	4 - Mounting plate for rail (2 channels)	- / EZ	002770	01.46.0334.2
5 - Glass (tactic 3xx plus, 5xx plus)	L / EZ	037567	01.46.0082.6	
6 - Sealing glass (1 channel)	- / EZ	003210	01.78.0021.6	
	for FM/1 Q, FM/1 S			
	1 - Glass	- / EZ	011215	01.76.0054.6
2 - Flush mounting socket	- / EZ	002831	01.79.0002.2	

Room thermostat clocks, thermostats

Feeling comfortable with room thermostats



Central heating
Circulation pumps
Boilers/Burners



Motorized valves
Combi-boilers
Cooling devices





Room Thermostats

Wireless Room Thermostat Clocks

Overview	p. 50
feeling	p. 52
famoso	p. 54
Receiver	p. 56




Wired Room Thermostat Clocks

Overview	p. 51
feeling	p. 58
famoso	p. 60

Thermostats

Overview	p. 62
thermio	p. 64, 66

Overview wireless room thermostat clocks 

	feeling D 101 rf	famoso 601 rf	famoso 651 rf *
			
Switching programs	weekly program with up to 48 time and temperature level changes	daily program	weekly program
Actual roomtemperature	●	–	–
Underfloor heating	–	–	–
Adjustment for summer-/wintertime	automatic	–	–
Automatic antifreeze protection	●	●	●
Operating hours counter	●	–	–
Backlighted display	–	–	–
Outdoor temperature dependent control	–	–	–
OpenTherm communication	–	–	–

Page	p. 52	p. 54	p. 54
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* Check availability, product to be discontinued.



Overview wired room thermostat clocks

feeling D 101	feeling D 201 OT	famoso 500	famoso 550	famoso 601
				
weekly program with up to 48 time and temperature level changes	weekly program with up to 48 time and temperature level changes	daily program	weekly program	daily program
●	●	–	–	–
–	–	–	–	–
automatic	automatic	–	–	–
●	●	●	●	●
●	●	–	–	–
–	●	–	–	–
–	●	–	–	–
–	●	–	–	–
p. 58	p. 58	p. 60	p. 60	p. 60



Wireless room thermostat clocks



Features

- Digital weekly chronothermostats (up to 48 time and temperature level changes)
- Modern design and large, easy-to-read display
- Display of heating process status
- Various running modes to select from depending on the situation: AUTO, Override, ECO-FIX, Cleaning, Countdown, Party, Holiday and OFF
- Total OFF function with anti-freeze temperature

- Wide temperature control range (+5°C ... +32°C)
- Problem-free installation with adjustable anti-freeze temperature (+3°C ... +7°C)
- Battery discharge level monitoring and notice when batteries have to be replaced
- Integrated operating hour counter
- Automatic daylight saving adjustment
- Suitable for flush or wall installation

Applications

- Central heating
- Boilers/Burners
- Circulation pumps
- Motorized valves



feeling D 101 rf set - Set consisting of transmitter and receiver

Voltage	EAN-Code 4010940	Ord.-no.	Description
2 x 1.5 V 230 V / 50-60 Hz	039974	04.11.0004.1	Transmitter white Receiver

feeling D 101 rf - Transmitter

Voltage	EAN-Code 4010940	Ord.-no.	Description
2 x 1.5 V	039943	04.11.0001.1	Transmitter white



feeling D 101 rf Set / feeling D 101 rf

- Battery powered / RF output / relay output
- Reliable 868 MHz RF signal that guarantees perfect communication between transmitter and receiver
- Transmission range up to 30 meters (indoor 2 walls and 1 ceiling)
- Pre-commissioned



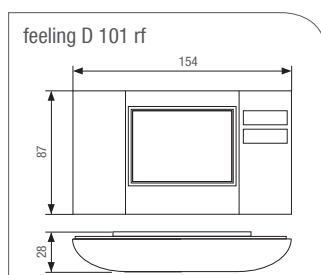
Technical data

	feeling D 101 rf
Dimensions H x W x D (mm)	87 x 154 x 28
Weight (g) approx.	200
Operating voltage	Battery 2 x 1,5 V AA LR6 Alkaline
Battery lifetime	2 years (dep. on switching frequency)
Battery back-up	>10 min. (programs retained in EEPROM)
Switching output	depending on receiver type see p. 56
Resistive load	depending on receiver type see p. 56
Connection type	depending on receiver type see p. 56
Regulation cycles (selectable)	2 points, PID
Sensing element	100 K (at 25°C) NTC
Ambient temperature resolution	0,1°C
Time setting resolution	
– program	+5°C ... +32°C (0,5°C steps)
– frost protection	+5°C (adjustable +3°C ... +7°C)
Time display	24 h or 12 h AM/PM format
Time setting resolution	
– time of day	1 minute
– program	30 minutes
Temperature control accuracy	0,5 K (20°C 3 K/hour)
Thermal gradient (heating system)	3 K/hour
Room temperature display range	0°C ... +50°C
Pre-set programs	4 + 1 user defined
Output signal	RF signal
RF signal	868,3 MHz
RF signal range	Inside buildings 30 m (2 walls + 1 ceiling)
Coding	> 16,8 Mio.
Power transmission	< 1mW
Operating temperature range	Max. 45°C
Operating humidity range	10% to 90% relative humidity, not condensing
Storing temperature limits	-20°C ... +55°C
Protection class	II
Protection type	IP40
According to	EN 60730-1, EN 60730-2-7 EN 60730-2-9, EN 55014-1 EN 55014-2, EN 61000-6-2 ETSI EN 300 220-1 ETSI EN 300 220-3 ETSI EN 301 489-3

Accessories

Receiver	see page 56
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Dimensional drawings /
circuit diagrams:



Wireless room thermostat clocks

Features

- Transmission ensured by high quality 868 MHz
- Communication range of up to 30 metres
- Flat and attractive design
- Battery operation (transmitter)
- Time and temperature control accuracy
- Antifreeze through programming at +5°C

Applications

- Central Heating
- Boilers/Burners
- Circulation pumps
- Motorized valves

	Voltage	EAN-Code 4010940	Ord.-No.	Description
	famoso 601 rf Set - Set consisting of transmitter and Receiver			
	2 x 1.5 V 230 V / 50-60 Hz	037437	04.53.0005.1	Transmitter Receiver
	famoso 601 rf - Transmitter			
	2 x 1.5 V	037444	On request	Transmitter
famoso 601 rf Set, famoso 601 rf				
<ul style="list-style-type: none"> • Daily program • Shortest switching time: 15 min. • Programming: every 15 min. 				
	famoso 651 rf Set * - Set consisting of transmitter and Receiver			
	2 x 1.5 V 230 V / 50-60 Hz	037451	On request	Transmitter Receiver
	famoso 651 rf * - Transmitter			
	2 x 1.5 V	037468	On request	Transmitter
famoso 651 rf Set, famoso 651 rf				
<ul style="list-style-type: none"> • Daily program • Shortest switching time: 2h • Programming: every hour 				

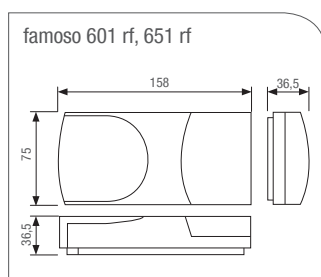
* Check availability, product to be discontinued.

Technical data

	famoso 601 rf	famoso 651 rf
Dimensions H x W x D (mm)	75 x 158 x 36,4	75 x 158 x 36,4
Weight (g) approx.	250	250
Switching output	potential-free	potential-free
Operating voltage	2 x LR6/AA Alkaline battery	2 x LR6/AA Alkaline battery
Accuracy at 25°C	± 2,5 sec./day	± 2,5 sec./day
Battery lifetime	1 year (dep. on switching frequency)	1 year (dep. on switching frequency)
Control range of day temperatures	+5°C ... +30°C	+5°C ... +30°C
Control range of night temperatures	+5°C ... +30°C	+5°C ... +30°C
Ambient temperature	-5°C ... +45°C	-5°C ... +45°C
Differential gap of temperature	± 0,25 ... 0,5 K	± 0,25 ... 0,5 K
Controller	electronic, 2 points	electronic, 2 points
Operating modes	Day / Night / AUTO	Day / Night / AUTO
Timer / control	yes / –	yes / –
Selector switch	Temperature 1,2, „automatic“	Temperature 1,2, „automatic“
Assembling mode	wall mounting	wall mounting
Connection type	wireless	wireless
Control period	5...30 min.	5...30 min.
Transmission frequency	868,3 MHz	868,3 MHz
Transmission power	corresp. LEPT/ERC/REC 70-03 E class 7a	corresp. LEPT/ERC/REC 70-03 E class 7a
Transmission range	< 1mW	< 1mW
Antenna	internal	internal
Coding	>16,8 Mio.	>16,8 Mio.
Protection class	II	II
Protection type	IP 20	IP 20
According to	EN 60730-1 EN 60730-2-7 EN 60730-2-9	EN 60730-1 EN 60730-2-7 EN 60730-2-9

Accessories		
Receiver	see page 56	see page 56

Dimensional drawings / circuit diagrams:



Wireless room thermostat clocks - Receiver




Features

- Transmission ensured by high quality 868 MHz
- Communication range of up to 30 meters
- Time and temperature control accuracy
- Relay output

Application

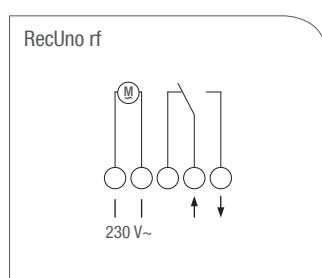
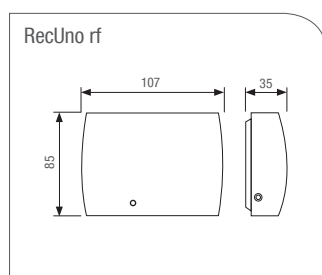
- Central Heating
- Boilers/Burners
- Circulation pumps
- Motorized valves

	Voltage	EAN-Code 4010940	Ord.-No.	Description
	RecUno rf 230 V +/- 10% / 50-60 Hz	031220	04.52.0001.1	Receiver
	For use with transmitters: feeling D 101 rf, famoso 601 rf			

Technical data

	RecUno rf
Dimensions H x W x D (mm)	85 x 107 x 35
Weight (g) approx.	113
Switching output	1 changeover contact (potential-free)
Operating voltage	230 V +/- 10% / 50-60 Hz
Resistive load	5 (1) A / 250 V
Connection type	screws max. 1,5 mm ²
Transmission frequency	868,3 MHz
Transmission range in buildings	30 m (2 walls + 1 ceiling)
Coding	> 16,8 Mio
Power transmission	< 1mW
Radio state display	LED
Operating temperature limits	Max. +45°C
Operating humidity range	10% to 90% relative humidity, not condensing
Storing temperature limits	-20°C ... +55°C
Protection class	II
Protection type	IP 20

Dimensional drawings / circuit diagrams:



Room thermostat clocks, wired connection

Features

- Wired connection with weekly program (up to 48 time and temperature level changes)
- Modern design, large display
- Display of heating process status
- Total OFF function with anti-freeze temperature
- Wide temperature control range (+5°C...+32°C)
- Problem-free installation with adjustable anti-freeze temperature (+3°C...+7°C)
- Battery discharge level monitoring and notice when batteries have to be replaced
- Integrated operating hour counter
- Automatic daylight saving adjustment
- Suitable for flush or wall installation

Applications

- Central Heating
- Boilers/Burners
- Circulation pumps
- Motorized valves



feeling D 101

Voltage	EAN-Code 4010940	Ord.-No.	Description
2 x 1.5 V	039578	04.10.0001.1	white

- Battery powered / Relay output
- Various running modes: AUTO, Override, ECO-Fix, Cleaning, Countdown, Party and Holiday program and OFF



feeling D 201 OT

Voltage	EAN-Code 4010940	Ord.-No.	Description
2 x 1.5 V	041472	04.12.0005.1	white

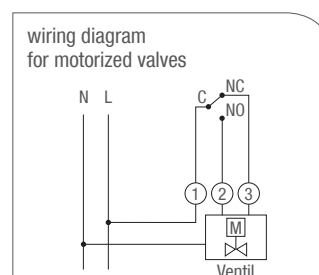
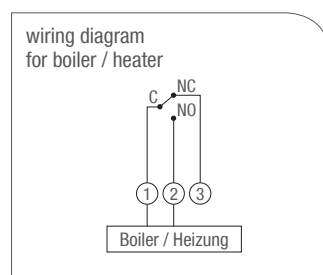
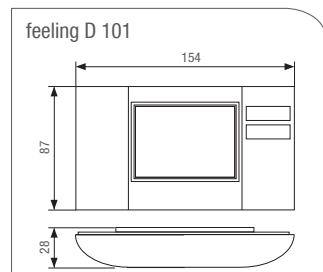
- Modulating control (OpenTherm communication protocol)
- Domestic Hot Water (DHW) and Central Heating (CH) control with antilegionella function
- Room dependent or outdoor temperature dependent control (with outdoor temperature sensor)
- Various running modes: AUTO, Override, Comfort temperature, Reduced temperature, OFF and Holiday program
- 2 external inputs (analog and digital)
- Remote boiler control and status reading on display
- Optimum start function
- Backlighting display
- Keyboard lock (child-proof lock)



Technical data

	feeling D 101	feeling D 201 OT
Dimensions H x W x D (mm)	87 x 154 x 28	87 x 154 x 28
Weight (g) approx.	200	200
Operating voltage	Battery 2 x 1,5V AA LR6 alkaline	OT Bus from Boiler
Battery lifetime	2 years (dep. on switching frequency)	2 years (dep. on switching frequency)
Battery back-up	10 min. (programs retained in EPROM)	> 1 h (programs retained in EPROM)
Switching output	1 changeover contact (potential-free)	2 wires (Open Therm Bus)
Resistive load	6 (2) A 250 V AC	–
Connection type	max. 1,5 mm ²	max. 1,5 mm ²
Regulation cycles (selectable)	2 points, PID	2 points, PID
Sensing element	100 K (at 25°C) NTC	100 K (at 25°C) NTC
Ambient temperature resolution	0,1°C	0,1°C
Time setting resolution – program – frost protection	+5°C ... +32°C (0,5°C steps) +5°C (adjustable +3°C ... +7°C)	+5°C ... +32°C (0,5°C steps) +5°C (adjustable +3°C ... +7°C)
Time display	24 h or 12 h AM/PM format	24 h or 12 h AM/PM format
Time setting resolution – time of day – program	1 minute 30 minutes	1 minute 30 minutes
Temperature control accuracy	± 0,5°C (20 K/hour)	± 0,5°C (20 K/hour)
Thermal gradient (heating system)	3 K/hour	3 K/hour
Room temperature display range	0°C ... +50°C	0°C ... +50°C
Pre-set programs	4 + 1 user defined	4 + 1 user defined
Operating temperature range	Max. 45°C	Max. 45°C
Operating humidity range	10% to 90% relative humidity, not condensing	10% to 90% relative humidity, not condensing
Storing temperature limits	-20°C to +55°C	-20°C to +55°C
Protection class	II	II
Protection type	IP40	IP40
According to	EN 60730-1, EN 60730-2-7 EN 60730-2-9, EN 55014-1 EN 55014-2, EN 61000-6-2	EN 60730-1, EN 60730-2-7 EN 60730-2-9, EN 55014-1 EN 55014-2, EN 61000-6-2

Dimensional drawings /
circuit diagrams:



Room thermostat clocks, wired connection

Features

- Wired connection
- Flat and attractive design
- Suitable time and temperature control
- Time and temperature control accuracy

Applications

- Central Heating
- Boilers/Burners
- Circulation pumps
- Motorized valves

Voltage	EAN-Code 4010940	Ord.-No.
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famoso 500

230 V +/- 10% / 50-60 Hz	020231	04.34.0001.1
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- Daily program
- Shortest switching time: 15 min.

famoso 550

230 V +/- 10% / 50-60 Hz	020224	04.34.0002.1
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- Weekly program
- Shortest switching time: 15 min.



famoso 601

2 x 1,5 V	022709	04.40.0008.1
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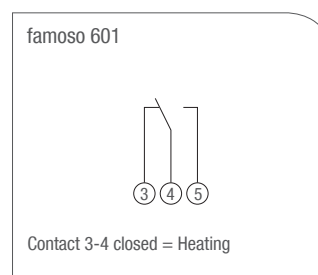
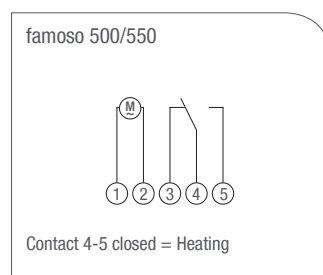
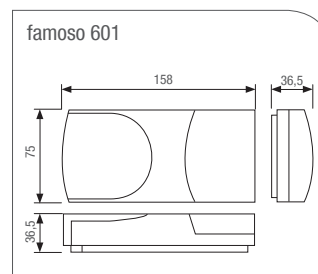
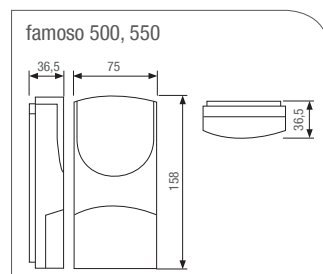
- Daily program
- Shortest switching time: 15 min.

Technical data



	famoso 500, 550	famoso 601
Dimensions H x W x D (mm)	158 x 75 x 36,5	158 x 75 x 36,5
Weight (g) approx.	250	250
Connection	230 V +/- 10% / 50-60 Hz	Battery, 2 x LR6 Alkaline
Switching capacity – ohmic load – inductive load cos. φ 0,6 – minimal	5 A / 250 V~ 1 A / 250 V~ 1 mA at 24 V	5 A / 250 V~ 1 A / 250 V~ 1 mA at 24 V
Switching output	potential-free	potential-free
Switch contacts	1 changeover contact	1 changeover contact
Ambient temperature	-5°C ... +45°C	-5°C ... +45°C
Accuracy	± 2,5 sec./day at +25°C	± 2,5 sec./day at +25°C
Running reserve	–	battery
Battery life time	–	approx. 1 year
Switching state display – Timer/control – Selector switch	yes / – Temperature 1, 2, „automatic“	yes / yes Temperature 1, 2, „automatic“
Assembling mode	Construction with receptacle terminals on supportplate	Construction with receptacle terminals on supportplate
Connection type	5 screw terminals each 2,5 mm ² resp. 2 x 1,0 mm ²	3 screw terminals each 2,5 mm ²
Control range of day temperatures	+5°C ... +32°C	+5°C ... +32°C
Control range of night temperatures	+5°C ... +32°C	+5°C ... +32°C
Antifreeze	through programming at +5°C	through programming at +5°C
Differential gap of temperature	± 0,25 ... 0,5 K *	± 0,25 ... 0,4 K *
Controller	electronic	electronic
Protection class	II	II
Protection type	IP 20	IP 20

* Higher deviations are possible depending on the heating system and the heated room





Dimensional drawings / circuit diagrams:



Overview thermostats

	thermio E	thermio 102	thermio 103	thermio 402	thermio 403	thermio 513
						
Controller	electronic	Bi-metal		Bi-metal		Bi-metal
Connection for time switch	–	–	•	–	–	•
Actual room temperature	•	–		–	–	–
Application	heating	heating		heating		heating
Antifreeze	–	•		•	•	•
Page	p. 64	p. 64		p. 64		p. 64



thermio 603	thermio 703	thermio 713	thermio touch
			
electronic	electronic	electronic	electronic
-	-	-	•
•	•	•	•
heating / cooling	heating / cooling	heating / cooling / fan coil	heating
•	•	•	•
p. 66	p. 66	p. 66	p. 66



Thermostats

Features

- Temperature control accuracy
- Flat and attractive design
- Possibility to connect a time switch (night-time reduction)
- Surface-mount

Applications

- Central heating
- Boilers
- Combi-boiler

Voltage	EAN-Code 4010940	Ord.-No.
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thermio E

24 V / 50-60 Hz	033231	04.46.0014.1
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- Electronic control with digital temperature indicator (actual and desired temp.), with power stealing
- No battery required



thermio 513

230 V +/- 10% / 50-60 Hz	019167	04.46.0001.1
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- Bi-metal controller / Rotary knob for temperature adjustment / Manual switch for night-time reduction
- Connection for time switch (night-time reduction)
- Thermic feedback
- Antifreeze adjustable by turning knob catch



thermio 402

230 V +/- 10% / 50-60 Hz	019495	04.46.0003.1
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thermio 403

230 V +/- 10% / 50-60 Hz	019471	04.46.0005.1
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- Bi-metal controller / Rotary knob for temperature adjustment / Manual switch for heating ON/OFF
- Thermic feedback
- Antifreeze adjustable by turning knob catch



thermio 102

230 V +/- 10% / 50-60 Hz	019488	04.46.0004.1
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thermio 103

230 V +/- 10% / 50-60 Hz	019464	04.46.0006.1
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- Bi-metal controller / Rotary knob for temperature adjustment
- Connection for time switch (night-time reduction)
- Thermic feedback
- Antifreeze adjustable by turning knob catch



Frame

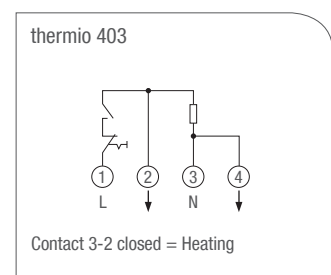
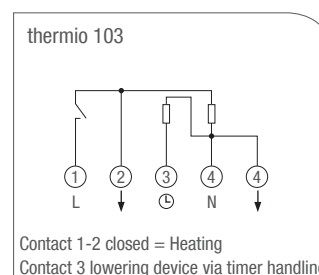
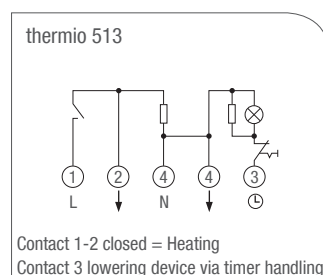
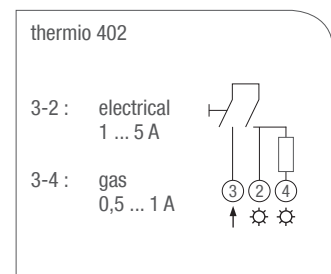
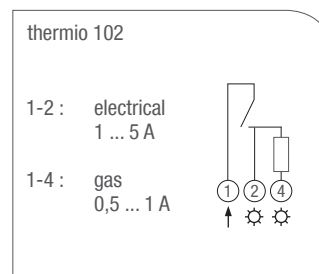
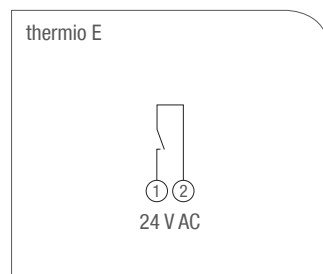
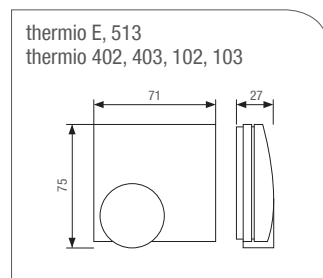
–	035044	04.46.0038.6
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- Fitted for all thermostats thermio
- 80,5 x 80,5 mm (5 mm thick)

Technical data

	thermio E	thermio 513	thermio 102	thermio 103	thermio 402	thermio 403
Dimensions H x W x D (mm)	75 x 71 x 27		75 x 71 x 27		75 x 71 x 27	
Weight (g) approx.	60	70	60		90	
Connection	2-wire	3- and 4-wire	2- and 3-wire		2- and 3-wire	
Power consumption	100 mW	approx. 200 mW	approx. 200 mW		approx. 200 mW	
Switching capacity						
– ohmic load	–	10 A / 250 V~	0,5 A, 5 A / 250 V~	10 A / 250 V~	0,5 A, 5 A / 250 V~	10 A / 250 V~
– inductive load cos φ 0,6	–	4 A / 250 V~	0,5 A, 4 A / 250 V~	4 A / 250 V~	0,5 A, 4 A / 250 V~	4 A / 250 V~
– minimal	20 mA / 24 V-	0,1 A / 230 V-	0,5 A, 1 A / 24 V-	0,1 A / 230 V-	0,5 A, 1 A / 24 V-	0,1 A / 230 V-
Switching output	opens with raising temperature		opens with raising temperature		opens with raising temperature	
Switch contacts	–	Ag Ni	Ag Ni		Ag Ni	
Ambient temperature	T 30		T 30		T 30	
Switching state display						
– control	flame icon	LED green	–		–	
– selector switch	–	night lowering device ON/OFF	–		heating ON/OFF	
Assembling mode	wall mounting		wall mounting		wall mounting	
Connection type	screw terminal with wire protection		screw terminal with wire protection		screw terminal with wire protection	
Control range of day temperatures	+5°C ... +30°C		+5°C ... +30°C		+5°C ... +30°C	
Night lowering device	–	approx. 4 K	–	approx. 4 K	–	
Antifreeze	–	adjustable by turning knob catch	adjustable by turning knob catch		adjustable by turning knob catch	
Differential gap of temperature	approx. 0,5 K		approx. 0,5 K		approx. 0,5 K	
Refeeding	–	thermic	thermic		thermic	
Stocking temperature	-20°C ... +70°C		-20°C ... +70°C		-20°C ... +70°C	
Protection class	II after accordant installation		II after accordant installation		II after accordant installation	
Protection type	IP 20		IP 20		IP 20	
Fault clearance of sparks	according to EN 55014		according to EN 55014		according to EN 55014	

Dimensional drawings / circuit diagrams:







Thermostats

Features

- Precise temperature control
- Low profile, attractive design
- Surface mount
- Combination heating/cooling

Applications

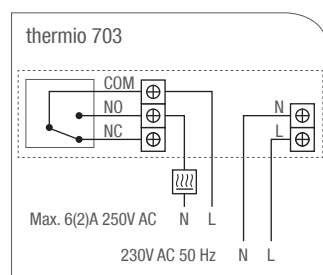
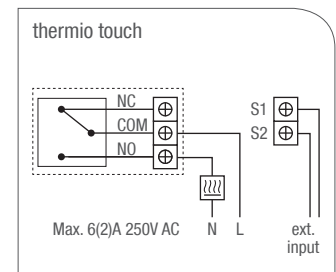
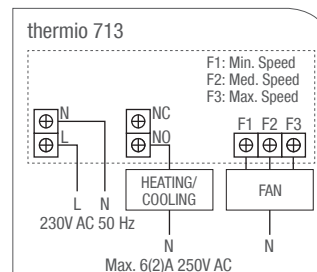
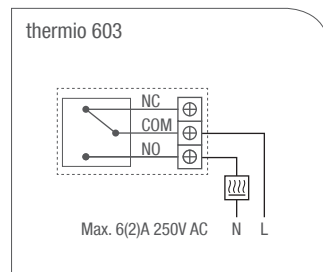
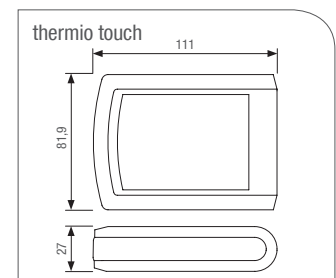
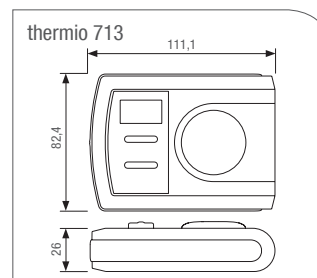
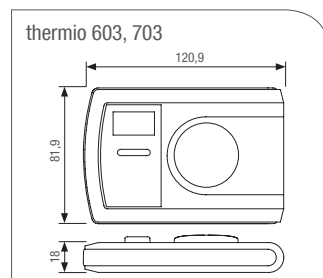
- Central heating
- Cooling devices (thermio 603, 703, 713)
- Boilers
- Combi-boiler
- Fan Coil (thermio 713)

	Voltage	EAN-Code 4010940	Ord.-No.	Description				
	<p>thermio 603</p> <table border="1"> <tr> <td>2 x 1,5 V</td> <td>041328</td> <td>04.46.0016.1</td> <td>–</td> </tr> </table> <ul style="list-style-type: none"> • Electronic control with digital temperature indicator (actual temp.) • Function mode: heating/cooling 				2 x 1,5 V	041328	04.46.0016.1	–
2 x 1,5 V	041328	04.46.0016.1	–					
	<p>thermio 703</p> <table border="1"> <tr> <td>230 V +/- 10% / 50-60 Hz</td> <td>041335</td> <td>04.46.0017.1</td> <td>–</td> </tr> </table> <ul style="list-style-type: none"> • Electronic control with digital temperature indicator (actual and desired temp.) • Function mode: heating/cooling 				230 V +/- 10% / 50-60 Hz	041335	04.46.0017.1	–
230 V +/- 10% / 50-60 Hz	041335	04.46.0017.1	–					
	<p>thermio 713</p> <table border="1"> <tr> <td>230 V +/- 10% / 50-60 Hz</td> <td>041342</td> <td>04.46.0018.1</td> <td>–</td> </tr> </table> <ul style="list-style-type: none"> • Electronic control with digital temperature indicator (actual and desired temp.) • Function mode: heating/cooling • Control of fan coils 				230 V +/- 10% / 50-60 Hz	041342	04.46.0018.1	–
230 V +/- 10% / 50-60 Hz	041342	04.46.0018.1	–					
	<p>thermio touch</p> <table border="1"> <tr> <td>2 x 1,5 V</td> <td>041359</td> <td>04.46.0019.1</td> <td>–</td> </tr> </table> <ul style="list-style-type: none"> • Electronic control with digital temperature indicator (actual and desired temp.) • Function mode: heating • Touch screen • External input 				2 x 1,5 V	041359	04.46.0019.1	–
2 x 1,5 V	041359	04.46.0019.1	–					

Technical data

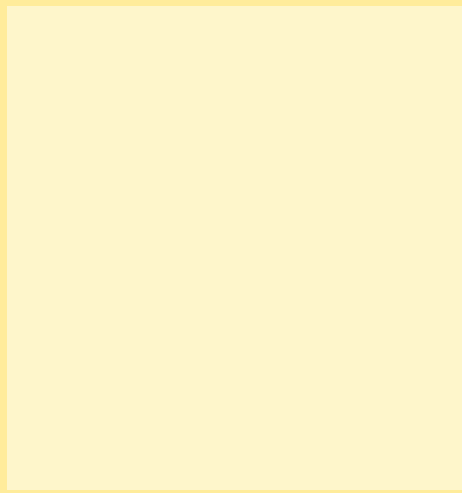
	thermio 603	thermio 703	thermio 713	thermio touch
Dimensions H x W x D (mm)	82 x 121 x 18		82 x 111 x 26	82 x 111 x 26
Weight (g) approx.	108	114	128	168
Connection	2 x 1,5 V LR03 / AAA	220-240 V / 50-60 Hz	220-240 V / 50-60 Hz	2 x 1,5 V LR03 / AAA
Protection class	II		II	II
Switching capacity – ohmic load (VDE, IEC) – inductive load cos φ 0,6	max. 6 A / 250 V AC / 50 Hz max. 2 A / 250 V AC / 50 Hz		max. 6 A / 250 V AC / 50 Hz max. 2 A / 250 V AC / 50 Hz	max. 6 A / 250 V AC / 50 Hz max. 2 A / 250 V AC / 50 Hz
Switching output	potential-free		potential-free	potential-free
Differential	0.4 / 0.6°C		0.4 / 0.6°C	0.4 / 0.6°C
Controlled temperature	+5°C ... + 30°C	+5°C ... + 35°C	+5°C ... + 35°C	+5°C ... + 35°C
Temperature meas. range	+0°C ... + 40°C		+0°C ... + 40°C	+0°C ... + 40°C
Display temperature update	every 10 sec.		every 10 sec.	every 10 sec.
Ambient temperature	-5°C ... + 45°C		-5°C ... + 45°C	-5°C ... + 45°C
Accuracy	± 1°C at +20°C		± 1°C at +20°C	± 1°C at +20°C
Resolution	0,5°C		0,5°C	0,5°C
Protection type	IP 30		IP 30	IP 30

Dimensional drawings / circuit diagrams:

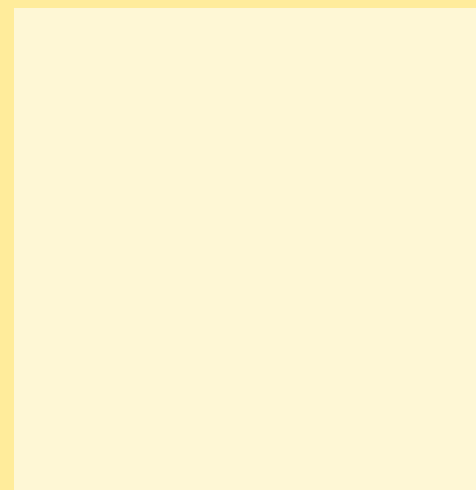


Motion and presence detectors, staircase lighting, photoelectric switches

Individual lighting control

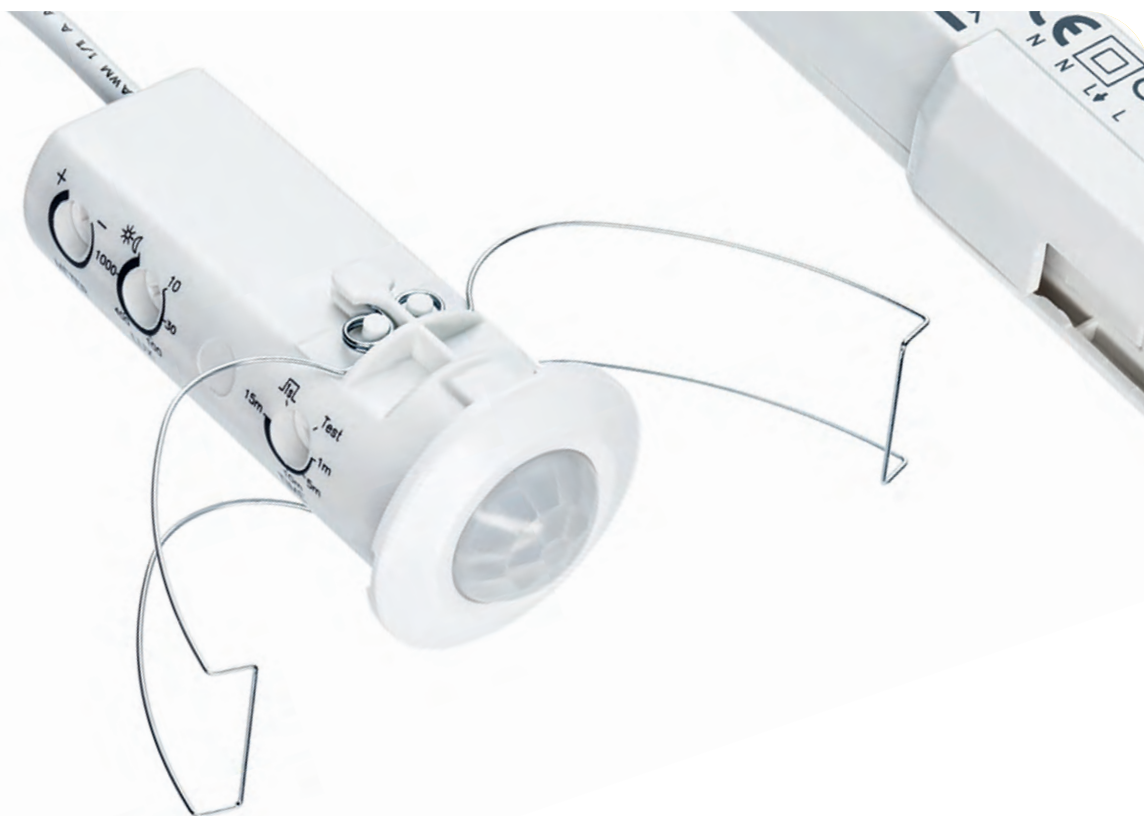


Lighting control for:
Stairways
Halls
Corridors
Bathrooms



Street lighting
Shop lighting
Shutters control





Motion and presence detectors

Overview	p. 70
talis	p. 72, 74, 76
Accessories	p. 76




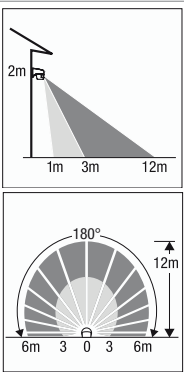
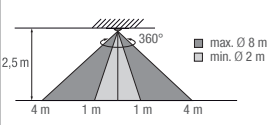
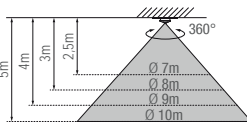
Staircase lighting

Overview	p. 78
trealux	p. 80
Accessories	p. 86





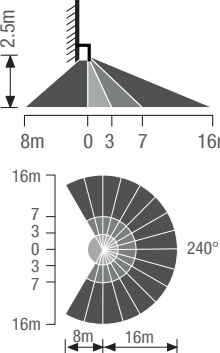
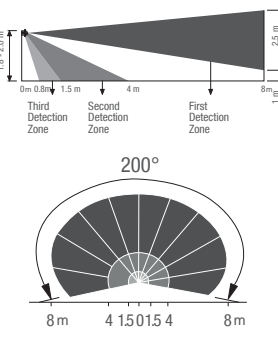
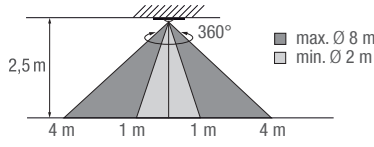
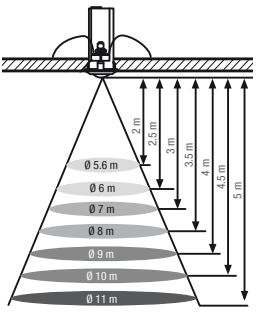
Photoelectric switches

Overview	p. 79
turnus	p. 82, 84
Accessories	p. 86

Overview motion and presence detectors

	talis MW 180-12-1	talis MF 360-8-1	talis MS 360-7-1
			
Type of detector	Motion detector	Motion detector	Motion detector
Field of application	Indoor, outdoor	Indoor	Indoor
Light level	5 Lux (☾) - ∞ Lux (☀)	10 (☾) - ∞ (☀) Lux	10 (☾) - ∞ (☀) Lux
Detection range	12 m	8 m	7 m
			
Detection angle	180°	360°	360°
Time setting	5 sec. - 12 min.	5 sec. - 30 min.	5 sec. - 30 min.
Learning function	–	●	●
Test mode	–	●	●

Page	p. 72	p. 72	p. 72
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talís PW 240/360-16-1*	talís PW2 200-9-1*	talís PW3 200-9-1*	talís PFMR 360-8-1*	talís PFSL 360-8-1*	talís PFDR 360-8-1*	talís PF 360-8-2*	talís PFM 360-6-1*
							
Presence detector	Presence detector	Presence detector	Presence detector				
Indoor, outdoor	Indoor	Indoor	Indoor				
10 (☾) - ∞ (☼) Lux	5 (☾) - 300 (☼) Lux	10 (☾) - ∞ (☼) Lux	10 (☾) - ∞ (☼) Lux				
16 m	9 m	8 m	6 m				
							
240° - 360°	200°	360°	360°				
5 sec. - 30 min.	5 sec. - 30 min.	5 sec. - 30 min.	1 min. - 15 min.				
●	●	●	●				
●	●	●	●				
p. 74	p. 74	p. 76	p. 76				

* Available from the second half of 2014

Motion detectors

Features

- Used for transit areas
- Detection by infrared (IR)
- React to large movements
- Perform a light level measurement only at first time detection

Outdoor and indoors applications

- Driveways
- Staircases
- Building entrances
- Hallways and corridors
- Basements and cellars

Voltage

EAN-Code 4010940

Ord.-No.



talis MW 180-12-1

230 V ± 10% / 50-60 Hz

043957

18.06.0002.1

- Indoor and outdoor
- Detection range 12 m
- Wall mount



talis MF 360-8-1

230 V ± 10% / 50-60 Hz

043988

18.06.0005.1

- Indoor
- Detection range 8 m
- Flush ceiling mount



talis MS 360-7-1

230 V ± 10% / 50-60 Hz

043971

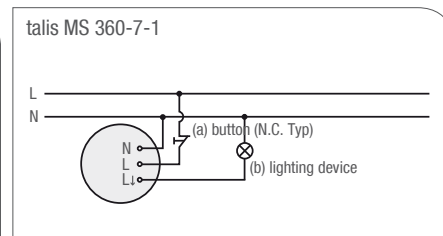
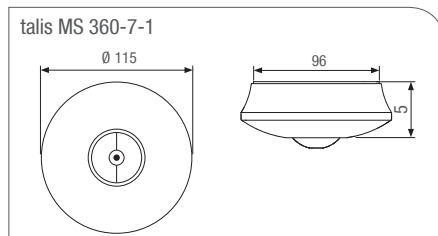
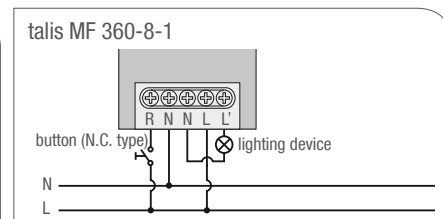
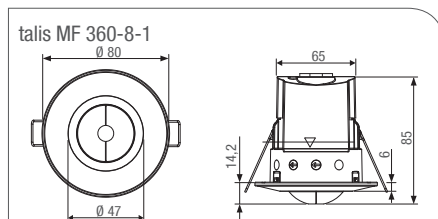
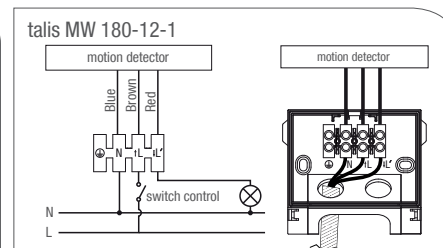
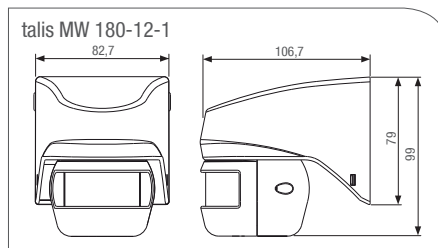
18.06.0004.1

- Indoor
- Detection range 7 m
- Surface ceiling mount

Technical data

	talis MW 180-12-1	talis MF 360-8-1	talis MS 360-7-1
Dimensions (mm)	99 x 82,7 x 106,7	Ø 80 x 85	Ø 115 x 43
Connection	230 V ± 10% / 50-60 Hz	230 V ± 10% / 50-60 Hz	230 V ± 10% / 50-60 Hz
Switching capacity	max. 1000 W (4,34 A cos φ = 1) max. 500 W - max. 400 VA (non-compensated) (4,34A cos φ = 1) max. 150 W -	max. 2000 W (8,7 A cos φ = 1) max. 1000 W max. 1000 VA / 600 W (traditional) max. 1000 VA / 900 W (elektronic) max. 900 VA / 100 µF 25 x (1 x 18 W); 12 x (2 x 18 W); 15 x (1 x 36 W); 7 x (2 x 36 W); 10 x (1 x 58 W); 5 x (2 x 58 W) max. 400 W max. 600 VA / 400 W (incl. CFL- and PL-lamp)	max. 2000 W (8,7 A cos φ = 1) max. 1000 W max. 1000 VA / 600 W (traditional) max. 1000 VA / 900 W (elektronic) max. 900 VA / 100 µF 25 x (1 x 18 W); 12 x (2 x 18 W); 15 x (1 x 36 W); 7 x (2 x 36 W); 10 x (1 x 58 W); 5 x (2 x 58 W) max. 400 W max. 600 VA / 400 W (incl. CFL- and PL-lamp)
Energy consumption at 230V~ AC	< 1 W	< 1 W (in standby mode)	< 1 W (in standby mode)
Parallel connection	max. 6 detectors	max. 6 detectors	max. 6 detectors
Detection range	12 m at installation hight 2 m (at 20-25°C)	ca. 8 m at installation hight 2,5 m (at 20-25°C)	ca. 7 m at installation hight 2,5 m (at 20-25°C)
Detector adjustment head	left/right: 90° down: 45°	-	-
Ambient temperature	-25°C ... + 45°C	0°C ... + 45°C	0°C ... + 45°C
Type of mounting	Outdoor surface wall	Indoors ceiling flush	Indoors ceiling flush
Protection class (EN60730-1)	II	II	II
Protection type (EN 60529)	IP 54	IP 44	IP 40
Presentation color	White RAL 9016	White RAL 9016	White RAL 9016
Subject to the regulations	2006/95/CE (LVD) 2004/108/CE (EMV)	2006/95/CE (LVD) 2004/108/CE (EMV)	2006/95/CE (LVD) 2004/108/CE (EMV)
Safety standard	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

Dimensional drawings / circuit diagrams:





Presence detectors

Features

- Used in areas with continuous presence of people
- Detection by infrared (IR)
- React to small movements
- Perform a permanent infrared measurement
- Switch off with sufficient daylight

Applications

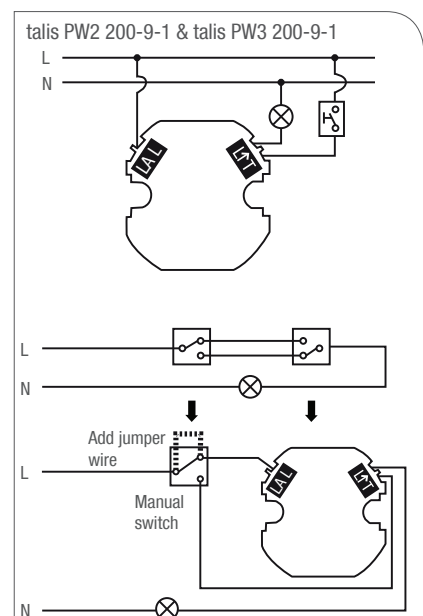
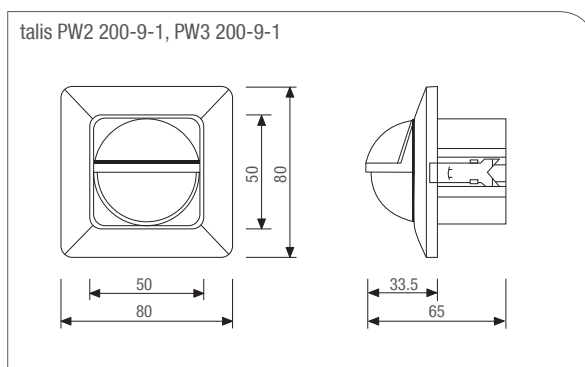
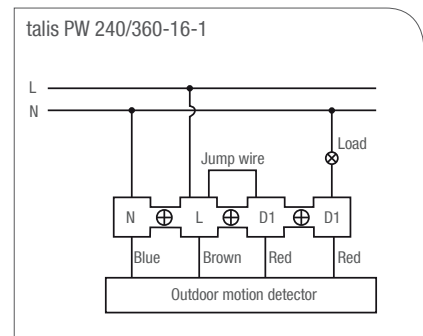
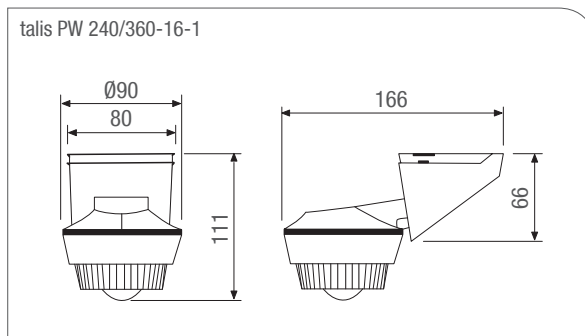
- Offices
- Class rooms
- Meeting and working rooms
- Hotel rooms and corridors
- Gyms

	Voltage	EAN-Code 4010940	Ord.-No.
	talis PW 240/360-16-1 230 V ± 10% / 50-60 Hz		
	043964	18.06.0003.1	Available from the second half of 2014
	<ul style="list-style-type: none"> • Indoor and outdoor • Detection range 16 m • Wall mount 		
	talis PW2 200-9-1 230 V ± 10% / 50-60 Hz		
	044046	18.06.0011.1	Available from the second half of 2014
	<ul style="list-style-type: none"> • Indoor • Detection range 9 m • Wall mount 		
	talis PW3 200-9-1 230 V ± 10% / 50-60 Hz		
	044053	18.06.0012.1	Available from the second half of 2014
	<ul style="list-style-type: none"> • Indoor • Detection range 9 m • Wall mount 		
	talis PW2 200-9-1		talis PW3 200-9-1
	<ul style="list-style-type: none"> • Indoor • Detection range 9 m • Wall mount 		<ul style="list-style-type: none"> • Indoor • Detection range 9 m • Wall mount

Technical Data

	talis PW 240/360-16-1	talis PW2 200-9-1	talis PW3 200-9-1
Dimensions (mm)	111 X Ø 90 X 166	80 x 80 x 33,5	
Connection	230 V ± 10% / 50-60 Hz	230 V ± 10% / 50-60 Hz	
Switching capacity	max. 2000 W max. 1000 W max. 1000 VA / 600 W (traditional) max. 1000 VA / 900 W (electronic) max. 900 VA / 100 µF 25 x (1 x 18 W); 12 x (2 x 18 W); 15 x (1 x 36 W); 7 x (2 x 36 W); 10 x (1 x 58 W); 5 x (2 x 58 W)	10 - 300 W 10 - 300 W 10 - 150 W (electronic)	max. 2000 W max. 1000 W max. 1000 VA / 600 W (traditional) max. 1000 VA / 900 W (electronic) max. 900 VA / 100 µF 25 x (1 x 18 W); 12 x (2 x 18 W); 15 x (1 x 36 W); 7 x (2 x 36 W); 10 x (1 x 58 W); 5 x (2 x 58 W)
– Incandescent lamp load			
– Halogen lamp load (AC)			
– Halogen lamp load (LV)			
– Fluorescent lamp load		10 - 150 W	
– LED lamp	max. 400 W	10 - 100 W	max. 400 W
– Energy-saving lamp	max. 600 VA / 400 W (incl. CFL- and PL-lamp)	10 - 150 W (incl. CFL- and PL-lamp)	max. 600 VA / 400 W (incl. CFL- and PL-lamp)
Energy consumption at 230V~ AC	< 1 W (in standby mode)	< 1 W (in standby mode)	
Parallel connection	max. 6 detectors	max. 6 detectors	
Detection range	16 m at an installation height 2,5 m (at 20-25°C)	9 m at an installation height 1,5 m (at 20-25°C)	
Detector adjustment head	left/right: 90° up: 90° down: 40°	-	
Ambient temperature	-25°C ... +45°C	0°C ... +45°C	
Type of mounting	Surface wall	Surface wall	
Protection class (EN 60730-1)	II	II	
Protection type (EN 60529)	IP 54	IP 40	
Presentation color	White RAL 9016	White RAL 9016	
Subject to the regulations	2006/95/CE (LVD) 2004/108/CE (EMV)	2006/95/CE (LVD), 2004/108/CE (EMV)	
Safety standard	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3	

Dimensional drawings / circuit diagrams:



Presence detectors

Features

- Used in areas with continuous presence of people
- Detection by infrared (IR)
- React to small movements
- Perform a permanent infrared measurement
- Switch off with sufficient daylight

Applications

- Offices
- Class rooms
- Meeting and working rooms
- Hotel rooms and corridors
- Gyms



talis PFMR 360-8-1

230 V ± 10% / 50-60 Hz

EAN-Code 4010940

044008

Ord.-No.

18.06.0007.1

Available from the second half of 2014

talis PFSL 360-8-1

230 V ± 10% / 50-60 Hz

044015

18.06.0008.1

Available from the second half of 2014

talis PFDR 360-8-1

230 V ± 10% / 50-60 Hz

044039

18.06.0010.1

Available from the second half of 2014

talis PF 360-8-2

230 V ± 10% / 50-60 Hz

043995

18.06.0006.1

Available from the second half of 2014

talis PFM 360-8-1

- Indoor
- Detection range 8 m
- Flush ceiling mount
- For master function
- Remote control able

talis PFSL 360-8-1

- Indoor
- Detection range 8 m
- Flush ceiling mount
- For slave function

talis PFDR 360-8-1

- Indoor
- Detection range 8 m
- Dimmable
- Surface ceiling
- Remote control able

talis PF 360-8-2

- Indoor
- Detection range 8 m
- Flush ceiling mount
- 2 channels HVAC



talis PFM 360-6-1

230 V ± 10% / 50-60 Hz

044022

18.06.0009.1

Available from the second half of 2014

- Indoor
- Detection range 6 m
- Flush ceiling mount

Accessories

for

EAN-Code 4010940

Ord.-No.

talis RP remote control

talis PFMR, PFDR

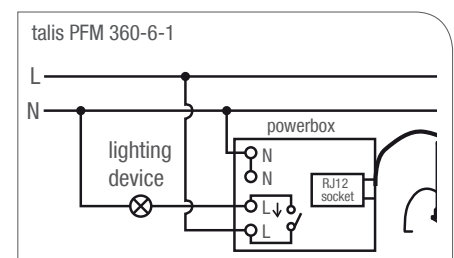
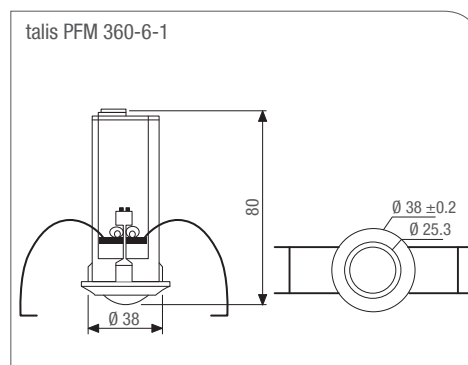
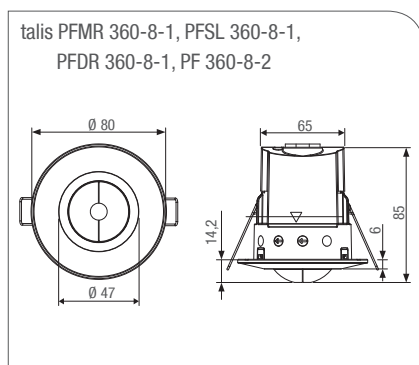
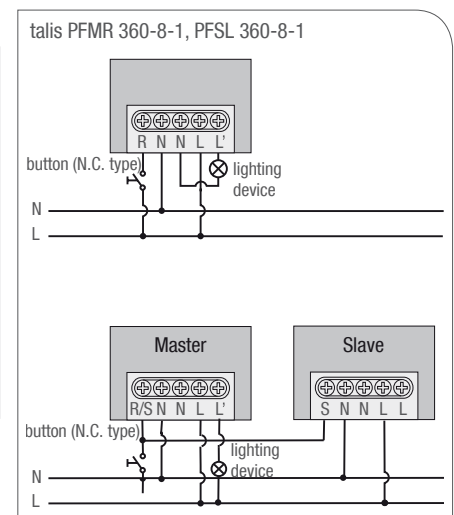
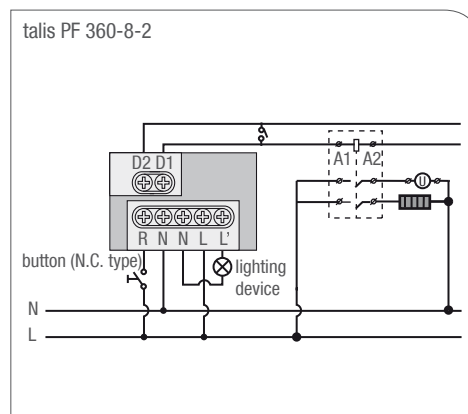
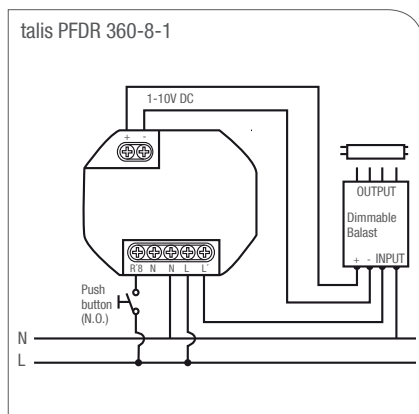
035358

07.10.0002.1 (Available from the second half of 2014)

Technical Data

	talis PFMR 360-8-1, PFDR 360-8-1, PF 360-8-2	talis PFSL 360-8-1	talis PFM 360-6-1
Dimension (mm)	Ø 80 x 85	Ø 80 x 85	80 x Ø 38
Connection	230 V ± 10% / 50-60 Hz	230 V ± 10% / 50-60 Hz	230 V ± 10% / 50-60 Hz
Switching capacity	max. 2000 W max. 1000 W max. 1000 VA / 600 W (traditional) max. 1000 VA / 900 W (electronic) max. 900 VA / 100 µF 25 x (1 x 18 W); 12 x (2 x 18 W); 15 x (1 x 36 W); 7 x (2 x 36 W); 10 x (1 x 58 W); 5 x (2 x 58 W)	-	max. 2000 W max. 1000 W max. 1000 VA / 600 W (traditional) max. 1000 VA / 900 W (electronic) max. 900 VA / 100 µF 25 x (1 x 18 W); 12 x (2 x 18 W); 15 x (1 x 36 W); 7 x (2 x 36 W); 10 x (1 x 58 W); 5 x (2 x 58 W)
– Incandescent lamp load			
– Halogen lamp load (AC)			
– Halogen lamp load (LV)			
– Fluorescent lamp load			
– LED lamp			
– Energy-saving lamp			
Energy consumption at 230 V~ AC	< 1 W (in standby mode)	< 1 W (in standby mode)	< 1 W (in standby mode)
Parallel connection	max. 6 detectors	max. 10 slave detectors per master detector	max. 6 detectors
Detection range	8 m at an installation high 2,5 m (at 20-25°C)	8 m at an installation high 2,5 m (at 20-25°C)	5,6 m at an installation high 2,5 m (at 20-25°C)
Detector adjustment head	-	-	-
Ambient temperature	0°C ... +45°C	0°C ... +45°C	0°C ... +45°C
Type of mounting	Indoors ceiling flush	Indoors ceiling flush	Indoors ceiling flush
Protection class (EN 60730-1)	II	II	II
Protection type (EN 60529)	IP 44	IP 44	IP 44, Power box IP 20
Presentation color	White RAL 9016	White RAL 9016	White RAL 9016
Subject to the regulations	2006/95/CE (LVD), 2004/108/CE (EMV)	2006/95/CE (LVD), 2004/108/CE (EMV)	2006/95/CE (LVD), 2004/108/CE (EMV)
Safety standard	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3	EN 60669-1, EN 60669-2-1, EN 55015, EN 61547, EN 61000-3-2, EN 61000-3-3

Dimensional drawings / circuit diagrams:



Overview staircase lighting time switches

	trealux 210	trealux 410	trealux 510
			
Pre-warning	–	–	●
Autom. recognition of 3- or 4-line connection	●	●	●
Adjustment range	0,5 - 20 min	0,5 - 20 min	0,5 - 20 min
Service long-term function 1h	–	–	●
Manual switch	●	●	●
Re-triggerable	once	3 times	3 times
Time extension	●	●	●
Switching capacity	2300 W	3600 W	3600 W

Page	p. 80	p. 80	p. 80
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Overview photoelectric switches

	turnus 200	turnus 501 A	turnus 501 E	turnus 502 A	turnus 502.1	turnus 771 plus turnus 772 plus
						
Channels	1	1		2	2	1 2
Max. adjustable Lux-value	2000	500		500		500
Brightness sensor for ...	integrated	surface mount	flush mount	surface mount	–	surface mount
Switching program	–	–		–		weekly program
Memory spaces	–	–		–		50
Autom. daylight saving changeover	–	–		–		•
Running reserve	–	–		–		3 years
Sealable	–	–		•		•

Page	p. 82	p. 82	p. 82	p. 84
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Staircase lighting time switches

Features

- Electronic
- Automatic recognition of 3-line or 4-line connection
- Manual switch
- Adjustment range: 0,5 – 20 min

Applications

- Lighting or ventilation for
- Stairs
 - Basements
 - Halls
 - Toilets



trealux 210

230 V / 50 Hz

EAN-Code 4010940
024789

Ord.-No.
18.13.0009.1

trealux 410

220-240 V / 50-60 Hz

EAN-Code 4010940
042097

Ord.-No.
18.13.0018.1

trealux 210

- Immediately adjustable
- Connection from below
- Switching capacity: 2300 W

trealux 410

- Immediately adjustable
- Switching capacity: 3600 W



trealux 510

220-240 V / 50-60 Hz

EAN-Code 4010940
039127

Ord.-No.
18.13.0016.1

- Pre-warning
- Safety staircase lighting time switch in acc. to DIN 18015 with impulse pre-warning
- When any key is pressed for more than 2 seconds light remains on for 1 hour
- **Switching capacity: 3600 W**

Technical data

	trealux 210	trealux 410	trealux 510
Dimensions H x W x D (mm)	45 x 17,5 x 62	45 x 17,5 x 62	45 x 17,5 x 62
Distributor cut-out (mm)	46 x 18	46 x 18	46 x 18
Connection	230 V / 50 Hz	220-240 V / 50-60 Hz	220-240 V / 50-60 Hz
Switching capacity AC			
– Ohmic load (VDE, IEC) cos. φ 1	16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC
– Inductive load cos. φ 0,6	10 A / 250 V AC	10 A / 250 V AC	10 A / 250 V AC
– Incandescent lamp load	2300 W	3600 W	3600 W
– Halogen lamp load	2300 W	3600 W	3600 W
– Halogen (low voltage)	1000 W	1600 VA	1600 VA
– Fluorescent lamp in DUO circuit	20 x 2 x 58 W	3600 VA	3600 VA
– Fluorescent lamp, parallel compensated	20 x 58 W	3600 VA	3600 VA
– Fluorescent lamp, series-compensated	40 x 58 W	3600 VA	3600 VA
– Power consumption stand by mode	0,5 W	0,5 W	0,5 W
– EVG	500 VA	1000 VA	1000 VA
– KVG	1000 W	1500 VA	1500 VA
– CFL (EVG)	15 x 7 W; 12 x 11 W; 11 x 15 W; 10 x 20 W	34 x 7 W; 27 x 11 W; 24 x 15 W; 22 x 23 W	34 x 7 W; 27 x 11 W; 24 x 15 W; 22 x 23 W
– LEDs	750 W	1200 W	1200 W
Switch contacts	1 NO	1 NO	1 NO
Ambient temperature	-10°C ... +55°C	-10°C ... +55°C	-10°C ... +55°C
Protection class	II	II	II
Protection type	IP 20	IP 20	IP 20
Pilot lights	max. 50 ͆ x1 mA (3-line connection) max. 50 ͆ x1 mA (4-line connection)	max. 50 ͆ x1 mA (3-line connection) max. 150 ͆ x1 mA (4-line connection)	max. 50 ͆ x1 mA (3-line connection) max. 150 ͆ x1 mA (4-line connection)
On-time	100% ED	100% ED	100% ED
Max. terminal capacity	1 - 4 mm ²	1 - 4 mm ²	1 - 4 mm ²
Connection type	captive ± screw terminals	captive ± screw terminals	captive ± screw terminals
Switching type	automatic recognition of 3-line or 4-line connection	automatic recognition of 3-line or 4-line connection	automatic recognition of 3-line or 4-line connection

Accessories

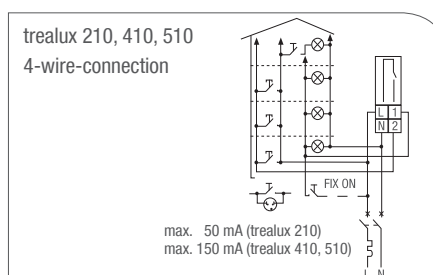
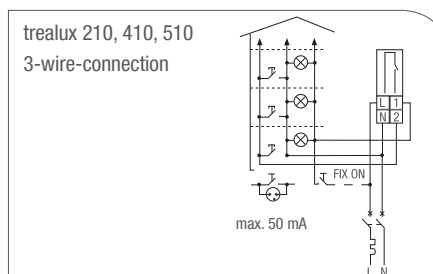
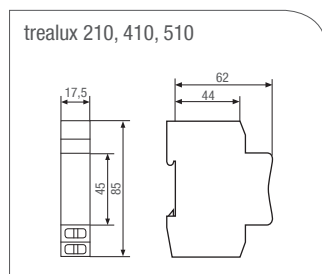
Assembly accessories

see page 86

see page 86

see page 86

Dimensional drawings / circuit diagrams:



Photoelectric switches

Applications

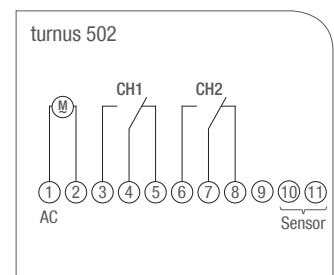
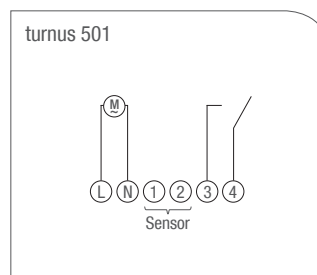
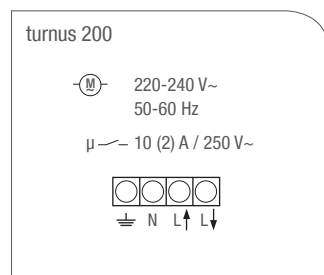
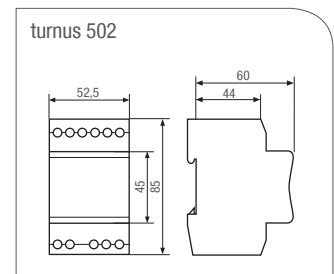
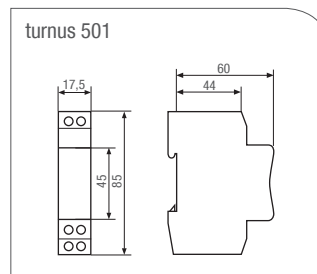
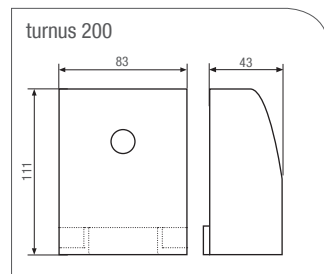
- Shop lighting
- Car parking lighting
- Shutters control
- Advertising signs
- Street lighting
- Sun blinds

	Voltage	EAN-Code 4010940	Ord.-No.
	turnus 200		
	220-240 V / 50-60 Hz	018986	18.17.0001.1
	<ul style="list-style-type: none"> • Adjustable ON/OFF switching delay 20-120 sec. • With integrated brightness sensor • Surface mount/outdoor 		
	turnus 501 A		
	230 V / 50-60 Hz	023249	18.18.0001.1
	<ul style="list-style-type: none"> • With brightness sensor surface mount, incl. in the scope of delivery 		
	turnus 501 E		
230 V / 50-60 Hz	024031	18.18.0006.1	
<ul style="list-style-type: none"> • With brightness sensor, flush mount, incl. in the scope of delivery 			
	turnus 501 A, turnus 501 E		
<ul style="list-style-type: none"> • Switching ON/OFF delay 100 sec. fixed • With brightness sensor, flush mount, incl. in the scope of delivery 			
	turnus 502 A		
	230 V / 50-60 Hz	023256	18.18.0002.1
	<ul style="list-style-type: none"> • With brightness sensor, surface mount, incl. in the scope of delivery 		
	turnus 502.1		
	230 V / 50-60 Hz	023973	18.18.0003.1
<ul style="list-style-type: none"> • Additional unit without brightness sensor 			
	turnus 502 A, turnus 502.1		
<ul style="list-style-type: none"> • With brightness sensor, surface mount, incl. in the scope of delivery • Adjustable ON/OFF switching delay 0-100 sec. • Light control system • Up to 10 units (20 channels) of the types turnus 502, 771 and 772 can be extended to form a light control system with only 1 brightness sensor • Sealable 			





Technical data

	turnus 200	turnus 501	turnus 502
Dimensions H x W x D (mm)	111 x 83 x 43	45 x 17,5 x 60	45 x 52,5 x 60
Distributor cut-out (mm)	–	46 x 18	46 x 54
Weight (g) approx.	175	75	285
Connection	220-240 V / 50-60 Hz	230 V / 50-60 Hz	230 V / 50-60 Hz
Power consumption at 230 V~ (AC)	approx. 6 VA	approx. 5 VA	approx. 2,5 VA
Switching output	not potential-free (230 V)	potential-free	potential-free
Switch contacts	1 NO	1 NO	2 changeover contacts
AC switching capacity – Ohmic load (VDE, IEC) – Inductive load cos. φ 0,6 – Incandescent lamp load	10 A / 250 V AC 2 A / 250 V AC 1200 W	16 A / 250 V AC 8 A / 250 V AC 2000 W	10 A / 250 V AC 8 A / 250 V AC 2000 W
DC switching capacity 24 V~/60 V~/220 V~	–	approx. 800 mA / 300 mA / 150 mA	approx. 800 mA / 300 mA / 150 mA
Functionality	electronic	electronic	electronic
Connection type	captive ± screw terminals	captive ± screw terminals	captive ± screw terminals
Ambient temperature: – Control unit – Brightness sensor	-35°C ... +60°C –	-20°C ... +55°C -30°C ... +70°C	-20°C ... +55°C -30°C ... +70°C
Protection type: – Control unit – Brightness sensor	IP 54 –	IP 20 IP 65	IP 20 IP 65
Brightness sensor: – Length connecting lead – Terminal capacity	– – –	– max. 100 m min. 0,75 mm ²	SELV max. 100 m min. 0,75 mm ²
Photoelectric switches:			
Adjustment range	2 lx – 2000 lx	2 lx – 500 lx	2 lx – 500 lx
Hysteresis	approx. factor 1.3 of engaging value	approx. factor 1.3 of engaging value	approx. factor 1.3 of engaging value
Switching delay	20 ... 120 sec.	approx. 100 sec. ON / 100 sec. OFF	adjustable: 0-100 sec. ON / 0-100 sec. OFF
Switching state display	undelayed	undelayed	undelayed
Accessories			
Assembly accessories	–	see page 86	see page 86

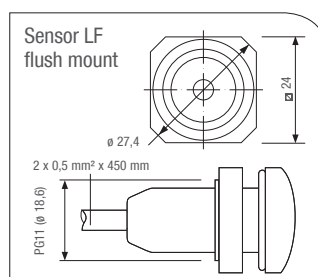
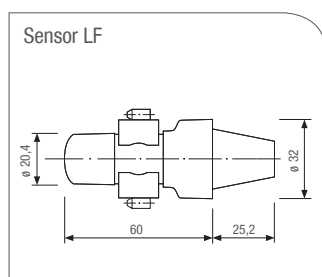
Dimensional drawings / circuit diagrams:



Photoelectric switches

	Voltage	EAN-Code 4010940	Ord.-No.
	turnus 771 plus		
	230 V / 50-60 Hz	040420	18.22.0001.1
	turnus 772 plus		
	230 V / 50-60 Hz	040437	18.22.0002.1
	turnus 771 plus, turnus 772 plus		
	<ul style="list-style-type: none"> • Brightness sensor, surface mount included in the scope of delivery • Adjustable ON/OFF switching delay 0-100 sec. • Up to 10 units (20 channels) of the types turnus 502, 771 plus and 772 plus • Can be extended to form a light control system with only 1 brightness sensor • With weekly time switch • Sealable 		
	Sensor IF		
	2-500 Lux	002671	07.02.0001.1
	500-10.000 Lux	027643	07.02.0004.1
	Sensor IF flush mount		
	2-500 Lux	016630	07.02.0003.1
	<ul style="list-style-type: none"> • Cable length approx. 0,4 m • Bore hole diameter 19 mm 		
	Cap IF		
	500-10.000 Lux	029166	07.02.0003.2

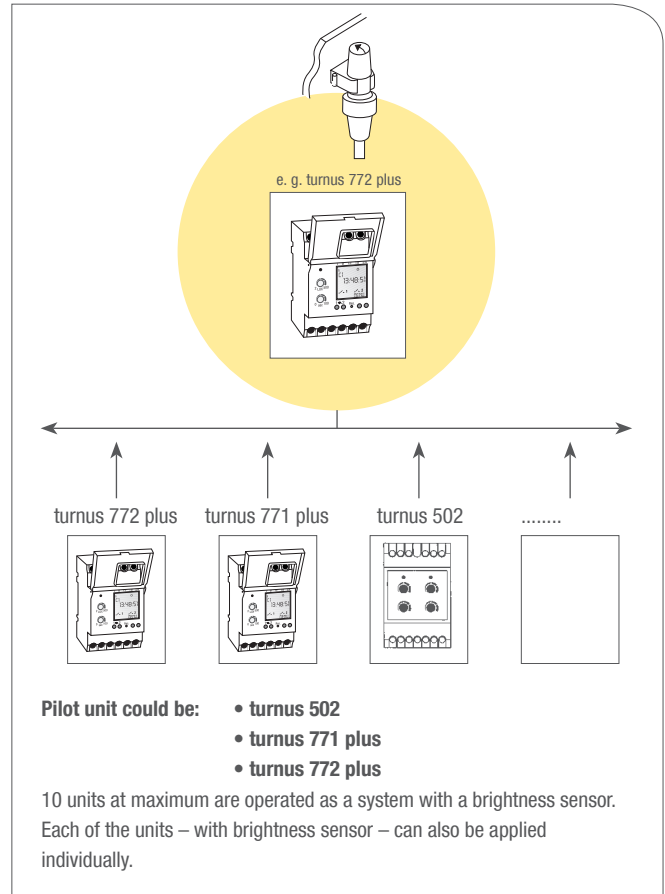
Dimensional drawings / circuit diagrams:



Technical data

	turnus 771 plus	turnus 772 plus
Dimensions H x W x D (mm)	45 x 52,5 x 60	
Distributor cut-out (mm)	46 x 54	
Weight (g) approx.	250	285
Connection	230 V / 50-60 Hz	
Power consumption at 230 V~ (AC)	5 VA	
Switching output	potential-free	
Switch contacts	1 CO	2 CO
AC Switching capacity		
– Ohmic load (VDE, IEC) cos. φ 1	16 A / 250 V AC	
– Inductive load cos. φ 0,6	10 A / 250 V AC	
– Incandescent lamp load	2600 W	
– Halogen lamp load	2600 W	
– Fluorescent lamp, parallel compensated	1000 W	
– Fluorescent lamp, series-compensated	1000 W	
– Max. switching capacity AC1 / AC15	3700 W / 750 W	
DC Switching capacity 24 V–/60 V–/220 V–	approx. 800 mA / 300 mA / 150 mA	
Functionality	electronic	
Max. terminal capacity	4 mm ²	
Connection type	captive ± screw terminals	
Ambient temperature:		
– Control unit	-10°C ... +55°C	
– Brightness sensor	-30°C ... +70°C	
Protection type:		
– Control unit	IP 20	
– Brightness sensor	IP 65	
Brightness sensor:	SELV	
– Length connecting lead	max. 100 m	
– Terminal capacity	min. 2 x 0,75 mm ²	
Photoelectric switches:		
Adjustment range	2 lx – 500 lx	
Hysteresis	approx. factor 1.3 of engaging value	
Switching delay	adjustable: 0-100 sec. ON / 0-100 sec. OFF	
Switching state display	undelayed	
Time switch:		
Memory spaces	50	
Shortest switching time	1 min.	
Programmable every	every minute	
Block formation of weekdays	Block formation of weekdays	
Switching state display	yes	
Summer/wintertime changeover	automatic	
Manual switch	automatic / fix ON/OFF	
Accuracy	typ ± 1 sec./day at +20°C	
Running reserve	3 years ex works	

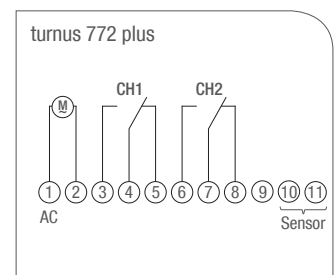
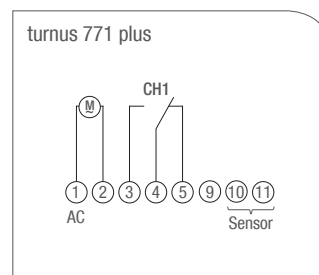
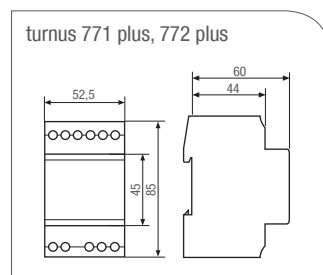
Accessories	
Assembly accessories	see page 86



- Pilot unit could be:**
- turnus 502
 - turnus 771 plus
 - turnus 772 plus

10 units at maximum are operated as a system with a brightness sensor. Each of the units – with brightness sensor – can also be applied individually.

Dimensional drawings / circuit diagrams:

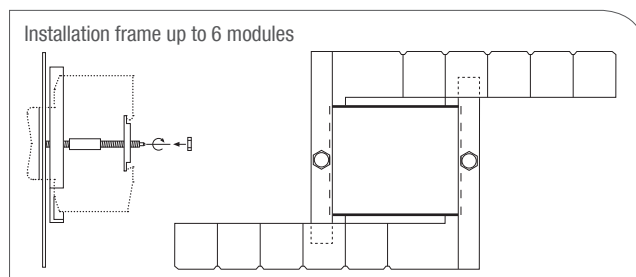
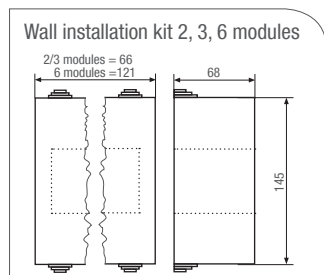
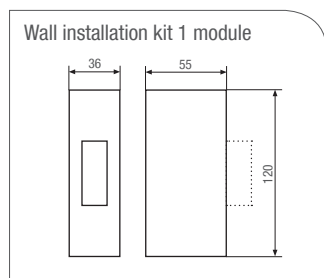


Accessories – DIN rail time switches

	for	EAN-Code 4010940	Ord.-No.
	Wall installation kit 1 module		
	trealux 210, 410, 510 turnus 501	002657	18.01.0004.2
	Wall installation kit 2-3 modules		
	turnus 502 turnus 771 plus turnus 772 plus	021719	03.53.0083.2
	Installation frame up to 6 modules		
	trealux turnus	021726	03.59.0047.2

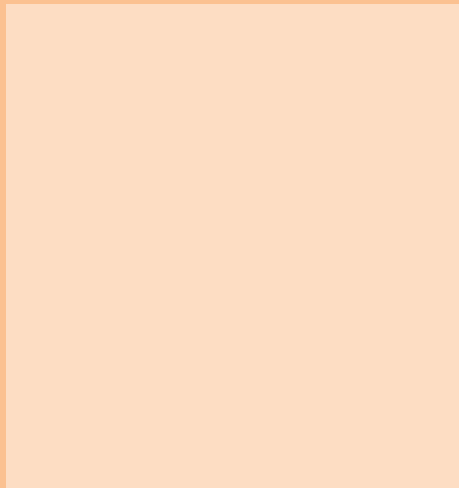
Technical data

Dimensional drawings /
circuit diagrams:

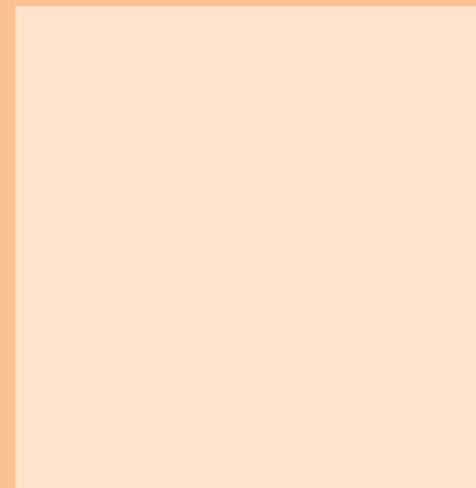


Energy meters, hour meters, automatic fish feeder, plug-in time switches

The efficient connection of time and activity.



Metering of:
Energy consumption
Operating hours



Control of:
Lighting
Appliances
Direct heating systems





Energy meters

Overview Energy Meters p. 90
 taxxo p. 92

Hour meters

taxxo p. 94
 Accessories p. 96





Automatic fish feeder

rondomatic p. 97
 Accessories p. 97

Plug-in time switches

Overview Plug-in time switches p. 98
 topica p. 100
 Accessories p. 101

Overview Energy Meters

	taxxo M 45-1	taxxo ER 80-1	taxxo E 45-1-MID	taxxo E 100-3-MID
				
Type	electromechanical	digital	digital	digital
Phases	1	1	1	3
Display	6 digits	6 digits	7 digits	7 digits
Minimum value	0,1 kWh	0,1 kWh	0,01 kWh	0,1 kWh
Reset function	–	●	–	–
Sealable	●	●	●	●
DIN module width	1	2	1	7

Page	p. 92	p. 92	p. 92	p. 92
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Energy Meters

Applications

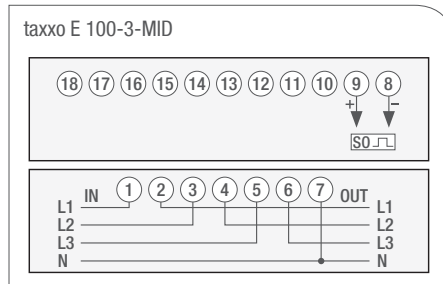
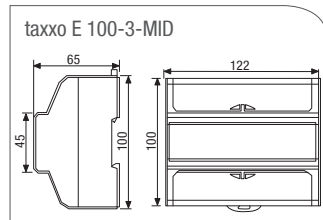
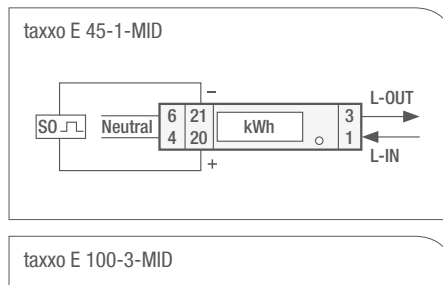
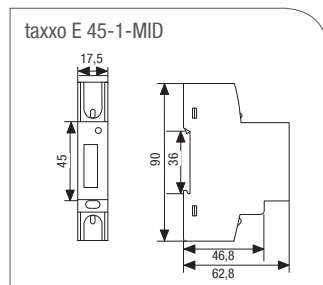
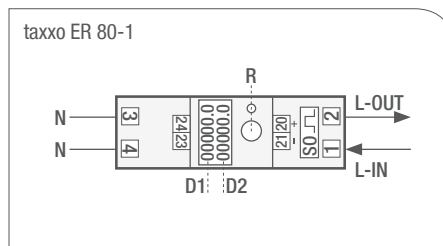
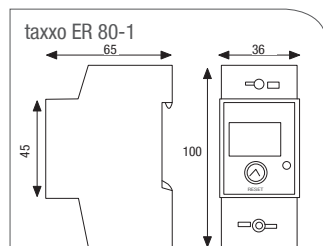
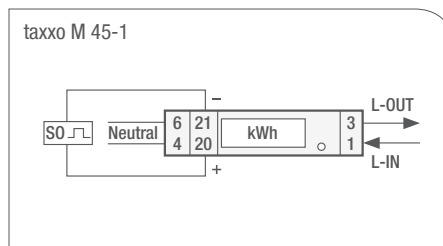
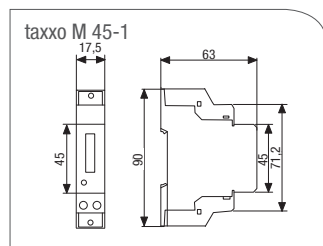
- Energy billing at camping sites or marinas
- Energy consumption control
- Facility management
- DIN rail mounting
- Long-lasting, maintenance free technology

	Voltage	EAN-Code 4010940	Ord.-No.
	taxxo M 45-1 230 V AC	044084	05.25.0001.1
	<ul style="list-style-type: none"> • Mechanical • 6 digits display • Sealable 		
	taxxo ER 80-1 230 V AC	044107	05.25.0003.1
	<ul style="list-style-type: none"> • Digital • Double display, 6 digits • Reset function • Sealable 		
	taxxo E 45-1-MID 230 V AC	044091	05.25.0002.1
	<ul style="list-style-type: none"> • Digital • 7 digits display • Sealable 		
	taxxo E 100-3-MID 3 X 230/400 V AC	044114	05.25.0004.1
	<ul style="list-style-type: none"> • Digital • 7 digits display • Sealable 		

Technical Data

	taxxo M 45-1	taxxo ER 80-1	taxxo E 45-1-MID	taxxo E 100-3-MID
Dimensions H x B x T (mm)	118 x 17,5 x 63	100 x 36,5 x 65,5	118 x 17,5 x 63	100 x 122 x 65
Connections	230 V AC, ±20%	230 V AC, ±20%	230 V AC, ±20%	3 x 230/400 V AC, ±20%
Basic current (Ib)	5 A	5 A	5 A	5 A
Limit current (I _{max})	45 A	80 A	45 A	100 A
Minimum current (I _{min})	0,25 A	0,25 A	0,25 A	0,25 A
Connection mode	direct	direct	direct	direct
Initial current	0,004 I _b	0,004 I _b	0,004 I _b	0,004 I _b
Frequency	50/60 Hz	50/60 Hz	50 Hz ±10%	50 Hz ±10%
Internal consumption	≤ 0,4 W / ≤ 8 VA	≤ 0,4 W / ≤ 8 VA	≤ 0,4 W / ≤ 8 VA	≤ 2 W / ≤ 10 VA
Pulse output	1000 imp/kWh	1000 imp/kWh	1000 imp/kWh	1000 imp/kWh
Pulse output SO				
– Voltage	12-27 VDC	12-27 VDC	12-27 VDC	12-27 VDC
– Current	≤ 27 mA	≤ 27 mA	≤ 27 mA	≤ 27 mA
– Max. line length	20 m	20 m	20 m	20 m
– Pulse duration	90 ms	90 ms	90 ms	30-80 ms
Ambient temperature	-25°C ... +55°C	-25°C ... +55°C	-25°C ... +55°C	-25°C ... +55°C
Accuracy class	1	1	B	B
Protection type	IP51	IP51	IP51	IP51
Protection class	II	II	II	II
Max. terminal capacity	12 mm ²	12 mm ²	12 mm ²	20 mm ²
Insulating ability				
– Electric strenght AC	4 kV for 1 minute	4 kV for 1 minute	4 kV for 1 minute	4 kV for 1 minute
– Pulse withstand voltage	6 kV – 1.2 μS wave form	6 kV – 1.2 μS wave form	6 kV – 1.2 μS wave form	6 kV – 1.2 μS wave form
Standards	EN50470-1, EN50470-3	EN50470-1, EN50470-3	IEC62053-21, IEC62052-11	IEC62053-21, IEC62052-11
Pulse output	DIN43684	DIN43684	DIN43684	DIN43684

Dimensional drawings / circuit diagrams:



Hour meters

Features

- Flush, surface or DIN rail mount
- Durable, maintenance-free technology
- Robust and reliable
- Various dimensions, round and square
- Latching screws or low profile plugs

Applications

- Machinery working time control
- Pumps working time control

Voltage

EAN-Code 4010940

Ord.-No.

**taxxo 403 (UWZ 35 V)**

220-240 V / 50 Hz	001773	05.21.0001.1
110-120 V / 50 Hz	001780	05.21.0002.1
36-48 V / 50 Hz	001797 *	05.21.0003.1 *
18-26 V / 50 Hz	001803 *	05.21.0004.1 *
110-127 V / 60 Hz	001810 *	05.21.0009.1 *

- DIN rail mount

**taxxo 100 (UWZ 48 A)**

220-240 V / 50 Hz	001339	05.15.1001.1
330-380 V / 50 Hz	001506	05.15.1089.1
110-120 V / 50 Hz	001407	05.15.1019.1
36-48 V / 50 Hz	001452	05.15.1049.1
18-26 V / 50 Hz	001377	05.15.1010.1
110-127 V / 60 Hz	001438 *	05.15.1026.1 *

- Surface mount

**taxxo 112 (UWZ 48 KED)**

220-240 V / 50 Hz	002268	05.15.1038.1
110-120 V / 50 Hz	002282	05.15.1118.1
18-26 V / 50 Hz	002275	05.15.1016.1
110-127 V / 60 Hz	002299 *	05.15.1031.1 *

- Screw terminals / Flush mount

**taxxo 612 (FWZ 36 K)**

220-240 V / 50 Hz	001599	05.20.0006.1
330-380 V / 50 Hz	001742	05.20.0033.1
18-26 V / 50 Hz	001667	05.20.0016.1

- Screw terminals (VBG4) / Flush mount

**taxxo 712 (FWZ 55 K)**

220-240 V / 50 Hz	001582	05.20.0004.1
110-120 V / 50 Hz	001728	05.20.0029.1
36-48 V / 50 Hz	001711	05.20.0028.1
18-26 V / 50 Hz	001681	05.20.0018.1
110-127 V / 60 Hz	001629 *	05.20.0008.1 *

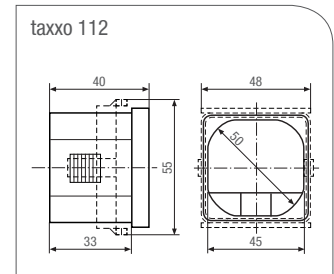
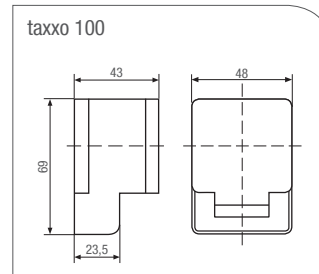
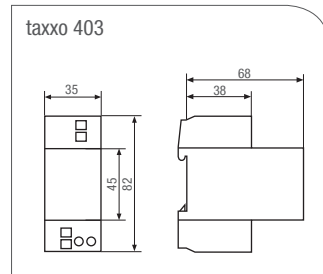
- Screw terminals (VBG4) / Flush mount

* These variants are being produced only upon receipt of special orders.

Technical data

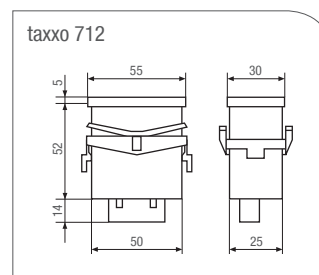
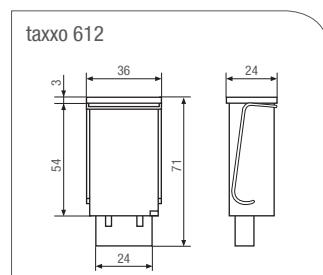
	taxxo 403	taxxo 100	taxxo 112
Dimensions H x W x D (mm)	82 x 35 x 68	69 x 48 x 43	55 x 48 x 40
Switchboard panel (mm)	–	–	45 x 45
Distributor cut-out (mm)	46 x 36	–	–
Mounting depth (mm)	68	43	33
Weight (g) approx.	90	70	60
Connection	see ordering data	see ordering data	see ordering data
Power consumption	approx. 1 VA	approx. 1 VA	approx. 1 VA
Ambient temperature	-20°C ... +55°C	-20°C ... +55°C	-20°C ... +55°C
Protection class	II	II	II
Protection type front	IP 20	IP 20	IP 20
Accuracy	synchronic to network	synchronic to network	synchronic to network
Metering capacitance	99999,99 h	99999,99 h	99999,99 h
Run display	yes	yes	yes
Assembling mode	distributing bus bar	assembling with clamp cover	integration
Connection type	captive ± screw terminals 1 x 2,5 resp. 2 x 1,5 mm ²	receptacle with screw terminals	screw terminals

Dimensional drawings / circuit diagrams:

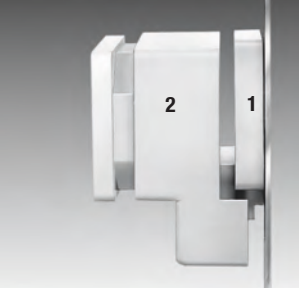
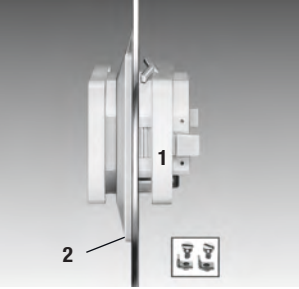

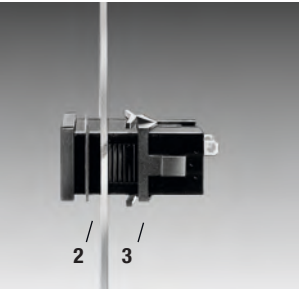


	taxxo 612	taxxo 712
Dimensions H x W x D (mm)	24 x 36 x 57	30 x 55 x 71
Switchboard panel (mm)	22 x 33	25 x 50
Distributor cut-out (mm)	–	–
Mounting depth (mm)	68	66
Weight (g) approx.	34	50
Connection	see ordering data	see ordering data
Power consumption	approx. 1 VA	approx. 1 VA
Ambient temperature	-20°C ... +55°C	-20°C ... +55°C
Protection class	II	II
Protection type front	IP 20 (IP 54 with sealing s. accessories)	IP 20 (IP 54 with sealing s. accessories)
Accuracy	synchronic to network	synchronic to network
Metering capacitance	99999,99 h	99999,99 h
Run display	yes	yes
Assembling mode	integration	integration
Connection type	screw terminals	screw terminals


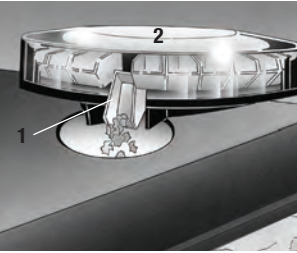
Dimensional drawings / circuit diagrams:



Hour meters / Accessories

	for	L = Scope of delivery EZ = Spare parts / Accessories	EAN-Code 4010940	Ord.-No.
	for: taxxo 100			
	1 - Base	L/EZ	002862	15.92.0021.4
	2 - Surface mount housing	L/EZ	002879	50.12.0001.4
	for: taxxo 112			
	1 - Ratchet clamp	L/EZ	002886	15.27.0011.4
	2 - Cover 55 x 55	-/EZ	008802	05.15.0065.6
	Cover 72 x 72 with sealing IP 54 wall-mounted	-/EZ	008819 011253	16.26.0006.4 11.24.0008.8
	for: taxxo 612			
	1 - Spring clip	L/EZ	002961	05.20.0026.6
	2 - Sealing	-/EZ	002978	11.24.0007.8
	for: taxxo 712			
	2 - Sealing	-/EZ	002992	14.24.0001.5
	3 - Ratchet clamp	L/EZ	002985	14.27.0002.4

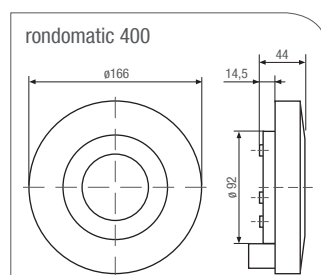
Automatic fish feeder

	Voltage	EAN-Code 4010940	Ord.-No.	
	rondomatic 400			
	230 V / 50-60 Hz	003364	16.58.0001.1	
	Accessories for rondomatic			
	1 - Food container	017316	85.21.0002.4	L / EZ
	2 - Glass	017323	85.13.0001.3	L / EZ
	Plug-in riders	024079	85.15.0006.4	L / EZ
	Attachment bracket	024086	16.58.0016.6	L / EZ
	Assembly kit	024093	16.58.0004.2	- / - Z
(L = Scope of delivery, EZ = Spare parts / Accessories)				

Technical data

	rondomatic 400
Connection	230 V / 50 Hz
Operating voltage	24 V / 50 Hz
Power consumption	approx. 5 VA
Minimal feeding interval	2 h
Maximum feeding period (for daily feeding)	27 days
Food container	28
Filling volume: – per food container – total filling vol. approx.	3,5 ccm 100 ccm
Repetition of feeding	every 24 h

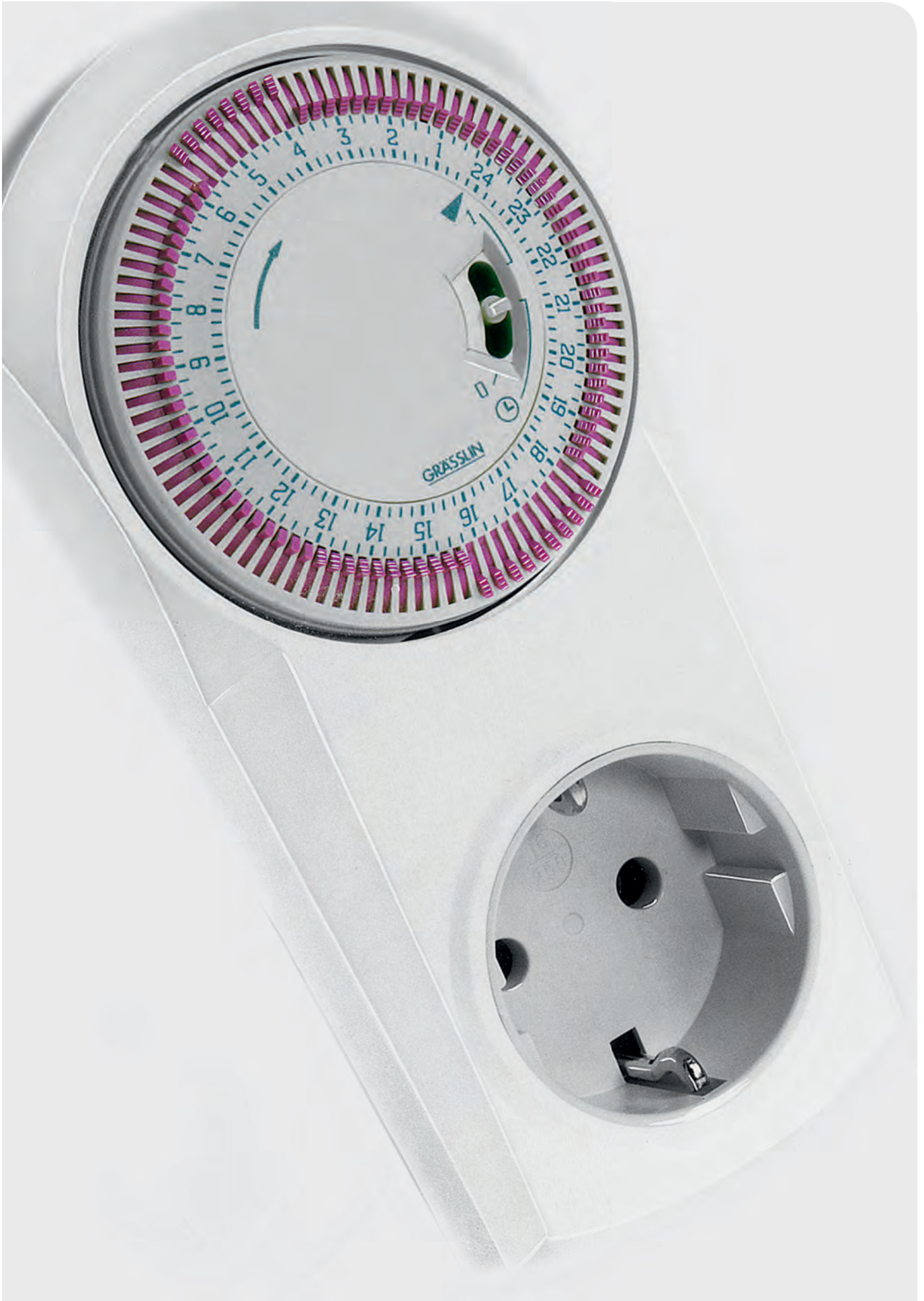
Dimensional drawings / circuit diagrams:



Overview plug-in time switches

	topica 200 S	topica 400 S	topica 450 S	topica 410 S	topica 600
					
Switching programs	daily program	daily program	weekly program	daily program	daily, weekly program
Display	–	clock face		clock face	digital (LCD)
Memory spaces	–	–		–	20
Shortest switching time	15 min.	15 min.	2 h	15 min.	1 min.
Programmable	every 15 min.	every 15 min.	every 2 h	every 15 min.	every minute
Manual switch	Automatic / fix ON/OFF	Automatic / fix ON/OFF		Automatic / fix ON/OFF	Automatic / fix ON/OFF
Switching state display	–	–		–	●
Random switching	–	–		–	●
Weekday blocks	–	–		–	●

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Meters,
Plug-in time switches

Plug-in time switches

Applications

- Appliances control
- Direct heating systems control
- Lighting control
- Simulation of home presence

	Voltage	EAN-Code 4010940	Ord.-No.
	topica 200 S		
	220-240 V / 50 Hz	002428	16.25.0008.1
	<ul style="list-style-type: none"> • Daily program • Shortest switching time: 15 min. • Programmable: every 15 min. • Manual switch: Automatic / fix ON/OFF • Synchronous 		
	topica 400 S		
	220-240 V / 50 Hz	002435	16.26.0008.1
	<ul style="list-style-type: none"> • Daily program • Shortest switching time: 15 min. • Programmable: every 15 min. 		
	topica 450 S		
	220-240 V / 50 Hz	003906	16.40.0001.1
	<ul style="list-style-type: none"> • Weekly program • Shortest switching time: 2 h • Programmable: every 2 h 		
	topica 400 S, topica 450 S		
	<ul style="list-style-type: none"> • Manual switch: Automatic / fix ON/OFF • Display: clock face • Synchronous 		
	topica 410 S		
	220-240 V / 50 Hz	016241	16.27.0001.1
	<ul style="list-style-type: none"> • Daily program • Shortest switching time: 15 min. • Programmable: every 15 min. • Manual switch: Automatic / fix ON/OFF • Display: clock face • Synchronous 		
	topica 600		
	230 V / 50-60 Hz	039387	16.15.0001.1
	<ul style="list-style-type: none"> • Memory spaces • Daily and weekly program • Shortest switching time: 1 min. • Programmable: every minute • Manual switch: Automatic / fix ON/OFF • Switching state display • Random generator (retards the switching command from 1-45 minutes) • Weekday blocks • Display: digital (LCD) 		

Technical data

	topica 200 S	topica 400 S, 410 S, 450 S	topica 600
Connection	220-240 V / 50 Hz	220-240 V / 50 Hz	230 V / 50-60 Hz
Switching capacity			
– Ohmic load	16 A / 250 V AC	16 A / 250 V AC	16 A / 250 V AC
– Inductive load	8 A / 250 V AC	8 A / 250 V AC	4 A / 250 V AC
Power consumption	approx. 5 VA	approx. 5 VA	approx. 5 VA
Ambient temperature			
– Continuous operating	-10°C ... +55°C	-10°C ... +55°C	-10°C ... +55°C
– Short time rating	-10°C ... +55°C	-10°C ... +55°C	-10°C ... +55°C
Running reserve	–	–	3 years ex works at 20°C
Protection type	–	IP54 (410 S)	–

Accessories

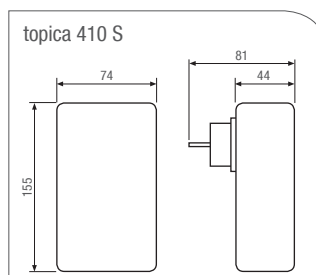
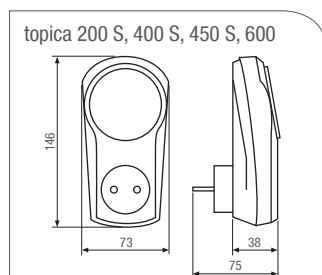
Glass

EAN-Code: 4010940 011215
Ord.-No.: 01.76.0054.6

for:
topica 200 S
topica 400 S
topica 450 S

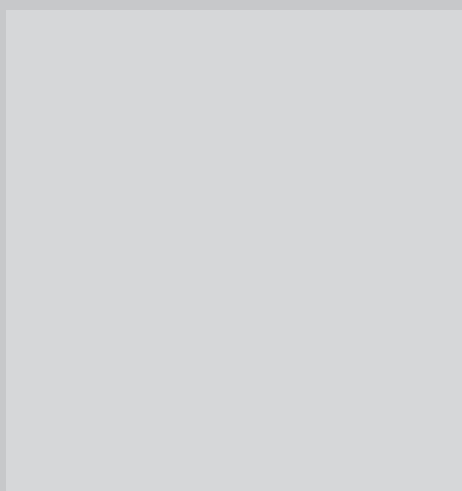
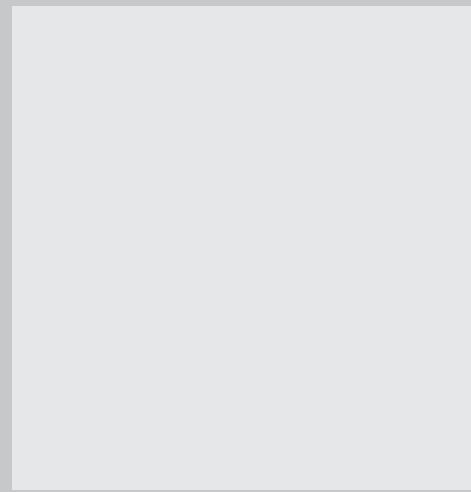


Dimensional drawings /
circuit diagrams:



Product directory

Successful
in the market.





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You will find a list of follow-up types on our website at
www.graesslin.de/follow-up-types

Offer/tender texts

Mechanical DIN rail time switches

talento 111 mini

1-channel time switch 17.5 mm; synchronous without running reserve; daily program; 1 potential-free NO; switching capacity 16 (4) A / 250 V AC; fix ON; timer operation; captive switching segments; shortest switching time 30 min; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 171

1-channel time switch 52.5 mm; synchronous without running reserve; daily program; 1 potential-free NO; switching capacity 16 (4) A / 250 V AC; fix ON / timer operation / fix OFF; captive switching segments; shortest switching time 3 h; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 111

1-channel time switch 52.5 mm; synchronous without running reserve; daily program; 1 potential-free change-over contact; switching capacity 16 (4) A / 250 V AC; fix ON / timer operation / fix OFF; captive switching segments; shortest switching time 30 min; DIN-rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 121

1-channel time switch 52.5 mm; synchronous without running reserve; short-time program; 1 potential-free change-over contact; switching capacity 16 (4) A / 250 V AC; fix ON / timer operation / fix OFF; captive switching segments; short-time program 1 h; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 211 mini

1-channel time switch 17.5 mm; quartz with running reserve; daily program; 1 potential-free NO; switching capacity 16 (4) A / 250 V AC; fix ON; timer operation; captive switching segments; shortest switching time 30 min; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 271

1-channel time switch 52.5 mm; quartz with running reserve; daily program; 1 potential-free change-over contact; switching capacity 16 (4) A / 250 V AC; captive switching segments; shortest switching time 3 h; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 211

1-channel time switch 52.5 mm; quartz with running reserve; daily program; 1 potential-free change-over contact; switching capacity 16 (4) A / 250 V AC; captive switching segments; shortest switching time 30 min; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 202

2-channel time switch 105 mm; quartz with running reserve; weekly and daily program; 2 potential-free change-over contacts; switching capacity 16 (4) A / 250 V AC per channel; fix ON / timer operation / fix OFF; captive switching segments; shortest switching time for day: 30 min, week: 3 h; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 212

2-channel time switch 105 mm; quartz with running reserve; 2 separate daily programs; 2 potential-free change-over contacts; switching capacity 16 (4) A / 250 V AC per channel; fix ON / timer operation / fix OFF; captive switching segments; shortest switching time for day: 30 min, week: 3 h; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

Digital DIN rail time switches

talento 371 mini pro

1-channel time switch 17.5 mm; 3-year running reserve; weekly and daily program; holidays program; 70 memory spaces; automatic daylight saving changeover; shortest switching time: 1 min; 1 change-over contact; switching capacity 16 (8) A / 250 V AC; switching status automatic, fix ON, fix OFF, override; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 371 pro

1-channel time switch 35 mm; 3-year running reserve; weekly and holidays program; free block formation of weekdays; automatic daylight saving changeover; 70 memory spaces; shortest switching time: 1 min.; 1 change-over contact; switching capacity 16 (10) A / 250 V AC; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 372 pro

2-channel time switch 35 mm; 3-year running reserve; weekly and holidays program; free block formation of weekdays; automatic daylight saving changeover; 70 memory spaces; shortest switching time: 1 min.; 2 change-over contacts; switching capacity 16 (10) A / 250 V AC; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 471 pro

1-channel time switch 35 mm; 10-year running reserve; weekly and holiday program; free block formation of weekdays; automatic daylight saving changeover; 100 memory spaces; shortest switching time: 1 sec.; 1 change-over contact; switching capacity 16 (10) A / 250 V AC; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; external input; random switching, infrared interface; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 472 pro

2-channel time switch 35 mm; 10-year running reserve; weekly and holidays program; free block formation of weekdays; automatic daylight saving changeover; 100 memory spaces; shortest switching time: 1 sec.; 1 changeover contact; 1 make contact; switching capacity 16 (10) A / 250 V AC; pulse; cycle; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; external input; random switching; infrared interface; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories

talento 751 pro

1-channel time switch 35 mm; 3-year running reserve; astro and holidays program; automatic calculation of sunrise and sunset times when longitude and latitude are entered or when the country/city is selected from the list; free block formation of weekdays; automatic daylight saving changeover; 70 memory spaces; shortest switching time: 1 min.; 1 changeover contact; switching capacity 16 (10) A / 250 V AC; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 752 pro

2-channel time switch 35 mm; 3-year running reserve; astro and holidays program; automatic calculation of sunrise and sunset times when longitude and latitude are entered or when the country/city is selected from the list; free block formation of weekdays; automatic daylight saving changeover; 70 memory spaces; shortest switching time: 1 min.; 2 changeover contact; switching capacity 16 (10) A / 250 V AC; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 791 pro

1-channel time switch 35 mm; 10-year running reserve; astro, weekly and holidays program; automatic calculation of sunrise and sunset times when longitude and latitude are entered or when the country/city is selected from the list; free block formation of weekdays; automatic daylight saving changeover; 100 memory spaces; shortest switching time: 1 sec.; 1 change-over contact; switching capacity 16 (10) A / 250 V AC; pulse; cycle; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; external input; infrared interface; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 792 pro

2-channel time switch 35 mm; 10-year running reserve; astro, weekly and holidays program; automatic calculation of sunrise and sunset times when longitude and latitude are entered or when the country/city is selected from the list; free block formation of weekdays; automatic daylight saving changeover; 100 memory spaces; shortest switching time: 1 sec.; 1 change-over contact; make contact; switching capacity 16 (10) A / 250 V AC; pulse; cycle; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; external input; infrared interface; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 881 pro

1-channel time switch 35 mm; 10-year running reserve; astro, weekly, annual and holidays program; automatic calculation of sunrise and sunset times when longitude and latitude are entered or when the country/city is selected from the list; free block formation of weekdays; automatic daylight saving changeover; 400 memory spaces; shortest switching time: 1 sec.; 1 changeover contact; switching capacity 16 (10) A / 250 V AC; pulse; cycle; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; external input; random switching; infrared interface; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 882 pro

2-channel time switch 35 mm; 10-year running reserve; astro, weekly, annual and holidays program; automatic calculation of sunrise and sunset times when longitude and latitude are entered or when the country/city is selected from the list; free block formation of weekdays; automatic daylight saving changeover; 400 memory spaces; shortest switching time: 1 sec.; 1 change-over contact; 1 make contact; switching capacity 16 (10) A / 250 V AC; pulse; cycle; manual switch: automatic, override, fix ON/OFF; switching state display; PIN code; hour meter with service function; display lighting; external input; random switching; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 892 pro

Annual time switch 52.5 mm; 2 channels; 3 years running reserve; infrared interface, date-dependent entry for several years; individual days and date ranges; free block formation of weekdays; annual, weekly and daily program; 800 memory spaces; automatic daylight saving changeover; programmable every minute; shortest switching time 1 sec.; 2 change-over contacts; switching capacity 16 (10) A / 250V AC per channel; pulse; cycle; switching state automatic; fix ON, fixed OFF, override; external input; DIN rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento 992 pro

Annual time switch 52.5 mm; 2-channel; 3-year running reserve; radio interface DCF; infrared interface; date-dependent input for several years; individual days and date ranges; free block formation of weekdays; annual, weekly and daily program; 800 memory spaces; automatic daylight saving changeover; programmable for every minute; shortest switching time 1 sec.; 2 change-over contacts; switching capacity 16 (10) A / 250V AC per channel; pulse; cycle; switching state automatic; fix ON, fixed OFF, override; external input; DIN-rail assembly; undetachable ± screw terminals; surface mount with accessories.

talento CE pro

Channel extension for talento 892 pro and talento 992 pro; 2 change-over contacts; switching

capacity 16 (10) A / 250 V AC; DIN-rail assembly.

talento LAN pro

Interface for the transmission of switching programs to the time switch talento 892/992 pro via a local network (LAN) or via the internet; remote access to the time switch e.g., for the query of the switching state as well as the operating hours meter or for the performance of the override; communication with talento 892/992 pro via Powerline; integrated Web-Server; DIN rail assembly; undetachable ± screw terminals; width 52.5 mm. Programming software talento dialog (on CD) for the creation of switching programs.

Radio antenna FA DCF 77

DCF 77 signal reception; synchronization of time switches; IP 54; cable length max. 300 m.

talento dialog

Software to create switching programs; calculation of moveable holidays; printing of switching programs.

talento taxi

Hand-held programming device for date / time and max. 4 programs; bidirectional, serial interface; selection: Sending, receiving of programs; transmission of the programs from time switch to time switch via taxi; replaceable battery.

Motion and presence detectors

talis MW 180-12-1

Motion detector; for indoor rooms, outdoors; 5 lux - ∞ lux; range 12 m; detection angle 180°; time setting 5 sec – 12 min; switching capacity max. 1000 W; adjustable sensor head; detects larger movements; detection via infrared (IR); one-time light balance when motion is detected; installation on walls.

talis MS 360-7-1

Motion detector; for indoor rooms; 10 lux - ∞ lux; range 7 m; detection angle 360°; time setting 5 sec – 30 min; learning function, test mode; switching capacity max. 2000 W; detects bigger movements; detection via infrared (IR); one-time light balance when motion is detected; installation on the ceiling.

talis MF 360-8-1

Motion detector; for indoor rooms; 10 lux - ∞ lux; range 8 m; detection angle 360°; time setting 5 sec – 30 min; learning function, test mode; switching capacity max. 2000 W; detects bigger movements; detection via infrared (IR); one-time light balance when motion is detected; installation on the ceiling (flush mount fitting).

talis PW 240/360-16-1

Presence detector; for indoor rooms, outdoors; 10 lux - ∞ lux; range 16m; detection angle 240°-360°; time setting 5 sec – 30 min; learning function; switching capacity max. 2000W; reacts to the slight movements; detection via infrared (IR); frequent light balance; Offline function with sufficient daylight; installation on walls.

talis PW2 200-9-1

Presence detector for indoor rooms, 5 lux - 300 lux; range 9 m, detection angle 200°; time setting 5 sec – 30 min; learning function; test mode; switching capacity 10 – 300 W; reacts to the slight movements; detection via infrared (IR); frequent light balance; Offline function with sufficient daylight; installation on walls.

talis PW3 200-9-1

Presence detector; for indoor rooms; 5 lux – 300 lux; range 9m; detection angle 200°; time setting 5 sec – 30 min; learning function; test mode; switching capacity max. 2000 W; reacts to slight movements; detection via infrared (IR); frequent light balance; Offline function with sufficient daylight; installation on walls.

talis PFM 360-8-1

Presence detector; for indoor rooms; 10 lux – ∞ lux; range 8 m; detection angle 360°; time setting 5 sec – 30 min; learning function; test mode; switching capacity max. 2000 W; reacts to slight movements; detection via infrared (IR); frequent light balance; Offline function with sufficient daylight; installation on the ceiling (flush mount fitting).

talis PFDR 360-8-1

Presence detector; for indoor rooms; 10 lux – ∞ lux; range 8 m; detection angle 360°; time setting 5 sec – 30 min; learning function; test mode; switching capacity max. 2000 W; reacts to slight movements; detection via infrared (IR); frequent light balance; Offline function with sufficient daylight; can be dimmed; installation on the ceiling (flush mount fitting).

talis PF 360-8-2

Presence detector; 2 channels; for indoor rooms; 10 lux - ∞ lux; range 8 m; detection angle 360°; time setting 5 sec – 30 min; learning function; test mode; switching capacity max. 2000 W; reacts to slight movements; detection via infrared (IR); frequent light balance; Offline function with sufficient daylight; installation on ceiling (flush mount fitting).

talis PFM 360-6-1

Presence detector; for indoor rooms; 10 lux - ∞ lux; range 6m; detection angle 360°; Time setting 1 min – 15 min; test mode; switching capacity max. 2000 W; reacts to slight movements; detection via infrared (IR), frequent light balance; offline function with sufficient daylight; installation on the ceiling (flush mount fitting).

talis RP

Remote control for talis PFM and talis PFR.

Staircase time switch

trealux 210

Staircase time switch 17.5 mm; electronic; setting range: 0.5 - 20 min; immediately adjustable; 3- and 4-line connection; switching capacity 16 (10)A / 250V AC; fix ON / automatic; DIN-rail assembly; surface mount with accessories.

trealux 510

Safety staircase time switch 17.5 mm according to DIN 18015 with pulse pre-warning and 4-line connection; setting range: 0.5 - 20 min; switching capacity 16 A / 250V AC; DIN rail assembly; surface mount with accessories.

Photoelectric switch

turnus 200

Photoelectric switch; 1 channel; for the incident-dependent switching ON and OFF; potentiometer to set the desired lux value; adjustment range: 2-2000 lux; undelayed LED display; delayed ON-OFF switching; switching capacity 10 (2.5) A / 250 V AC; undetachable ± screw terminals; surface mount/mast assembly; IP 54.

turnus 501 A / 501 E

Photoelectric switch 17.5 mm; 1 channel; switching capacity 16 (8) A / 250 V AC; adjustment range: 2-500 lux; DIN rail assembly; brightness sensor included in the delivery (recessed mount or surface mount).

turnus 502

Photoelectric switch 52.5 mm; 2-channel; switching capacity 10 (8) A / 250 V AC per channel; 1 adjustment range: 2-500 lux; adjustable ON / OFF switching delay: 0-100 sec.; DIN rail assembly; brightness sensor included in the delivery (surface mounting); Up to 10 devices (20 channels) of type 771, 772, 502 can be combined to a light control system with only 1 brightness sensor.

turnus 502.1

Photoelectric switch 52.5 mm; 2 channels; switching capacity 10 (8) A / 250 V AC per channel; 1 adjustment range: 2-500 lux; adjustable ON / OFF switching delay: 0-100 sec.; DIN rail assembly; without brightness sensor; Up to 10 devices (20 channels) of type turnus 771, 772, 502 can be combined to a light control system with only one brightness sensor.

turnus 771 plus

Photoelectric switch with electronic time switch 52.5 mm; 1 channel; switching capacity 16 (8) A / 250 V AC ; 1 adjustment range: 2-500 lux; adjustable ON/OFF switching delay: 0-100 sec.; running reserve: 3 years; 30 memory spaces; weekly and daily program; DIN rail assembly; brightness sensor included in the delivery (surface mounting); Up to 10 devices (20 channels) of type 771 plus, 772 plus, 502 can be combined to a light control system with only 1 brightness sensor.

turnus 772 plus

Photoelectric switch with electronic time switch 52.5 mm; 2-channel; switching capacity 10 (8) A / 250 V AC ; 1 adjustment range: 2-500 lux; adjustable ON/OFF switching delay: 0-100 sec.; running reserve: 3 years; 30 memory spaces; weekly and daily program; DIN rail assembly; brightness sensor included in the delivery (surface mounting); Up to 10 devices (20 channels) of type 771 plus, 772 plus, 502 can be combined to a light control system with only 1 brightness sensor.

Mechanical Universal Time Switches

tactic 111.1

1-channel time switch; synchronous without running reserve; daily program ; 1 potential-free change-over contact; switching capacity 16 (8) A / 250 V AC; shortest switching time 15min; motion work; manual switch; recessed assembly and DIN-rail assembly; plug base with ± screw terminals; surface mounting with accessories.

tactic 171.1

1-channel time switch; synchronous without running reserve; weekly program ; 1 potential-free change-over contact; switching capacity 16 (8) A / 250 V AC; shortest switching time 2 h; motion work; manual switch; recessed assembly and DIN-rail assembly; plug base with ± screw terminals; surface mounting with accessories.

tactic 211.1

1-channel time switch; quartz with running reserve; daily program ; 1 potential-free change-over contact; switching capacity 16 (8) A / 250 V AC; shortest switching time 15 min; motion work; manual switch; recessed assembly and DIN-rail assembly; plug base with ± screw terminals; surface mounting with accessories.

tactic 271.1

1-channel time switch; quartz with running reserve; weekly program ; 1 potential-free change-over contact; switching capacity 16 (8) A / 250 V AC; shortest switching time 2 h; motion work; manual switch; recessed assembly and DIN-rail assembly; plug base with ± screw terminals; surface mounting with accessories.

tactic 814.1

1-channel time switch; synchronous without running reserve; daily program ; 1 non-potential-free make contact; switching capacity 20 (8) A / 250 V AC; shortest switching time 15 min; motion work; manual switch; recessed assembly and DIN-rail assembly; plug base with ± screw terminals; surface mounting with accessories.

tactic 815.1

1-channel time switch; synchronous without running reserve; daily program ; 1 potential-free

Offer/tender texts

change-over contact; switching capacity 20 (8) A / 250 V AC; shortest switching time 15 min; motion work; manual switch; recessed assembly and DIN rail assembly; plug base with \pm screw terminals; surface mount with accessories

tactic 824.1

1-channel time switch; quartz with running reserve; daily program ; 1 non-potential-free make contact; switching capacity 20 (8) A / 250 V AC; shortest switching time 15 min; motion work; manual switch; recessed assembly and DIN rail assembly; plug base with \pm screw terminals; surface mount with accessories.

tactic 825.1

1-channel time switch; quartz with running reserve; daily program ; 1 potential-free change-over contact; switching capacity 20 (8) A / 250 V AC; shortest switching time 15 min; motion work; manual switch; recessed assembly and DIN rail assembly; plug base with \pm screw terminals; surface mount with accessories.

Universal Digital Time Switches

tactic 371.1 plus

1-channel time switch with running reserve; 20 memory spaces; weekly and daily program; programmable for each minute; shortest switching time 1 min; 1 change-over contact; switching capacity 16 (4) A / 250 V AC; automatic, fix ON, fix OFF; surface mount, recessed assembly and DIN rail assembly (with Accessories); plug base with screw terminals.

tactic 372.1 plus

2-channel time switch with running reserve; 20 memory spaces; weekly and daily program; programmable every minute; shortest switching time 1 min; holidays program; 2 change-over contacts; switching capacity 16 (2.5) A / 250 V AC; fix ON, fix OFF; surface mount, recessed mounting and DIN rail assembly; plug base with screw terminals.

tactic 571.1 plus

1-channel time switch with running reserve; 50 memory spaces; free block formation of weekdays, weekly and daily program; programmable every minute; shortest switching time 1 min; automatic daylight saving changeover; 1 change-over contact; switching capacity 16 (8) A / 250 V AC; automatic; fix ON, fix OFF; surface mounting, recessed mounting and DIN rail assembly (with accessories); plug base with screw terminals.

tactic 572.1 plus

2-channel time switch with running reserve; 50 memory spaces; free block formation of weekdays; weekly and daily program; programmable every minute; shortest switching time 1 min.; holidays program; automatic daylight saving changeover; 2 change-over contacts; switching capacity 16 (2.5) A / 250 V AC; fix ON, fix OFF; surface mount, recessed assembly and DIN rail assembly; plug base with screw terminals.

Radio Chronothermostats

feeling D101 rf Set

feeling D101 rf – transmitter: Digital radio chronothermostat; powered by batteries; temperature range +5°C...+32°C; weekly program with up to 48 time and temperature programs; 4 standard programs; override; ECO fix; party program, holidays program, countdown; cleaning function; switch-off function with frost protection; when the batteries are replaced, the settings will be retained; date display; automatic daylight saving changeover; wall mount.
Receiver: see RecUno rf, Rec topica rf, FM/1 rf.

famoso 601 rf Set

famoso 601 rf – transmitter: Analogue radio chronothermostat with daily program; shortest switching time 15 min; electronic temperature controller; powered by batteries; 2 individually adjustable temperature levels, temperature range +5°C...+30°C; manual switch for: comfort temperature/ automatic/setback temperature; wall mount.
Receiver: see RecUno rf, Rec topica rf, FM/1 rf.

famoso 651 rf Set

Famoso 651 rf – transmitter: Analogue radio chronothermostat with weekly program; shortest switching time 15 min; electronic temperature controller; powered by batteries; 2 individually adjustable temperature levels, temperature range +5°C...+30°C; manual switch for: comfort temperature/ automatic/setback temperature; wall mount.
Receiver: see RecUno rf, Rec topica rf, FM/1 rf.

RecUno rf

Radio receiver for feeling D101 rf, famoso 601 rf; 2/3-line connection; 1 potential-free change-over contact; switching capacity 5 (1) A / 250 V AC; wall mount.

Rec topica rf

Radio receiver for feeling D101 rf, thermio D rf, famoso 601 rf; connection via plugs for Power socket; 1 make contact; switching capacity 16 (4) A / 250 V.

Hard-wired Chronothermostats

feeling D101

Digital chronothermostat; powered by batteries; temperature range +5°C...+32°C; weekly program with up to 48 time and temperature programs; 4 standard programs; override; ECO fix; party program, holidays program, countdown; cleaning function; switch-off function with frost protection; when the batteries are replaced, the settings will be retained; date display; automatic change-over to summer/winter time; colour options: white, anthracite, silver; wall mounting.

feeling D201 OT

Digital chronothermostat; modulating burner control unit (OpenTherm Communications Protocol); room-dependent controller or controller unit controlled by atmospheric conditions; powered by batteries; background lighting; 2 external inputs; temperature range +5°C...+32°C; weekly program with up to 48 time and temperature programs; 3 standard programs; override; holidays program; switch-off function with frost protection; optimum-start function; key lock; when the batteries are replaced, the settings will be retained; date display; automatic change-over to summer/winter time; wall mount.

famoso 601

Analogue chronothermostat with daily program; shortest switching time 15 min; electronic temperature controller; powered by batteries; 2 individually adjustable temperature levels, temperature range +5°C...+30°C; manual switch for: comfort temperature/automatic/ setback temperature; wall mount.

famoso 500

Analogue chronothermostat with daily program; shortest switching time 15 min; electronic temperature controller; 3/4-line connection; powered by mains voltage 230 V AC; 1 potential-free change-over contact, switching capacity 5 (1) A/250 V AC; 2 individually adjustable temperature levels; temperature range +5°C...+32°C; manual switching for: comfort temperature/ automatic / setback temperature; wall mount.

famoso 550

Analogue chronothermostat with weekly program; shortest switching time 2 h; electronic temperature controller; 3/4-line connection; powered by mains voltage 230 V AC; 1 potential-free change-over contact, switching capacity 5 (1) A/250 V AC; 2 individually adjustable temperature levels; temperature range +5°C...+32°C; manual switch for: comfort temperature/ automatic / setback temperature; wall mount.

Thermostats

thermio 513

Thermostat with bimetal controller; 3/4-line connection; adjuster for comfort temperature; opens with rising temperature; manual switch for night setback ON/OFF; input for time switch (night setback); difference value between comfort and setback temperature = 4°K; switching state display with LED; frost protection only when manual switch ON; wall surface mount.

thermio 402 / 403

Thermostat with bimetal controller; 2/3-line connection; adjuster for comfort temperature; opens with rising temperature; manual switch for night setback ON/OFF; input for time switch (night setback); difference value between comfort and setback temperature = 4°K; switching state display with LED; frost protection only when manual switch ON; wall surface mount.

thermio 102 / 103

Thermostat with bimetal controller; 2/3-line connection; adjuster for comfort temperature; opens with rising temperature; input for time switch (night setback); wall surface mount.

thermio E

Electronic thermostat with digital ACTUAL/TARGET temperature display, power-steeling 24 V AC; 2-line connection; adjuster for comfort temperature; opens with rising temperature; flame icon as switching state indication; wall surface mount.

thermio 603

Electronic thermostat with digital ACTUAL/TARGET temperature display, 1 change-over contact; application: cooling and heating; adjuster for comfort temperature; heating icon as switching state indication; automatic frost protection; wall surface mount.

thermio 703

Electronic thermostat with digital ACTUAL/TARGET temperature display, 1 change-over contact; application: cooling and heating; adjuster for comfort temperature; heating icon as switching state indication; automatic frost protection; wall surface mount.

thermio 713

Electronic thermostat with digital ACTUAL/TARGET temperature display, 1 make contact; application: cooling and heating; controller of fan coils; adjuster for comfort temperature; heating icon as switching state indication; automatic frost protection; wall surface mount.

thermio touch

Electronic thermostat with digital ACTUAL/TARGET temperature display, 1 change-over contact; application: heating; touch screen; heating icon as switching state indication; external input; automatic frost protection; wall surface mount.

thermio D rf

Electronic thermostat with digital ACTUAL temperature display, application: heating; adjuster for comfort temperature; heating icon as switching state indication; automatic frost protection; wall surface mount.

Energy meters

taxxo M 45-1

Electro-mechanical energy meter; 18.2 mm; 1 phase; 6-digit display indication; minimum display value 0.1 kWh; sealable; DIN rail assembly.

taxxo ER 80-1

Digital energy meter; 36.5mm; 1 phase; 6-digit display indication; minimum display value 0.1 kWh; reset function; sealable; DIN rail assembly.

taxxo E 45-1-MID

Digital energy meter; 18.2mm; 1 phase; 7-digit display indication; minimum display value 0.01 kWh; sealable; DIN rail assembly.

taxxo E 100-3-MID

Digital energy meter; 122mm; 3 phases; 7-digit display indication; minimum display value 0.1 kWh; sealable; DIN rail assembly.

Operating Hours Meter**taxxo 403**

Operating hours meter, alternating current; metering capacitance 99999.99 h; DIN rail assembly; surface mount with accessories.

taxxo 100

Operating hours meter, alternating current; metering capacitance 99999.99 h; surface mount.

taxxo 112

Operating hours meter, alternating current; metering capacitance 99999.99 h; screw terminals (VBG4) recessed mount.

taxxo 612

Operating hours meter, alternating current; metering capacitance 99999.99 h; screw terminals (VBG4) recessed mount.

taxxo 712

Operating hours meter, alternating current; metering capacitance 99999.99 h; screw terminals (VBG4) recessed mount.

Plug-in Time**topica 200 S**

Mechanical plug-in time switch; synchronous without running reserve; daily program; shortest switching time 15 min; programmable every 15 min; captive switching segments; manual switch for: fix ON / fix OFF / automatic; switching capacity 16 A / 250 V AC.

topica 400 S

Mechanical plug-in time switch; synchronous without running reserve; daily program; motion work; shortest switching time 15 min; programmable every 15 min; captive switching segments; manual switch for: fix ON / fix OFF / automatic; switching capacity 16 A / 250 V AC.

topica 410 S

Mechanical plug-in time switch; synchronous without running reserve; daily program; motion work; shortest switching time 15 min; programmable every 15 min; captive switching segments; manual switch for: fix ON / fix OFF / automatic; switching capacity 16 A / 250 V AC, can be used in outdoor areas (IP54).

topica 450 S

Mechanical plug-in time switch; synchronous without running reserve; weekly program; motion work; shortest switching time 2 h; programmable every 2 h; captive switching segments; manual switch for: fix ON / fix OFF / automatic; switching capacity 16 A / 250 V AC.

topica 600

Electronic plug-in time switch; ready to plug-in; weekly and daily program; shortest switching time 1 min; 20 memory spaces; random generator; automatic; fix ON / OFF; switching capacity 16 A / 250 V AC.

Product directory

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Base (2 channels)	002718	03.52.0003.2		47
Base	002862	15.92.0021.4		96
Base	003265	50.92.0013.4		46
Cap LF	029166	07.02.0003.2	500-10.000 Lux	84
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Cover 72 x 72	008819	16.26.0006.4		96
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EMD 220	040123	03.85.0005.1	3,4-6 V DC	44
EMD 250	039448	03.86.0003.1	3,4-6 V DC	44
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famoso 601 rf	037444	04.53.0002.1	2 X 1,5 V	54
famoso 601	022709	04.40.0008.1	2 X 1,5 V	60
famoso 651 rf Set	037451	04.53.0003.1	2 X 1,5 V 230 V / 50-60 Hz	54
famoso 651 rf	037468	04.53.0004.1	2 X 1,5 V	54
feeling D 101 rf Set white	039974	04.11.0004.1	2 x 1,5 V 230 V / 50-60 Hz	52
feeling D 101 rf white	039943	04.11.0001.1	2 x 1,5 V	52
feeling D 101 white	039578	04.10.0001.1	2 x 1,5 V	58
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FM/1 SWuZH	000271	01.76.0089.1	220-240 V / 50-60 Hz	38
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rondomatic 400 (automatic fish feeder)	003364	16.58.0001.1	230 V / 50-60 Hz	97
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tactic 372.1 plus	038014	03.62.0002.1	230 V / 50-60 Hz	40
tactic 571.1 plus	038021	03.87.0001.1	230 V / 50-60 Hz	40
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tactic 572.1 plus	038045	03.87.0003.1	230 V / 50-60 Hz	40
tactic 572.1 plus	038052	03.87.0004.1	110-120 V / 50-60 Hz	40
tactic 572.1 plus	038069	03.87.0005.1	24 V AC/DC	40

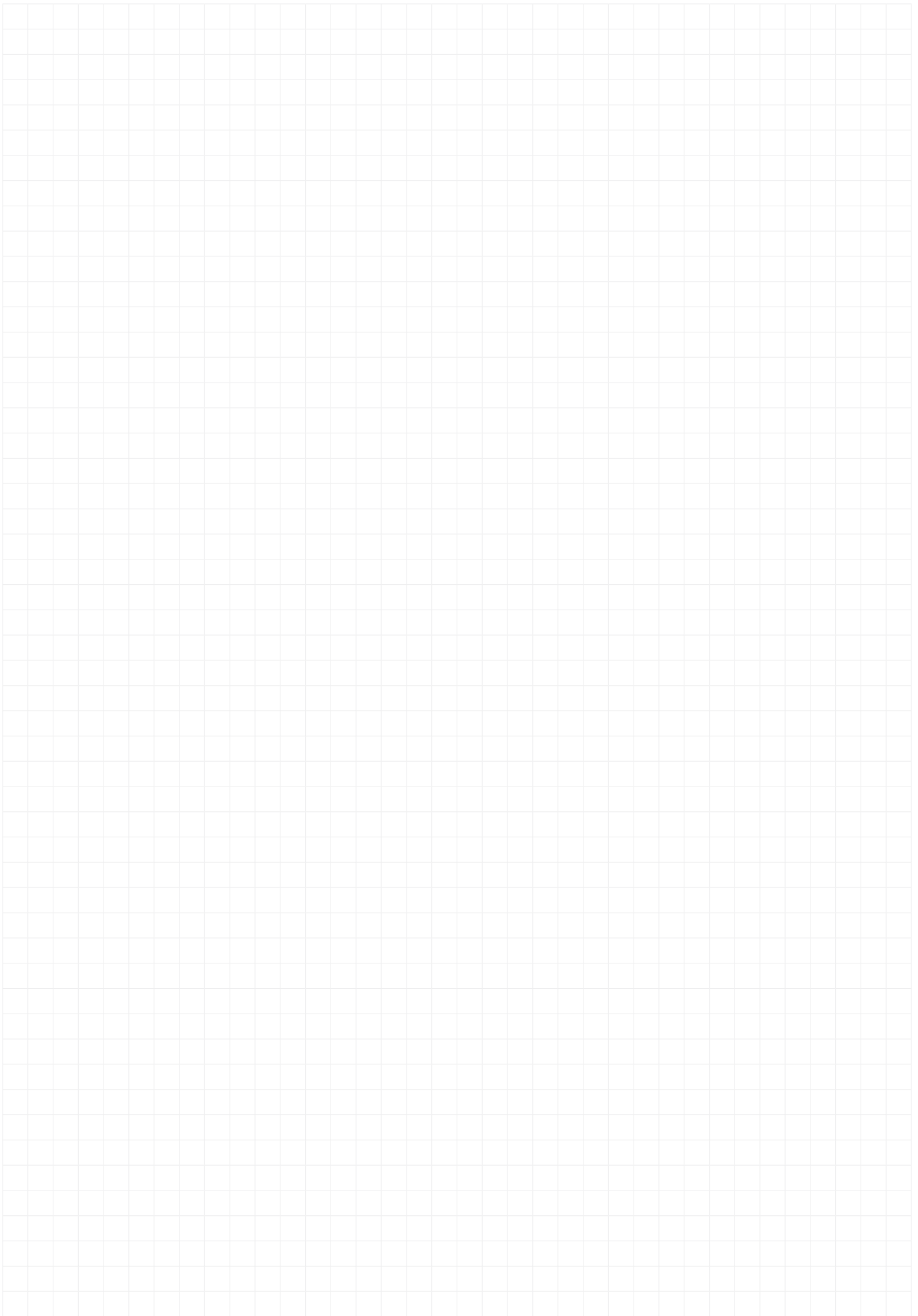
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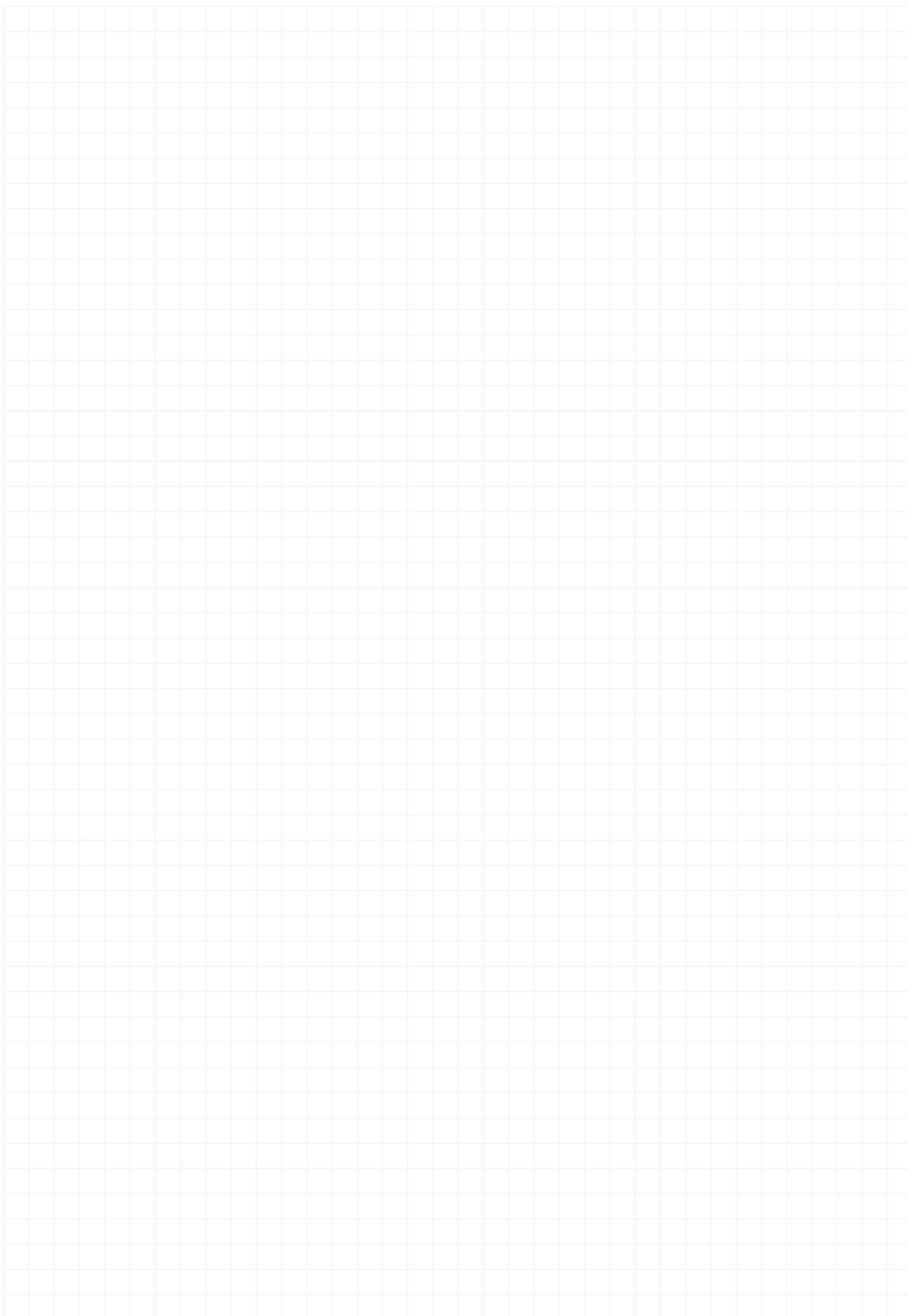
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tactic 572.1 plus	038076	03.87.0006.1	12 V AC/DC	40
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talento 121	020682	01.28.0003.1	220-240 V / 50 Hz	24
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talento 472 pro	042004	03.98.0002.1	24V AC/DC, 110-230 V AC	14
talento 472 pro	042011	03.98.0003.1	12 V AC/DC / 50-60 Hz	14
talento 472 pro	042394	03.98.0010.1	24V AC/DC, 110-230 V AC	14
talento 472 pro	042400	03.98.0011.1	12 V AC/DC / 50-60 Hz	14
talento 472 pro	042813	03.98.0018.1	24V AC/DC, 110-230 V AC	14
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talento 791 pro	042028	03.98.0004.1	24 V AC/DC, 110-230 V AC / 50-60 Hz	14
talento 791 pro	042417	03.98.0012.1	24 V AC/DC, 110-230 V AC / 50-60 Hz	14
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talento 792 pro	042844	03.98.0021.1	24 V AC/DC, 110-230 V AC / 50-60 Hz	14
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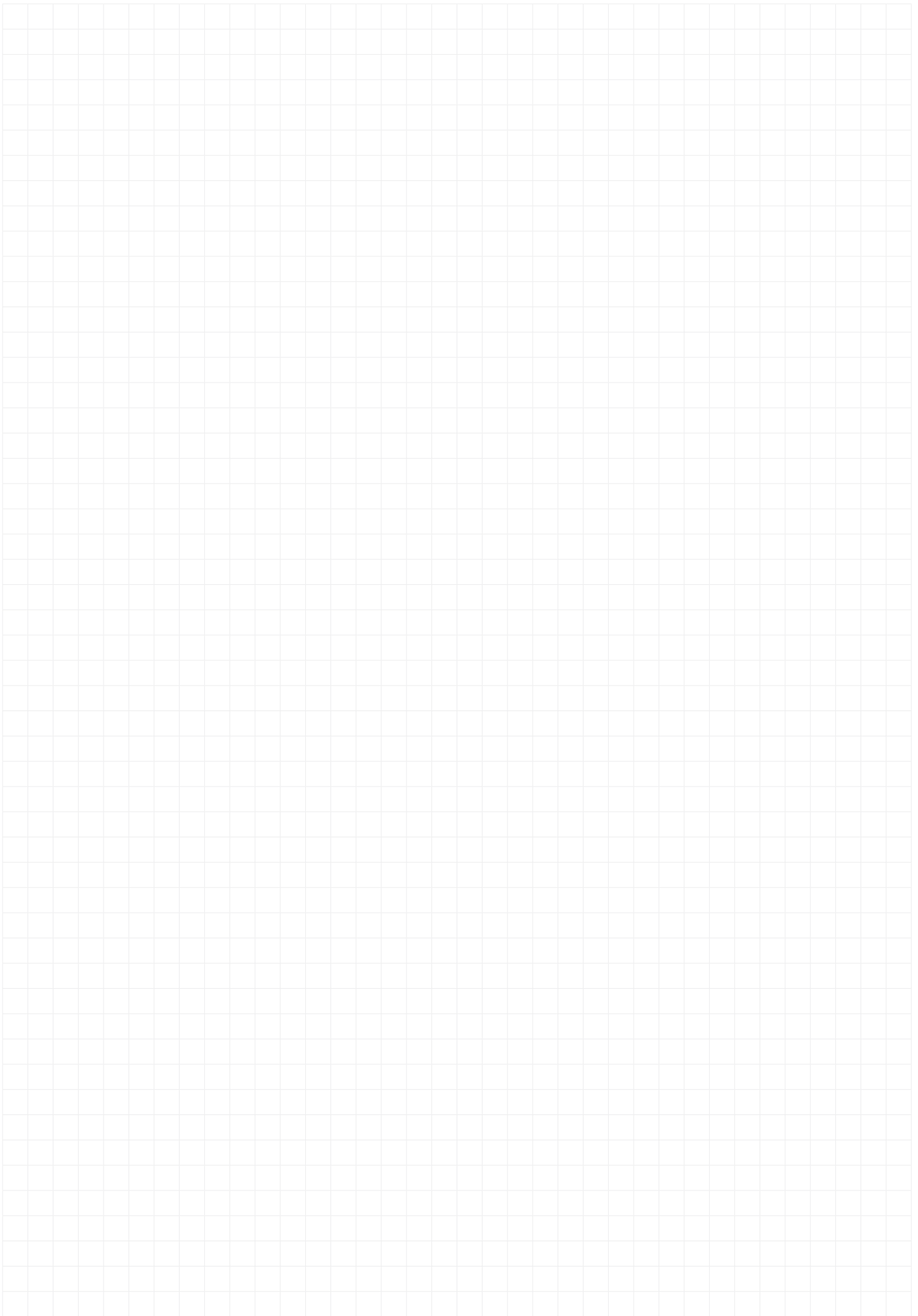
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UNI 45 1hE	000226	01.50.0013.1	230-240 V / 50 Hz	46
UNI 45 TE	000202	01.50.0075.1	230-240 V / 50 Hz	46
UNI 45 WE	003333	01.50.0076.1	230-240 V / 50 Hz	46
Wall installation kit 1 TE	002657	18.01.0004.2		28 / 86
Wall installation kit 2 -3 TE	021719	03.53.0083.2		28 / 86
Wall installation kit 6 TE	021733	03.59.0046.2		28

Technical specifications and other information are subject to change without notice.









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