

Light and Energy Management

Smart design when managing energy and resources in residential and commercial buildings must encompass flexibility in order to realise genuine efficiencies over the true lifetime of a building. Our light and energy solutions offer you long-term cost saving benefits and helps meet your energy efficiency target.



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Analogue Timers



	EHN010	EHN011	EHN110	EHN111	EHN171	EHN711
Description	Daily Time Switch, 1 channel, 1 module	Daily Time Switch, 1 channel, 1 module with reserve	Daily Time Switch, 1 channel, 3 modules	Daily Time Switch, 1 channel, 3 modules with reserve	Weekly Time Switch, 1 channel, 3 modules with reserve	Daily Time Switch, 1 channel, 72x72 analog, with reserve
Type	Quartz Technology					
Current Rating	16A	16A	16A	16A	16A	13A
Supply voltage range	230V / 240V AC	230V / 240V AC	230V / 240V AC	230V / 240V AC	230V / 240V AC	230V / 240V AC
Type of Contact	1Ch, 1NO, 16A, 230V, AC1	1Ch, 1NO, 16A, 230V, AC1	1Ch, 1NO or NC, 16A, 230V, AC1	1Ch, 1NO or NC, 16A, 230V, AC1	1Ch, 1NO or NC, 16A, 230V, AC1	1Ch, 1NO/NC, 13A, 230V, AC1
Time Cycle	24 Hour	24 Hour	24 Hour	24 Hour	Weekly	24 Hour
Minimum interval between two switching times	Program increments - 15 min	Program increments - 15 min	Program increments - 15 min	Program increments - 15 min	Program increments - 2 hours	Program increments - 15 min
Width in Modules	1	1	3	3	3	4 (72 x 72mm)
Battery backup for program retention	-	With reserve / 120hr battery backup	-	With reserve / 120hr battery backup	With reserve / 120hr battery backup	With reserve / 72hr battery backup
Control	Manual override (On/Off/Auto)					
Programme features	Daily	Daily	Daily	Daily	Weekly	Daily
Daylight Saving compensation	No	No	No	No	No	No

Delay Timers



	EZD100	EZF100	EZL100	EZM100
Description	ON Delay Time Relay	OFF Delay with Control Input Time Relay	Emergency Light Tester Time Relay	Multifunction (Seven Functions) Time Relay
Type	Digital Technology			
Current Rating	8A	8A	5A N/O / 10A N/C	8A
Supply voltage range	24V to 240V AC/DC	24V to 240V AC/DC	230V / 240V AC	12V to 230V AC/DC
Type of Contact	1 Change Over contact, 8A	1 Change Over contact, 8A	1 Change Over contact, 5A N/O, 10A N/C	1 Change Over contact, 8A
Time Cycle	50ms - 100hrs	50ms - 100hrs	10min - 180mins	50ms - 100hrs
Width in Modules	1	1	1	1
Control	-	-	Test button and reset function incorporated into device	-
Programme features	LED Relay Status / LED Power ON indication	LED Relay Status / LED Power ON indication	LED Relay Status / LED Power ON indication	LED Relay Status / LED Power ON indication

Digital Timers programmable with Bluetooth



EGN103



EGK103



EGN100AU



EGN200AU



EGN400AU

	EGN103	EGK103	EGN100AU	EGN200AU	EGN400AU
Description	1 channel, Digital Time Switch, weekly cycle	1 channel, Digital Time Switch, weekly cycle - with BT Key	1 channel, Multi-funct. Time Switch, BT	2 channels, Multi-funct. Time Switch, BT	4 channels, Multi-funct. Time Switch, BT
Type	Digital Technology				
Current Rating	16A	16A	10A	16A	16A
Supply voltage range	230V / 240V AC	230V / 240V AC	230V / 240V AC	230V / 240V AC	230V / 240V AC
Type of Contact	1Ch,16A, 230V, AC1	1Ch, 16A, 230V, AC1	1Ch, 10A, 230V, AC1	2Ch, 16A, 230V, AC1	4Ch, 16A, 230V, AC1
Time Cycle	Daily/Weekly	Daily/Weekly	Daily/Weekly/Annual	Daily/Weekly/Annual	Daily/Weekly/Annual
Minimum interval between two switching times	1 minute	1 minute	1 minute normal or 1 sec pulse	1 minute normal or 1 sec pulse	1 minute normal or 1 sec pulse
Width in Modules	2	2	1	2	4
Battery backup for program retention	5 year power reserve	5 year power reserve	10 year power reserve	10 year power reserve	10 year power reserve
Control	Physically Programmable or via Hager Mood app.	Physically Programmable or via Hager Mood app.	Programmable with Hager Mood app	Physically Programmable or via Hager Mood app	Physically Programmable or via Hager Mood app
Programme features	Override button on device	Override button on device	Astro Mode, Pulse output, lux sensor input and / or Manual Override	Astro Mode, Pulse output, lux sensor input and / or Manual Override	Astro Mode, Pulse output, lux sensor input and / or Manual Override
Daylight Saving compensation	Yes	Yes	Yes	Yes	Yes

Description

Electromechanical 1 channel time switches, with daily or weekly programming. For control of lighting, heating, household appliances, shop windows etc, to improve comfort and save energy.

Hager strongly recommend the installation of modular contactors with all time switches.

Technical information:

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Applications

- Domestic and commercial premises.



EHN010



EHN011



EHN110



EHN111



EHN171

Analogue Time Switches - DIN Mount

Description	Characteristic	Width	New ref.
Compact versions - Supply: 230/240V 50/60Hz - 1NO contact - 16A AC1 contact rating	24hr Without battery reserve	1 mod	EHN010
	24hr With battery reserve	1 mod	EHN011
Standard versions - Supply: 230/240V 50/60Hz - 1NO/NC changeover - 16A AC1 contact rating	24hr Without battery reserve	3 mod	EHN110
	24hr With battery reserve	3 mod	EHN111
	7 day With battery reserve	3 mod	EHN171

Analogue Time Switches - Surface Wall Mount

Description	Characteristic	Width	New ref.
- Supply: 230/240V - 1NO/NC - 13A AC1 contact rating	24hr With battery reserve	4 mod	EHN711



EHN711

Description

Digital Time Switches that are easily programmed from a mobile device via Bluetooth technology.

Digital weekly switch, 1 channel

- programmable with Bluetooth key EGN003. Key not supplied.
- potential-free switching contact
- programming without voltage supply possible
- automatic summer/winter time change (Daylight savings)
- program cycles: 1 x 7 days
- with screw terminals

- for mounting on DIN top-hat rail
- 5 years power reserve

Digital multifunctional time switch, 1 channel

- integrated Bluetooth connection
- program cycles: daily, weekly, yearly
- with pulse function
- wired input
- button lock
- automatic summer/winter time change (astro mode)
- screw terminals
- for mounting on DIN top-hat rail
- 10 years power reserve

Digital multifunctional time switch, 2 & 4 channels

- integrated Bluetooth connection
- program cycles: daily, weekly, yearly
- with pulse function
- programming without voltage supply possible
- button lock
- LC display with lighting
- automatic summer/winter time change (astro mode)
- screw terminals
- for mounting on DIN top-hat rail
- 10 years power reserve

Hager strongly recommend the installation of modular contactors with all time switches.

Technical information:
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Digital Weekly Time Switch

Description	Characteristics	Width	Cat ref.
1 channel - Bluetooth via Key (EGN003), not supplied - Capacity: 56 program steps	Daily, weekly Voltage rating: 230V AC 50/60Hz Output: 1 changeover and 1 NO contact No pulse function	2 mod	EGN103
1 channel - Bluetooth via Key (EGN003), supplied in kit - Capacity: 56 program steps	Daily, weekly Voltage rating: 230V AC 50/60Hz Output: 1 changeover and 1 NO contact	2 mod	EGK103



EGN103

Digital Multifunctional Time Switch

Description	Characteristics	Width	Cat ref.
1 channel - Integrated bluetooth - Capacity: 100 program steps	Daily, weekly, annual Voltage rating: 230V AC 50/60Hz Output: 1 changeover and 1 NO contact	1 mod	EGN100AU
2 channels - Integrated bluetooth - Capacity: 200 program steps	Daily, weekly, annual Voltage rating: 230V AC 50/60Hz Output: 2 changeover and 2 NO contacts	2 mod	EGN200AU
4 channels - Integrated bluetooth - Capacity: 400 program steps	Daily, weekly, annual Voltage rating: 230V AC 50/60Hz Output: 4 changeover and 4 NO contacts	4 mod	EGN400AU



EGN100AU



EGN200AU



EGN400AU

Light & energy
management

Accessories

Description	Characteristics	Cat ref.
Twilight switches	Flush-mounted sensor with connection cable	EEN002
	Separate wall-mounted sensor	EEN003
Bluetooth key	For EGN103	EGN003



EEN002

Description

To provide all types of automatic control i.e. lighting, ventilation, watering, machine preheating, automatic door and visual audible indication, cycle control etc.

For timing and automation in residential and commercial premises. The input signal can be via various switching devices (push button, latching switch, time clock etc.) and the timed output used to control the application.

Hager strongly recommend the installation of modular contactors with all time switches.

Wiring Diagrams: [Page 144](#)

EZL wiring with Emergency
Test Kits: [Page 118](#)



EZD100



EZF100



EZL100



EZM100

Delay Timers

Description	Characteristics	Width	Cat ref.
ON Delay Time Relay (50ms - 100hrs)	Current rating: 8A Voltage rating: 24V to 240V AC/DC 1 changeover contact, 8A Programme capacity - ON Delay (E)	1 mod	EZD100
U LED U/t R			
OFF Delay with Control Input Time Relay (50ms - 100hrs)	Current rating: 8A Voltage rating: 24V to 240V AC/DC 1 changeover contact, 8A Programme capacity - OFF Delay (R)	1 mod	EZF100
U LED U/t S R			
Emergency Light Tester Time Relay (10min - 180mins)	Current rating: 5A N/O, 10A N/C Voltage rating: 230V / 240V AC 1 changeover contact 5A N/O, 10A N/C Programme capacity - Single shot leading with control input (Ws)	1 mod	EZL100
U LED U/t S R			
Multifunction Time Relay (50ms - 100hrs) 7 individual functions including: E - ON delay R - OFF delay Ws - Single shot leading edge with control input Wa - Single shot trailing edge with control input Es - ON delay with control input Wu - Single shot leading edge voltage controlled Bp - Flasher pause first	Current rating: 8A Voltage rating: 12V to 230V AC/DC 1 Changeover contact, 8A	1 mod	EZM100

Time Lag Switch

Provides control of lighting circuits with automatic switch-off after a preset time. (e.g. for staircase, corridors lighting). Compact design with a two position switch permanent/timed lighting implementation facility.

Technical information: [Page 145](#)

Universal Dimmer

- Soft start (progressive start) to increase the working life of lamps
- Last dimming level memorised
- Protection against overheating
- Control possible by illuminated push button up to 5mA.

Dimmer 1000W features

- Universal products with automatic recognition of the load type (inductive/capacitive)
- Electronic protection against overheating and overload.

Technical information: [Page 146](#)

Standard Staircase Time Lag Switch

Description	Characteristics	Width	Cat ref.
- Adjustable time delay setting: 30s until 10min - Retrigger	- Supply voltage: 230V 50/60Hz - 16A - 250V AC1 - 2300W incandescent halogen and fluorescent	1 mod	EMN001



EMN001

Universal Dimmer 500W

Description	Characteristics	Width	Cat ref.
Functional mode selection: - Control via push button (local) or control via push buttons connected to the product	230V AC / 50Hz Load type: - Incandescent - 230V halogen lamps - ELV halogen lamps with ferromagnetic transformer (inductive) - ELV halogen lamps with electronic transformer (capacitive)	2 mod	EVN002



EVN002

Heat dissipation insert

Description	Width	Cat ref.
To help minimise heat transfer between devices	0.5 mod	LZ060



LZ060

Light Sensitive Switches

Using light sensitive switches can prevent the unnecessary use of lighting circuits where sufficient daylight exists.

A photo electric cell measures the light level and in conjunction with the relay, provides ON/OFF control of a circuit.

Applications

Street lighting, display lighting, illuminated signs etc....

Features

- Front cover sealability
- Protective cable clamps
- LED shows status of changeover contact.
- 4 position override switch:
Auto: normal operating mode
On: permanently on
Off: permanently off
Test: mode for easy adjustment

Technical data

- Output: 1 changeover AC1
- Contact:
16A AC1 230V (EE702)
- Rigid capacity: 1.5 to 10mm²
- Flexible capacity: 1 to 6mm²
- Maximum distance between photocell and controller: 50m

Should be used in conjunction with a suitably rated contactor.

Technical information: [Page 147](#)



EEN100

Light Sensitive Switch

Description	Characteristics	Width	Cat ref.
Delivered with a separate surface photo electric cell EEN003	- Voltage rating: 230V AC +10-15% 50Hz - Output: 1 changeover 16A AC1 contact rating - Sensitivity: 2 ranges - 5 to 100 lux - 50 to 2000 lux	3 mod	EEN100



EEN003

Photo Electric Cell for Light Switch

Description	Cat ref.
Surface cell IP54 for EEN100	EEN003

Motion and Presence Detectors



**More options for
light control in
any situation.**

Our detectors allow you to manage and automate lighting in residential and commercial buildings easily and efficiently. You can choose from a complete range of high-performance presence and motion detectors.

Versions	Standard Ø 6m		Mini Ø 10m	Large Area Ø 20m	
	EE804A	EE805A	EER501	EER503	EER513
Mounting					
Flush mounted		✓	✓	✓	
Surface mounted	✓				✓
Wall mounted					
Application					
Round area	✓	✓	✓	✓	✓
Specially for offices			✓	✓	✓
Specially for corridors					
High ceilings					
Discreet version			✓		
Outside application					
Detection					
Angle	360°	360°	360°	360°	360°
Mounting height	2.5 - 3.5m	2.5 - 3.5m	2.5 - 3.5m	2.5 - 3.5m	2.5 - 3.5m
Detection zone	Ø 6m	Ø 6m	Ø 10m	Ø 20m	Ø 20m
Square office area			7 x 7m	14 x 14m	14 x 14m
Function					
Motion	✓	✓	✓	✓	✓
Presence	✓	✓	✓	✓	✓
Brightness	✓	✓	✓	✓	✓
Use					
Master function			✓	✓	✓
Slave function	✓	✓	✓	✓	✓
Connection					
Quick-connect terminal / screw	Quick	Quick	Quick	Quick	Quick
Loop through terminal			✓	✓	✓
Input				✓	✓
Remote control adjustment			EE807 (installer) EE808 (user)	EE807 (installer) EE808 (user)	
Technical data					
Ingress/Impact protection	IP21/IK04	IP21/IK04	IP21/IK04	IP21/IK04	IP21/IK04
Mounting hole diameter		Ø 75mm	Ø 50/54mm	Ø 68mm	
Time delay	5 sec - 30 min	5 sec - 30 min	5 sec - 30 min	5 sec - 30 min	5 sec - 30 min
Breaking capacity	10 A	10 A	10 A	10 A	10 A
Max LED Power	20 x 20 W	20 x 20 W	20 x 20 W	20 x 20 W	20 x 20 W

Corridor		High Ceilings	IP55 Wall Mounted
EER505	EER515	EER518	EE860/EE870/EE871
✓			
	✓	✓	
			✓
✓	✓		
		✓	
			✓
360°	360°	360°	EE860 ► 140° EE870 ► 220° EE871 ► 230°
2.5 - 3.5m	2.5 - 3.5m	10m	2.5m
30 x 5m	30 x 5m	22 x 12m	16 x 16m - Ø 12m
✓	✓	✓	✓
✓	✓	✓	✓
✓	✓	✓	✓
✓		✓	✓
Quick	Quick	Quick	Quick
✓	✓	✓	✓
✓	✓	✓	
EE807 (installer) EE808 (user)		EE807 (installer) EE808 (user)	EE806 (installer)
IP21/IK04	IP21/IK04	IP21/IK04	IP55
Ø 68mm			
5 sec - 30 min	5 sec - 30 min	5 sec - 30 min	5 sec - 30 min
10 A	10 A	10 A	10 A
20 x 20 W	20 x 20 W	20 x 20 W	20 x 20 W



Motion Detectors

Our motion detectors are made for automatic control of lighting in both the residential and private/public industry sectors.

Technical information:

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EER505

Special Corridor Motion Detectors

Description	Mounting	Characteristics	Cat ref.
Corridor motion detector 30 x 5 metres ON/OFF	flush mounted	10A AC1 contact rating	EER505
Corridor motion detector 30 x 5 metres ON/OFF	surface mounted	10A AC1 contact rating	EER515



EER515



EER518

High Ceilings Motion Detectors

Description	Mounting	Characteristics	Cat ref.
Motion detector for high ceilings 22 x 12 metres, ON/OFF	surface mounted	10A AC1 contact rating	EER518



EE860

Advanced Wall Mounted Motion Detectors

Description	Characteristics	Cat ref.
Standard IP55 wall mounted motion detector, 140° ON/OFF	10A AC1 contact rating	EE860
Standard IP55 wall mounted motion detector, 200° ON/OFF	10A AC1 contact rating	EE870
Standard IP55 wall mounted motion detector, 220/ 230° ON/OFF	10A AC1 contact rating	EE871



EE806

Accessories

Description	Characteristics	Cat ref.
IR remote control compatible with EE86x /EE87x / EE6xx	Sets time, sensitivity, lux, detection angle used (for Twin model), lock/unlock, test and override ON/OFF	EE806
IR commissioning remote control – For EER501, EER503, EER505, EER515 and EER518 detectors	For commissioning	EE807
IR user remote control – For EER501, EER503, EER505, EER515 and EER518 detectors	For local lighting control through the detector	EE808
Ceiling mount accessory	For EE860/EE870	EE855
	For EE871	EE856

Motion and Presence Detectors

Our motion and presence detectors are made for the automatic control of lighting in indoor circulating zones. They automatically switch on lighting when movement is detected and light is needed. They turn off the light after a preset duration.

Technical information:

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6 metres - Standard Version

Description	Mounting	Characteristics	Cat ref.
Basic motion/presence detector ON/OFF	surface mounted	10A AC1 contact rating	EE804A
Basic motion/presence detector ON/OFF	flush mounted	10A AC1 contact rating	EE805A



EE804A



EE805A

10 metres - Mini Version

Description	Mounting	Characteristics	Cat ref.
Mini motion/presence detector 10 m, ON/OFF	Flush mounted	10A AC1 contact rating	EER501



EER501

20 metres Version

Description	Mounting	Characteristics	Cat ref.
Large area motion/presence detector 20 m, ON/OFF	Flush mounted	10A AC1 contact rating	EER503
Large area motion/presence detector 20 m, ON/OFF	Surface mounted	10A AC1 contact rating	EER513



EER503



EER513



Description

Energy meters measure the active energy used in an electric installation. They can monitor the detailed consumption within an installation to provide the consumption data between different appliances and circuits. Not suitable for billing. Not approved with NMI.

Technical data

- Fully compliant with EN50470-3
- Class B
- Accuracy 1%
- Energy readout: 7 digits
- Backlit display
- Indication of instantaneous power consumption
- Total/partial counter
- Measures Active/Reactive/ Apparent power, voltage, current and power factor
- Unlimited saving of measurements
- LED flashing according to consumption
- Display indication in case of incorrect wiring
- Will not reset if power is turned off. The device will hold its memory.
- Pulse and Modbus communication

Technical information: [Page 157](#)

*Please check availability with the Hager sales office at time of order



ECN140D

Single Phase

Description	Characteristics	Width	Cat ref.
- Direct reading 40A	Voltage: 230V AC 45/65Hz Starting current: 20mA Base current: 5A Maximum current: 40A	1 mod	ECN140D
- Direct reading 40A - Pulsed output	Voltage: 230V AC 45/65Hz Starting current: 20mA Base current: 5A Maximum current: 40A	1 mod	ECP140D
- Direct reading 80A - Pulsed output	Voltage: 230V AC 92/276Hz Starting current: 15mA Base current: 5A Maximum current: 80A	2 mod	ECP180D
- Direct reading 40A - Modbus output	Voltage: 230V AC 45/65Hz Starting current: 20mA Base current: 5A Maximum current: 40A	1 mod	ECR140D
- Direct reading 80A - Modbus output	Voltage: 230V AC 92/276Hz Starting current: 15mA Base current: 5A Maximum current: 80A	2 mod	ECR180D

Description

Energy meters measure the active energy used in an electric installation. They can monitor the detailed consumption within an installation to provide the consumption data between different appliances and circuits. Not suitable for billing. Not approved with NMI.

Technical data

- Fully compliant with EN50470-3
- Class B
- Accuracy 1%
- Energy readout: 7 digits
- Backlit display
- Indication of instantaneous power consumption
- Total/partial counter
- Measures Active/Reactive/ Apparent power, voltage, current and power factor
- Unlimited saving of measurements
- LED flashing according to consumption
- Display indication in case of incorrect wiring
- Will not reset if power is turned off. The device will hold its memory.
- Pulse and Modbus communication

Technical information: [Page 157](#)

Three Phase

Description	Characteristics	Width	Cat ref.
- Indirect reading 1/5 A - Pulsed output	Voltage: 400V AC 45/65Hz Starting current: 1mA Base current: 1(6) A Maximum current: 6A	4 mod	ECP300C
- Direct reading 125A - Pulsed output	Voltage: 400V AC 45/65Hz Starting current: 20mA Base current: 5A Maximum current: 125A	6 mod	ECP310D
- Direct reading 80A - Pulsed output	Voltage: 400V AC 45/65Hz Starting current: 15mA Base current: 5A Maximum current: 80A	4 mod	ECP380D
- Indirect reading 1/5A - Modbus output	Voltage: 400V AC 45/65Hz Starting current: 1mA Base current: 1(6) A Maximum current: 6A	4 mod	ECR300C
- Direct reading 125A - Modbus output	Voltage: 400V AC 45/65Hz Starting current: 20mA Base current: 5A Maximum current: 125A	6 mod	ECR310D
- Direct reading 80A - Modbus output	Voltage: 400V AC 45/65Hz Starting current: 15mA Base current: 5A Maximum current: 80A	4 mod	ECR380D



ECP310D

Pulse Concentrator

Description	Width	Cat ref.
- Up to 7 separate pulse inputs - Total/partial energy (daily, weekly, monthly, yearly) - Direct reading on display - RS485 Jbus/modbus communication	4 mod	EC700



EC700

Light & energy
management

KNX Meter Interface

Description	Cat ref.
KNX interface for energy meter - Compatible with the energy meters above	TXF121



TXF121



SM101C Multimeter

For monitoring the electrical network: single, two or three phases (with or without neutral). Current transformers are not provided and are sold separately. This DIN mount device enables the display of electrical values as instantaneous, average or maximum (voltage and intensity per phase in RMS value). When monitoring of a power generator, it measures the frequency and working time. The SM101C digital multimeter displays the following instantaneous and max. values: I, U, V, F, P, PF, H, THD, E. It has a pulsed output and an RS485 Jbus/Modbus communications capability.

SM10xE Multimeters

SM102E & SM103E are panel mount digital multifunction energy meters suitable for electrical measurement in low voltage networks.

SM102E

Provides instantaneous true RMS measurement

- Current (Instantaneous & maximum) via CT
- Power EP, EQ, ES and per phase
- Frequency
- Harmonics (THD up to 31)

Add on module

- RS485 Jbus/modbus RTU

SM103E

Provides instantaneous true RMS measurement

- Current (Instantaneous & maximum) via CT
- Power EP, EQ, ES and per phase
- Frequency
- Harmonics (THD up to 51)
- Embedded webserver on TCP/IP add on module

Add on module

- RS485 Jbus/modbus RTU
- Memory card
- Ethernet

Technical information: [Page 158](#)



SM101C

SM101C Multimeter

Description	Width	Cat ref.
Voltage supply: 230/400V 50/60hz Display voltage: 35-480V Accuracy $\pm 0.5\%$ Consumption: $<0.5VA$ Display current: Via CT Primary 5-8000A Secondary 0.1-6A Accuracy: $\pm 0.5\%$ Consumption: $<0.5VA$ Display frequency Range 40-80hz Accuracy: $\pm 2hz$ Display hour counter: 7 digits 999999.9	4 mod	SM101C



SM102E

SM102E Multimeter and Add On Module

Description	Characteristics	Cat ref.
Multifunction meter	Panel mount	SM102E
Add on modules	RS485 JBus/Modbus	SM210



SM103E + SM211

SM103E Multimeter and Add On Modules

Description	Characteristics	Cat ref.
Multifunction meter	Panel mount	SM103E
Add on modules	Memory module	SM204
	RS485 JBus/Modbus	SM211
	Ethernet	SM213
	Ethernet + RS485 Jbus/Modbus	SM214

Description

Current transformers are used to feed analogue and digital ammeters, as well as kWh meters. Their current on secondary circuit (0-5A) is proportional to the current on primary circuit class: 1

Specifications

- Can be mounted on copper busbar or on cable
- Can be mounted on DIN rail with adaptors
- Frequency: 50/60Hz

Technical information: [Page 160](#)

Current Transformers (CT)

Ratio	Cat ref.
50/5	SRA00505
100/5	SRA01005
150/5	SRA01505
200/5	SRA02005
250/5	SRA02505
300/5	SRI03005
400/5	SRC04005
600/5	SRC06005



SRA00505



SRI03005



SRC06005

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DIN Rail Meters

- 4 Module DIN rail mounting
- Single phase or 3 phase (4 wire) network balanced or unbalanced load
- Built-in energy pulse output and RS485 MODBUS communication
- High quality backlit LCD display
- 330mV current transformer input
- Active energy class 1 (EN62053-21)
- Reactive energy class 2 (EN62053-23)
- THD up to 31st harmonic for voltage and current
- 3-phase: 140...460Vac measured voltage
- Single phase: 80...265Vac measured voltage
- Self supplied auxiliary
- Programmable CT ratio 5...10,000A
- Programmable VT ratio
- Frequency 45/65Hz



JKM01

DIN Rail Meters

Description

Multi-Function Meter Pulsed/Modbus Dual Input
For supply cable, see JF130VMF
Note: No cables are supplied with these meters

Cat ref.

JKM02



PGRJ1000

RJ45 Connection Cable

Description

1.50m - RJ45 Connector Cable 67 L7005 LSZH

Cat ref.

PGRJ1500



PG9523MALE

Supply Voltage Connector Plugs

For those who want to make up their own power cable looms

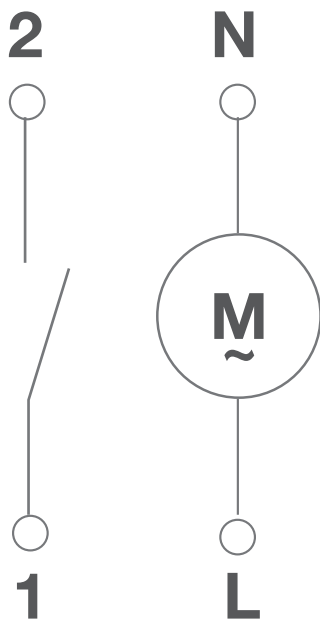
Description

Voltage IN (Male) Connector

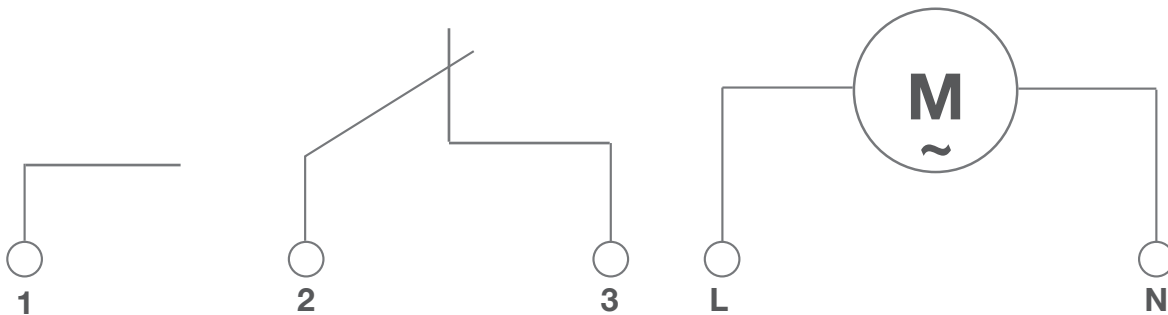
Cat ref.

PG9523MALE

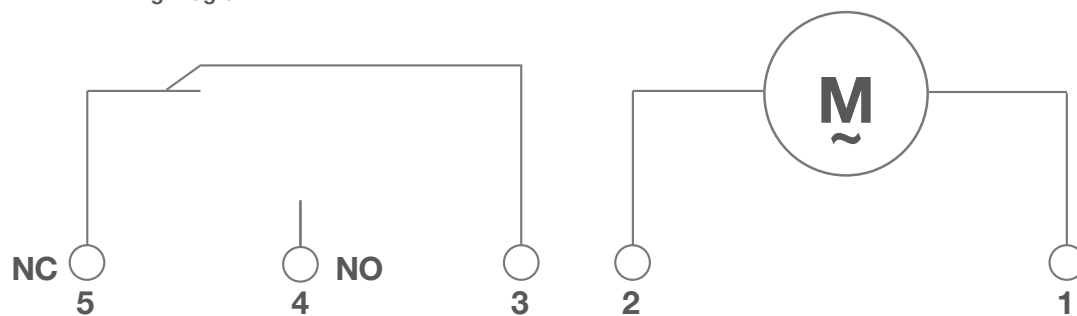
EHN010, EHN011 Wiring Diagram



EHN110, EHN111, EHN171 Wiring Diagram



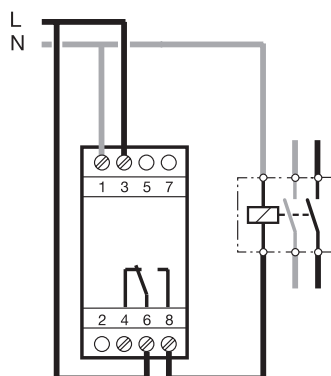
EHN711 Wiring Diagram



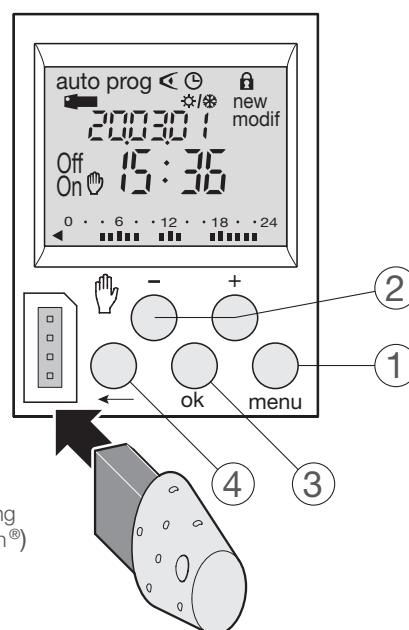
Electrical characteristics

Operating voltage	230V (+10% / -15%)
Frequency	50/60 Hz
Contact rating	AC1 μ 16A 230 V~
Power input	0.25VA
Switching current at $\cos \phi = 0.6$	
Power loss at full load	
230 V incandescent and halogen lamps	max. 2300 W
LED lamps	400 W
Fluorescent tubes, compensated // (max. 45 μ F)	400 W
Fluorescent tubes, uncompensated, series compensated	1000 W
Compact fluorescent lamps	400 W
Number of function channels	1
Number of contacts per channel	2
Shortest switching time	1 min
Number of switching times for On/Off	56
Power reserve (years)	≈ 5 a
Accuracy rate	± 1.5 s/day
Operating temperature	- 5 ... 45 °C
Conductor cross-section (flexible)	1 ... 6 mm ²
Conductor cross-section (rigid)	1.5 ... 10 mm ²
Rail-mounted device (RMD) width	2 units

Wiring diagram



Product presentation



EGN003
(programming
via Bluetooth®)
or
EG004
(locking)
or
EG005
(programming)

Keys

- | | |
|--------------|--|
| 1. menu | Selection of operating mode |
| new prog. | For programming |
| change prog. | To change an existing program |
| ◀ | Program verification |
| ⌚ | Change of time, date and mode choice switch to or from daylight savings time |
| 2. +/- | Navigation or setting values |
| 👉 | In auto mode, selection of overrides or exceptions |
| 3. OK | To validate flashing information on display |
| 4. ← | To return to the previous step |

You can return to auto mode at any time with the menu.

If no action is taken for 1 minute, the switch returns to auto mode.

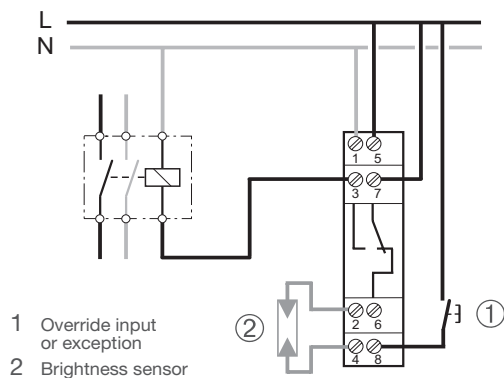
Major characteristics

- programmable with Bluetooth (with EGN003)
- changeover
- with potential-free switching contact
- button lock using lock key
- programming without voltage supply possible
- with programming key
- with automatic summer/winter time change
- program cycles: 1 x 7 days
- with screw terminals
- for mounting on DIN top-hat rail
- 5 years power reserve

Electrical characteristics

Operating voltage	230V (+10% / -15%)
Frequency	50/60 Hz
Contact rating	AC1 μ 10A 230 V~
Power input	0.17VA
Switching current at $\cos \phi = 0.6$	
Power loss at full load	
230 V incandescent and halogen lamps	max. 2300 W
LED lamps	400 W
Fluorescent tubes, compensated // (max. 45 μ F)	400 W
Fluorescent tubes, uncompensated, series compensated	1000 W
Compact fluorescent lamps	400 W
Number of function channels	1
Number of contacts per channel	2
Shortest switching time	1 min
Number of switching times for On/Off	100
Power reserve (years)	≈ 10 a
Accuracy rate	± 90 s/year
Operating temperature	- 5 ... 45 °C
Conductor cross-section (flexible)	0.2 ... 2.5 mm ²
Conductor cross-section (rigid)	0.2 ... 4 mm ²
Rail-mounted device (RMD) width	1 unit

Wiring diagram



Product presentation



C1/FCT (key and LED) used for:

- output control;
- Bluetooth® reset.

BLE/CFG (key and LED) used for:

- Bluetooth® activation and deactivation (BLE),
- Resetting parameters.

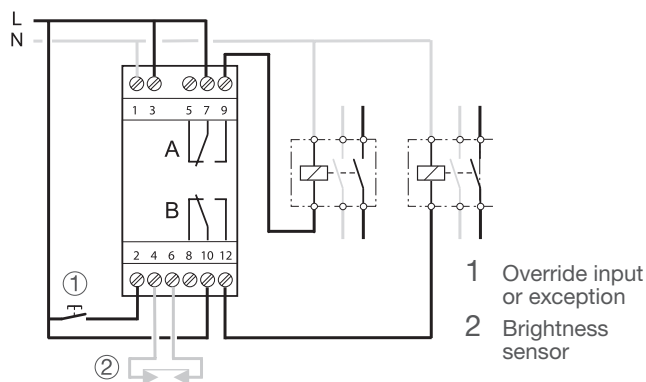
Major characteristics

- integrated Bluetooth connection
- program cycles: daily, weekly, yearly
- 1 changeover output
- with pulse function
- wired input
- with radio input connection: Quicklink configuration
- button lock
- with automatic summer/winter time change
- with screw terminals
- for mounting on DIN top-hat rail
- 10 years power reserve

Electrical characteristics

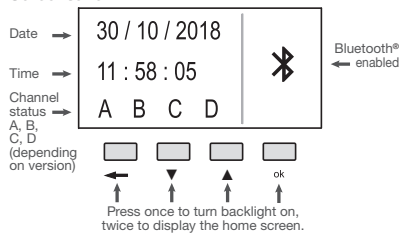
Operating voltage	230V (+10% / -15%)
Frequency	50/60 Hz
Contact rating	AC1 μ 16A 230 V~
Power input	0.3VA
Switching current at $\cos \phi = 0.6$	
Power loss at full load	
230 V incandescent and halogen lamps	max. 2300 W
LED lamps	400 W
Fluorescent tubes, compensated // (max. 45 μ F)	400 W
Fluorescent tubes, uncompensated, series compensated	1000 W
Compact fluorescent lamps	400 W
Number of function channels	2
Number of contacts per channel	2
Shortest switching time	1 min
Number of switching times for On/Off	200
Power reserve [years]	≈ 10 a
Accuracy rate	± 90 s/year
Operating temperature	- 5 ... 45 °C
Conductor cross-section (flexible)	0.2 ... 2.5 mm ²
Conductor cross-section (rigid)	0.2 ... 4 mm ²
Rail-mounted device (RMD) width	2 units

Wiring diagram

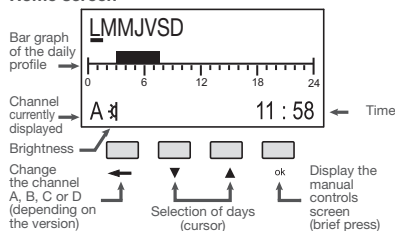


Product presentation

Screensaver



Home screen



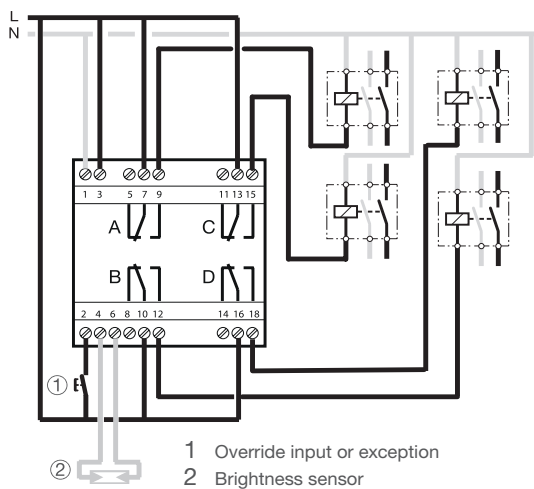
Major characteristics

- integrated Bluetooth connection
- program cycles: daily, weekly, yearly
- 2 changeovers output
- with pulse function
- with radio input connection: Quicklink configuration
- programming without voltage supply possible
- button lock
- LC display with lighting
- with automatic summer/winter time change
- with screw terminals
- for mounting on DIN top-hat rail
- 10 years power reserve

Electrical characteristics

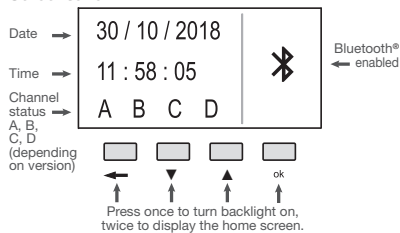
Operating voltage	230V (+10% / -15%)
Frequency	50/60 Hz
Contact rating	AC1 μ 16A 230 V~
Power input	0.45VA
Switching current at $\cos \phi = 0.6$	
Power loss at full load	
230 V incandescent and halogen lamps	max. 2300 W
LED lamps	400 W
Fluorescent tubes, compensated // (max. 45 μ F)	400 W
Fluorescent tubes, uncompensated, series compensated	1000 W
Compact fluorescent lamps	400 W
Number of function channels	4
Number of contacts per channel	2
Shortest switching time	1 min
Number of switching times for On/Off	400
Power reserve (years)	≈ 10 a
Accuracy rate	± 90 s/year
Operating temperature	- 5 ... 45 °C
Conductor cross-section (flexible)	0.2 ... 2.5 mm ²
Conductor cross-section (rigid)	0.2 ... 4 mm ²
Rail-mounted device (RMD) width	4 units

Wiring diagram

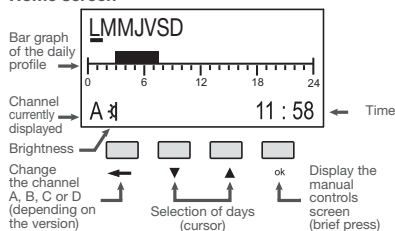


Product presentation

Screensaver



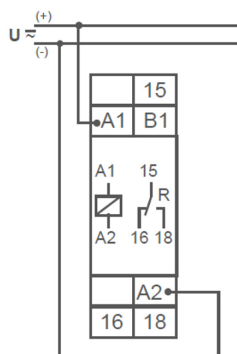
Home screen



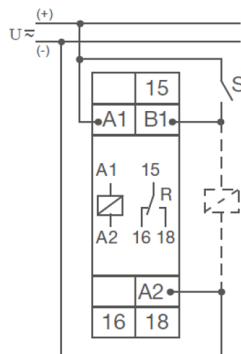
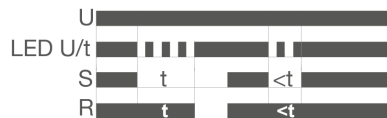
Major characteristics

- integrated Bluetooth connection
- program cycles: daily, weekly, yearly
- 2 changeovers output
- with pulse function
- with radio input connection: Quicklink configuration
- programming without voltage supply possible
- button lock
- LC display with lighting
- with automatic summer/winter time change
- with screw terminals
- for mounting on DIN top-hat rail
- 10 years power reserve

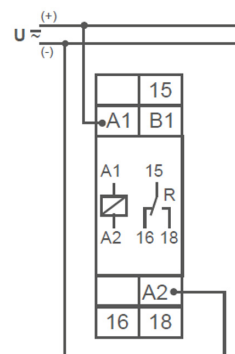
EZD100 - ON Delay Time Relay



EZF100 - OFF Delay with Control Input Time Relay



EZL100 - Emergency Light Tester Time Relay

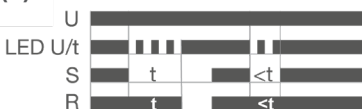


EZM100 - Multifunction Time Relay

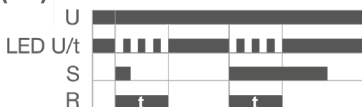
1. (E)



2. (R)



3. (Ws)



4. (Wa)



5. (Es)



6. (Wu)



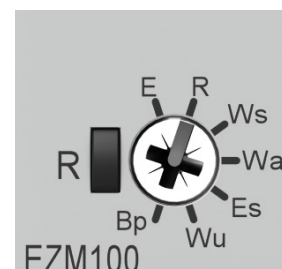
7. (Bp)



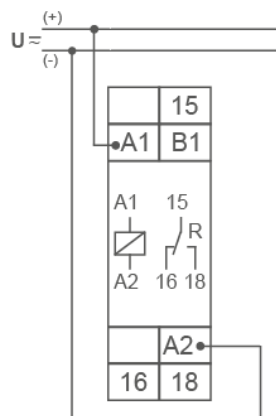
Multifunction timer - Seven individual functions

The desired function must be selected before connecting the relay to supply voltage.

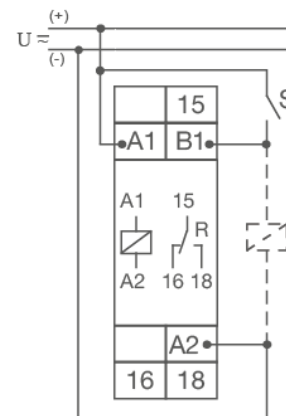
- 1) E - ON delay **A**
- 2) R - OFF delay **B**
- 3) Ws - Single shot leading edge with control input **B**
- 4) Wa - Single shot trailing edge with control input **B**
- 5) Es - ON delay with control input **B**
- 6) Wu - Single shot leading edge voltage controlled **A**
- 7) Bp - Flasher pause first **A**



A. Wire without control contact



B. Wire with control contact



Legend:

- Output relay open - with no command
- Output relay open - with command signal running
- Output relay closed - with command signal running
- Output relay closed - with command signal removed
- Output relay closed

Time lag switches

A common area where time delay devices are used is stairways and corridors in multi occupancy buildings where they provide a level of energy efficiency. The EMN001 device provides basic time lag control.

Electrical characteristics

Supply voltage	230V~ +10%/-15% 50/60Hz
Consumption	1VA
Size	1 module
Output	16A - 230V AC1
Lighting	
Incandescent lighting	2300W
Halogen lighting 230V	2300W
Ferro-magnetic transformer	1600W
Parallel compensated	Capacitor 112F
Fluoro lamps	1000W
Series compensated	3600W
Electronic transformer	2300W
Compact fluoro lamps with electronic ballast	60 x 7W or 40 x 11w or 32 x 15W or 20 x 23W
with conventional ballast	2300W

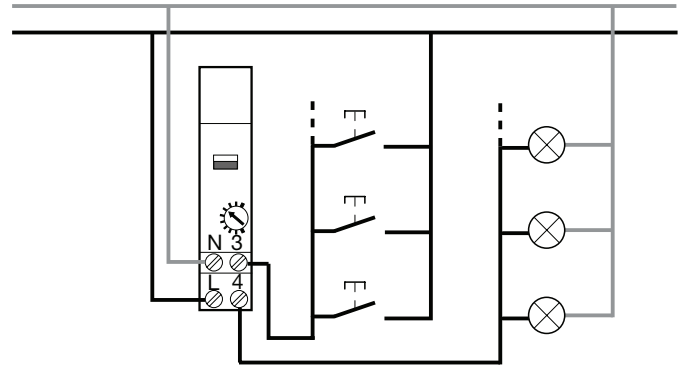
Functional characteristics

Time delay	30s to 10min
Retrigger	Yes
Maximum current in rest position	100mA
Automatic 3/4 recognition	Yes
Local command	Automatic / override On

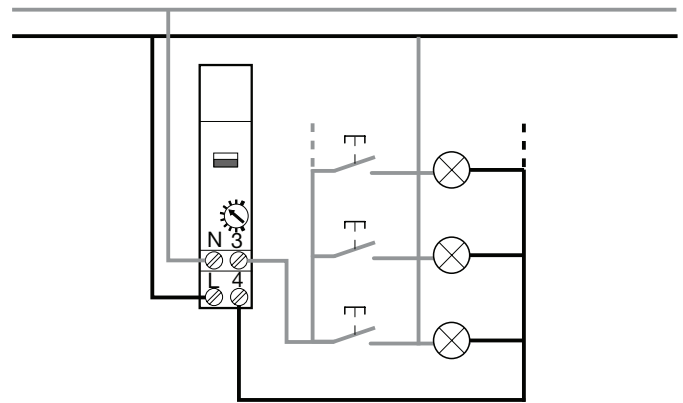
Environment

Working temperature	-10°C to +55°C
Storage temperature	-20°C to +60°C
Cable capacity	
Flexible	1 to 6mm ²
Rigid	1.5 to 10mm ²

Wiring diagrams 4 wire

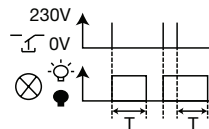


3 wire



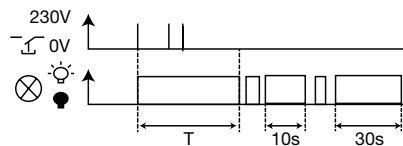
A: Basic mode

Press push button to switch ON the light. After a set time (Adjustable "T", the light will switch OFF automatically.



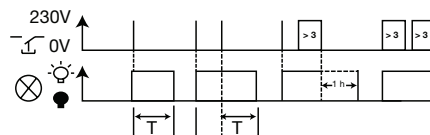
B: Prewarning mode

A signal (blink) will appear before the end of the lighting period.



C: Double delay mode

Press push button to switch light ON. After a set time (Adjustable "T", the light will switch OFF automatically. If you press the button for more than 3 seconds, a time lag of one hour begins.



Electrical characteristics	EVN002
Supply voltage	230V AC 50Hz
Consumption	0.2W
Dissipation	4.5W

Lighting

Incandescent lighting	500W
Halogen lighting 230V	500W
Lamps with ELV Halogen via ferro-magnetic transformer	500VA

The transformer must not be used below 75% of its nominal load

Lamps with ELV halogen via electronic transformer	500VA
--	-------

The maximum number of lamps permitted shall be calculated according to the efficiency of transformers.

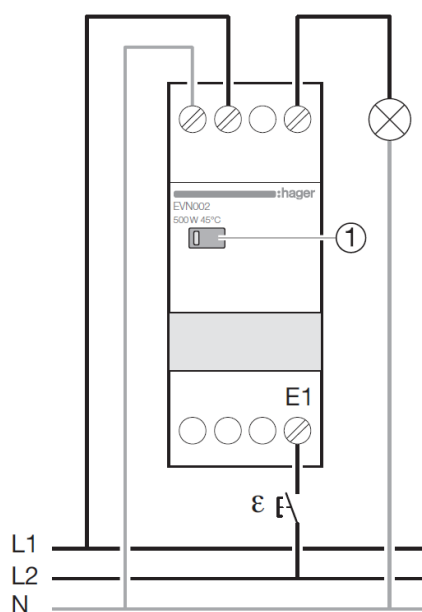
Functional characteristics

Input 1/10V	-
1/10V control	-
1/10V control status	-
Max. PB - dimmers distance for 1-10V control	-
Dim PB and ON/OFF module	Yes
Min. and max. dim lighting setting	Yes
IP Rating	1P20
Potentiometer	-

Environment

Working temperature	-10°C to +45°C
Storage temperature	-25°C to +70°C
Cable capacity	Flexible
	Rigid
	1.5 to 6mm ²
	1.5 to 6mm ²

Wiring diagram



Light sensitive switches

Using light sensitive switches can prevent the unnecessary use of lighting circuits where sufficient daylight exists. The benefit of modular devices is the facility to set the ambient lighting level at which the device will operate, and as the device is fitted at the distribution point prevent unauthorised tampering. The remote photocell unit can be mounted up to a distance of 50 metres from the device. Devices available is the standard EEN100 light sensitive switch.

Principle of operation

Both devices control lighting systems according to natural illumination;

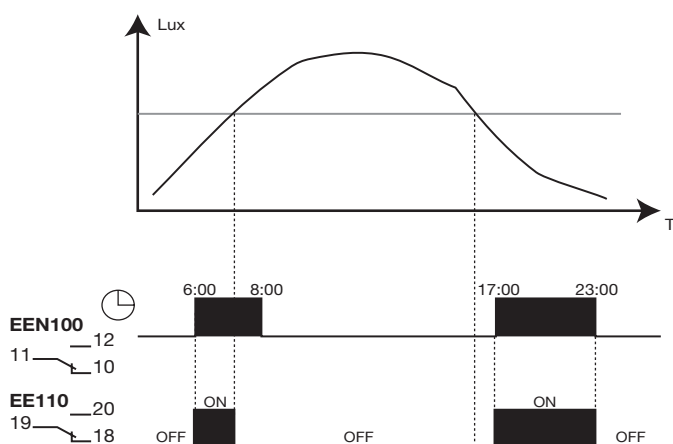
- The user sets the working level
- The photo cell measures the external light level

The output of the EEN100 is:

- ON, when the measured level is lower than the pre-set light level
- OFF, when the measured level is higher than the pre-set light level

Built in time delay

The light sensitive switches include a built in time delay which avoids unnecessary switching due to temporary factors such as car headlight beams etc...



Adjustment of the Working Level

The test position of the override selector 1 makes setting the preset level easier by removing the ON and OFF delay. Select the sensitivity range which suits your application (selector 1)

5 to 100 lux (low light level) application examples;
public lighting, shop windows, signals...

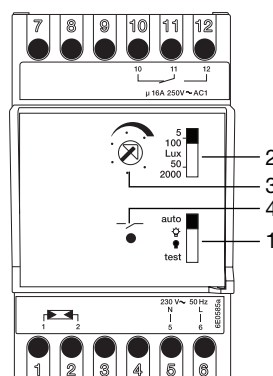
50 to 2000 lux (high light level) application examples;
controls of shades

At the appropriate moment of the day, put the selector 1 in test position; turn the potentiometer 2 up to the switching point (the indicator 4 lights); put the selector back to position 'auto' the normal operating mode of the device.

Mounting the cell

To ensure correct operation of the light sensitive switch, the cell must not be influenced by artificial light or direct solar radiation and should be sheltered from dust and humidity. In case of disconnection of the link between the cell and the light sensitive switch, the output of the device will be switched on. Make sure the light sensitive switch is unplugged before connecting the cell.

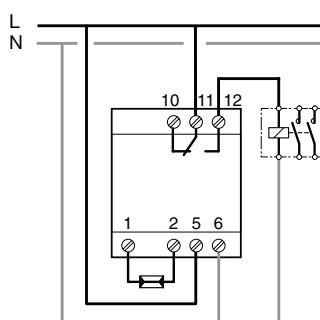
Description - EEN100



The programmable light sensitive switch EEN100 has one main function:

- Light sensitive switch comprising:
 - 1 Override selector switch to allow permanent ON or OFF, auto or test mode
 - 2 Lighting range selector
 - 3 Potentiometer to set light level
 - 4 Indicator to show output switching status

Wiring diagram - EEN100



Electrical characteristics

Supply voltage	230V~ +10%/-15% 50Hz
Consumption	1.5VA max.
Output	1 voltage free changeover contact
Breaking capacity	16A 250V AC1

Lighting

Incandescent lighting	2000W
Halogen lighting 230V	1000W
Uncompensated fluoro lamp	1000W
Compensated fluoro lamp in series (10µF)	1000W
Parallel fluoro lamps (15µF)	200W
Compensated duo fluoro lamps in series	1000W

Functional characteristics

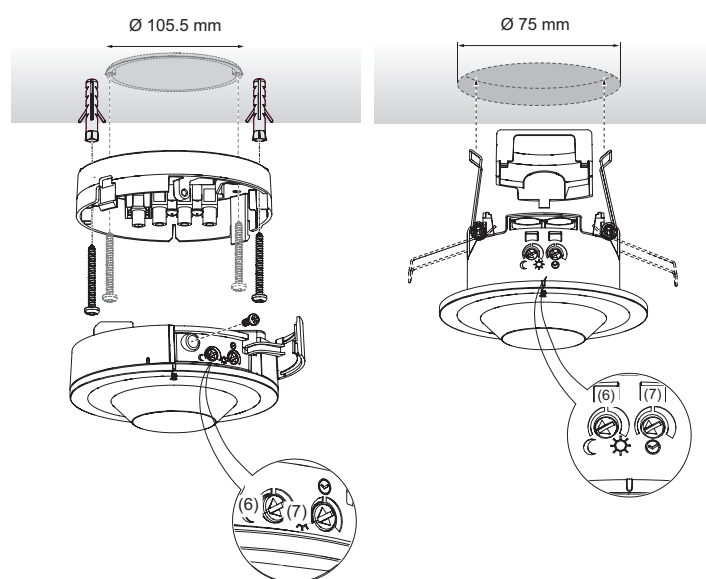
2 sensitivity ranges	5 to 100 lux and 50 to 2000 lux
ON and OFF delay	15 to 60s
Protection class (cell)	IP54
Insulation class (cell)	II

Environment

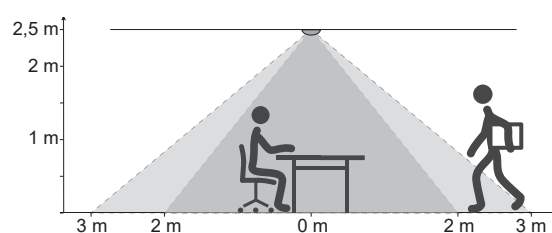
Working temperature	Cell	-30°C to +60°C
	Modular device	-10°C to +50°C
Storage temperature		-20°C to +60°C
Cable capacity	Cell	0.75 to 2.5mm ²
	Modular device	0.5 to 4mm ²
Max. length between cell and modular device		50m
Mounting of the cell with 2 screws		2.5mm Ø

Electrical characteristics	EE804A (surface)	EE805A (flush)
Supply voltage	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz
Standby power consumption	< 0.3 W	< 0.3 W
Switching time	Adjustable	Adjustable
Operation	5 sec – 30 min	5 sec – 30 min
Factory setting	~ 3 min	~ 3 min
Response brightness	Adjustable 5 – 1000 Lux	Adjustable 5 – 1000 Lux
Factory setting	200 Lux	200 Lux
Recommended installation height	2.5 m – 3.5 m	2.5 m – 3.5 m
Maximum installation height	4 m	4 m
Detection zone motion diameter (fitting height 2.5 m)		
across the detector	6 m	6 m
Frontal movement towards the detector	4 m	4 m
Detection zone presence diameter (Fitting height 2.5 m)	4 m	4 m
Detection angle	~ 360°	~ 360°
Contact power	10 A	10 A
230 V incandescent halogen lamp	2300 W	2300 W
LED/compact fluorescent lamps	20 x 20 W (400 W)	20 x 20 W (400 W)
Electrical transformer	1500 VA	1500 VA
Electronic transformer	1500 W	1500 W
Parallel compensated fluorescent tubes	1000 W	1000 W
Fluorescent tubes with electronic ballast	1000 W	1000 W
Operating temperature	-5°C to +45°C	-5°C to +45°C
Storage/transport temperature	-25°C to +70°C	-25°C to +70°C
Ingress/Impact Protection and/ Protection Class	IP21/IK 04 II	IP21/IK 04 II
Dimensions	Ø 100 x 50 mm	Ø 90 x 61 mm

Hole diameter

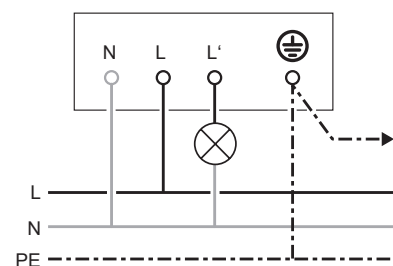


Detection zone



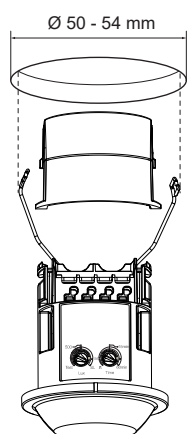
Connection

ON/OFF wiring

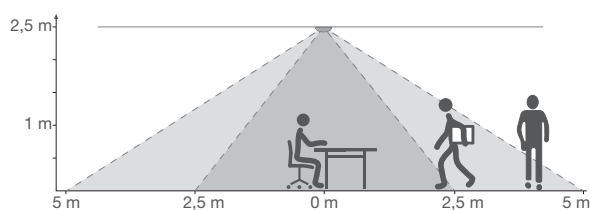


Electrical characteristics	EER501
Supply voltage	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz
Standby power consumption	< 0.5 W
Switching time	Adjustable
Operation	5 sec – 60 min - pulse (2s)
Factory setting	~ 15 min
Response brightness	Adjustable 5 – 2000 Lux
Factory setting	500 Lux
Recommended installation height	2.5 m – 3.5 m
Maximum installation height	4 m
Detection zone motion diameter (fitting height 2.5 m)	
Across the detector	10 m
Frontal movement towards the detector	5 m
Detection zone presence diameter (Fitting height 2.5 m)	5 m
Detection angle	~ 360°
Cable length from the first to the last device	max. 50 m
Number of slave devices per master	max. 10
Contact power	10 A
230 V incandescent halogen lamp	2000 W
LED/compact fluorescent lamps	20 x 20 W (400 W)
Electrical transformer	1500 VA
Electronic transformer	1500 W
Parallel compensated fluorescent tubes	1000 W/130µF
Fluorescent tubes with electronic ballast	1000 W
Operating temperature	-5°C to +45°C
Storage/transport temperature	-20°C to +70°C
Ingress/Impact Protection and Protection Class	IP41/IK 04
Dimensions	
Flush mounted version (Ø x H)	Ø 62 x 86.2 mm

Hole diameter

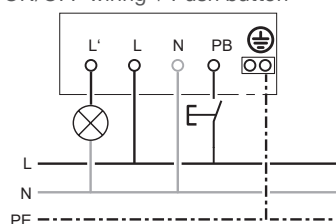


Detection zone

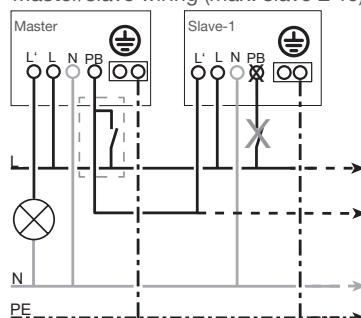


Connection

ON/OFF wiring + Push button

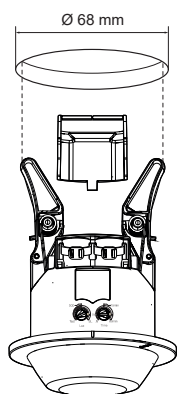


Master/slave wiring (max. slave ≤ 10)

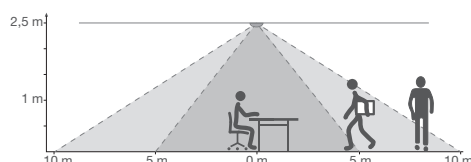


Electrical characteristics	EER503/EER513
Supply voltage	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz
Standby power consumption	< 0.5 W
Switching time	Adjustable
Operation	5 sec – 60 min - pulse (2s)
Factory setting	~15 min
Response brightness	Adjustable 5 – 2000 Lux
Factory setting	500 Lux
Recommended installation height	2.5 m – 3.5 m
Maximum installation height	4 m
Detection zone motion diameter (fitting height 2.5 m)	
Across the detector	20 m
Frontal movement towards the detector	10 m
Detection zone presence diameter (Fitting height 2.5 m)	10 m
Detection angle	~ 360°
Cable length from the first to the last device	max. 50 m
Number of slave devices per master	max. 10
Contact power	10 A
230 V incandescent halogen lamp	2000 W
LED/compact fluorescent lamps	20 x 20 W (400 W)
Electrical transformer	1500 VA
Electronic transformer	1500 W
Parallel compensated fluorescent tubes	1000 W/130µF
Fluorescent tubes with electronic ballast	1000 W
Operating temperature	-5°C to +45°C
Storage/transport temperature	-20°C to +70°C
Ingress/Impact Protection and Protection Class	IP41/IK 04 II
Dimensions	
Flush mounted version (Ø x H)	Ø 85 x 75.9 mm
Surface mounted version (Ø x H)	Ø 105 x 59.7 mm
Terminal capacity	
Screwless terminals (loop through)	0.5 – 2.5 mm²

Hole diameter

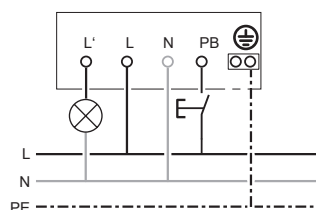


Detection zone

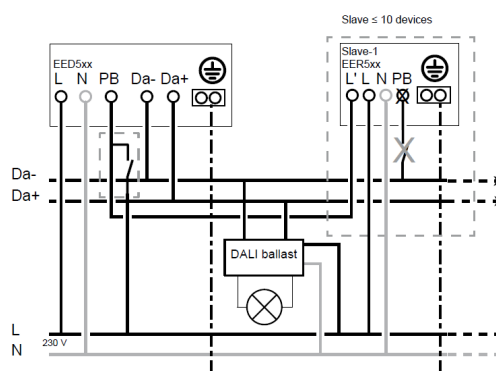


Connection

ON/OFF wiring + Push button

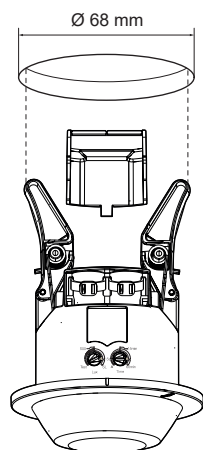


Master/slave wiring (max. slave ≤ 10)

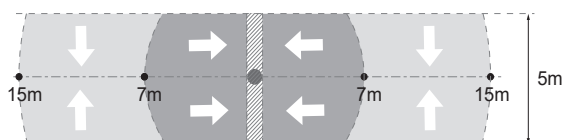


Electrical characteristics	EER505/EER515
Supply voltage	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz
Standby power consumption	< 0.5 W
Switching time	Adjustable
Operation	5 sec – 60 min - pulse (2s)
Factory setting	~ 15 min
Response brightness	Adjustable 5 – 2000 Lux
Factory setting	500 Lux
Recommended installation height	2.5 m – 3.5 m
Maximum installation height	4 m
Detection zone motion diameter (fitting height 2.5 m)	
Perpendicular to the detector	30 x 5 metres
Frontal movement towards the detector	14 x 5 metres
Detection angle	~ 360°
Cable length from the first to the last device	max. 50 m
Number of slave devices per master	max. 10
Contact power	10 A
230 V incandescent halogen lamp	2000 W
LED/compact fluorescent lamps	20 x 20 W (400 W)
Electrical transformer	1500 VA
Electronic transformer	1500 W
Parallel compensated fluorescent tubes	1000 W/130µF
Fluorescent tubes with electronic ballast	1000 W
Operating temperature	-5°C to +45°C
Storage/transport temperature	-20°C to +70°C
Ingress/Impact Protection and Protection Class	IP41/IK 04 II
Dimensions	
Flush mounted version (Ø x H)	Ø 85 x 75.9 mm
Surface mounted version (Ø x H)	Ø 105 x 59.7 mm
Terminal capacity	
Screwless terminals (loop through)	0.5 – 2.5 mm²

Hole diameter

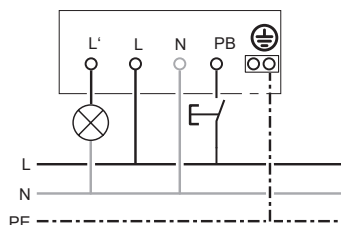


Detection zone

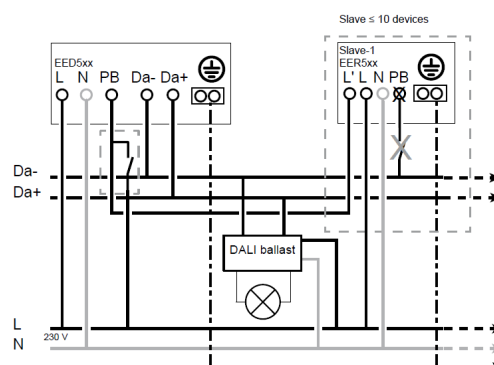


Connection

ON/OFF wiring + Push button

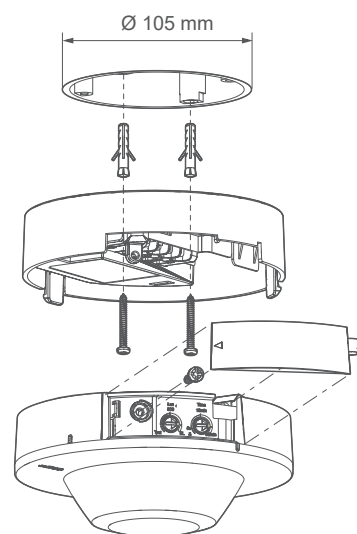


Master/slave wiring (max. slave ≤ 10)

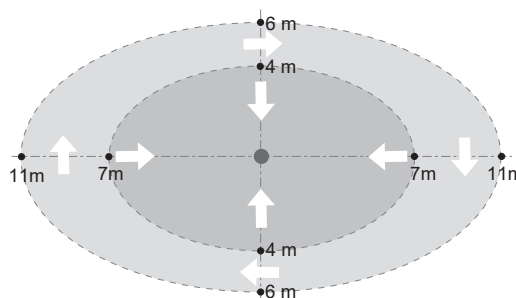


Electrical characteristics	EER518
Supply voltage	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz
Standby power consumption	< 0.5 W
Switching time	Adjustable
Operation	5 sec – 60 min - pulse (2s)
Factory setting	~ 15 min
Response brightness	Adjustable 5 – 2000 Lux
Factory setting	500 Lux
Recommended installation height	6 m – 9 m
Maximum installation height	10 m
Detection zone motion diameter	
(fitting height 2.5 m)	22 x 12 metres
Perpendicular to the detector	14 x 8 metres
Frontal movement towards the detector	
Detection angle	~ 360°
Cable length from the first to the last device	max. 50 m
Number of slave devices per master	max. 10
Contact power	10 A
230 V incandescent halogen lamp	2000 W
LED/compact fluorescent lamps	20 x 20 W (400 W)
Electrical transformer	1500 VA
Electronic transformer	1500 W
Parallel compensated fluorescent tubes	1000 W/130µF
Fluorescent tubes with electronic ballast	1000 W
Operating temperature	-5°C to +45°C
Storage/transport temperature	-20°C to +70°C
Ingress/Impact Protection and Protection Class	IP41/IK 04
Dimensions	
Surface mounted version (Ø x H)	Ø 105 x 59.7 mm
Terminal capacity	
Screwless terminals (loop through)	0.5 – 2.5 mm²

Hole diameter

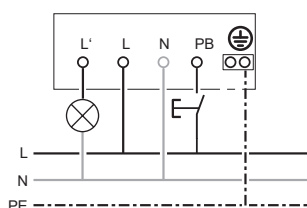


Detection zone

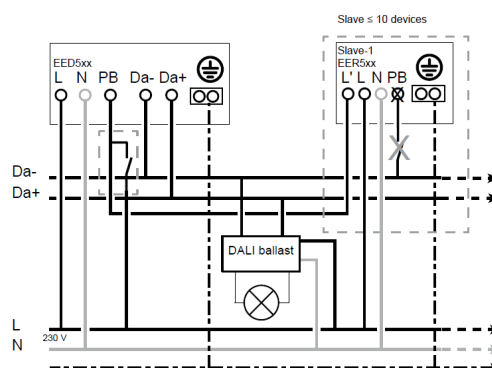


Connection

ON/OFF wiring + Push button



Master/slave wiring (max. slave ≤ 10)

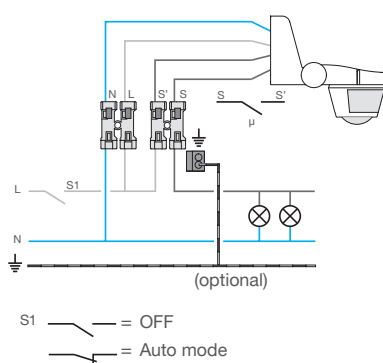


Electrical characteristics	EE860	EE870	EE871
Supply voltage	230 V ~, +10%/-15% 50/60 Hz	230 V ~, +10%/-15% 240 V ~, +6/-6% 50/60 Hz	230 V ~, +10%/-15% 50/60 Hz
Standby power consumption	1.2 W		
Switching time	Adjustable		
Operation	5 sec – 30 min - pulse		
Response brightness	Adjustable 5 – 1000 Lux		
Motion detection zone (Fitting height 2.5 m)			
Detector tilt at 0°	12 x 8 m	20 x 8 m	
Detector tilt at 30°	12 x 16 m	20 x 16 m	
Detection angle	~ 140°	~ 220°	~ 360°
Contact power	10 A	10 A	10 A
230 V incandescent halogen lamp	2300 W	2300 W	2300 W
LED/compact fluorescent lamps	10 to 20 W (200 W)	10 to 20 W (200 W)	10 to 20 W (200 W)
Electrical transformer	1500 VA	1500 VA	1500 VA
Electronic transformer	1500 VA	1500 VA	1500 VA
Parallel compensated fluorescent tubes	400 W/45 µF	400 W/45 µF	400 W/45 µF
Fluorescent tubes with electronic ballast	580 W	580 W	580 W
Storage/transport temperature	-20°C to +60°C		
Ingress/Impact Protection and Protection Class	IP55/IK06 II		
Dimensions	153 x 91 x 139mm		
Surface mounted version (W x H x D)			
Terminal capacity	Rigid 1.5mm²		
Screwless terminals (loop through)			

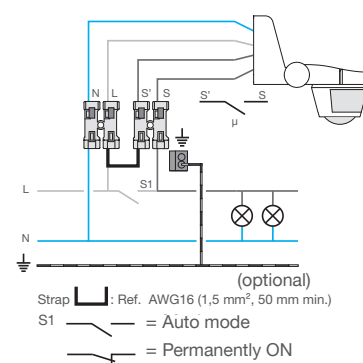
Connection

ON/OFF wiring

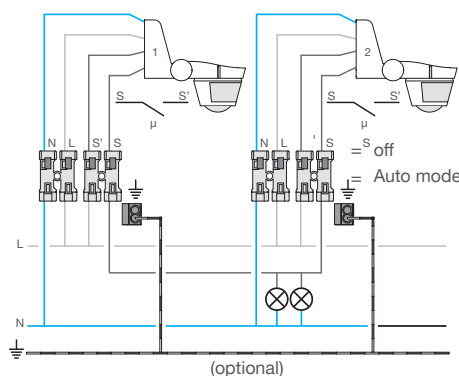
Auto/Stop operation



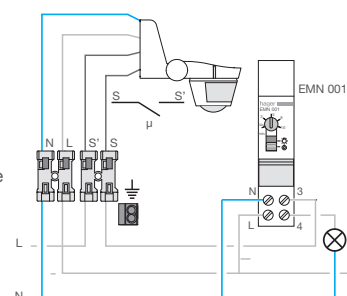
Auto/On operation



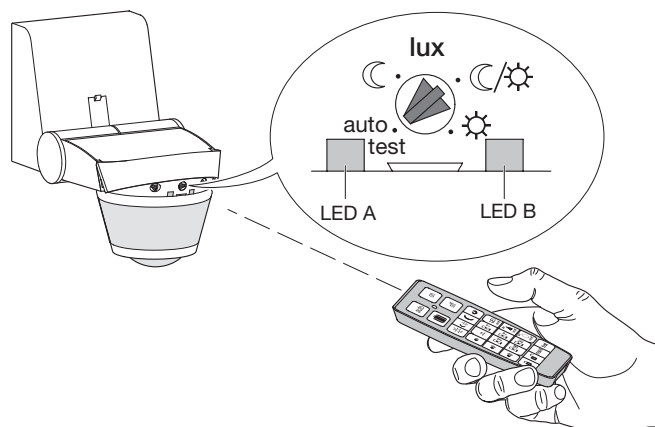
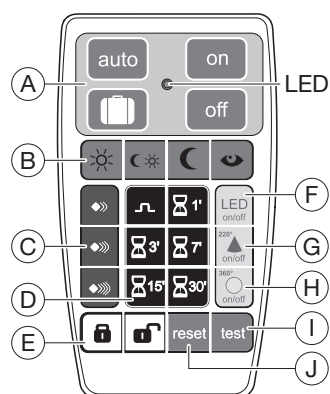
Parallel operation



Timer control



Description EE806



Use

The remote control allows you to set or modify settings on the comfort movement detectors, ref. EE860, EE870, EE871. Every button corresponds to a command. The LED flashes every time a button is pressed. The 4 buttons at the top can be accessed even when the remote control is locked. To lock/unlock the remote control and the settings, just press **I** and **J** for 1 sec.

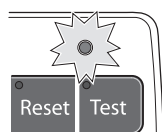
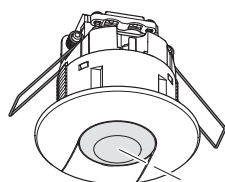
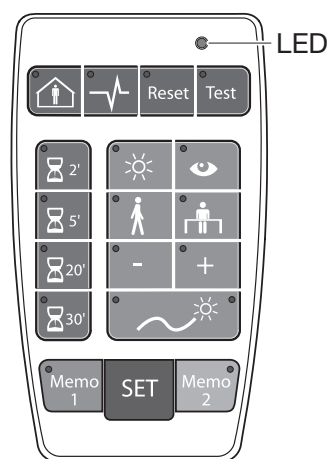
Key

- A** User commands: mode Auto, holidays (simulation of presence) presetting ON, presetting OFF
- B** Setting Lux (day, twilight, night, ambient lighting learning)
- C** Sensitivity settings
- D** Fixed time settings
- E** To lock/unlock the settings of the detector
- F** ON/OFF of the LED A (detection) of the detector
- G** ON/OFF of the 220° detection of the EE87x detectors
- H** ON/OFF of the 360° detection of the EE87x detectors
- I** Test
- J** Reset, return to manufacturer's settings

Technical specifications

- Power supply : 1x 3V CR2032
- Shelf life of battery : 5 years
- Protection index : IP30

Description EE807



The acknowledgment LED blinks during the sending of the IR message.

Technical specifications

Power supply: 1x 3V CR2032
Shelf life of battery: 2.5 yrs
Protection index: IP30

Use

The remote control allows the user to set or modify settings on the EER5xx detector when the potentiometer is on "auto test". It allows single and multiple settings. The SET key is used to send the IR messages to the occupancy sensors. Multiple settings can be stored in Memo 1 and Memo 2 and recalled to set several devices.

Single setting

Example: do a reset.



Multiple settings

Define the parameters to be changed and press SET to send. Example: for 25min. & corridor use, press 20', 5' and corridor.



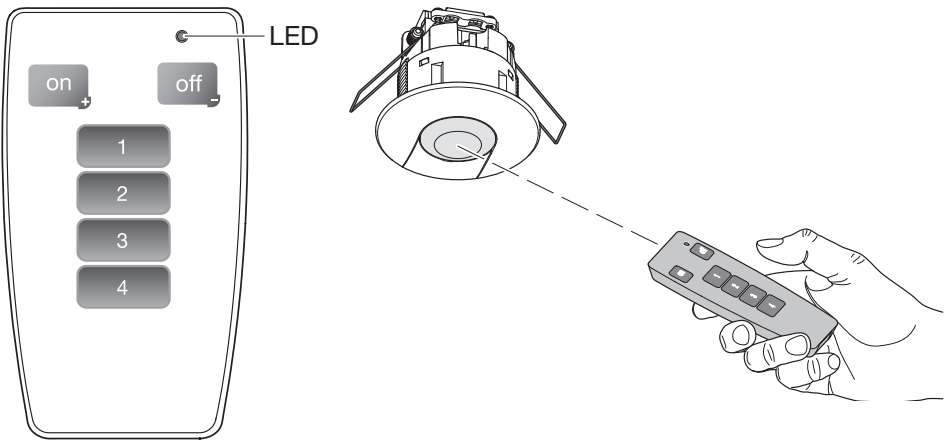
In the case of 2 opposite states the green LED denotes ON and the red LED denotes OFF (except presence/ absence). When no function is selected all LED's are OFF.

Settings available

Key	Meaning	Indication	Function
	Presence	Green LED on	Presence on (auto mode)
	Absence	Red LED on	Absence on (semi-auto mode)
	Power up	Green LED on	The light is automatically switched ON for 30s after power up.
		Red LED on	During warm up phase, the light output is off
Reset	Reset	LED on	To return to factory settings (Lux = 400, time = 20min., presence on, power up off & cell active)
Test	Test	LED on	To validate the detection area
	Time	LED on	To set the time. It is possible to add times e.g. press 2' & 5', time value is 7'
	Day level 1000 Lux	LED on	To set the value on 1000 Lux
	Learn	LED on	To learn the current Lux level
	Corridor 200 Lux	LED on	To set the value on 200 Lux
	Office 400 Lux	LED on	To set the value on 400 Lux
-	Lux +	LED on	To increase the Lux level (+100)
+	Lux -	LED on	To decrease the Lux level (-100)
	Active cell	Green LED on	The light is continuously measured
	Passive cell	Red LED on	The product doesn't switch the light off even if the ambient luminosity is sufficient

Memo & set keys	Meaning	Indication	Function
Memo 1	Press	LED is on until a setting is changed	To load/unload Memo 1
	Long press	LED is on for 5s., then blinks until release press. After release, the LED goes off in case of setting change	To save the current setting as Memo 1
Memo 2	Press	LED is on until a setting is changed	To load/unload Memo 1
	Long press	LED is on for 5s., then blinks until release press. After release, the LED goes off in case of setting change	To save the current setting as Memo 1
SET	Short press	LED flashes	To send an IR message of the current setting

Description EE808

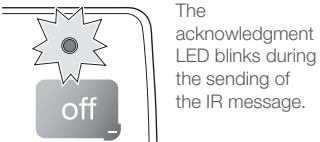


Use

The remote control allows the user to set or modify settings on the EER5xx detector. Each button corresponds to a command.

Technical specifications

Power supply: 1x 3V CR2032
Shelf life of battery: 3.5 yrs
Protection index: IP30



Settings available

Key	Action	Function
	Short press (<0.5s)	On
	Long press (>0.5s)	Dim up
	Short press	Off
	Long press (>0.5s)	Dim down
	Short press	To start scene 1
	Long press (>0.5s)	To learn scene 1
	Short press	To start scene 2
	Long press (>0.5s)	To learn scene 2
	Short press	To start scene 3
	Long press (>0.5s)	To learn scene 3
	Short press	To start scene 4
	Long press (>0.5s)	To learn scene 4

	ECx140D	ECx180D	ECx180T	ECx380D	ECx310D	ECx300C
Electrical characteristics	1Ph - 40A	1Ph - 80A	1Ph - 80A (3 track)	3Ph - 80A	3Ph - 125A	3Ph - A via CT
Supply voltage	230V AC	230V AC	230V AC	400V AC	400V AC	400V AC
Frequency	45/65Hz	92/276Hz	184/276Hz	45/65Hz	45/65Hz	45/65Hz
Starting current	20mA	15mA	15mA	15mA	20mA	1mA
Base current	5A	5A	5A	5A	5A	1(6) A
Max current	40A	80A	80A	80A	125A	6A
Consumption on voltage circuit	<2<1	<2/<1	<2/<1	<2/<0.6	<2/<0.6	<2/<0.6
Consumption on current circuit	<1	<1	<1	<0.7	<0.7	<0.7
Accuracy	Class 1 (1%) in accordance with IEC 62053 and IEC 61557	Class 1 (1%) in accordance with IEC 62053 and IEC 61557	Class 1 (1%) in accordance with IEC 62053 and IEC 61557	Class 1 (1%) in accordance with IEC 62053 and IEC 61557	Class 1 (1%) in accordance with IEC 62053 and IEC 61557	Class 1 (1%) in accordance with IEC 62053 and IEC 61557
Connection	Direct	Direct	Direct	Direct	Direct	Via CT
Display	Digital 5+2 Digit	Digital 7+2 Digit	Digital 7+2 Digit	Digital 7+2 Digit	Digital 7+2 Digit	Digital 7+2 Digit
Metrological LED	Blinking = 5wh/impulse	Blinking = 1wh/impulse	Blinking = 2wh/impulse	Blinking = 1wh/impulse	Blinking = 1wph/impulse	Blinking = 1wph/impulse
Pulse output (Except ECRxxxx)	At 100wh load 1 pulse = 100ms 3 - 27 VAC 5 - 39 VDC	At 100wh load 1 pulse = 30ms -100ms	At 100wh load 1 pulse = 30ms -100ms	At 100wh load 1 pulse = 30ms -100ms	At 100wh load 1 pulse = 30ms -100ms	At 100wh load 1 pulse = 30ms -100ms
Modbus (Only ECR140D)	RS-485 3 wire 120 Ohm resistor required (Only ECR140R)	RS-485 3 wire 120 Ohm resistor required (Only ECR180D)	RS-485 3 wire 120 Ohm resistor required (Only ECR180T)	Built in 120 Ohm resistor (Only ECR380D)	Built in 120 Ohm resistor (Only ECR310D)	Built in 120 Ohm resistor (Only ECR300C)
Width	1 module	2 modules	4 modules	4 modules	6 modules	4 modules
Connection capacity of digital input	0.5 to 2.5mm ²	0.8 to 2.5mm ²	0.8 to 2.5mm ²	0.8 to 2.5mm ²	0.8 to 2.5mm ²	0.8 to 2.5mm ²
Connection capacity of power supply	0 to 16mm ²	0 to 33mm ²	0 to 33mm ²	0 to 33mm ²	0 to 50mm ²	0 to 4mm ²
Protection degree	IP20 / IK03	IP20 / IK03	IP20 / IK03	IP20 / IK03	IP20 / IK03	IP20 / IK03
Operating temperature	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C
Storage temperature	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C	-25°C to +70°C

Description - SM102E

- 1 Key-pad with 4 dual-function keys (display or programming)
- 2 Backlighted LCD display
- 3 Phase
- 4 Values
- 5 Unit
- 6 Energy metering indication



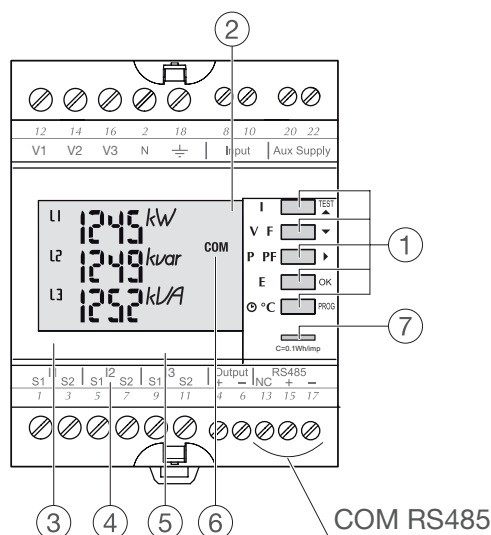
Description - SM103E

- 1 Key-pad with 6 dual-function keys (display or programming)
- 2 Backlighted LCD display
- 3 Phase
- 4 Values
- 5 Unit
- 6 Energy metering indication
- 7 Hour meter and energy display
- 8 Alarm relay 1
- 9 Alarm relay 2



Description - SM101C

- 1 Key-pad with 4 dual-function keys (display or programming)
- 2 Backlighted LCD display
- 3 Phase
- 4 Values
- 5 Unit
- 6 Activity indicator on the communication bus
- 7 Energy metering indication



Electrical characteristics

Current (TRMS)	SM102E	SM103E	SM101C
I (1st CT)	up to 9,999A	up to 9,995A	5A to 9,999A
I (2nd CT)	5A	1 or 5A	5A
In	0.5% (from 10 to 110% to In)	0.2% (from 10 to 110% to In)	Calculated
Minimum measuring current (2nd CT)	5mA	10mA	5mA
Input consumption	<0.6 VA	<0.3 VA	<0.6VA per phase
Permanent overload (2nd CT)	6A	10A	6A
Accuracy	±0.2%	±0.2%	±0.2%
THD	±1%	±1%	±1%
Update period	1sec	1sec	1sec

Voltage (TRMS)			
U	50V AC to 500V AC (Ph-Ph) 28V AC to 289V AC (Ph-N)	17V AC to 700V AC (Ph-Ph) 11V AC to 404V AC (Ph-N)	50V AC to 520V AC (Ph-Ph) 28V AC to 300V AC (Ph-N)
Input consumption	-	-	<0.1VA per phase
Permanent overload (2nd CT)	800V AC	760V AC	760V AC
Accuracy	±0.2%	±0.2%	±0.2%
THD	±1%	±1%	±1%
Update period	1sec	1sec	1sec

Power			
Accuracy (P,Q)	±0.5 to ±2% (from -90° to +90°)	±0.5 to ±2% (from -90° to +90°)	±0.5%
Accuracy (S)	±1%	±1%	±1%
Accuracy (PF)	±0.5% (for 0.5<PF<1)	±0.5% (for 0.6<PF<1)	±0.02%
Update period	1sec	1sec	1sec

Energy			
Accuracy (Ea)	Class 0.5s	Class 0.5s	Class 0.5s
Accuracy (Er)	Class 2	Class 1	Class 2
Update period	1sec	1sec	1sec

Frequency			
F	45Hz to 65Hz	45Hz to 65Hz	45Hz to 65Hz
Accuracy	±0.1%	±0.02%	±0.1%
Update period	1sec	1sec	1sec

Supply			
Voltage	110V AC to 400V AC ±10%	110V AC to 400V AC ±10%	200V AC to 277V AC ±15%
Frequency	50/60Hz	50/60Hz	50/60Hz
Consumption	<10VA	<10VA	<5VA

Environment			
Protection degree	IP52 (front panel) IP30 (case)	IP52 (front panel) IP30 (case)	IP51 (front panel) IP20 (case)
Operating temperature	-10°C to +55°C	-10°C to +55°C	-10°C to +55°C
Storage temperature	-20°C to +85°C	-20°C to +85°C	-20°C to +70°C
Insulation category	III (480Vac Ph-Ph)	III (480Vac Ph-Ph)	III (300Vac Ph-Ph)
Degree of pollution	PD2	PD2	PD2

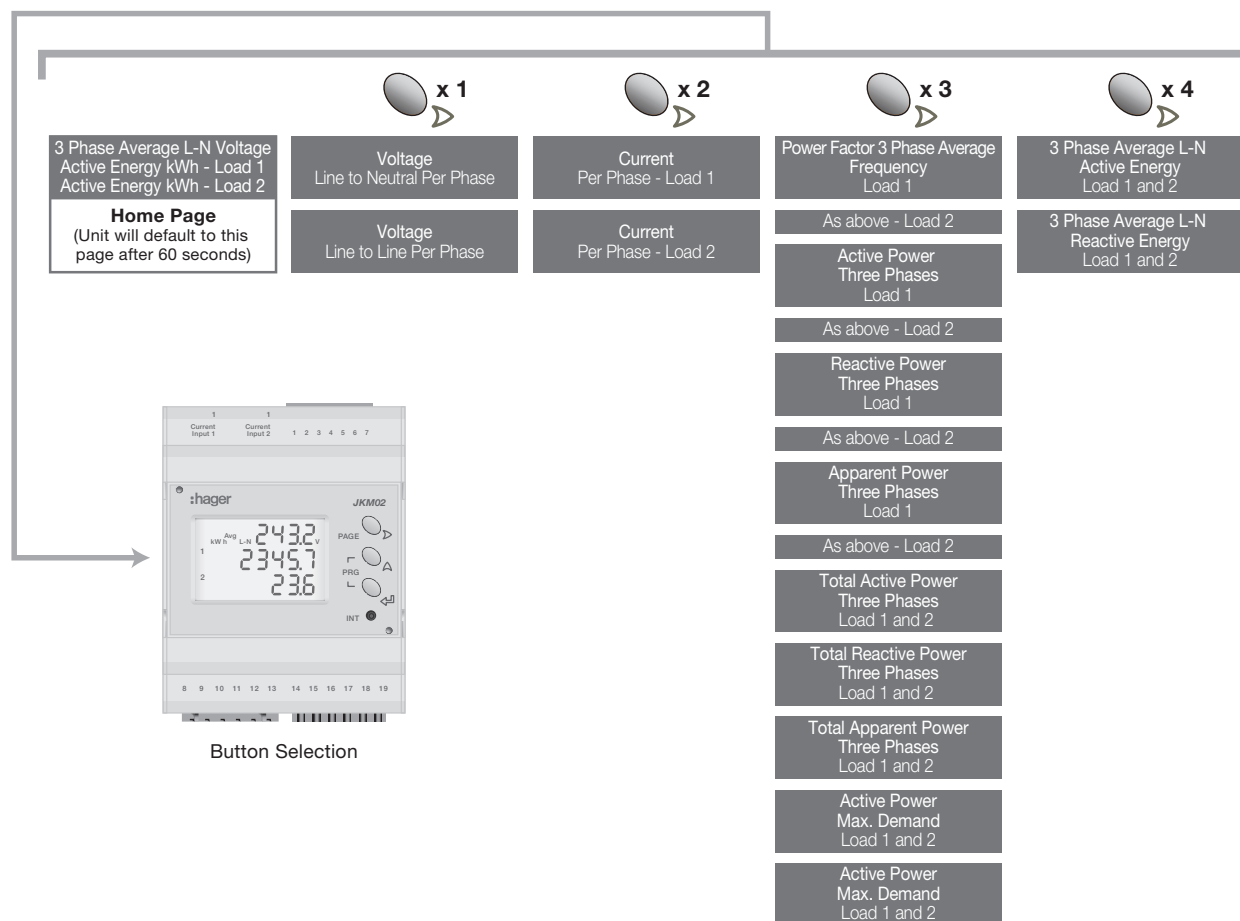
Communication			
Metrological LED	-	-	0.1Wh/pulse
Pulse output	-	-	30Vdc/27mA Max
Communication	Three phase (3 or 4 wires), two phase (2 wire) and single phase networks	Three phase (3 or 4 wires), two phase (2 wire) and single phase networks	RS485 2/3 wires half duplex Jbus/Modbus 2,400bds to 38,400bds Parity (no,odd,even) 1 or 2 Stop bytes

Shape			
Weight	400g	400g	215g
Size	96mm x 96mm x 60mm or 96mm x 96mm x 80mm with all optional modules	96mm x 96mm x 60mm or 96mm x 96mm x 80mm with all optional modules	4 mod, 73mm x 90mm x 67mm

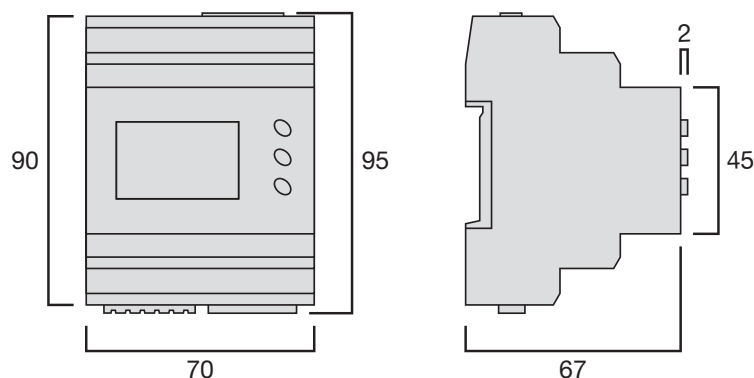
Primary rated current	50A - 2,000A
Rated secondary current	5A
Rated frequency	50 - 60Hz
Highest voltage for equipment Um	720V
Rated power-frequency withstand voltage (r.m.s.)	3kV
Instrument security factor	FS 5
Rated continuous thermal current	1.2 x In
Current rating	120%
Rated short time thermal current	$I_{th} = 60 \times I_n$ (max 50kA)
Rated dynamic current	$I_{dyn} = 2.5 \times I_{th}$ (max 120kA)
Permissible ambient temperature	-40°C to +40°C
Class of insulation in accordance with IEC 60085	E
Protection rating	IP20
Tightening torque	1.5 - 2Nm

Subject to technical modification

JKM02 Function Diagram



Dimension Diagrams (mm)



Please allow space above and below the meter for cable connections.

