## ELTAKO POWERLINE

## THE IDEAL SUPPLEMENT TO THE ELTAKO WIRELESS BUILDING SYSTEM WITH ENOCEAN.

THE ELECTRICITY WIRING IN BUILDINGS ACTS AS THE ELTAKO POWERLINE BUS. NOW YOU CAN TRANSMIT SENSOR DATA AND TELEGRAMS TO ACTUATORS OVER THE EXISTING ELECTRICITY WIRING INSTEAD OF BROADCASTING WIRELESS TELEGRAMS THAT IS THE BASIC DIFFERENCE BETWEEN THE TWO TECHNOLOGIES.

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## Function rotary switches



Standard setting ex works.


## Function rotary switches



Standard setting ex works.

## FPLG14

Wireless Powerline gateway. Bidirectional. Standby loss only 0.4 watt.

Modular device for DIN-EN 60715 TH35 rail mounting.
2 module $=36 \mathrm{~mm}$ wide, 58 mm deep.
Supply voltage 230 V .
Connection to the Eltako-RS485 bus. Bus cross wiring and power supply with jumper.
This gateway translates wireless and Powerline telegrams in both directions.
Operation in conjunction with FAM14 or FTS14KS.
GFVS control functions for dimming, heating and shading are also possible.
All Powerline telegrams from the electricity wiring system are automatically translated into RS485 bus telegrams and may also be sent as wireless telegrams by connected FTD14 devices.
Only wireless and RS485 bus telegrams taught into the FPLG14 are translated into Powerline telegrams and modulated onto the electricity wiring system. Up to 120 different addresses. Teach-in takes place by means of rotary switches on the front of the devices or using the PCT14 as described in the user's manual.

| FPLG14 | Wireless Powerline gateway | EAN 4010312316771 | $\mathbf{9 7 , 1 0} \mathbf{€} / \mathbf{p c .}$ |
| :--- | :--- | :--- | ---: |

## FPLT14

Wireless Powerline tunnel gateway. Uni-and bidirectional. Standby loss only 0.4 watt.

Modular device for DIN-EN 60715 TH35 rail mounting.
2 module $=36 \mathrm{~mm}$ wide, 58 mm deep.
Supply voltage 230 V .
Connection to the Eltako-RS485 bus. Bus cross wiring and power supply with jumper.
This gateway transmits RS485 bus telegrams over powerline with large distance over the electrical net. Minimum 2 pcs FPLT14 are required.
Up to 10 FPLT14 can unidirectionally send the bus telegrams of their FAM14 / FTS14KS installation with Powerline to another FAM14 / FTS14KS installation via a local FPLT14.
Two FPLT14 can exchange the bus telegrams bidirectionally from 2 FAM14 / FTS14KS installations with Powerline via the installed wires. Teach-in up to 120 telegram IDs according to the operating instructions, also with PCT14. Because of the transmission delay, short-click evaluations for FUD and FSB actuators are not possible.

| FPLT14 | Wireless Powerline tunnel gateway | EAN 4010312317723 | $\mathbf{9 7 , 1 0} € / \mathbf{p c .}$ |
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## PL-FGW

Powerline wireless gateway. Bidirectional. $53 \times 43 \mathrm{~mm}, 40 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. Standby loss 1.1 watt.

Supply voltage 230 V. Power consumption in operation 1.1 watt.
Powerline telegrams from the grid taught-in into the gateway are automatically transformed and sent into Eltako-wireless telegrams.
Wireless telegrams taught-in into the gateway are transformed into powerline telegrams and modulated to the power supply grid.
By pressing the reset button, the PL-FGW will be put into the teaching-in mode. The rotary switch selects, whether wireless or powerline telegrams should be taught-in.
One being taught powerline sensor is automatically assigned by operating in the learning mode , a free radio channel.
Up to 80 Powerline sensors or feedbacks can be taught-in. The function as a universal, direction or central pushbutton for a taught-in wireless sensor is assigned via slide switch of the PL-FGW. The Powerline address is set via rotary switch g and e which should be addressed with the wireless sensor. In addition to wireless switches also Eltako wireless sensors such as window contacts and motion detectors can be taught-in. Also control functions of the GFVS for dimmer switches and roller shutter control is possible. The implementation into practical Powerline telegrams für PL actuators is done automatically. Up to 100 different wireless sensor can be taught-in.
All records and configurations can be accessed via Sienna-Professional software and power supply. Other functions can then be selected which are not available through the direct teaching-in via rotary switch. In addition, the gateway can be set into the learn and deletion mode, so that a manual teaching-in can be carried out without direct access to the device.
The PL-FGW also serves as a relay station for communication between the temperature controller PL-SAMTEMP with EnOcean actuators FKS-MD1 and FKS-E. Up to 20 actuators and PL-SAMTEMP are managed here.

| PL-FGW | Powerline wireless gateway | EAN 4010312324110 | $137,30 € /$ pc. |
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## PL-RPT

Powerline repeater. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. Standby loss only 0,5 watt.

The repeater supports greater ranges. With cable lengths of $>300 \mathrm{~m}$ the repeater is normally located in a distributor between the sensor and the actuator.
The repeater repeats commands from sensors with the same address $g$, e.
Feedback messages from actuators are not repeated.
Two rotary switches are located on the front to assign addresses:
The left-hand rotary switch determines the group address $g$ with 16 alphanumeric digits from $A$ to $P$. The right-hand rotary switch determines the element address e with 16 numerical values.
Above it is a slide switch which is a configuration switch with positions $\mathbf{0 , 1} 1$ and 2.
Position 0: Central commands are repeated irrespective of the repeater's e address. With address $g, e=0$, only central commands are repeated.
Position 1: With address $\mathrm{g}, \mathrm{e}=0$ at the repeater, all commands of group g are repeated.
Position 2: Unassigned.
Addresses can be changed live or without voltage.
On the left of the rotary switches is a red LED to display all activities.
Next to that is the Reset button and to the right of that is Service Pin (P).
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$.


## PL-SAMIL

Powerline actuator with 1 channel with sensor input. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep, for mounting in 58 mm switch boxes. Used as impulse switch or relay. 1 NO contact not potential free 10 A/250 V AC, incandescent lamps 2000 watts. Sensor input 230 V. Standby loss only 0,5 watt. To control and switch at the same place.

Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address g with 16 alphabetical values from $A$ to $P$. The right rotary switch defines the element address e with 16 numerical values from 0 to 15. Above it is a slide switch which acts as a configuration switch with positions $\mathbf{0 , 1} 1$ and 2 .
Position 0: Sensor input functions as pushbutton (impulse switch).
Position 1: Sensor input functions as NO contact (relay).
Position 2: A change-over switch is evaluated as a pushbutton.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$.

Typical connections on page 12 .


Typical connections on page 12.

## PL-SAM2L

Powerline actuator with 2 channels. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. Used as impulse switch or relay. 1 + 1 NO contacts not potential free 5 A/250 V AC, incandescent lamps 1000 watts. 2 sensor inputs with internal low voltage. Standby loss only 0,5 watt. To control and switch at the same place.

Use only potential free switching elements. Internal low voltage applied to the sensor inputs.
Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address $g$ with 16 alphabetical values from $A$ to $P$.
The right rotary switch defines the element address e with 16 numerical values from 0 to 15.
Above it is a slide switch which acts as a configuration switch with positions 0,1 and 2.
Position 0: Sensor inputs function as pushbuttons (impulse switches).
Position 1: Sensor input functions as NC contact (relay).
Position 2: A change-over switch is evaluated as a pushbutton.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$. Next to them are three wires with wire end-sleeves for the two control inputs with internal low voltage.

| PL-SAM2L | Powerline actuator 2 channels with <br> 2 sensor inputs | EAN 4010312316672 | $\mathbf{1 1 1 , 9 0} \mathbf{€} / \mathbf{p c .}$ |
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## VENETIAN BLIND ACTUATOR PL-SAM2 WITH SENSOR INPUTS



Typical connections on page 12 .

## PL-SAM2

Powerline Venetian blind actuator for 1 motor. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. $1+1$ NO contact for motors up to 3 A .2 sensor inputs with internal low voltage. Standby loss only 0,5 watt. To control and switch at the same place.

Use only potential free switching elements. Internal low voltage applied to the sensor inputs.
The control inputs can be used for a Venetian blind pushbutton or a Venetian blind switch.
The runtime is preset to 120 seconds. This can be changed using the SIENNA-Professional installation software.
Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address $\mathbf{g}$ with 16 alphabetical values from $\mathbf{A}$ to $P$.
The right rotary switch defines the element address e with 16 numerical values from 0 to 15.
Above it is a slide switch which acts as a configuration switch with positions $\mathbf{0 , 1} 1$ and 2.
Position 0: Start and stop by pressing Venetian blind pushbutton. Auto stop at end.
Position 1: Comfort switch for Venetian blind slat adjustment. Tip briefly to adjust slats.
$>1$ second same as position 0 .
Position 2: Tip pushbutton to operate, release to stop. Auto stop at end.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$. Next to them are three wires with wire end-sleeves for the two control inputs with internal low voltage.

| PL-SAM2 | Powerline Venetian blind actuator for <br> 1 motor | EAN 4010312316689 | $\mathbf{1 1 1 , 9 0} \boldsymbol{\ell} \mathbf{p c .}$ |
| :--- | :--- | :--- | :---: |



Typical connections on page 12.


## PL-SAMDU

Powerline universal dimmer actuator. $53 \times 43 \mathrm{~mm}, 40 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. Power MOSFET up to 300 W. Automatic lamp detection. Sensor input 230 V . Standby loss only 0,6 Watt. To control and dim at the same place.

Universal dimmer switch for lamps up to 300 W , dependent on ventilation conditions. Dimmable energy saving lamps ESL and dimmable 230V-LED lamps, additionally dependent on the lamps electronics. No minimum load. Zero passage switching with soft ON and soft OFF to protect lamps.
Short-time control commands switch on/off, permanent control varies the brightness to the maximum level. A interruption of control changes the direction of dimming.
The brightness level is stored on switch-off (memory).
In case of a power failure the switch position and the brightness stage are stored and may be switched on when the power supply is restored.
Automatic electronic overload protection and overtemperature switch-off.
Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address $g$ with 16 alphabetical values from $A$ to $P$.
The right rotary switch defines the element address e with 16 numerical values from 0 to 15.
Above it is a slide switch which acts as a configuration switch:
The position AUTO1 allows the dimming of all types of lamps up to 300 watts.
The position LC1 is a comfort position for LED lamps up to 150 watts which are not being dimmed down enough when set to AUTO (trailing phase angle) dependent on the construction and must therefore be forced to leading phase angle.
The position AUTO2 allows the dimming of all types of lamps up to 300 watts.
Increased minimum brightness compared to AUTO1.
In position LC1 no inductive (wound) transformers should be used. In addition, the maximum number of dimmable LED lamps can be lower than in the AUTO position dependent on the construction.
Mixing of L loads (inductive loads, e.g. wound transformers) and C loads (capacitive loads, e.g. electronic transformers) is not permitted. R loads (ohmic loads, e.g. 230 V incandescent lamps and halogen lamps) may be added anytime.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$.

| PL-SAMDU | Powerline universal dimmer actuator <br> 1 channel with sensor input 230V | EAN 4010312316870 | $\mathbf{1 2 6 , 9 0} \mathbf{€} / \mathbf{p c .}$ |
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## PL-AMDIOV

Powerline dimmer actuator $1-10 \mathrm{~V} .53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep, for mounting in 58 mm switch boxes. To switch and/or dim via a $1-10 \mathrm{~V}$ interface. 1 NO non-floating contact 600 VA . Standby loss only 0,5 watt. To activate and dim at different places.

Current sink of max. 30 mA for active and passive electronic ballasts. A Powerline sensor input is required for activation. Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address g with 16 alphabetical values from A to P . The right rotary switch defines the element address e with 16 numerical values from 0 to 15 .
Above it is a slide switch which has no function here.
To the left of the rotary switches is a red LED which indicates all activities. Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$.


## DECENTRALISED TLZ ACTUATOR PL-SAMILT WITH SENSOR INPUT 230 V AND DECENTRALISED ACTUATOR PL-SMIL WITH SENSOR INPUT 230 V



Typical connections on page 12 .


## PL-SAMILT

Powerline TLZ (staircase time switch) actuator with 1 channel. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. Off delay settable from 1 minute to 120 minutes. Switch-off early warning settable. 1 NO contact not potential free $10 \mathrm{~A} / 250 \mathrm{~V} \mathrm{AC}$, incandescent lamps 2000 watts. Sensor input 230 V . Standby loss only 0,5 watt. To control and switch at the same place.

Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address $g$ with 16 alphabetical values from $A$ to $P$. The right rotary switch determines the off-delay time.
Above it is a slide switch which acts as a configuration switch with positions $\mathbf{0 , 1} 1$ and 2.
Position 0: Pushbutton at sensor input with subsequent switching.
Position 1: Same as Position 0 but with switch-off early warning.
Position 2: A change-over switch is evaluated as a pushbutton.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$.

| PL-SAM1LT | Powerline TLZ actuator 1 channel with sensor <br> input 230 V | EAN 4010312316702 | $\mathbf{1 1 1 , 9 0} \mathbf{€} / \mathbf{p c .}$ |
| :--- | :--- | :--- | :--- |

## PL-SMIL

Powerline sensor input with 1 channel. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. Sensor input 230 V. Standby loss only 0,5 watt. To control and switch at different places.

When pressed, the sensor input acts on all actuators with the same address or as a central pushbutton if element address 0 is used.
Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address $g$ with 16 alphabetical values from $A$ to $P$.
The right rotary switch defines the element address e with 16 numerical values from 0 to 15
Above it is a slide switch which acts as a configuration switch with positions 0,1 and 2.
Position 0: Sensor input with reset function as pushbutton.
Position 1: Sensor input functions as NO contact.
Position 2: A change-over switch is evaluated as a pushbutton.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$.

| PL-SM1L | Powerline sensor input 230V | EAN 4010312316740 | $\mathbf{1 0 6 , 0 0} € / \mathbf{p c .}$ |
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Typical connections on page 12.


## PL-SM8

Powerline sensor input with 8 channels. $53 \times 43 \mathrm{~mm}, 25 \mathrm{~mm}$ deep for mounting in 58 mm switch boxes. 8 sensor inputs with internal low voltage. Standby loss only 0,5 watt. To control and switch at different places.

Use only potential free switching elements. Internal low voltage applied to the sensor inputs.
Two rotary switches are located on the front for address assignment:
The left rotary switch defines the group address $\mathbf{g}$ with 16 alphabetical values from $A$ to $P$.
The right rotary switch defines the element address e with 16 numerical values from 0 to 15. Above them is a slide switch which functions as a configuration switch.
Position 0: 2 adjacent inputs as direction pushbuttons for UP/DOWN or ON/OFF.
Position 1: All sensor inputs function separately as NO contacts.
Position 2: All sensor inputs function separately as pushbuttons.
To the left of the rotary switches is a red LED which indicates all activities.
Next to it is a reset pushbutton and to the right of that is a service pin. For functions, please refer to the operating instructions.
The terminals located above are plug-in terminals for conductor cross-sections of $0.2 \mathrm{~mm}^{2}$ to $1.5 \mathrm{~mm}^{2}$. The addresses of the 8 inputs can also be freely assigned if necessary using the SIENNA-Professional software.
The socket strip located above this has 9 plug-in wires with wire end-sleeves.
8 control inputs with internal low voltage.

| PL-SM8 | Powerline sensor inputs, 8 channels, internal <br> low voltage | EAN 4010312316719 | $\mathbf{1 1 1 , 9 0} € / \mathbf{p c .}$ |
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## PL-SAMTEMP

Powerline temperature controller with display, white, $55 \times 55 \mathrm{~mm}$, for mounting in switch systems. In addition a floating control contact 3 A/250 V AC for direct connection of heaters and coolers. Standby loss only 0,4 watt.

The scope of supply comprises a frame R1E and an intermediate frame ZR65/55 for the E-Design, the temperature controller upper part and a bottom part for attachment in 55 mm flush-mounted boxes. The complete display can be removed from the frame for screw mounting.
In normal mode the current room temperature is indicated in the display as well as icons for 'present' or 'absent' and for 'heating on' or 'cooling active'.
Press the pushbuttons $\boldsymbol{i}$ (absent) and (present) to activate the associated setpoint. In setup mode as described in the user's manual, press pushbuttons $\boldsymbol{\Delta}$ and $\boldsymbol{\nabla}$ to display the setpoint and actual temperatures and change the setpoints.
Control heating or cooling with Powerline actuators PL-SAM1L or PL-SAM2L.

| PL-SAMTEMP | Powerline Temperature controller for heating <br> and cooling | EAN 4010312316733 | $\mathbf{2 1 1 , 0 0} \mathbf{€} / \mathbf{p c .}$ |
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## PL-SW-PROF

The coupling element with USB cable and 230 V power supply unit is included in the scope of supply. The software for installation and configuration of the powerline devices PL is available for download under eltako.com.

PL-SW-PROF is a Windows-based program for installing and configuring all PL and SIENNA components and is designed for electricians.
Powerline systems can either be installed or configured using a screwdriver or a PC/laptop. All changes can be made from the PC. Existing installations in a building can also be read and detected. The bus is coupled using a USB port on the PC. Thanks to Powerline technology, the nearest electric socket becomes a bus coupler.
Download in accordance with the included installation instructions from the homepage eltako.com/en -> Software -> Powerline. The operating instructions are available for download at the bottom of the page under Operating Instructions/SIENNA Professional.

| SYSTEM REQUIREMENTS, LAPTOP / PC |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Processor |  | Intel ${ }^{\ominus}$ Pentium ${ }^{\text {® }}$ III 366 MHz or higher |  |  |
| Operating system |  | Server 2003, Windows XP, Vista ( 32 Bit), Windows 7 ( 32 Bit), Windows 8 ( 32 Bit and 64 Bit), Windows 10 |  |  |
| Programming environment |  | Microsoft .NET Framework 3.5 SP1 or higher |  |  |
| Hard disc memory |  | 32 MB free space on hard disc |  |  |
| RAM memory |  | 128 MB RAM |  |  |
| Screen resolution |  | $1024 \times 768$ |  |  |
| Interface |  | USB 1.1, 2.0 or 3.0 |  |  |
| TECHNICAL DATA ECHELON COUPLING ELEMENT PL-20 |  |  |  |  |
| Technology |  | Powerline communication on B/C tape ( $5 \mathrm{~Kb} / \mathrm{s}$ ); acc. to FCC, CENELEC EN50065-1 and LONWORKS ${ }^{\oplus}$ protocol |  |  |
| Bus coupler |  | Fused safety socket, $230 \mathrm{~V} / 50 \mathrm{~Hz}$ |  |  |
| PC coupler |  | USB 1.1 or 2.0 |  |  |
| Current draw |  | Mains plug/power supply unit: maximum 250 mA at 18 V DC voltage. USB: maximum 50 mA at 5 V DC voltage |  |  |
| Processor type |  | Neuron processor integrated in Powerline Smart Transceiver PL 3120 |  |  |
| Temperature range |  | $-25^{\circ} \mathrm{C}$ to +70응 |  |  |
| PL-SW-PROF | Software PL-SW-PROF |  | EAN 4010312316856 | 358,90 €/pc.* |



## NF2A

The mains filter up to $2 \mathrm{~A} 230 \mathrm{~V} / 50 \mathrm{~Hz}$ is designed as a built-in filter. It attenuates interference signals from the consumer to the actuator and prevents that disturbances from the connected consumers are reaching the house network. Frequency range $110-140 \mathrm{kHz}$.

For installation mounting. 49 mm long, 32 mm wide, 24 mm deep.

| NF2A | Mains filter up to $2 \mathrm{~A}, 230 \mathrm{~V} / 50 \mathrm{~Hz}$ | EAN 4260194737057 | $\mathbf{3 1 , 3 0} \boldsymbol{€} / \mathbf{p c .}$ |
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## FPP12

Wireless Powernet phase coupler to transmit wireless telegrams over the 230 V power mains. Only 0.2 watt standby loss.

Modular device for DIN-EN 60715 TH35 rail mounting.
1 module $=18 \mathrm{~mm}$ wide, 58 mm deep.
Voltage between the two outer conductors: $400 \mathrm{~V} / 50 \mathrm{~Hz}$.
Frequency range $115-132 \mathrm{kHz}$.
The phase coupler increases the capacitive coupling between 2 different outer conductors if, for example, the cables within the installation are not laid in parallel at a distance of at least several metres apart (as ribbon cables or jacketed cables).
Caution: The phase coupler may only be connected to the input side of the line circuit-breaker.

## Typical connection



| FPP12 | Wireless Powernet phase coupler | EAN 4010312311769 | $\mathbf{2 8 , 0 0} \mathbf{€} / \mathbf{p c .}$ |
| :--- | :--- | :--- | :--- |

Typical connection PL-SAMIL
Additional switching point for an existing consumer


Typical connection PL-SAM2


## Typical connection PL-AMD1OV



Typical connection PL-SAMILT

## Delayed switch-off


(e.g. staircase time switch or circulation pump)

SAM1LT switches itself and associated actuators off after a preset time.

Typical connection PL-SAM2L


Typical connection PL-SM1 Switch an additional consumer

(e.g. mirror light in bathroom, socket in living room, outside light)

## Typical connection PL-SM8



Typical connection PL-SAMDU


| Type | PL-SAMDU | PL-AMD10V | $\begin{aligned} & \text { PL-SAMIL } \\ & \text { PL-SAMILT } \end{aligned}$ | PL-SAM2L | PL-SAM2 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Contacts |  |  |  |  |  |
| Contact material/contact gap | Power Mosfet | $\mathrm{AgSnO}_{2} / 0.5 \mathrm{~mm}$ | $\mathrm{AgSnO}_{2} / 0.5 \mathrm{~mm}$ | $\mathrm{AgSnO}_{2} / 0.5 \mathrm{~mm}$ | $\mathrm{AgSnO}_{2} / 0.5 \mathrm{~mm}$ |
| Spacing of control connections/contact | - | - | 3 mm | 3 mm | 3 mm |
| Test voltage control connections/contact | - | - | 2000V | 2000 V | 2000 V |
| Rated switching capacity each contact | - | $600 \mathrm{VA}^{4}$ | 10A/250V AC | 5A/250V AC | $3 \mathrm{~A} / 250 \mathrm{~V}$ AC |
| Incandescent lamp and halogen lamp load ${ }^{11} 230 \mathrm{~V}$, I on $\leq 70 \mathrm{~A} / 1013 \mathrm{~ms}$ | up to 300W ${ }^{21}$ | - | 2000W | 1000W | - |
| Inductive laod $\cos \varphi=0.6 / 230 \mathrm{VAC}$ inrush current $\leq 35 \mathrm{~A}$ | up to 300W ${ }^{61}$ | - | 650W | $650 W^{5)}$ | $650 W^{51}$ |
| Fluorescent lamp load with KVG* in lead-lag circuit or non compensated | - | - | 1000 VA | 500 VA | - |
| Fluorescent lamp load with KVG* shunt-compensated or with EVG* | - | $600 \mathrm{VA}{ }^{4)}$ | 500 VA | 250 VA | - |
| Compact fluorescent lamps with EVG* and energy saving lamps | - | - | up to 400 W | - | - |
| Dimmable 230V LED lamps | up to 300W ${ }^{31}$ | - | up to 400 W | - | - |
| Service life at rated load, $\cos \varphi=1$ or incandescent lamps 500 W at $100 / \mathrm{h}$ | - | $>10^{5}$ | $>10^{5}$ | $>10^{5}$ | $>10^{5}$ |
| Service life at rated load, $\cos \varphi=0.6$ at $100 / \mathrm{h}$ | - | $>4 \times 10^{4}$ | $>4 \times 10^{4}$ | $>4 \times 10^{4}$ | $>4 \times 10^{4}$ |
| Max. operating cyles | - | $10^{3} / \mathrm{h}$ | $10^{3} / \mathrm{h}$ | $10^{3} / \mathrm{h}$ | $10^{3} / \mathrm{h}$ |
| Connection type | Plug-in terminals | Plug-in terminals | Plug-in terminals | Plug-in terminals | Plug-in terminals |
| Minimum conductor cross-section | $0.2 \mathrm{~mm}^{2}$ | $0.2 \mathrm{~mm}^{2}$ | $0.2 \mathrm{~mm}^{2}$ | $0.2 \mathrm{~mm}^{2}$ | $0.2 \mathrm{~mm}^{2}$ |
| Maximum conductor cross-section | $1.5 \mathrm{~mm}^{2}$ | $1.5 \mathrm{~mm}^{2}$ | $1.5 \mathrm{~mm}^{2}$ | $1.5 \mathrm{~mm}^{2}$ | $1.5 \mathrm{~mm}^{2}$ |
| Conductor stripping | 8-9 mm | 8-9 mm | 8-9 mm | 8-9 mm | $8-9 \mathrm{~mm}$ |
| Type of enclosure/terminals | IP30/IP20 | IP30/IP20 | IP30/IP20 | IP30/IP20 | IP30/IP20 |
| Electronics |  |  |  |  |  |
| Time on | 100\% | 100\% | 100\% | 100\% | 100\% |
| Max./min. temperature at mounting location | $+50^{\circ} \mathrm{C} /-20^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C} /-20^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C} /-20^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C} /-20^{\circ} \mathrm{C}$ | $+50^{\circ} \mathrm{C} /-20^{\circ} \mathrm{C}$ |
| Standby loss (active power) | 0.6W | 0.5W | 0.5W | 0.5W | 0.5W |
| Local control current at 230 V control input | 0.4 mA | - | 0.4 mA | 0.4 mA | 0.4 mA |
| Max. parallel capacitance (approx. length) of local control lead at 230 V AC | 3 nF <br> ( 10 m ) | - | $\begin{aligned} & 3 \mathrm{nF} \\ & (10 \mathrm{~m}) \end{aligned}$ | $\begin{aligned} & 3 \mathrm{nF} \\ & (10 \mathrm{~m}) \end{aligned}$ | 3 nF <br> ( 10 m ) |

1) Applies to lamps of max. 150 W .
${ }^{2)}$ Also transformers electronically (C load).
${ }^{3)}$ Generally applies to 230 V LED lamps. Due to different lamp electronics, switch on/off problems and a restriction in the maximum number of lamps, however, the dimming ranges may be limited depending on the manufacturer; in particular when the connected load is very low (e.g. with 5 W LEDs). The comfort position LC1 at SAMDU optimizes the dimming range, which however results in a maximum capacity of only up to 150 W. In this comfort position, no wound (inductive) transformers should be dimmed
2) Fluorescent lamps or LV halogen lamps with electronic ballast.
3) All actuators with 2 contacts: Inductive load $\cos \varphi=0.6$ as sum of both contacts 1000 W max
4) A maximum of 2 transformers of the same type.
*EVG = electronic ballast units; KVG = conventional ballast units

Powerline communication in the B/C-Band (5kb/s) corresponds to FCC, CENELEC EN 50065-1 and LONWORKS protocol

# DO YOU HAVE ANY OUESTIONS? WE HAVE THE ANSWERS FOR YOU. 

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