## PIR movement and presence detectors 10 A




PIR movement detectors for internal installations - ceiling mount

## Type 18.21

- Surface mounting

Type 18.31

- Recess mounting

Type 18.31-0031

- High ceiling type (6 meter max.)
- Surface or recess mounting
- Output contact connected to supply live
- Small size
- Adjustable ambient light intervention threshold
- Adjustable Light ON Time
- Wide angle of survey
18.21/18.31/18.31... 0031

Screw terminal


NOTE: with $110 \ldots 125 \mathrm{~V}$ AC supply, the Ratings (AC1, AC15 and lamp loads) must be reduced by $50 \%$ (e.g. 500 W instead of 1000 W)

## Contact specification

Number of contacts
Rated current/Maximum peak current A
Rated voltage/

| Maximum switching voltage | V AC |
| :--- | ---: |
| Rated load AC1 | VA |

Rated load AC15 (230 V) VA
Nominal lamp rating 230 V :
incandescent/halogen W




| Movement and presence detectors with Push-in terminals. For internal installation. Type 18.5D with DALI interface | 18.5D <br> DALI | 18.5K |
| :---: | :---: | :---: |
| Three selectable functions: <br> - Daylight-linked constant light level control <br> - ON/OFF control with early warning <br> - ON/OFF control with early warning + courtesy light level |  |  |
| Type 18.5K with KNX interface <br> - 2 outputs (data telegrams) for load control (Lighting, HVAC etc.) <br> - 1 output (data telegram) - movement/ presence detected <br> - Adjustment of ambient light threshold, and PIR sensitivity | DALI |  |
| - Master/Slave mode for increased sensing area <br> - Selectable function to inhibit ambient light threshold control <br> - Reporting of light level and movement status (for security purposes, etc.) | - Applications: offices, schools, zones of low activity <br> - Suitable for direct control of up to 8 DALI lighting ballasts <br> - Extensive sensing area up to | - Applications: offices, schools, zones of low activity <br> - Extensive sensing area up to $64 \mathrm{~m}^{2}$ <br> - Two sensing areas: |
| 18.5D <br> Push-in terminal | $64 \mathrm{~m}^{2}$ <br> - Two sensing areas: | "presence" suitable for zones of low activity, and |
|  | "presence" suitable for zones of low activity, and "movement" suitable for transit areas or zones of high activity | "movement" suitable for transit areas or zones of high activity |
| For outline drawings see page 16 |  |  |
| Supply specification |  |  |
| Coil specification V AC ( $50 / 60 \mathrm{~Hz}$ ) | 110... 230 | - |
| Rated power VA ( 50 Hz )/W | 1.5/1 | - |
| Operating range V AC ( $50 / 60 \mathrm{~Hz}$ ) | 96... 253 | - |
| Supply specification |  |  |
| Type of BUS | - | KNX |
| Supply voltage V DC | - | 30 |
| Rated consumption mA | - | 10 |
| Technical data |  |  |
| Ambient light intervention threshold lx | 10... 500 | 1... 1500 |
| Light ON time after last detection | $10 \mathrm{~s} . . .35 \mathrm{~min}$ | $0.1 \mathrm{~s} . .18 \mathrm{~h}$ |
| Ambient temperature range ${ }^{\circ} \mathrm{C}$ | $-10 \ldots+50$ | -5... +45 |
| Protection category | IP 40 | IP 40 |
| Approvals (according to type) | CE | CE $\triangle$ |

## Movement detectors with Push-in terminals <br> For internal installation - with volt-free output

 contact
## Type 18.41

- Corridor (ceiling) installation


## Type 18.61

- Wall mount installation
- Extensive sensing area up to $120 \mathrm{~m}^{2}$
- Modern design
- Quick installation thanks to push-in terminals
- 1 NO contact 10 A , with "zero crossing" switching
- Wall mounting compatible with 60 mm box and 2 or 3 module box
- Double terminals for easy "looping" in and out


### 18.41/18.61

Push-in terminal


NOTE: with $110 \ldots 125 \mathrm{~V}$ AC supply, the Ratings (AC1, AC15 and lamp loads) must be reduced by $50 \%$ (e.g. 500 W instead of 1000 W)

| 18.41 <br> - 1 NO 10 A <br> - Applications: hotel and offices corridors, transit areas <br> - Sensing area 30 meters length and 4 meters width | 18.61 <br> - 1 NO 10 A <br> - Specifically for wall mounting <br> - Wide angle: $180^{\circ}$ <br> - Wall mounting compatible with 60 mm box |
| :---: | :---: |
| 1 NO (SPST-NO) | 1 NO (SPST-NO) |
| 10/20 (100 A - 5 ms ) | 10/20 (100 A - 5 ms ) |
| 250/400 | 250/400 |
| 2500 | 2500 |
| 450 | 450 |
| 1000 | 1000 |
| 500 | 500 |
| 350 | 350 |
| 300 | 300 |
| 300 | 300 |
| 300 | 300 |
| 500 | 500 |
| $\mathrm{AgSnO}_{2}$ | $\mathrm{AgSnO}_{2}$ |
| 110... 230 | 110... 230 |
| 1.5/1 | 1.5/1 |
| 96... 253 | 96... 253 |
| $100 \cdot 10^{3}$ | $100 \cdot 10^{3}$ |
| 1... 500 | 1... 500 |
| $12 \mathrm{~s} . . .35 \mathrm{~min}$ | $12 \mathrm{~s} . . .35 \mathrm{~min}$ |
| See diagram page 15 | See diagram page 15 |
| -10...+50 | -10...+50 |
| IP 40 | IP 40 |
| CEEF[ $\triangle$ | CEER[ |


| Movement detectors for internal installation | $18.91$ |
| :---: | :---: |
| Type 18.91 |  |
| - Wall mount installation | $1 \times$ |
| - External push-button connection | $i \leqslant 1$ |
| - Modern design | $i$ |
| - 1 output with "zero crossing" switching |  |
| - Wall mounting compatible with 3 module housing, complete with adaptor for following frames: |  |
| - BTicino series Axolute |  |
| - BTicino series Light tech |  |
| - BTicino series Living |  |
| - BTicino series Living light Air |  |
| - BTicino series Matix |  |
| - Gewiss series Chorus |  |
| - Vimar series Eikon |  |
| - Vimar series Idea | - Specifically for wall mounting |
| - Vimar series Arkè | - Wide angle: $110^{\circ}$ |
| - Vimar PLANA | - Applications: corridors, transit |
| - White or black color version | areas, toilets, staircases |
| 18.91 |  |
| Screw terminal |  |
|  |  |
| For outline drawings see page 16 |  |
| Output data |  |
| Rated voltage V AC | 230 |
| Power max. W | 200 |
| Power min. W | 3 |
| Nominal lamp rating 230 V : |  |
| incandescent/halogen W | 200 |
| toroidal electromagnetic transformers for LV halogen W | 200 |
| E-core electromagnetic transformers for LV halogen W | 200 |
| electronic transformers (ballasts) for LV halogen W | 200 |
| compact fluorescent (CFL) W | 200 |
| 230 V LED W | 200 |
| electronic transformers for LV LED W | 200 |
| Supply specification |  |
| Nominal voltage ( $\mathrm{U}_{\mathrm{N}}$ ) V AC ( $50 / 60 \mathrm{~Hz}$ ) | 230 |
| Rated power VA(50Hz)/W | 14/0.5 |
| Operating range | $(0.8 \ldots 1.1) U_{N}$ |
| Technical data |  |
| Ambient light intervention threshold Ix | 5... 500 (black)/6... 600 (white) |
| Light ON time after last detection | $10 \mathrm{~s} . . .20 \mathrm{~min}$ |
| Sensing area | See diagram page 15 |
| Ambient temperature range ${ }^{\circ} \mathrm{C}$ | $-10 \ldots+50$ |
| Protection category | IP 20 |
| Approvals (according to type) | CE |

## Ordering information

Example: 18 series, PIR movement detector for internal installations, wall mounting, 1 NO 10 A contact, $120 \ldots 230 \mathrm{~V}$ AC supply.


## Codes

| 18.01 .8 .230 .0000 | 18.31 .0 .024 .0300 | 18.41 .8 .230 .0300 |
| :--- | :--- | :--- |
| 18.11 .8 .230 .0000 | 18.31 .8 .230 .0000 | 18.51 .8 .230 .0300 |
| 18.21 .0 .024 .0300 | 18.31 .8 .230 .0300 | 18.51 .8 .230 .0040 |
| 18.21 .8 .230 .0000 | 18.31 .8 .230 .0031 | $18.51 .8 .230 . B 300$ |
| 18.21 .8 .230 .0300 |  | 18.61 .8 .230 .0300 |
|  |  | 18.91 .8 .230 .0040 |
|  |  | 18.91 .8 .230 .0042 |
|  |  | $18 . A 1.8 .230 .0000$ |
|  |  | 18.5 D.8.230.0000 |
|  |  | 18.5 K.9.030.0000 |

## Technical data



- Following the initial power-on, and power-on following a power interruption, the detector makes a hardware-software initialisation for approximately 30 seconds. However, the behavior of the output during this 30 seconds will depend on certain circumstances:
- If the detector was in the On state before the power interruption, and if the lighting level is (currently) below the pre-set threshold, then the output contact will immediately close when the power is re-applied, for the time delay set by the potentiometer (irrespective of whether movement is being detected).
- If the detector was in the Off state before the power interruption, or if the ambient light is currently over the pre-set threshold, then the detector will not switch-on until the end of the initialisation phase (assuming movement is then detected).


## Wiring diagram



The nominal lamp rating as stated in the contact specification applies when wiring is realized in accordance with the diagrams above.
If the load is powered from a phase different to that powering the Movement detector, then a $50 \%$ reduction in the lamp rating must be considered.


Type 18.5D


Type 18.A1
L


## Wiring diagram



Note: Observe the polarity indicated for Phase and Neutral

## Type 18.51-B300-Bluetooth

Through the use of Bluetooth LE (Low Energy) technology programming the detector's operating characteristics can be easily and conveniently done using an Android or iOS smartphone.

After installing the 18.51, simply download the Free App Finder Toolbox from Google and Apple's official stores and set all the required parameters.

Android, Google Play and the Google Play logo are trademarks of Google Inc.
Apple is a trademark of Apple Inc. App Store is a service mark of Apple Inc.



Detectors can be named and uniquely identified within a building. The ambient light level threshold can be adjusted between 4 lux and 1000 lux, the Light On delay time can be set from 12 seconds to 25 minutes, and the movement detector set to one of three sensitivity levels. When Bluetooth connection is made to a detector a red LED signals the correct pairing and that all the set parameters have been transferred. The detector then responds with two feedback values - brightness as read by the light sensor in the detector and the contact status, if closed (On) or open (Off). For security, the detectors can be locked by a selector switch and a 4-digit PIN - preventing parameter changes by unauthorized persons.

## Functions

Type Functions


## Push-button function

A control pulse on the push-button inverts the status of the output relay, until the timing after the last movement detected is elapsed.

## Dynamic Light Compensation

By incorporating Finder's Patented "light feedback compensation" principle, the $18.51 \ldots .0040$ is able to calculate the artificial light contributed by the lamps controlled by the output relay. In effect, this means the $18.51 \ldots 0040$ is able to continuously monitor the natural ambient light level, even when the output is On. As a consequence, whenever the natural light level exceeds the threshold setting the output is forced Off. This can significantly minimises the time the lighting is On, particularly where there is a high level of traffic - and cost savings can be considerable. This is an advance over other types of movement detectors, which are unable to identify the natural ambient light level when the output is On and so can only turn Off after the time delay that follows the last detected movement. In busy areas this may mean that the movement detector is being continuously re-triggered and maintained in the On state, even though the natural light level has long risen above the threshold.
l8.5s

## Sensing area



Outline drawings

| Type | Suspended ceiling mounting | Recess mounting | Surface mounting |
| :---: | :---: | :---: | :---: |
| 18.21 |  |  |  |
| 18.31 |  |  |  |
| 18.31... 0031 |  |  |  |
| 18.41 |  |  |  |
| $\begin{gathered} 18.51 \\ \text { 18.5D } \\ \text { 18.5K } \\ \text { 18.51...B300 } \end{gathered}$ |  |  |  |
| 18.61 |  |  |  |

## Outline drawings



Type 18.A1


Type 18.91


## Push-in terminals for 18.41, 18.51, 18.5D, 18.61 and 18.A1

The push-in terminals permit the quick connection of solid wires or ferrules by their simple insertion into the terminal (A). It is possible to open the terminal to extract the wire by first pushing down on the push-button using a screwdriver or fingers (C).
For stranded cable it is necessary first to open the terminal using the push button, both for the extraction (C) and insertion (B).


Double terminals for the easy"looping" between multiple 18 Series.
The Max. wire size for each terminal is $2.5 \mathrm{~mm}^{2}$.

The terminals are equipped with a test hole to take a test probe.

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