

# PDM-I18 and PDM-I18T

## MAGIC PIR MOTION DETECTOR

VANDERBILT



Vanderbilt's MAGIC PIR and Dual motion detectors are an exciting new advance in security that provide the most reliable, convenient and cost effective solution for industry leading catch performance and false alarm immunity. The detectors feature a modern, slim design and share the same low-profile housing so intruders cannot tell which type of detector they are faced with. MAGIC PIR and Dual detectors are offered in either 12m or 18m range and are optionally available with either integrated anti-masking technology, curtain mirror or pet immunity.

The PDM-I18 and PDM-I18T PIR motion detectors utilize the patented MAGIC Mirror technology, which sets new standards in detection sensitivity and enables an extremely compact design. The innovative dual mirror design increases the focal length, which gives the detectors more homogeneous detection sensitivity, especially for wider areas. A new white-light filtering system reduces false alarms caused by external light sources such as car headlights or lamps.

Together with the enhanced Visatec algorithm, both MAGIC motion detectors feature a volumetric detection range of 18m. If required, the detectors can be optionally retro-fitted to long-range or curtain optics of up to 30m. For added peace of mind, the PDM-I18T is offering an integrated anti-masking technology (monitoring against covering).

Flexible installations can be carried out quickly and error-free due to features like Auto Walktest and the new End-of-Line concept (EoL).

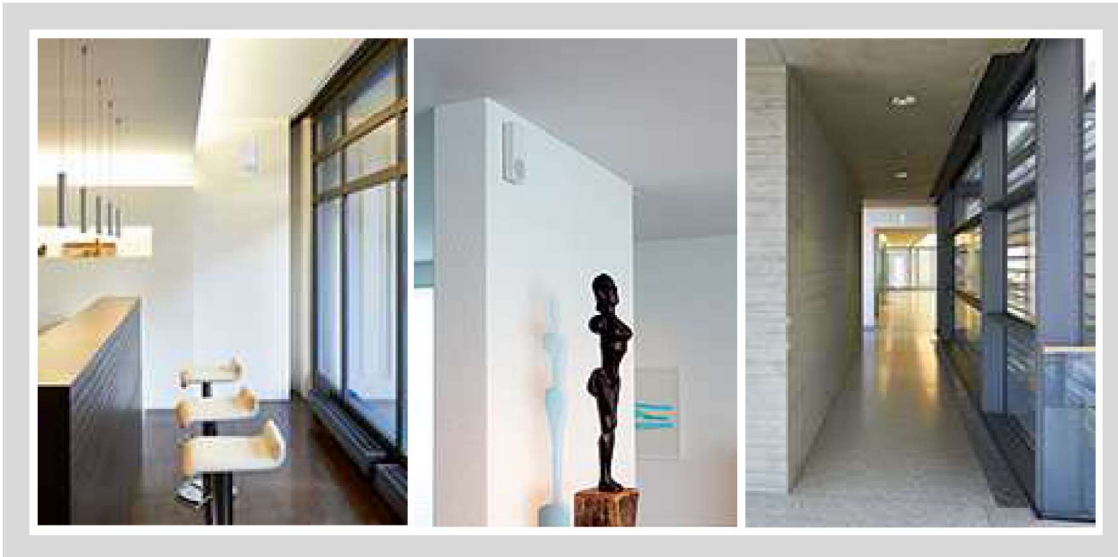
### Key Features include:

- Unmatched detection performance based on patented MAGIC mirror technology
- High immunity against false alarms
- 18m volumetric optics with undercrawl protection – 30m gapless curtain (option)
- Unique End-of-line concept eliminates time-consuming resistor wiring
- Flexible, fast and error-free installation with sensitivity adjustment and pet immunity (option)
- Compliance with latest approval standards such as VdS, VSÖ, INCERT, NF, IMQ, SBSC, etc.
- Modern and elegant design
- Low power consumption

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## Features & Benefits

### ■ Reliable detection

Thanks to the patented MAGIC mirror technology, intruders are detected effectively and reliably. The new double-mirror principle provides homogeneous coverage and sensitivity to all areas within the detection field. The proven and further enhanced Visatec algorithm supports the innovative mirror optic.

### ■ High security level

The integrated anti-mask function reliably detects any potential covering of the detector. In addition to this, the sophisticated mirror design ensures full under-crawl protection. Therefore, MAGIC PIR detector PDM-I18T complies with the highest security standards, such as VdS Class C, EN 50131-2-2 Grade 3 and many more.

### ■ High hurdles for intruders

A detector cannot be identified by its housing. Potential intruders – when confronted with MAGIC motion detectors – must assume the highest security level (e.g. EN 50131-2-2 Grade 3) irrespective of the actual detector type.

### ■ Error-free installation

Due to pre-fitted End-of-Line (EoL) resistors, the detectors are ready for use with Vanderbilt's alarm panels (SPC and Sintony). Thus, the time-consuming and error-prone resistor configuration can be omitted. PDM-I18/T can also be adapted to other intrusion panels by simply replacing the pre-fitted resistors with numerous optionally available plug-in EoL boards.

### ■ Low current consumption

State of the art energy concepts and electronic components provide low current consumption. Not only energy costs are decreased across the years of utilisation but also more cost efficient uninterrupted power supply units (like batteries) can be used in the intrusion panels.

### ■ Fast & easy set-up

The new Auto Walktest feature accelerates the installation of the detector. Verifying the installation and operation of the detector by means of a Walktest no longer requires repeated openings of the detector nor adapting DIP switch settings.

## Recommended Accessories

### ■ Mounting bracket

The PZ-MBG2 mounting bracket provides convenient cable guiding within the bracket and can be used for all MAGIC Mirror models for both wall and ceiling mounting.

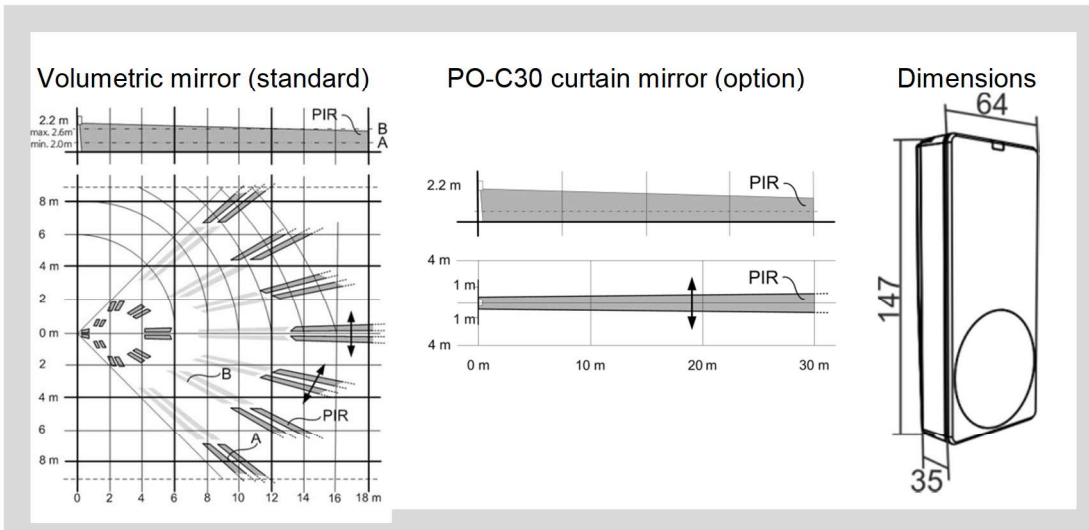
### ■ Curtain Mirror

The PO-C30 MAGIC curtain mirror has overlapping coverage zones to form a complete monitored area of up to 30m.

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### ■ Technical Data

Detection characteristic / range	Volumetric / 18m
Optical system	MAGIC mirror
Power supply (nom. 12V <sub>DC</sub> )	9V <sub>DC</sub> ~ 16V <sub>DC</sub>
– Max. ripple (0Hz ~ 100Hz)	1.0V <sub>SS</sub>
– Voltage control	Alarm at 8.0V <sub>DC</sub> ± 0.5V <sub>DC</sub>
Power consumption (8V <sub>DC</sub> ~ 16V <sub>DC</sub> )	
– PDM-I18	
Idle state	2.5mA (rms), 2.8mA (max peak)
LED ON	3.4mA (rms), 4.7mA (max peak)
– PDM-I18T	
Idle state	3.9mA (rms), 4.6mA (max peak)
LED ON	5.9mA (rms), 6.6mA (max peak)
Detection characteristic / range	Volumetric / 18m
Control inputs	Low ≤ 1.5V <sub>DC</sub> / High ≥ 3.5V <sub>DC</sub> R <sub>Pull-up</sub> (internal) = 470kΩ
Walk speeds	
– PDM-I18	
Volume mirror / Curtain mirror PO-C30	0.2 <sup>m</sup> /s ~ 3.0 <sup>m</sup> /s
– PDM-I18T	
Volume mirror / Curtain mirror PO-C30	0.1 <sup>m</sup> /s ~ 4.0 <sup>m</sup> /s
Algorithm	VISATEC
EoL resistors (pre-fitted)	
– R <sub>i</sub>	4.7kΩ ±5%, 250mW
– R <sub>F</sub>	2.2kΩ ±5%, 250mW
– R <sub>EOL</sub>	4.7kΩ ±5%, 250mW
Environmental conditions	
– Operating temperature	-10°C ~ 55°C
– Storage temperature	-20°C ~ 60°C
– Air humidity (EN 60721)	< 95%rh, non-condensing
– EMC-resistance up to 2.7GHz	10 <sup>V</sup> <sub>m</sub>
– Housing protection category (EN 60529, EN 50102)	IP41 / IK02
Colour	RAL9003
Approvals	
– PDM-I18	VdS Class B, EN 50131-2-2 Grade 2
– PDM-I18T	VdS Class C, EN 50131-2-2 Grade 3

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