

PDM-IXx18 and PDM-IXx18T

MAGIC DUAL 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 integrated anti-masking technology.

The PDM-IXx18 and PDM-IXx18T dual motion detectors offer reliable detection of intruders and high false alarm immunity. Their performance is based on an improved version of Vanderbilt's Matchtec algorithm, which combines passive infrared (PIR) and microwave (MW) channels to make extraordinarily accurate decisions on motion within their detection zone.

Intelligent processing routines analyse the relative strength of the IR and MW signals received from a moving object in order to make sound decisions. It is even possible to use multiple detectors in close proximity to each other, since the algorithm reduces interference between the MW modules. This increases flexibility in selecting the installation site.

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 – 25m 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 enhanced Matchtec 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-IXx18T complies with the highest security standards, such as VdS Class C, EN 50131-2-4 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 50131-2-4 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-IXx18/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.

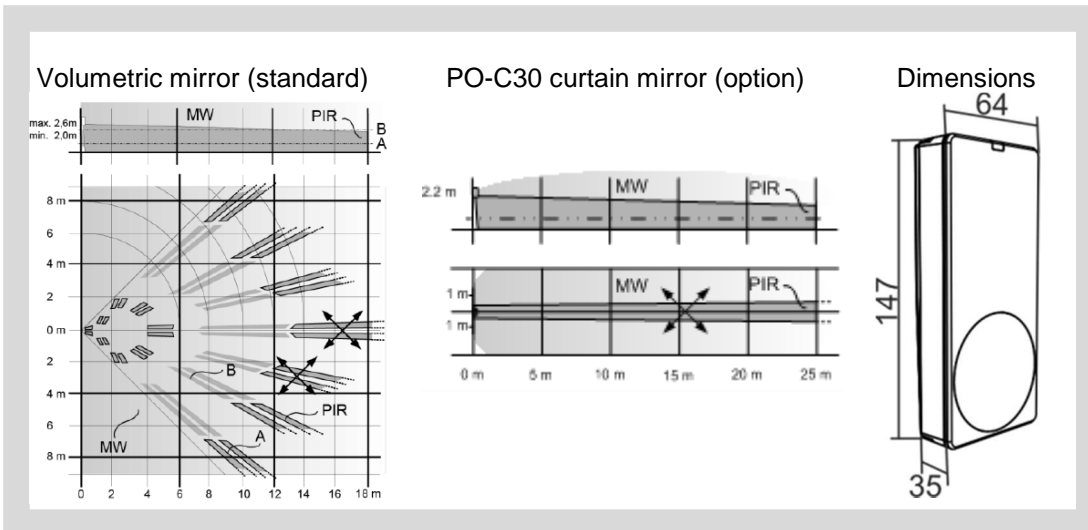
■ Curtain Mirror

The PO-C30 MAGIC curtain mirror has overlapping coverage zones to form a complete monitored area of up to 25m.

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■ Technical Data

| | |
|---|--|
| Detection characteristic / range | Volumetric / 18m |
| Optical system | MAGIC mirror |
| Microwave (MV) frequencies | |
| PDM-IXA18/T | 10.525GHz |
| PDM-IXD18/T | 9.35GHz |
| PDM-IXE18/T | 10.587GHz |
| Power supply (nom. 12V _{DC}) | |
| – Max. ripple (0Hz ~ 100Hz) | 9V _{DC} ~ 16V _{DC} |
| – Voltage control | 1.0V _{SS} |
| | Alarm at 8.0V _{DC} ± 0.5V _{DC} |
| Power consumption (8V _{DC} ~ 16V _{DC}) | |
| – PDM-IXx18 Idle state | 4.8mA (rms), 7.1mA (max peak) |
| LED ON | 6.7mA (rms), 9.0mA (max peak) |
| – PDM-IXx18T Idle state | 6.3mA (rms), 8.5mA (max peak) |
| LED ON | 8.3mA (rms), 10.5mA (max peak) |
| Control inputs | Low ≤ 1.5V _{DC} / High ≥ 3.5V _{DC} , R _{Pull-up} (internal) = 470kΩ |
| Outputs | Open collector, R=35Ω, I _{max} =120mA |
| Walk speeds | |
| – PDM-IXx18 (Volume mirror / Curtain mirror PO-C30) | 0.2m/s ~ 3.0m/s |
| – PDM-IXx18T (Volume mirror / Curtain mirror PO-C30) | 0.1m/s ~ 4.0m/s |
| Algorithm | MATCHTEC |
| EoL resistors (pre-fitted) | |
| – R _i | 4.7kΩ ±5%, 250mW |
| – R _F | 2.2kΩ ±5%, 250mW |
| – R _{EOL} | 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 ^V /m |
| – Housing protection category (EN 60529, EN 50102) | IP41 / IK02 |
| Colour | RAL9003 |
| Approvals | |
| – PDM-IXA18 / PDM-IXD18 / PDM-IXE18 | VdS Class B, EN 50131-2-4 Grade 2 |
| – PDM-IXA18T / PDM-IXD18T / PDM-IXE18T | VdS Class C, EN 50131-2-4 Grade 3 |

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■ Ordering Information

| Type | Art. No. | Description | Weight* |
|------------|------------------|---|---------|
| PDM-IXA18 | V54531-F119-A100 | DUAL Detector 10.525GHz | 0.165kg |
| PDM-IXD18 | V54531-F118-A100 | DUAL Detector 9.35GHz | 0.165kg |
| PDM-IXE18 | V54531-F120-A100 | DUAL Detector 10.587GHz | 0.165kg |
| PDM-IXA18T | V54531-F122-A100 | DUAL Detector 10.525GHz with Anti-mask | 0.168kg |
| PDM-IXD18T | V54531-F121-A100 | DUAL Detector 9.35GHz with Anti-mask | 0.168kg |
| PDM-IXE18T | V54531-F123-A100 | DUAL Detector 10.587GHz with Anti-mask | 0.168kg |
| PO-C30 | V54539-F123-A100 | PO-C30 Curtain Mirror for PDM-I18 (4 pcs) | 0.046kg |
| PZ-MBG2 | V54539-F124-A100 | PZ-MBG2 Mounting Bracket G2 for PDM | 0.051kg |
| PZ-CA | V54539-F125-A100 | PZ-CA 1/4" Adapter for Camera Bracket (4 pcs) | 0.022kg |
| PO-CL | V54539-F126-A100 | PO-CL Pet Clip for PDM-I12 (10 pcs) | 0.050kg |
| PO-FM | V54530-H101-A100 | PO-FM Flush Mount Housing Base PDM-I12 | 0.040kg |
| PO-MHB12 | V54530-H102-A100 | PO-MHB12 Metalized Housing Base PDM-I12 | 0.030kg |
| PO-PA01 | V54539-F127-A100 | EOL PCB R _F =4k7 R _I =2k2 R _{EoL} =2k2 (100 pcs) | 0.151kg |
| PO-PA02 | V54539-F127-A100 | EOL PCB R _F =2k2 R _I =4k7 R _{EoL} =2k2 (100 pcs) | 0.151kg |
| PO-PA03 | V54539-F127-A200 | EOL PCB R _F =12k R _I =1k R _{EoL} =1k (100 pcs) | 0.151kg |
| PO-PA04 | V54539-F127-A300 | EOL PCB R _F =12k R _I =6k8 R _{EoL} =4k7 (100 pcs) | 0.151kg |
| PO-PA05 | V54539-F127-A400 | EOL PCB R _F =1k R _I =3k3 R _{EoL} =3k3 (100 pcs) | 0.151kg |
| PO-PA06 | V54539-F127-A500 | EOL PCB R _F =48k R _I =16k2 R _{EoL} =16k2 (100 pcs) | 0.151kg |
| PO-PA07 | V54539-F127-A600 | EOL PCB R _F =48k R _I =48k R _{EoL} =48k (100 pcs) | 0.151kg |

* Total weight of the product inclusive of the weight of its accessories and packaging.

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