

MAGIC Dual Motion Detectors



MAGIC PIR and Dual motion detectors, by acre security, 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 the acre security 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 with Auto Walk Test, which ensures that the sensors are operating correctly on the acre Intrusion system.

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.

Key Features

- ✓ Unmatched detection performance based on patented MAGIC mirror technology
- ✓ High immunity against false alarms
- ✓ 18m volumetric optics with undercrawl protection – 25m gapless curtain (option)
- ✓ Compliance with latest approval standards such as VdS, VSÖ, INCERT, NF, SBSC, etc.
- ✓ Modern and elegant design
- ✓ Low power consumption

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 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.

Low Current Consumption

State of the art energy concepts and electronic components provide low current consumption. This decreases energy costs across the years of utilisation and also enables more cost efficient uninterrupted power supply units (like batteries) to be used in the intrusion panels.

High Security Level

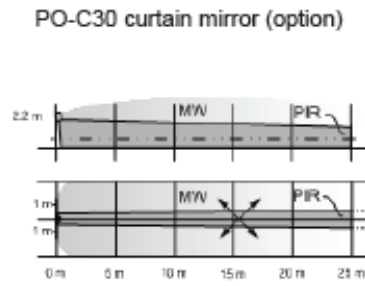
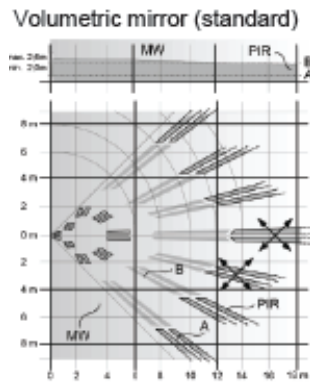
The integrated anti-mask function reliably detects any potential covering of the detector. In addition to this, the sophisticated mirror design ensures full under-crawl protection. Therefore, MAGIC DUAL detector PDM-IXx18T complies with the highest security standards, such as VdS Class C, EN 50131-2-4 Grade 3 and many more.

Error-free Installation

The detectors are ready for use with acre Intrusion Panels, omitting the time-consuming and error-prone resistor configuration. PDM-IXx18/T can also be adapted to other intrusion panels by simply replacing the pre-fitted resistors with the applicable values.

Fast & Easy Set-Up

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



Technical Data

Detection Characteristic / Range	Volumetric / 18m
Optical System	MAGIC mirror
Microwave (MW) Frequencies	
○ PDM-IXA18/T	10.525GHz
○ PDM-IXD18/T	9.35GHz
○ PDM-IXE18/T	10.587GHz
Power Supply (nom. 12VDC)	9VDC ~ 16VDC
○ Max. Ripple (0Hz ~ 100Hz)	1.0VSS
○ Voltage Control	Alarm at 8.0VDC ± 0.5VDC
Power Consumption (8VDC ~ 16VDC)	
○ 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 ≤ 1.5VDC / High ≥ 3.5VDC 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	10V/m
○ Housing Protection Category (EN 60529, EN 50102)	IP41 / IK02
Colour	RAL 9003 & RAL 9005
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
○ PDM-IXA18-B	VdS Class B, EN 50131-2-4 Grade 2
○ PDM-IXA18T-B	VdS Class C, EN 50131 2-4 Grade 3

Ordering Information

TYPE	ART. NO.	DESCRIPTION	WEIGHT*
PDM-IXA18	V54531-F119-A100	DUAL Detector 10.525GHz	0.165kg
PDM-IXA18-B	V54531-F119-A1-N	DUAL Detector 10.525GHz, Black	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-IXA18T-B	V54531-F122-A1-N	DUAL Detector 10.525GHz with Anti-mask, Black	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

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