ISC-PDL1-W18x Professional Series TriTech Detectors

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BOSCH
Invented for life

▶ 18 m x 25 m (60 ft x 80 ft) coverage, field selectable to 8 m x 10 m (25 ft x 33 ft)

▶ EN50131-2-4 Grade 2 compliant

▶ Sensor data fusion technology

▶ Tri-focus optics technology

▶ Range adaptive radar

The ISC-PDL1-W18x Professional Series TriTech Detectors are exceptionally suited for commercial indoor applications. Sensor data fusion technology ensures that the detectors send alarm conditions based on precise information. Tri-focus optics eliminate coverage gaps and respond efficiently to intruders. The powerful combination of unique features in the Professional Series delivers superior catch performance and virtually eliminates false alarms.

The self-locking two-piece enclosure, built-in bubble level, flexible mounting height, and three optional mounting brackets simplify installation and reduce service time.

Functions

Sensor Data Fusion Technology
Sensor data fusion technology is a unique feature that uses a sophisticated software algorithm to gather signals from five sensors: two pyroelectric sensors, range adaptive radar, a room temperature sensor, and a white light level sensor. The microcontroller analyzes and compares the sensor data to make the most intelligent alarm decisions in the security industry.

Tri-focus Optics Technology
Tri-focus optics technology uses optics with three specific focal lengths: long-range coverage, middle-range coverage, and short-range coverage. The detector applies the three focal lengths to 86 detection zones, which combine to make 11 solid curtains of detection. Tri-focus optics technology also includes two pyroelectric sensors, which deliver twice the standard optical gain. The sensors process multiple signals to deliver precise performance virtually free of false alarms.

Range Adaptive Radar
The microwave transceiver automatically adjusts its detection thresholds based on input from the PIR sensors. Integrating the target audience distance information from the PIR significantly reduces false alarms from the microwave Doppler radar.

Microwave Anti-mask
The detector sends a supervision-trouble signal if microwave reflective material is placed within 30.5 cm (1 ft) of the detector.

Supervised Microwave and PIR
The detector provides single technology coverage if the microwave subsystem fails.

Active White Light Suppression
An internal light sensor measures the level of light intensity directed at the face of the detector. Sensor data fusion technology uses this information to eliminate false alarms from bright light sources.

Field Selectable Coverage (18 m x 25 m or 8 m x 10 m)
Installers can use a DIP switch to select 18 m x 25 m or 8 m x 10 m (60 ft x 80 ft or 25 ft x 33 ft) coverage.

Dynamic Temperature Compensation
The detector automatically adjusts PIR sensitivity to identify human intruders at critical temperatures. Dynamic temperature compensation detects human body heat accurately, avoids false alarms, and delivers consistent catch performance at all operating temperatures.

Cover and Wall Tamper Switch
When an intruder removes the cover or attempts to separate the detector from the wall, a normally-closed contact opens to alert the control panel.

Self-adjusting LED
The LED brightness adjusts automatically to the surrounding light level. A blue light-emitting diode (LED) indicates dual alarms and activates during a walk test. A yellow LED indicates microwave alarms, and a red LED indicates PIR alarms.

Remote Walk Test LED
Users can type a command through a keypad, a control center, or programming software to remotely enable or disable the walk test LED. Users can locally enable or disable the walk test LED through the DIP switch.

Alarm Memory
Alarm memory flashes the alarm LED to indicate stored alarms for use in multiple unit applications. A switched voltage from the control panel controls the alarm memory.

Solid State Relays
Solid state relays send silent alarm output signals to provide a higher level of security and reliability. An external magnet does not activate the relay. The solid state relay uses less current than a mechanical relay, providing longer standby capacity during a power loss.

Draft, Insect, and Small Animal Immunity
The sealed optic chamber provides immunity to drafts and insects, reducing false alarms. Small animal immunity reduces false alarms caused by animals less than 4.5 kg (10 lb), such as rodents.

Remote Self Test
A remote self test initiates when the walk test input switches to its true state. The alarm relay and alarm LED activate for four seconds following a successful test. The trouble relay activates, and the alarm LED flashes following a failed test.

Input Power Supervision
When the power is lower than 8 V, a low input power trouble condition activates the trouble relay and causes the LED to flash. The trouble condition clears automatically when power reaches or exceeds 8 V.

Trouble Memory
When the walk test input switches to its true state for less than two seconds, LED flashes to indicate the most recent trouble condition. If there is no trouble in memory, the LED does not flash. After twelve hours, or after the detector receives a second walk test pulse for two seconds or less, the LED stops flashing and the trouble memory clears.
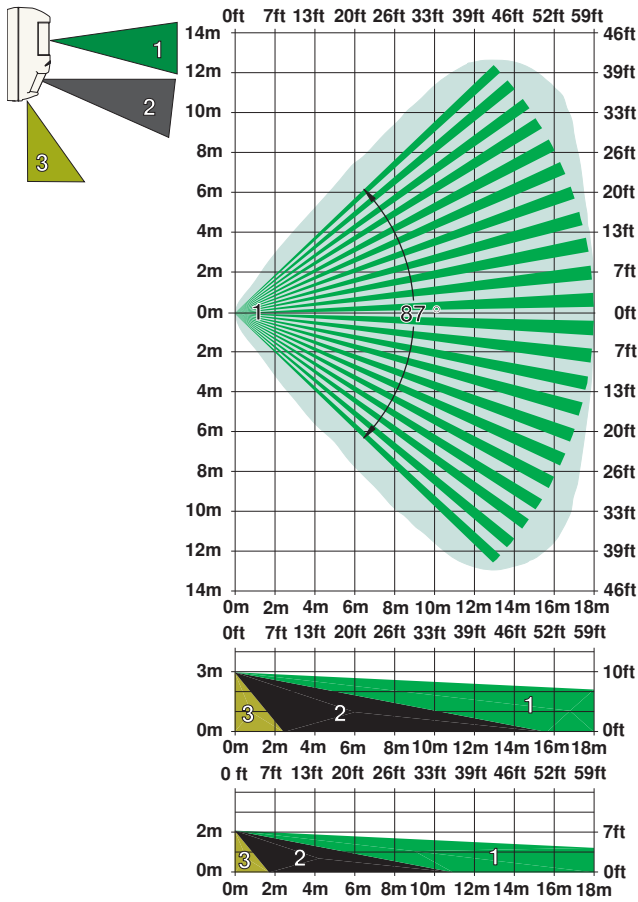
Certifications and approvals

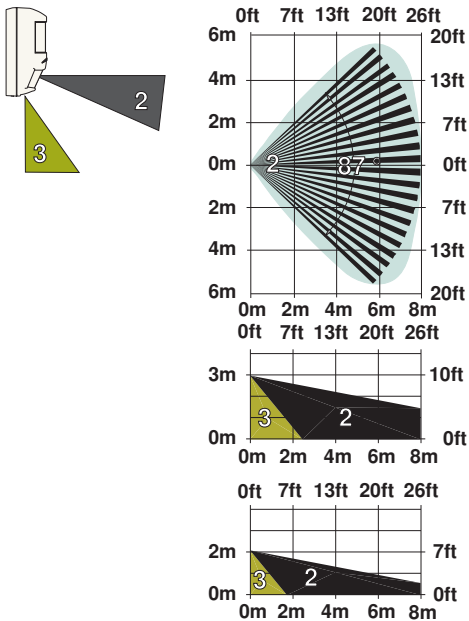The detectors are designed to also comply with the requirements of:

Australia	C-Tick

Region	Certification	
Australia	SCEC	eA1186637 [-W18G, -WA18G]
Europe	CE	2004/108EC EMC Directive (EMC), 2006/95/EC Low-Voltage Directive (LVD), 1999/5/EC Radio equipment and Telecommunications Terminal Equipment (R&TTE) [-W18G, -W18H]
Belgium	INCERT	B-509-0052 [-W18G]
	INCERT	B-509-0052/a
	INCERT	B-509-0052/f [-W18G]
USA	UL	ANSR: Intrusion Detection Units (UL639), ANSR7: Intrusion Detection Units Certified for Canada (cULus) [-W18G]
	FCC	(T3XISC-PDL1-W18G)
Italy	IMQ	(CA12.00833) [-G]
Canada	IC	(1249A-W18G)
France	AFNOR	2830390400A1 [-W18H]
	AFNOR	2830390400B0 [-W18G]
China	CCC	2009031901000559 [-W18G]
Sweden	INTYG	Nr11-850 [-W18G]
Brazil	ANATEL	1282-06-1855 [-W18G]
the Netherlands	REQ	07223002/AA/00 [-W18G]

Installation/configuration notes

Long-range Coverage 18 m x 25 m (60 ft x 80 ft)

Selectable Short-range Coverage 8 m x 10 m
(25 ft x 33 ft)

Mounting Considerations

The recommended mounting height is 2 m to 3 m (7 ft to 10 ft).

Use an optional B328 Gimbal-mount Bracket or B335-3 Low-profile Swivel-mount Bracket to surface-mount the detector on a flat wall or in a corner.

Use an optional B338 Universal Ceiling Bracket to mount the detector on the ceiling.

Wiring Considerations

Recommended wire size is 0.2 mm^2 to 1 mm^2 (26 AWG to 16 AWG).

Parts included

Quantity	Component
1	Detector
2	Flat-head screws
2	Screw anchors
1	Nylon cable tie
1	Pattern Mask
1	Installation Guide

Technical specifications

Electrical

Power Requirements

Voltage (Operating):	9 VDC to 15 VDC
Current (Maximum):	< 25 mA
Current (Standby):	13 mA

Outputs

Relay:	Solid state relay, normally-closed (NC) contacts power supervised. 3 W, 125 mA, 25 VDC, resistance < 10 Ω.
Tamper:	Normally-closed (NC) contacts (with cover on) rated at 25 VDC, 125 mA maximum. Connect tamper circuit to 24-hour protection circuit.
Trouble:	Solid-state relay normally-closed (NC) contacts.

Mechanical

Enclosure Design

Color:	White
Dimensions:	136 mm x 69 mm x 58 mm (5.25 in. x 2.75 in. x 2.25 in.)
Material:	High-impact ABS plastic

Indicators

Alarm Indicator:	• Blue LED for TriTech alarms • Yellow LED for microwave alarms • Red LED for PIR alarms

Zones

Zones:	86

Frequency Information

Radio Frequency Interference (RFI) immunity:	No alarm or setup on critical frequencies in the range from 26 MHz to 1 GHz at 50 V/m.

Environmental

Relative Humidity:	0 to 95%, non-condensing
Temperature (Operating and Storage):	-29℃ to +55℃ (-20℉ to +130℉) *For UL Certificated installations, 0℃ to +49℃ (+32℉ to +120℉)*
Environmental Class II	EN 50130-5
Protection Rating:	IP41, IK04 (EN 60529, EN 50102)

Ordering information

ISC-PDL1-W18G Professional Series TriTech Detector
10.525 GHz frequency.
Order number **ISC-PDL1-W18G**

ISC-PDL1-W18H Professional Series TriTech Detector
10.588 GHz frequency. For use in France and the United Kingdom.
Order number **ISC-PDL1-W18H**

B328 Gimbal-mount Bracket
Mounts on a single-gang box and allows rotation of a detector. Wires are hidden inside.
Order number **B328**

Swiveling B335-3 low-profile mount
Swiveling, low-profile, plastic mount for wall mounting. The vertical swivel range is +10° to -20°, while the horizontal swivel range is ±25°. Available in triple packs.
Order number **B335-3**

B338 Universal Ceiling-mount Bracket
Swiveling plastic mount for ceiling mounting. The vertical swivel range is +7° to -16°, while the horizontal swivel range is ±45°.
Order number **B338**