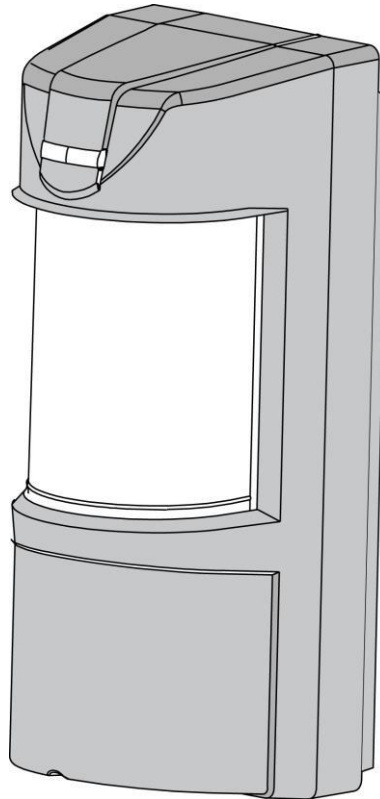


VANDERBILT

WPIR-EXT

**Two Way Wireless Outdoor Double PIR
Detector with Anti-masking**



INSTALLATION INSTRUCTIONS & USER MANUAL

Data and design subject to change without notice. / Supply subject to availability.

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<http://van.fyi?Link=WPIREXT>

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1. Introduction

The WPIR-EXT is a unique two-way wireless outdoor double quad motion detector with active Anti-Mask feature. The advanced Double PIR Elements provide two detection areas for superior stability.

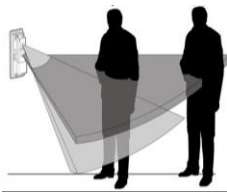
The WPIR-EXT is designed for outdoor usage in severe and extreme climate conditions

The WPIR-EXT is designed to also accommodate pets.

High reliability is achieved by combining both Dual Quad Sensors with highly sophisticated software as well as an adaptive coverage area, reducing false alarms alerts to zero while maintaining high security standards for the detection of human intruders into the protected area.

The detection sensitivity and range are controlled by optical rotary switch allowing 25 calibration levels, so that the effective pattern can be set for every installation environment and protection site.

The WPIR-EXT is designed to protect large areas and can easily be installed on walls to provide a solid protection of the area while rejecting interference from birds and small animals due to "PETMASK" optics.



Double PIR
Elements



Pet Immunity



Anti-Masking



2 Way Wireless



Remotely
Configurable

2. Features

- GFSK 2 Way Wireless Protocol
- Frequency Band: 868.35MHz
- Powered by 4 Lithium batteries Type AA (Battery life: Up to 5 years)
- Tamper Open/Close transmission
- Supervision transmission
- Battery status transmission
- LED indications
- Maximum distance from control panel up to 500m in open space
- Remotely configurable
- Height installation calibrations free: from 0.8m to 1.5m
- Pet Immunity up to 35kg
- PIR sensitivity adjustment
- Temperature compensation
- Front and Back tamper protection
- Sound indication for walk test and intruder detection
- Unique waterproof and seal plastic design
- Detection Range: Up to 12m
- Protection from: direct sunlight, wind up to 30m/sec, snow and rain, small animals
- Anti-Masking feature enabled by Dip Switches or remotely

3. Operation

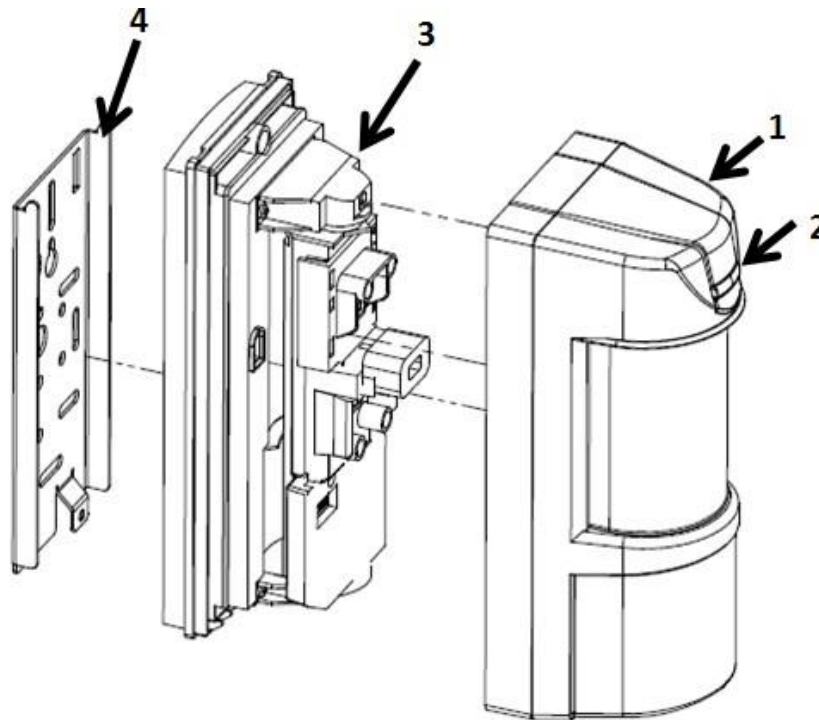
This WPIR-EXT detector transmits the following events data:

- **SUPERVISION**– A periodical transmission (configurable) indicating detector’s presence.
- **ALARM** – Alarm transmission triggered by the device indicating Motion detection. The Red LED will blink once.
- **LOW BAT** – Whenever the battery reaches the low level (2.5V), a Battery Low signal will be sent. When Battery level drops below Cut Off level (2.3V) the device will stop functioning and the Red LED will blink for 10 seconds and then turned Off.
- **TAMPER** – Whenever the cover is removed from Bracket or the device is tear off from the wall, a message will be transmitted with “Tamper ON” signal. When cover will be returned a “Tamper OFF” signal will be transmitted.
- **ANTI-MASKING** – If an attempt is made to mask the lens with a sticker or to put a masking object closeto the lens, a trouble alert will result up to 180 seconds after masking. A mask signal is also reported on your SPC system.

4. Assembly Description

The WPIR-EXT is a robust detector which includes indication LED prism that can be easily observed from long distance.

Having a back metal bracket, the WPIR-EXT can be easily mounted to walls and poles using mounting screws (supplied) or Jubilee clips/metal bands (supplied).

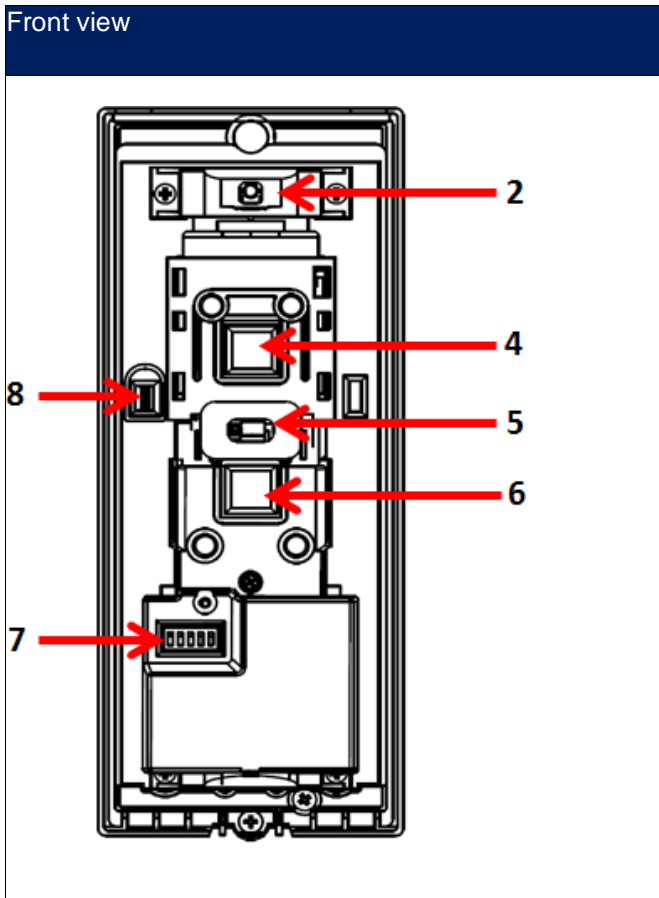


1 Front Cover

3 Detector Main Unit

2 LED Indicator

4 Back Metal Bracket



2 LED Detector

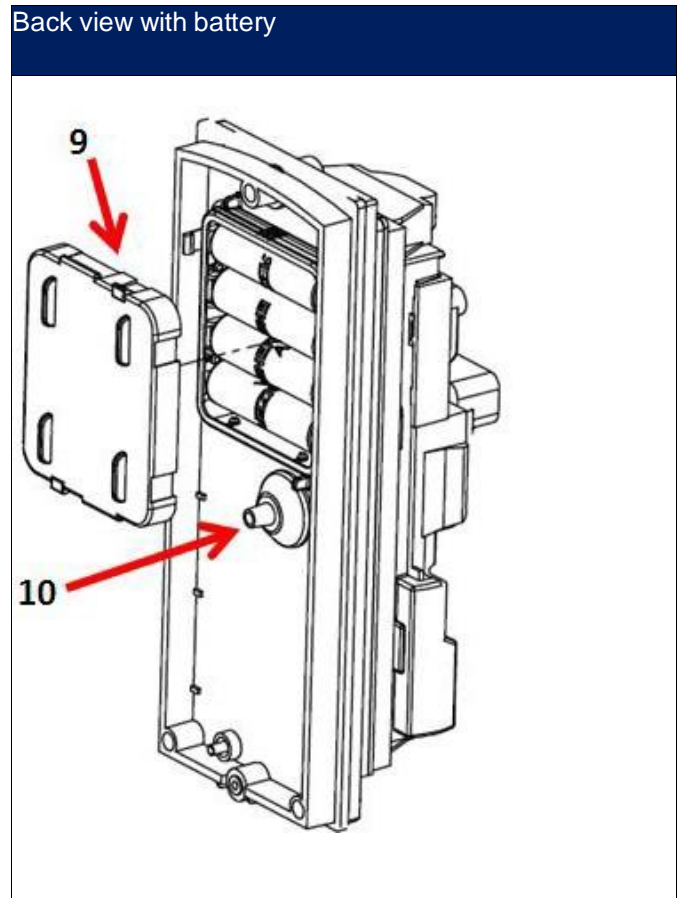
4 Upper PIR Element

5 Anti-Mask Sensor

6 Lower PIR Element

7 Dip Switches

8 Front Tamper Switch (Opening)



9 Battery Cover

10 Back Tamper Switch (Removal)



5. Installation and Discovery & Enrollment Process

Select Mounting Location

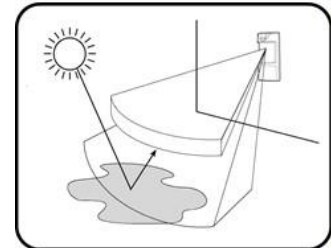
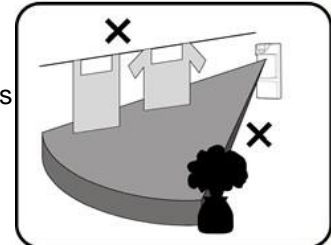
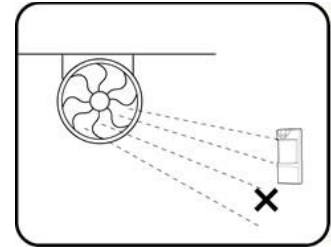
The installation of the WPIR-EXT requires a flat and secure mounting surface for the detector to perform correctly. The protected area must be free from obstacles like walls, fences, trees, ditches, and other microwave detectors, as well as systems of anti-intrusion surveillance.

The back metal bracket enables WPIR-EXT installation on a level wall or pole.

Choose a location most likely to intercept an intruder according to the detection pattern on page 6.

Avoid the following installation locations:

- Facing direct sunlight
- Facing areas subject to rapid temperature changes
- Wall angle of more than 10° from perpendicular line
- Mounting at more than 10° Deviation from horizontal line
- Facing metal doors
- Do not install near direct source of heat or air gust
- Clear all physical obstacles from the detection area (for example Plants, laundry, etc.)
- Clear all light reflecting surfaces from the detection area, as well as water puddles
- Avoid installation on the following types of ground:
Thick vegetation, Grass (un-mown), Water, Sand, and Metal.



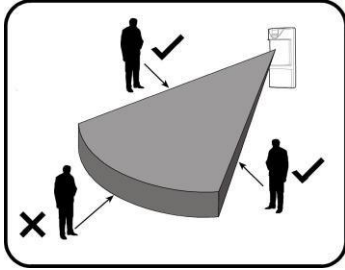
NOTE:

- Recommended installation height is 1.2m.
- If there is a risk of the protected area may contain tall pets (over 60cm), install the detector at a height of 1.5m.
- The Double Quad high quality sensor detects motion crossing the beam; it is less sensitive detecting motion towards the detector.
- The WPIR-EXT performs best when provided with a constant and stable environment.
- To ensure suitable operation of the WPIR-EXT type of ground should be one of the following: Asphalt concrete, Cement, Soil, Clay, Gravel, or Grass (mown).

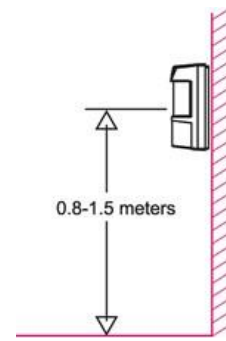
6. Detector Installation

Important! Before installing the WPIR-EXT, read "Select mounting location" section carefully.

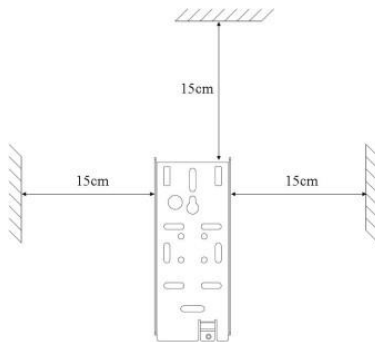
1. The detector must be installed in such manner that the intruder is most likely to cross the detection area from side to side.



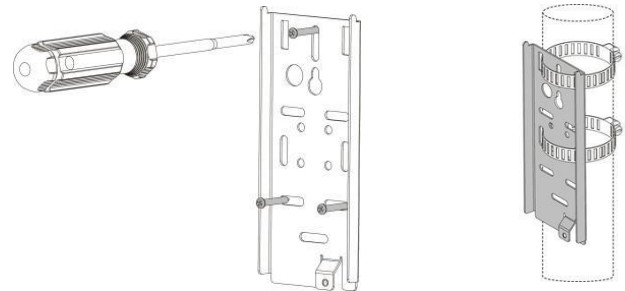
2. The detector must be installed at height of 0.8m to 1.5m



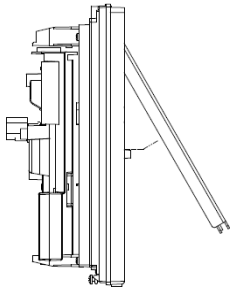
3. Draw metal bracket holes on the wall, leaving 15cm from all sides, for easy installation and maintenance.



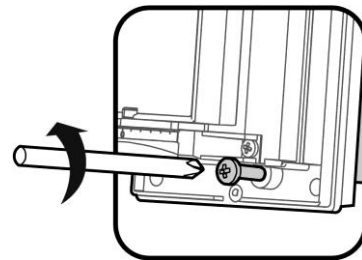
4. Install the metal bracket on the wall or a pole using either mounting screws or Jubilee clips/metal bands.



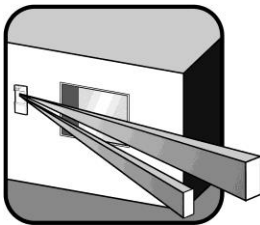
5. Install the detector unit on the metal bracket.



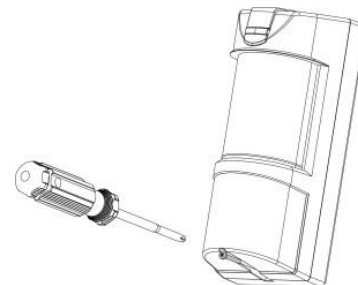
6. Screw the detector unit to the back metal bracket.



7. Adjust the detection beam to reach the best detection range (refer to Part 7 "Settings & Adjustments").

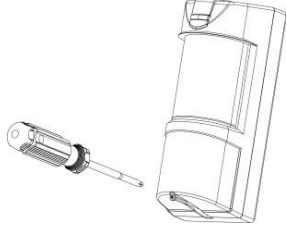
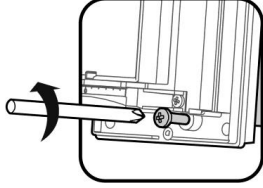
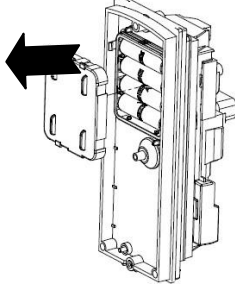




8. Close the detector cover screwing the bottom screw.

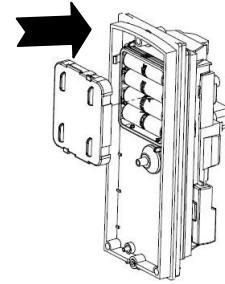


After detector closure, the detector starts calibration process.
Do not stand in detector's range during this period of 3 minutes.
After this period, the detector is ready for operation.

7. Discovery & Enrollment Process

<p>1. Open the detector unscrewing the bottom screw.</p>	
<p>2. Unscrew the detector unit from the back metal bracket and remove the detector from the bracket by tilting it.</p>	
<p>3. Remove the battery cover</p>	
<p>4. Discover the WPIR-EXT detector from the SPC control panel or from the keypad.</p> <p><i>To discover the WPIR detector from the SPC control panel:</i></p> <ol style="list-style-type: none"> I. In the SPC browser, select Configuration>Wireless and click Enroll New Sensor. II. Open the detector and insert the batteries taking care to observe correct polarity (+/-). Inserting the batteries starts the discovery process from the device. III. Enroll the device by configuring the Description, Zone, Zone Type, and other settings in the SPC system. <p>OR</p> <p><i>To discover and enroll the WPIR detector from the keypad:</i></p> <ol style="list-style-type: none"> I. On the keypad, select WIRELESS>SENSORS>ADD>ENROL. The keypad displays the ADD screen with a flashing ENROL DEVICE message. II. Open the detector and insert the batteries taking care to observe correct polarity (+/-). Inserting the batteries starts the discovery process from the device. The keypad displays the FOUND SENSOR message. III. Click OK. IV. You can now enroll the device by configuring the AREA, ZONE TYPE and ZONE settings. V. Click OK. <p>The keypad displays the UPDATED message. The WPIR-EXT is now enrolled on your SPC system.</p>	 

5. Close the battery cover



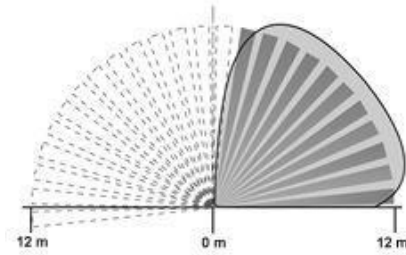
***DISCOVERY FAILED**

Remove the batteries, wait for around 10 seconds, and repeat the process.

8. Settings & Adjustments

Detection beam direction

The WPIR-EXT detection beam direction may vary between 0° and 180°.

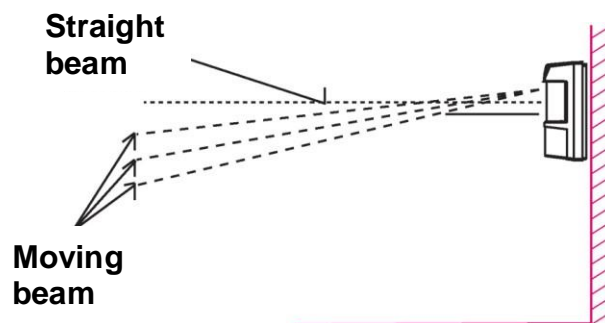


In order to change the detection beam direction, rotate the internal detection element housing to the desired direction.



Detection range setting

The WPIR-EXT detection range may vary between 3m and 12m, while installed on 1.2m height above the ground surface.



You can change the detection range by sliding the upper detection element up or down:

	<p>Long Range</p>
	<p>Short Range</p>

Dip Switch Functions

There are 5 DIP switches on the WPIR-EXT board that enable settings of following functions:

<p>Factory default positions</p>		ON = ENABLE
	SW1	PIR Sensitivity
	SW2	
	SW3	LED Indication
	SW4	Anti-Mask Activation
	SW5	Buzzer Audio
		OFF = DISABLE

Switches 1 & 2 – PIR ELEMENTS SENSITIVITY SETTING

Use the following combinations for setting PIR upper and lower element sensitivity control according to the environment.

Switch Position		DESCRIPTION
SW1	SW2	
OFF	OFF	LOW SENSITIVITY
OFF	ON	MEDIUM SENSITIVITY
**ON	**OFF	** NORMAL SENSITIVITY
ON	ON	HIGH SENSITIVITY

Switch 3 – LED VISUAL INDICATION

Use for setting LED Enable / Disable

** UP Position (ON) – LED enabled

DOWN Position (OFF) – LED disabled

Note: the state of the switch “LED” does not affect the operation of the ALARM and TROUBLE relays.

Switch 4 – ANTI-MASK ACTIVATION

Use for Anti Mask function setting.

** UP Position (ON) – AM feature enabled Down Position (OFF) – AM feature disabled.

MASKING CONDITION

If an attempt is made to mask the lens with a sticker or to put a masking object close to the lens, a trouble alert will result up to 180 seconds after masking:

The Red LED will blink, and the TROUBLE (Tamper) will be transmitted.

RESET AFTER TROUBLE OR MASKING

In case of masking alarm, proceed as follows:

Search for masking material or objects on the lens or in front of the detector and remove them. Reset the detector by walking in front of it. Cross its field detection causing it to alarm several times.

If everything is back to normal, the LED should stop blinking, and the TROUBLE should reset.

Note: If walk testing does not cause the trouble alert to stop, recheck for masking.

Switch 5 – BUZZER AUDIO INDICATION

Use for setting Audio Buzzer Enable / Disable

** Up Position (ON) – Buzzer enabled Down Position (OFF) – Buzzer disabled

Setting the buzzer ON gives the installer the ability to hear a beep on each detection for 1.8 seconds during the adjustments and walk test. After this process it is recommended to switch the buzzer OFF.

9. Test procedure

Walk Test Procedure:

1. Allow 3 minutes of warm up time.
2. Make sure that the protected area is cleared of all people.
3. Initialize the "Walk test" mode on your control panel.
4. Start walking across the detection zone.
5. Listen to ALARM sound whenever motion is detected (the red LED and the Buzzer also turns ON whenever motion is detected).
6. Allow 5 sec. between each test for the detector to stabilize.
7. Upon installation, the unit should be thoroughly tested to verify proper operation.
8. Walk across the entire area where coverage is desired. Should the coverage be incomplete, readjust coverage range or relocate the detector.

NOTE: Walk Test procedure should be conducted at least once a year, to verify proper operation and range coverage of the detector.

10. Specifications

Specifications are subject to change without prior notice.

Article number	V54538-F124-A100	
Short Description	WPIR-EXT AM Wrls. Ext PIR c/w pet	
Detection Method	Double PIR Elements with optional Anti-masking feature	
WA Detection Pattern	90° with 30 zones detection	
Data Protocol	Freewave2 Two Way Protocol with unique serial ID	
Modulation Type	GFSK	
Frequency	868-869MHz	
Events Transmission	Alarm, Anti-Mask, Tamper, Supervision, Low Battery	
Supervision Time	7 min by default (configurable between 1 to 30 minutes)	
Detection Range	Configurable from 3m to 12m	
Installation Height	From 0.8m to 1.5m (Optimal 1.2m)	
Range in open space	500m	
Battery	4 Lithium Batteries 1,5V Type AA LR06	
Battery life	Up to 5 years	
Current Consumptions	Standby ~22 μ A Receive mode ~24 mA	Transmit mode ~45 mA Transmit Power: ~14dBm
Tamper Switch	Front Cover and Wall Removal (Back Tamper)	
Weatherproofing	All openings with gasket and sealed. Protection against water and dust	
RFI Protection	10V/m plus 80% AM from 80MHz to 2GHz	
EMI Protection	6kV contact, 8kV air	
Tamper Switch	Front Cover and Wall Removal (Back Tamper)	
Temperature Compensation	Yes, Dual slop temperature compensation	
Alarm Period	2 sec (\pm 0.5sec)	
Warm up Period	30 sec (\pm 5sec)	
LED Indicator	LED is ON during ALARM and TROUBLE	
Operation Temp	-25°C ~ +55°C	
Protection Degree	IP 65	
Dimensions	200mm x 86mm x 80mm	
Weight (Nett)	0.640 Kg	