CONDOR / -XL

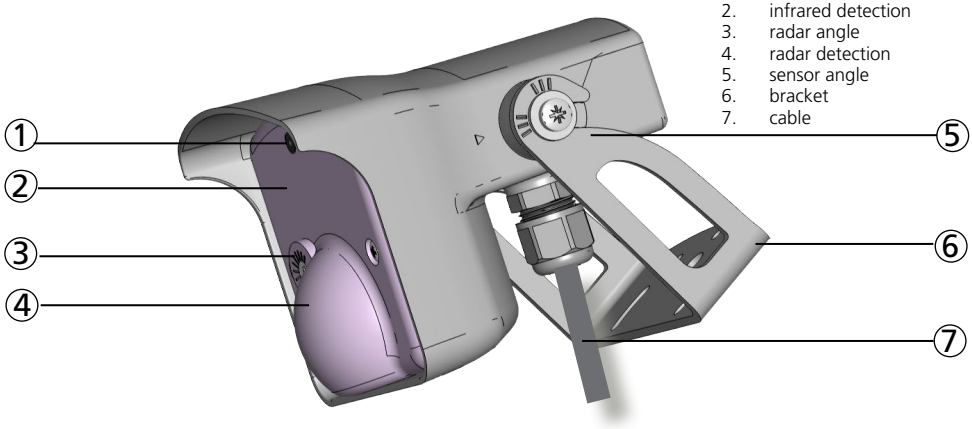
MOTION AND PRESENCE SENSOR FOR AUTOMATIC INDUSTRIAL DOORS

CONDOR: for normal to high mounting (3.5 - 6 m)
CONDOR XL: for low mounting (2 - 3.5 m)

Other use of the device is outside the permitted purpose and can not be guaranteed by the manufacturer.
The manufacturer cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor.

DESCRIPTION

1. push buttons
2. infrared detection
3. radar angle
4. radar detection
5. sensor angle
6. bracket
7. cable



TECHNICAL SPECIFICATIONS

Supply voltage:	12V to 24V AC ±10%; 12V to 24V DC +10% / -3% The Equipment must be powered by an approved Class II SELV limited power source. This requirement consists of the need for double insulation between primary voltages and the Equipment supply. The supply current should be limited to max 3A.	
Power consumption:	< 3.5 W / VA	
Mains frequency:	50 to 60 Hz	
Output:	2 relays (free of potential change-over contact)	
Max. contact voltage:	42 V AC/DC	
Max. contact current:	1 A (resistive)	
Max. switching power:	30 W (DC) / 42 VA (AC)	
Output holdtime:	0.5 s	
Mounting height:	CONDOR: 3.5 m - 6 m; CONDOR XL: 2 m - 3.5 m*	
Temperature range:	from -30 °C to + 60 °C (except for cold storage)	
Humidity:	0 - 95% non condensing	
Degree of protection:	IP65	
Dimensions:	127 mm (L) x 102 mm (H) x 96 mm (W)	
Materials:	ABS and polycarbonate	
Weight:	400 g	
Cable lenght:	10 m	
Technology:	microwave doppler radar	active infrared
Transmitter frequency/wavelength:	24.150 GHz	875 nm
Transmitter power density:	< 5 mW/cm²	< 250 mW/m²
Detection mode:	motion	motion & presence
Detection field:	CONDOR: 4 x 5 m ; CONDOR XL: 4 x 2 m**	4 m x 4 m (emitting spots***)
Min. detection speed:	5 cm/s	5 cm/s to activate detection
Reaction time:	100 ms	250 ms
Tilt angle:	-8° - 22° (relative to sensor front face)	15° - 45°

Specifications are subject to changes without prior notice.
Measured in specific conditions

* depending on size and nature of target
** measured at 30°, field size 9, mounting height: 5 m, XL: 3.5 m
*** zone detected by spotfinder, slightly bigger than actual detection field

This user's guide is an informative document and can not be seen as a commitment of result.

LED- SIGNAL

Motion detection
Value indication

Presence detection
Parameter indication

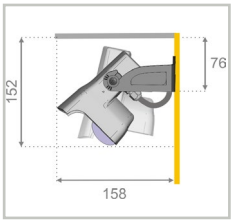
Setup

LED flashes

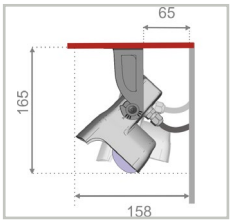
LED flashes quickly

LED is off

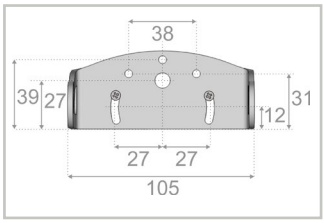
DIMENSIONS (in mm)



Wall mounting



Ceiling mounting

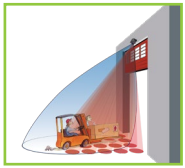


Bracket dimensions

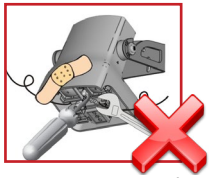
SAFETY INSTRUCTIONS

Only trained and qualified personnel may install and setup the sensor.

After installation, save an access code to lock the sensor.



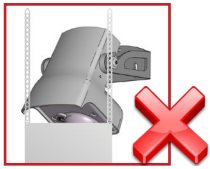
Test the good functioning of the installation before leaving the premises.



The warranty is void if unauthorized repairs are made or attempted by unauthorized personnel.

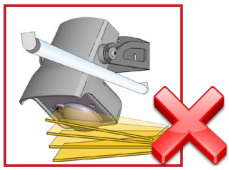
The manufacturer of the door system is responsible for installing the sensor and the door system in compliance with applicable national and international regulations.

MOUNTING TIPS

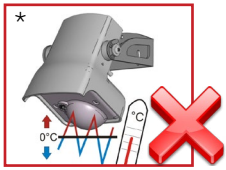


Do not cover the sensor.

Avoid extreme vibrations.



Avoid proximity to neon lamps or moving objects.



Avoid exposing the sensor to sudden temperature changes.

*In cold storage rooms (<0°), the functionality of the infrared part is affected by condensation, frost, mist etc. The radar part functions properly.

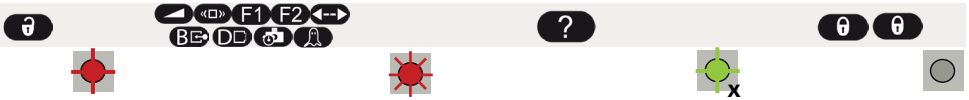
HOW TO USE THE REMOTE CONTROL

After unlocking, the red LED flashes and the sensor can be adjusted by remote control.

If the red LED flashes quickly after unlocking, enter an access code from 1 to 4 digits.
If you do not know the access code, **cut and restore the power supply**. During 1 minute, you can access the sensor without introducing any access code.

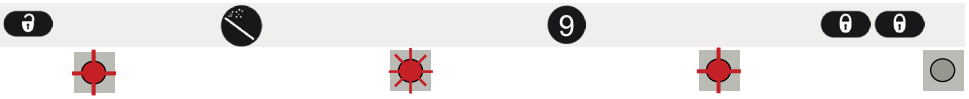
ADJUSTING ONE OR MORE PARAMETERS

CHECKING A VALUE



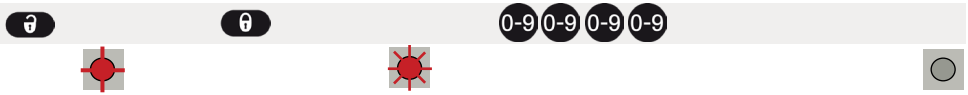
The number of flashes indicates the value of the chosen parameter.

RESTORING TO FACTORY VALUES



SAVING AN ACCESS CODE

The access code is recommended for sensors installed close to each other.

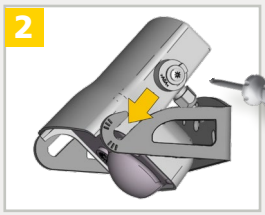


DELETING AN ACCESS CODE

If you do not know the access code, **cut and restore the power supply**.
During 1 minute, you can access the sensor without introducing any access code.

1 MOUNTING

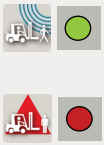
Remove the bracket from the sensor.
Drill 2 holes accordingly.
Fix the bracket firmly.



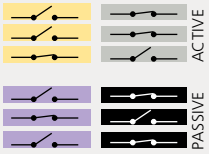
Position the sensor on the bracket and fasten the screws.

2 WIRING

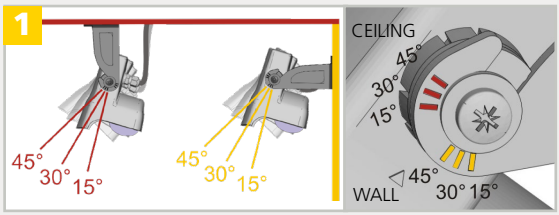
GN BN	12-24 V AC-DC	POWER SUPPLY
WH YE GY	COM NO NC	RADAR OUTPUT Motion signal
PK VT BK	COM NC NO	IR OUTPUT Presence signal



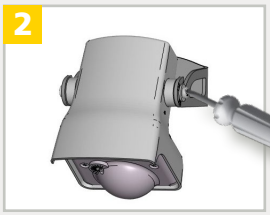
Connect the wires to the door controller.
Choose between NO and NC contact.



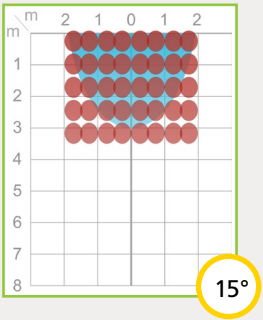
3 SENSOR ANGLE

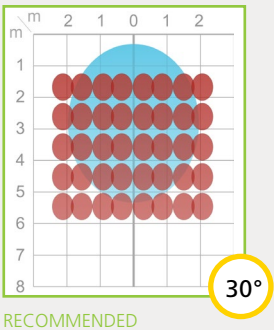


Adjust the angle of the sensor to position the detection fields.

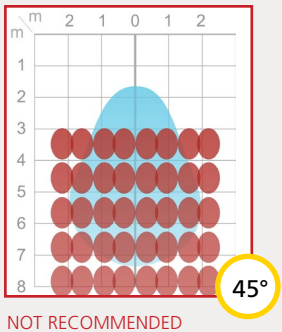


Tighten the screws firmly.





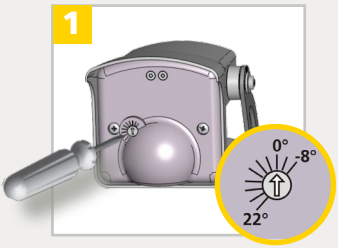
RECOMMENDED



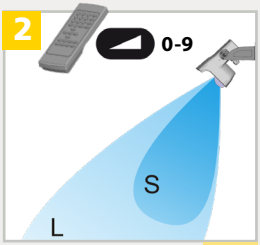
NOT RECOMMENDED

All detection field dimensions are measured in specific conditions (mounting height: 5 m, field size: 9).
Infrared field = emitting spots detectable by Spotfinder. The actual detection field is slightly smaller and influenced by external factors.

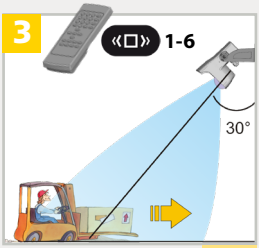
4 RADAR FIELD



By turning this screw, the radar field angle is reduced or increased (from -8° to +22°).



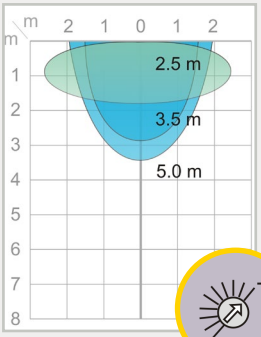
Adjust the field size. p. 6



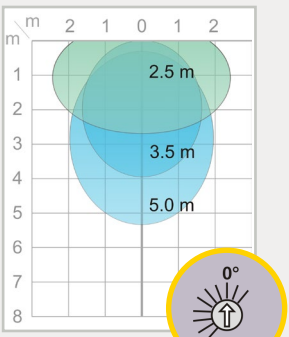
Choose the right detection filter for your application. p. 6

The total angle is the sum of the sensor angle and the radar field angle.

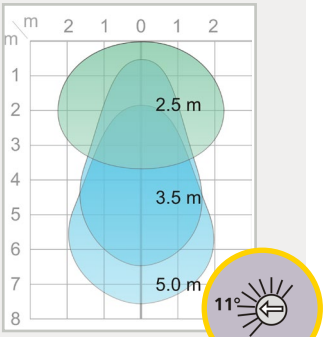
CONDOR CONDOR XL



Sensor angle: 30°
Radar field angle: -8°
Total angle: 22°



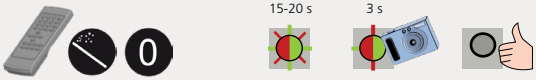
Sensor angle: 30°
Radar field angle: 0°
Total angle: 30 °
Total angle = sensor angle



Sensor angle: 30°
Radar field angle: +11°
Total angle: 41°

All detection field dimensions are measured in specific conditions and with a field size value 9.

5 SETUP



Launch a setup to make a reference picture.
Step out of the detection field and do not leave any tools inside the detection field.

After first power on, the sensor launches a setup and after each power cut a short setup is launched.

IMPORTANT: Test the good functioning of the installation before leaving the premises.

POSSIBLE REMOTE CONTROL SETTINGS

FIELD SIZE	XXS	XS	S	>	>	>	>	**L**	XL	XXL
DETECTION FILTER		**1**	2	3	4	5	6			

Detection of ALL TARGETS
(pedestrians and parallel traffic are detected)

1 no specific filter
2 immunity filter against disturbances (recommended in case of vibrations, rain etc.)

Detection only of VEHICLES MOVING TOWARDS THE SENSOR
(pedestrians and parallel traffic are not detected + immunity filter)

3 if total angle is ± 15°
4 if total angle is ± 30°
5 if total angle is ± 45°
6 if total angle is > 45°

TIP: Always check if the chosen value is optimal for the application!
The mounting height and object size or nature can influence the detection.
The vehicle detection filter increases the response time of the sensor.

DETECTION MODE	bi	**uni**	uni AWAY

bi = two-way detection
uni = one-way detection towards sensor
uni AWAY = one-way detection away from sensor

OUTPUT REDIRECTION F1

motion signal	motion + ir entry pulse	motion + ir exit pulse	motion + frontal ir entry pulse	motion + frontal ir exit pulse	motion + ir signal general	motion + ir signal limited	RELAY 1	
presence	presence	presence	presence	presence	presence	presence	RELAY 2	

See application note for detailed instructions

FREQUENCY		**A**	B							
MAX. PRESENCE DETECTION TIME	30 s	1 min	2 min	5 min	10 min	20 min	1 h	1 h 30	**2 h**	∞*
IR-CURTAIN IMMUNITY		low	**normal**	high						
MIN. SIZE OF TARGET F2										
IR-DETECTION FIELD BE										

* not guaranteed

The position of the target in the field is random.

FACTORY VALUES

RESETTING TO FACTORY VALUES:

IMPORTANT: Always finish an adjustment session by launching a setup.

TROUBLESHOOTING

The door remains closed and the LED is OFF.	The sensor power is off.	1 Check the wiring and the power supply.
The infrared sensor does not react.	The infrared power emission is too low according to the mounting height.	1 Launch a new setup. Step out of the detection field!
The door opens for no apparent reason.	The sensor detects raindrops or vibrations.	1 Make sure the detection mode is unidirectional. 2 Increase the detection filter value.
	The sensor is not installed properly.	1 Fasten the sensor firmly.
	In highly reflective environments, the sensor detects objects outside of its detection field.	1 Change the antenna angle. 2 Decrease the field size. 3 Increase the detection filter value.
The vehicle detection filter is used, but pedestrians are still detected.	The chosen value is not optimal for the application.	1 Increase the detection filter value. 2 Decrease the sensor angle. 3 Increase the mounting height.
The door opens and closes constantly.	The sensor is disturbed by the door motion or vibrations caused by the door motion.	1 Make sure the sensor is fixed properly. 2 Make sure the detection mode is unidirectional. 3 Increase the sensor angle and/or radar angle. 4 Increase the detection filter value. 5 Reduce the field size.
Sporadic presence detections for no reason.	The presence detection is disturbed by rain or lamps.	1 Set the IR-curtain immunity to value 3.
	The sensor is not installed properly.	1 Fasten the sensor firmly.
The red LED is permanently ON after a setup.	The sensor has failed the IR-setup.	1 Launch a new setup. Step out of the detection field!
The setup lasts more than 30 seconds.	The setup is disturbed.	1 Make sure the detection field is clear and launch a new setup.
	Another sensor causes interferences.	1 Select a different frequency for each sensor.
The sensor does not unlock and the red LED flashes quickly.	The sensor needs an access code to unlock.	1 Enter the right access code. 2 If you do not know the access code, cut the power supply and restore it to access the sensor and change the access code or delete it.
The sensor does not respond to the remote control.	The remote control batteries are weak or improperly installed.	1 Check the batteries and change them if necessary.
	The remote control is badly pointed.	1 Point the remote control towards the sensor.
	The sensor is not powered.	1 Check the power supply of the sensor.

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BEA hereby declares that the CONDOR is in conformity with the basic requirements and the other relevant provisions of the directives 2014/53/EU (RED) and 2011/65/EU (RoHS).

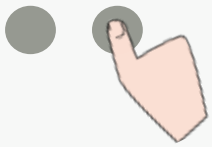
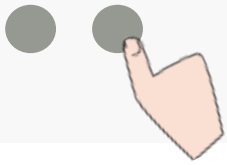
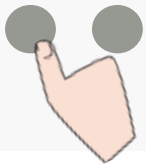
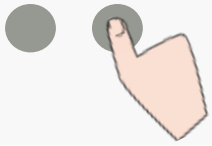
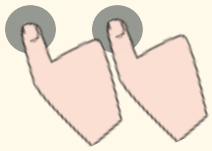
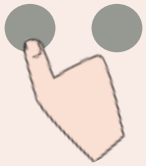
The complete declaration of conformity is available on our website.

This product should be disposed of separately from unsorted municipal waste.

A **Halma** company

CONDOR/MILAN/FALCON

How to use the push buttons?*

	PUSH BUTTONS	ACTION	LED	RESULT
START		**PUSH AND HOLD** the right button until the red LED flashes.	RED GREEN	The red and green LED are flashing subsequently.
ADJUSTMENT		Pushing on the right button = scrolling through the different **PARAMETERS**.	RED	The number of red flashes indicates the selected parameter.
		Pushing on the left button = increasing the **VALUE** of the displayed parameter by 1 unit.	GREEN	The number of green flashes indicates the value of the current parameter (no LED, value = 0).
	Note: when the max. value or the last existing parameter is reached, it will return to its minimum value or first existing parameter.			
STOP		**PUSH AND HOLD** the right button until the LEDs stop flashing.	OFF **or** RED	If the red LED lights up, you are standing in the detection field and creating a detection.
	Note: if no button is pushed within 20 seconds, the adjustment session ends automatically.			
FACTORY VALUES		**PUSH AND HOLD** both buttons for a few seconds. Exit and enter the adjustment session to verify.		
SETUP IR-FIELD		**BRIEFLY PUSH** the left button and step out of the detection field.	RED-GREEN OFF	Both LEDs flash and switch OFF.

CONDOR - MILAN

*It is recommeded to use the remote control for advanced adjustments of these products. The use of push buttons should only be in case of emergency.

CONDOR

	RC-symbol	Parameter n°	Factory value	Available values	
FIELD SIZE		x1	x7	0-9	
DETECTION FILTER		x2	x1	1-5	
DETECTION MODE		x3	x2	1-3	
MAX. DURATION OF PRESENCE DETECTION		x4	x8	0-9	
TARGET SIZE	F2	x5	x1	1-7	
IMMUNITY FILTER IR-FIELD		x6	x2	1-3	
FREQUENCY	DC	x7	x1	1-2	
DETECTION FIELD	BE	x8	x1	1-9	
MOTION CONFIGURATION		x9		0-3	NOT USED
OUTPUT REDIRECTION	F1	x10		0-6	
OUTPUT CONFIGURATION		x11	x1	1-4	NOT USED
MOTION HOLDTIME		x12		0-9	NOT USED

MILAN

	RC-symbol	Parameter n°	Factory value	Available values	
MAX. DURATION OF PRESENCE DETECTION		x1	x8	0-9	
TARGET SIZE	F2	x2	x1	1-7	
IMMUNITY FILTER IR-FIELD		x3	x2	1-3	
FREQUENCY	DC	x4	x1	1-2	
DETECTION FIELD	BE	x5	x1	1-9	
MOTION CONFIGURATION		x6		0-3	NOT USED
OUTPUT CONFIGURATION		x7	x1	1-4	NOT USED
MOTION HOLDTIME		x8		0-9	NOT USED

FALCON

	RC-symbol	Parameter n°	Factory value	Available values
FIELD SIZE		x1	x7	0-9
HOLD-OPEN TIME		x2		0-9
OUTPUT CONFIGURATION		x3	x1	1-2
DETECTION MODE		x4	x2	1-3
DETECTION FILTER		x5	x1	1-6

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