

PrimeTec B PrimeScan B

Please keep for further use!

Combined detector AIR/Radar for opening and protecting automatically controlled sliding doors

Translation of the original instructions

General

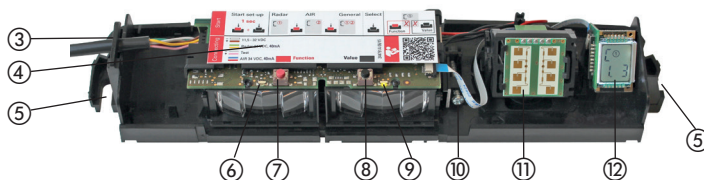
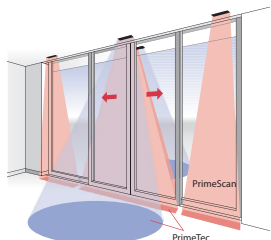
PrimeTec B



PrimeScan B



a) red LED b) green LED

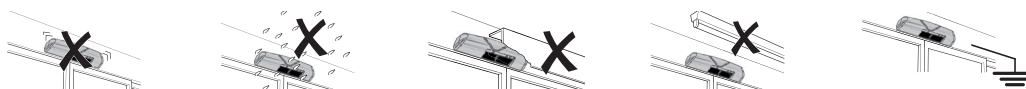


- ① Hood
- ② AIR light window
- ③ Cable bushing
- ④ Short Guide
- ⑤ Mounting holes
- ⑥ LED AIR: red (left)
- ⑦ Button function (red)
- ⑧ Button value (black)
- ⑨ LED radar: green (right)
- ⑩ AIR adjustment screw
- ⑪ Radar module
- ⑫ LCD display

1 Safety instructions



- Read these operating instructions thoroughly before putting the device into operation and keep them for future reference.
- This product is designed to be mounted above an overhead pedestrian door.
- Do not use this product other than for its specified application.
- Only trained and qualified personnel may install and initialize the device.
- It is the responsibility of the equipment installer to carry out a risk assessment and to install the system, in compliance with applicable local, national and international regulations, safety standards, codes and laws as well as the Machinery Directive 2006/42/EC, should this apply.
- Always consider the safety functions of your applications as a whole, never just in relation to one individual section of the system.
- The installer is responsible for testing the system to ensure it meets all applicable safety standards.
- Safety devices that are classified as Category 2 according to EN ISO 13849-1 must be tested regularly – at least once per cycle.
- If the safety device is not requested operationally at least once a year, it must be checked manually by the operator at least once a year.
- The sensor should only be operated from a safety extra low voltage (SELV) system with safe electrical separation according to EN 61558. The wiring must be protected against mechanical damage.
- Avoid touching any electronic and optical components.
- The door drive and the transom must be properly earthed.



Start-up

Recommended start-up sequence: ① Mounting ② Connection ③ Initialisation

2 Mounting

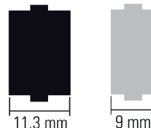
Mounting

1. Remove cover hood
2. Set AIR field width (see chapter 2.1)
3. Lay and connect cable
4. Mount detector

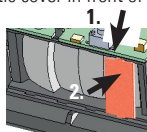
2.1 Setting the AIR field width (PrimeTec / PrimeScan)

The width of the AIR field can be set using the click-in plastic cover in front of the detector's lens.

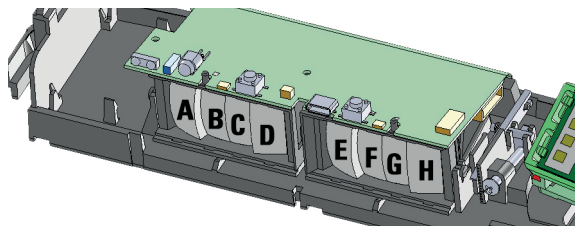
* Detector without cover:
All light beams are active



Field width:
2.0 m x 0.2 m
at 2.2 m



1. Slide
2. Push & click!

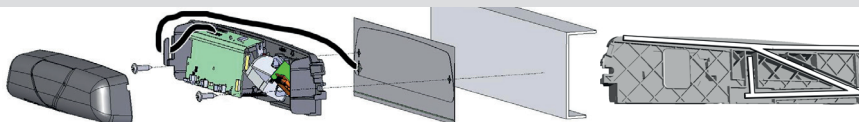


Possible settings (Dimensions at 2.2 m mounting height):

	A, D covered	A, C, D covered	C, D covered	A, B, D covered	A, B covered
Field width: 1 x 0.2 m					
	A B C D	A B C D	A B C D	A B C D	A B C D

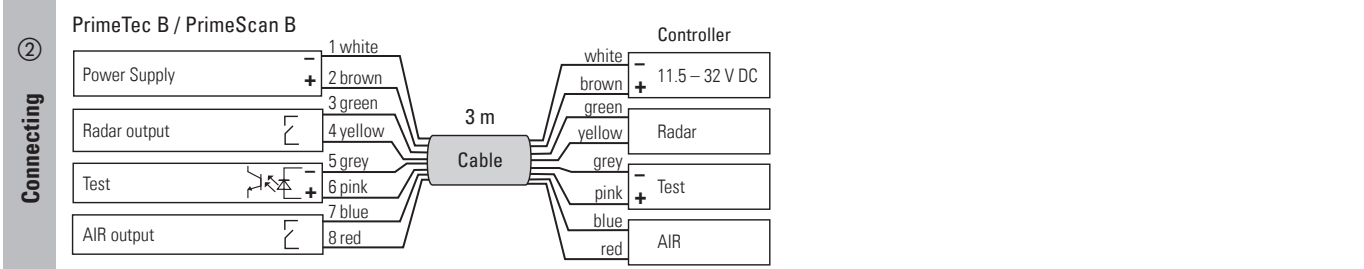
2.2 Mounting the detector

1. Position drill template
2. Drill the holes, remove drill template
3. Lay cable and mount detector



* Factory setting

3 Electrical connections



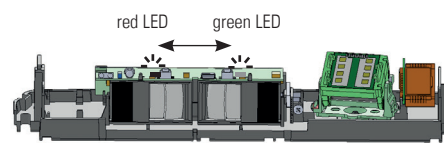
4 Initialisation

Remove all objects that do not form part of the usual door system environment from the door area BEFORE switching on the power supply. Ensure that no people are in the door area, otherwise correct startup will not be possible.

The alternate flashing shows the initialisation (teaching) of the detector. (Duration 20 - 25 seconds). During startup, the firmware version FXXX is displayed.

Following initialisation, the red/green LED only illuminates when a detection has occurred.

The door system is now operational at this point. If any further settings are required, proceed as described in the following sections.

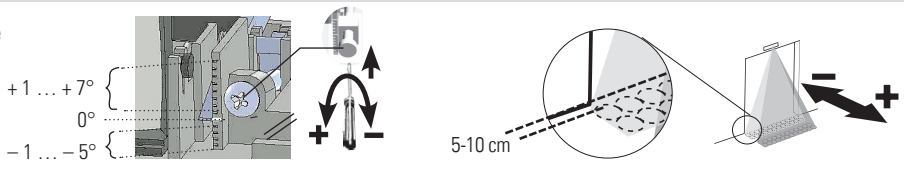


5 Mechanical fine tuning

5.1 AIR field (PrimeTec / PrimeScan)

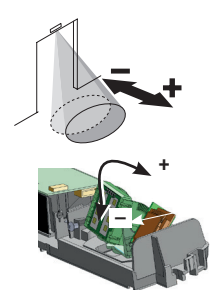
Settings of the inclination angle on the adjustment screw:

Inclination :
- 5° ... +7° continuously adjustable

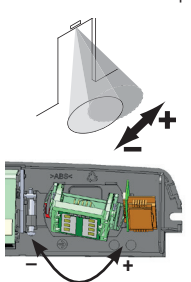


5.2 Radar field (PrimeTec)

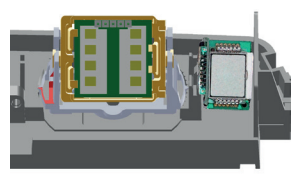
Manual settings of the inclination angle
0° ... +90° in 5° steps



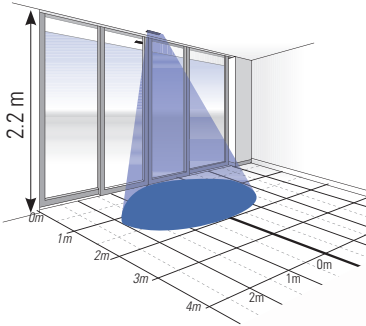
Manual settings of the pivot angle
- 20° ... +20° in 5° steps



Wide radar field

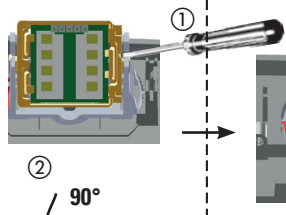


Inclination angle: 35°

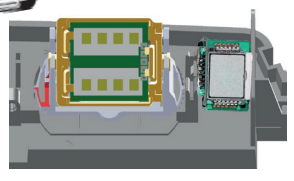


min. = 0.5 m x 0.25 m (WxD)
max. = 4 m x 2 m (WxD)

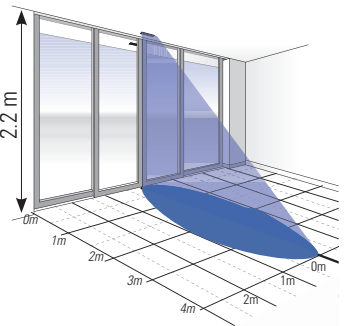
turn 90°



Narrow radar field



Inclination angle: 35°








min. = 0.16 m x 0.8 m (WxD)
max. = 2 m x 4 m (WxD)





6 Configuration using programming buttons (Operator buttons)





	Automatic	Config. mode	Choose Radar	Choose AIR	Funct./Parameter	Back to choice	Back to autom.
	A ①②	[①②	[①②	[①②	[① 1.3	[①②	A ①②
	A: Automatic mode t: Test active ① Radar output on ② AIR output on	Press shortly both buttons simultaneously	Red button: switch between Radar, AIR and general	Black button: choose	Red button: Choose parameter * Black button: Choose value of the parameter	Press both buttons	Press both buttons <i>Switches to automatic mode (A) automatically after 1 min</i>

* Value is going to be saved by switching to other parameters

		OPERATION OF THE BUTTONS ¹		DESCRIPTION
		Function (red)	Value (black)	
Radar functions (Prime Tec) ①			LCD	
Field size		1	1-5	① = Smallest radar field, ② ③* = Medium radar field, ④ ⑤ = Largest radar field
Direction recognition		2	1-2	① = both directions ②* = forward
Cross Traffic Optimisation CTO		4	1-2	①* = Off ② = On (recommended only at narrow field)
Door filter		6	1-2	①* = Filter off, ② = Door and interference filter on (EMV flows, e.g. fluorescence tube)
Radar output		7	1-2	①* = active (NO) ② = passive (NC)

The Slow Motion Detection (SMD) is a factory setting. The SMD recognises slow motions after the detector has been activated.

		OPERATION OF THE BUTTONS ¹		DESCRIPTION
		Function (red)	Value (black)	
AIR functions (PrimeTec / PrimeScan) ②			LCD	
Set sensitivity		1	1-5	① = high sensitivity (acc. to EN 16005 ≤ 3m, only indoors) ② = medium sensitivity (acc. to EN 16005 ≤ 3m) ④ = low sensitivity ③* = normal sensitivity (acc. to EN 16005 ≤ 2.6m) ⑤ = very low sensitivity
Set teach-in time		2	1-5	① = 10 s ②* = 30 s (acc. to EN 16005) ③ = 60 s (acc. to DIN 18650 + AS 5007) ④ = 180 s ⑤ = 15 min
AIR output contact logic		3	1-4	① I = active (NO) no detection contact open ②* I = passive (NC) no detection contact closed Series connection Settings Master ① → Slave ③ Master ② → Slave ④ Wiring: See series connection diagram: www.bircher.com → Products → Prime Tec
AIR output		4	1-2	①* = On ② = Off (AIR is going to be reactivated automatically after 15 minutes)



		OPERATION OF THE BUTTONS ¹		DESCRIPTION
		Function (red)	Value (black)	
General functions (PrimeTec / PrimeScan) ① ②			LCD	
Reset				Initialisation and teaching of the background
Presetting (After presetting and leaving config. a reset will be done automatically)		1	1-8 Press value for 1 second to change the presetting	① = Standard, ② = footpath, ③ = home for the aged, ④ = wind screen, ⑤ = high door, ⑥ = narrow door, ⑦ = wide door, ⑧ = factory settings For all values set, parameter 0 is displayed
Combined outputs activated / not activated		2	1-2	① = activated (radar and AIR actuate the radar output) ②* = not activated
AIR-frequency (In the case of overlapping AIR fields consider the addressing order: → odd nr. 1 → even nr. 2 → odd nr. 3)		3	1-6	①* = Frequency 1, ② = Frequency 2, ③ = Frequency 3, ④ = Frequency 4, ⑤ = Frequency 5, ⑥ = Frequency 6

¹ Press both buttons shortly for configuration mode





*Factory setting

7 Remediating malfunctions

7.1 Remediating false tripping

red LED	green LED	Fault	Remedy
			
not illuminated	continuously lit	Radar tripping when door is closing	<ol style="list-style-type: none"> 1. Set angle of radar further away from the door. 2. Adjust radar field size.
		Radar false tripping without apparent external influence	<ol style="list-style-type: none"> 1. Avoid light sources (e.g. fluorescent tubes) in the immediate vicinity of the detector. 2. No moving objects (plants, advertising posters, etc.) in the vicinity of the detector. 3. Avoid strong vibration at the radar detector 4. Possible influence from a second radar detector in the vicinity (very unlikely)
continuously lit	not illuminated	AIR tripping when door is closing	<ol style="list-style-type: none"> 1. Set angle of AIR detector further away from the door
		AIR false tripping without apparent external influence	<ol style="list-style-type: none"> 1. Avoid light sources (e.g. fluorescent tubes) in the immediate vicinity of the detector. 2. Avoid puddles of water on the ground. 3. Avoid strong vibration at the AIR detector. 4. Influence of overlapping AIR field from another detector. Set new Reglobeam address or CAN bus address. 5. Reduce sensitivity of the AIR (increase value).
not illuminated	not illuminated	Door stays open	<ol style="list-style-type: none"> 1. Switch AIR exit contact logic to other value

7.2 Remediating detector malfunctions

red LED	green LED	Fault	Remedy
			
flashing	flashing	 <ol style="list-style-type: none"> 1: Self test (RAM/ROM) 2: Watchdog 	<ol style="list-style-type: none"> 1. Disconnect device from supply voltage 2. Restart device 3. If device displays fault again or does not start → renew device
flashing	not illuminated	 <ol style="list-style-type: none"> 5: AIR fault 6: AIR output fault 	<ol style="list-style-type: none"> 1. Disconnect device from supply voltage 2. Clean optics-cover and check for scratches 3. Restart device 4. If device displays fault again or does not start → renew device

8 Technical data

Technology	Active infrared (wavelength: 880 nm), radar double field module → PrimeTec (24.125 GHz)
Number of IR spots	24
IR spot dimensions	3 cm x 3 cm (at 2.2 m mounting height)
Response time	< 200 ms
Mounting height	1.8 – 4 m
Angle setting of IR spots	– 5° ... + 7° continuously adjustable
Operating voltage	PrimeTec B ES: 11.5–32 V DC; PrimeTec B ES/02: 12–32 V DC / 11–28 V AC, 50/60 Hz PrimeScan B: 11.5–32 V DC
Operating current	max. 120 mA
Power consumption	max. 4 W
Making current	max. 240 mA
Output (AIR / Radar)	Semiconductor relay: Switching voltage: max. 24 V AC / 34 V DC, contact resistance: max. 10 Ω Switching current: max. 40 mA, switching capacity: max. 500 mW AC/DC
Protection type	IP54
Operating temperature	–20° ... 60° C
Dimensions	PrimeTec: 260 x 60 x 48.5 mm (LxWxD), PrimeScan: 216 x 60 x 47.5 mm (LxWxD)
Weight	PrimeTec: 250 g, PrimeScan: 180 g
Estimated economic life-time	20 years

9 EU Declaration of Conformity



See attachment

10 WEEE



Devices with this symbol must be treated separately during disposal. This must be done in accordance with the laws of the respective countries for environmentally sound disposal, processing and recycling of electrical and electronic equipment.

11 FCC approval



This device meets the requirements of Part 15 of the FCC regulations and the RSS-210 standard of Industry Canada.

Warning: Changes or modifications made to this device may void the FCC authorisation to operate this device.

12 Contact

BBC Bircher Smart Access, BBC Bircher AG, Wiesengasse 20, CH-8222 Beringen, www.bircher.com

Designed in Switzerland / Made in China