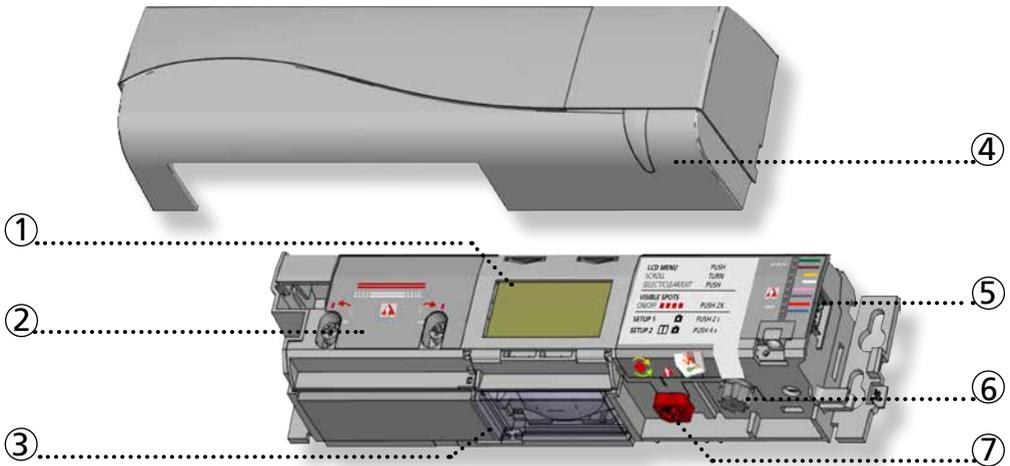


Safety sensor for automatic sliding doors

(according to EN 16005 and DIN 18650)

DESCRIPTION

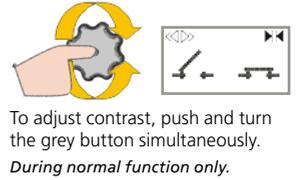
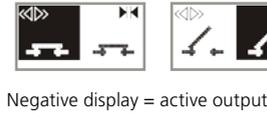
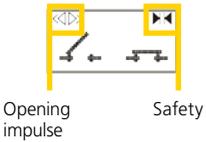


1. LCD
2. IR-curtain width adjustment
3. IR-lenses

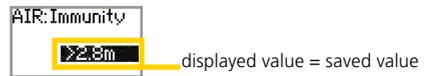
4. cover
5. main connector
6. main adjustment knob
7. IR-curtain angle adjustment knob

HOW TO USE THE LCD?

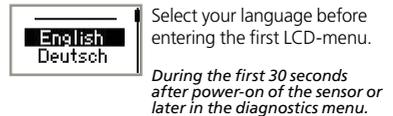
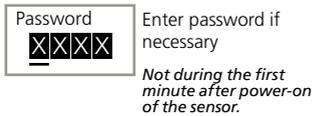
DISPLAY DURING NORMAL FUNCTIONING



FACTORY VALUE VS. SAVED VALUE



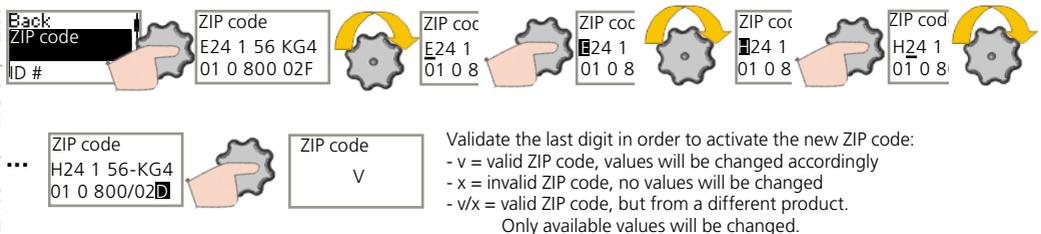
NAVIGATING IN MENUS



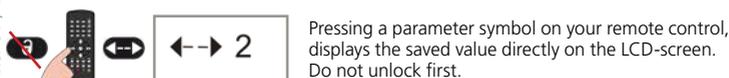
CHANGING A VALUE



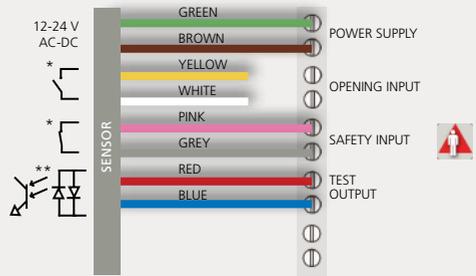
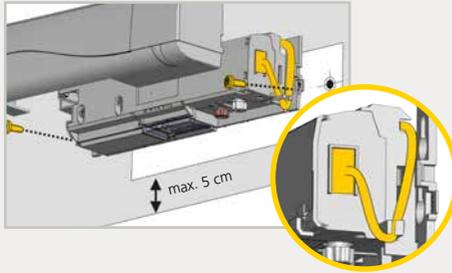
CHANGING A ZIP CODE



VALUE CHECK WITH REMOTE CONTROL

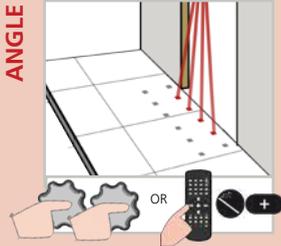


1 MOUNTING & WIRING

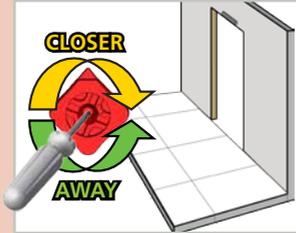


* Output status when sensor is operational
 ** For compliance with EN 16005 and DIN 18650, connection to door controller test output is required.

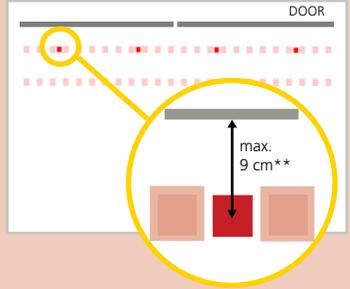
2 INFRARED SAFETY FIELD



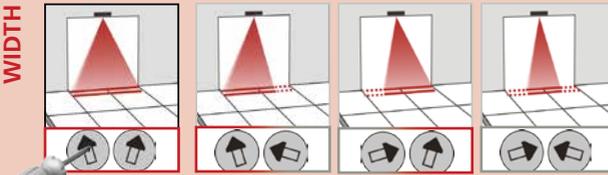
Activate the visible* spots to verify the position of the IR-curtain.



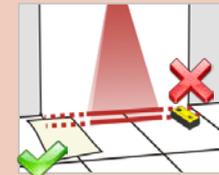
If necessary, adjust the IR-curtain angle (from -7° to 4° , default 0°).



* Visibility depends on external conditions. When spots are not visible, use the MRSP to locate the curtains.
 ** The distance between the inner curtain of the inside door sensor and the inner curtain of the outside door sensor should always be smaller than 20 cm. The distance to the door leaf depends therefore on the thickness of the door leaf.



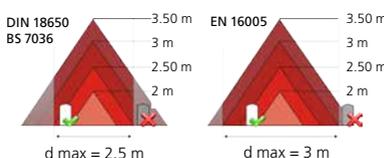
Part of the detection field can be masked to reduce it. The arrow position determines the width of the detection field.



Additional adjustments are possible by LCD or remote control (see p. 5)

Always verify the actual detection field width with a piece of paper and not the MRSP, which detects the whole emitted field.

Mounting height	Detection width
2.00 m	2.00 m
2.20 m	2.20 m
2.50 m	2.50 m
3.00 m	d max
3.50 m	d max



The size of the detection field varies according to the mounting height and the settings of the sensor. The full door width must be covered.

3 SETTINGS

Choose one of the following presets or adjust the sensor manually (see p.5):



OR



STANDARD: standard in- and outdoor installations

Presettings
Standard



CRITICAL ENVIRONMENT: critical installations due to surroundings or weather

Presettings
Critical env



SHOPPING STREET: installations in narrow streets with pedestrian traffic

Presettings
Shopping str



4 SETUP



STEP OUT OF THE INFRARED FIELD!



OR



SETUP 1 (QUICK)

reference picture



SETUP 2 (ASSISTED)

test of full door cycle +
reference picture



TEST THE GOOD FUNCTIONING OF THE INSTALLATION BEFORE LEAVING THE PREMISES!

OVERVIEW OF SETTINGS

	0	1	2	3	4	5	6	7	8	9				
<ul style="list-style-type: none"> Back More 														
PRESETTINGS	standard	critical env.	shopping street	factory values for IR immunity and IR number							increased immunity			
IR: IMMUNITY	low	normal	high	higher	highest	normal	high	For conformity to EN 16005 or DIN 18650 at a mounting height of 2.8 or more, use values 6 and 7.						
IR: FREQUENCY	A	B	Sensors mounted close to each other should have a different frequency.				For conformity to BS 7036 at a mounting height of 2.2 m or more, use values 6 and 7.							
More Back														
<ul style="list-style-type: none"> Back More 	factory value	excludes conformity of the door system according to EN 16005 / DIN 18650 / BS 7036												
IR: WIDTH												Always additionally adjust the arrow position on the sensor with a screwdriver.		
IR: NUMBER	service mode	1	2	service mode = no IR detection during 15 minutes (maintenance). This value excludes conformity of the door system to EN 16005 and DIN 18650.										
IR: PRESENCE TIME	motion	15 s	30 s	1 min	2 min	5 min	10 min	20 min	60 min	infinite	min. value for DIN18650: 1 min min. value for EN16005: 30 s			
IR: OUTPUT	NO NC	NC NO	NC NC	NO NO							NO: normally open NC: normally closed			
REDIRECTION	safety	safety + opening	0 presence detection on safety input 1 presence detection on safety and opening input											
FACTORY RESET								full reset	partial reset	partial: outputs are not reset				
More Back														
<ul style="list-style-type: none"> Back More 														
DIAGNOSTICS	ZIP CODE format		all parameter settings in zipped (see application note on ZIP CODE) unique ID-number										IR: C2 ENERG	signal amplitude received on curtain
	ID #	last 10 errors + day indication										2		
	ERROR LOG	view of spot(s) that trigger detection										POWERSUPPLY	supply voltage at power connector	
	IR: SPOTVIEW	signal amplitude received on curtain 1										OPERATINGTIME	power duration since first startup	
	IR: C1 ENERG											RESET LOG	delete all saved errors	
												PASSWORD	LCD and remote control password (0000 = no password)	
												LANGUAGE ADMIN	language of LCD-menu enter code to access admin mode	

TROUBLESHOOTING

E1	 ORANGE LED flashes 1 x.	The sensor signals an internal fault.	<ol style="list-style-type: none"> 1 Replace sensor.
E2	 ORANGE LED flashes 2 x.	The power supply is too low or too high.	<ol style="list-style-type: none"> 1 Check power supply (in the diagnostics menu of the LCD). 2 Check wiring.
E4	 ORANGE LED flashes 4 x.	The sensor receives not enough IR-energy.	<ol style="list-style-type: none"> 1 Decrease the angle of the IR-curtains. 2 Increase the IR-immunity filter (values >2.8 m). 3 Deactivate 1 curtain.
E5	 ORANGE LED flashes 5 x.	The sensor receives too much IR-energy.	<ol style="list-style-type: none"> 1 Slightly increase the angle of the IR-curtains. 2 Decrease the IR-immunity filter (values 1-3 <2.8 m).
E5		The sensor is disturbed by external elements.	<ol style="list-style-type: none"> 1 Eliminate the cause of disturbance (lamps, rain cover, door controller housing properly grounded).
E8	 ORANGE LED flashes 8 x.	IR power emitter is faulty.	<ol style="list-style-type: none"> 1 Replace sensor.
	 ORANGE LED is on.	The sensor encounters a memory problem.	<ol style="list-style-type: none"> 1 Cut and restore power supply. 2 If orange LED lights up again, replace sensor.
	 RED LED flashes quickly after an assisted setup.	The sensor sees the door during the assisted setup.	<ol style="list-style-type: none"> 1 Move the IR-curtains away from the door. 2 Install the sensor as close to the door as possible. If needed, use a bracket accessory. 3 Launch a new assisted setup.
	 RED LED lights up sporadically.	The sensor vibrates.	<ol style="list-style-type: none"> 1 Check if the sensor is fastened firmly. 2 Check position of cable and cover.
		The sensor sees the door.	<ol style="list-style-type: none"> 1 Launch an assisted setup and adjust the IR angle.
		The sensor is disturbed by external conditions.	<ol style="list-style-type: none"> 1 Increase the IR-immunity filter to value 3. 2 Select presetting 2 or 3.
	 The LED and the LCD-display are off.		<ol style="list-style-type: none"> 1 Check wiring.
	The reaction of the door does not correspond to the LED-signal.		<ol style="list-style-type: none"> 1 Check output configuration setting. 2 Check wiring.
	 The LCD or remote control does not react.	The sensor is protected by a password.	<ol style="list-style-type: none"> 1 Enter the right password. If you forgot the code, cut and restore the power supply to access the sensor without entering a password during 1 minute.

LED-SIGNAL



Presence detection



LED flashes



LED flashes x times



LED flashes red-green



LED flashes quickly



LED is off

INSTALLATION



The sensor should be fixed firmly to avoid extreme vibrations.



Do not cover the sensor.



Avoid moving objects and light sources in the detection field.



Avoid highly reflective objects in the infrared field.

MAINTENANCE

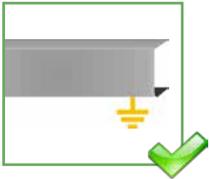


It is recommended to clean the optical parts at least once a year or more if required due to environmental conditions.



Do not use aggressive products to clean the optical parts.

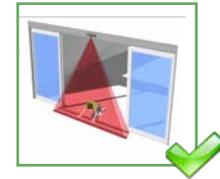
SAFETY



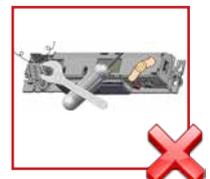
The door control unit and the door cover profile must be correctly earthed.



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



Always test the good functioning of the installation before leaving the premises.



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



- The device cannot be used for purposes other than its intended use. All other uses cannot be guaranteed by the manufacturer of the sensor.
- The manufacturer of the door system is responsible for carrying out a risk assessment and installing the sensor and the door system in compliance with applicable national and international regulations and standards on door safety.
- The manufacturer of the sensor cannot be held responsible for incorrect installations or inappropriate adjustments of the sensor.

TECHNICAL SPECIFICATIONS

Supply voltage:	12 V - 24 V AC +/-10% ; 12 V - 30 V DC +/-10% (to be operated from SELV compatible power supplies only)
Power consumption:	< 2.5 W
Mounting height:	2 m to 3.5 m (local regulations may have an impact on the acceptable mounting height)
Temperature range:	-25°C to +55°C; 0-95% relative humidity, non condensing
Degree of protection:	IP54
Noise:	< 70 dB
Expected lifetime:	20 years
Applicable directives:	MD 2006/42/EC; EMC 2004/108/EC; ROHS 2 2011/65/EU



Detection mode:	Presence Typical response time: < 200 ms (max. 500 ms)
Technology:	Active infrared with background analysis Spot: 5 cm x 5 cm (typ) Number of spots: max. 24 per curtain Number of curtains: 2
Output:	Solid-state-relay (potential and polarity free) Max. contact current: 100 mA Max. contact voltage: 42 V AC/DC Holdtime: 0.3 to 1 s
Test input:	Sensitivity: Low: < 1 V; High: > 10 V (max. 30 V) Response time on test request: typical: < 5 ms
Norm conformity:	EN 12978 EN ISO 13849-1:2008 PL «c» CAT. 2 (under the condition that the door control system monitors the sensor at least once per door cycle) IEC 61496-1:2012 ESPE Type 2 EN 16005:2012 Chapter 4.6.8; DIN 18650-1:2010 Chapter 5.7.4 BS 7036-1:1996 Chapter 8.1

Specifications are subject to changes without prior notice.
All values measured in specific conditions.



SAFETY INSTRUCTIONS

The manufacturer of the door system is responsible for carrying out a risk assessment and installing the sensor and the door system in compliance with applicable national and international regulations and standards on door safety and if applicable, the machinery directive 2006/42/EC.

Only trained and qualified personnel may install and setup the sensor. The warranty is void if unauthorized repairs are made or attempted by unauthorized personnel. Avoid touching any electronic and optical components.

CAME
safety & comfort

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TEL (+39) 0422 4940 - FAX (+39) 0422 4941 - info@came.com - www.came.com

Came S.p.A. hereby declares that MR8701 is in conformity with the basic requirements and the other relevant provisions of the directives 1999/5/EC, 2006/95/EC and 2006/42/EC.

Only for EC countries: According to the European Guideline 2012/19/EC for Waste Electrical and Electronic Equipment (WEEE)
Original upon request.



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