DATASENSING
easing automation challenges

IP67

NEW!

CR

POLARIZED RETROREFLECTIVE AREA SENSOR



- Area height controlled up to 309 mm
- Maximum operative distance up to 4.5 m
- Two teach-in types: fine and standard
- Optical pitch 10 mm
- Protection degree IP67
- Blanking function

IO-Link

CODE DESCRIPTION

		CR	0	/	0	I	-	1	V
series	**CR**	Retroreflective Polarized Area Sensor with aluminum compact housing							
models	**0**	Model area detection: high 69 mm; pitch 10 mm							
	1	Model area detection: high 149 mm; pitch 10 mm							
	2	Model area detection: high 309 mm; pitch 10 mm							
output	**0**	Outputs select (NO/NC); IO Link mode							
	B	Complementary output (NO +NC)							
output logic	**I**	IO Link output							
	B	NPN + PNP output							
	N	NPN outputs							
	P	PNP outputs							
	T	Push-Pull output							
housing material	**1**	Metallic housing							
connection	**V**	Output cable length 25 cm with M12 pigtail							

TECHNICAL SPECIFICATIONS

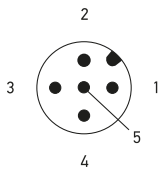
	CR0/**-**	CR1/**-**	CR2/**-**
			
GENERAL DATA			
Operating principle	Polarized retroreflective		
Description	Area Sen, H=69 mm-10 mm pitch,Reflex	Area Sen, H=149 mm-10 mm pitch,Reflex	Area Sen, H=309 mm-10 mm pitch,Reflex
Beams number	6 (4 em. + 3 ric.)	14 (8 em. +7 ric.)	30 (16 em.+ 15 ric.)
DETECTION CAPABILITIES			
Nominal sensing distance	0.2 ... 4.5 m		
Controlled height	69 mm	149 mm	309 mm
Minimum detectable object	ø 3 ... 7 mm @ 2m RL106G - Ø 3...16mm @ 4.5m RL106G	ø 3 ... 10 mm @ 2m RL136 - Ø 3...20mm @ 4.5m RL136	
Thermal drift	≤ 10% Sr		
EMISSION DATA			
Emission	Red (617nm)		
Emission	10 mm		
FUNCTIONS			
Sensitivity adjustment	Teach-in		
INPUT/OUTPUT			
Maximum switching frequency	400 Hz	320 Hz	190 Hz
Output type	NPN + PNP, IO-Link, Push-Pull, NPN, PNP		
Output function	NO/NC, NO+NC		
HMI/UI			
LED indicators	Green: power supply-alignment; Red: dark/light status		
supply voltage	12 ... 30 Vdc		
Maximum residual ripple	10%		
Leakage current	≤ 1µA		
Maximum No-load absorption	100mA		150mA
Maximum DC output voltage drop	1.6 V @ IL=100mA		
Maximum DC load current	160 mA		
Short circuit protection	•		
Reverse polarity protection	•		
Impulsive overvoltage protections	•		
Delay to availability	≤300ms	≤700ms	≤ 1s
MECHANICAL DATA			
Dimensions	107x20x36 mm	187x20x36 mm	347x20x36 mm
Housing material	Aluminium		
Active part material	PMMA		
Connections	Pigtail (CR*/0B-1V), Pigtail (CR*/0I-1V), Pigtail (CR*/0T-**), Pigtail (CR*/B*-**)		
Weight	100 g	170 g	310 g
TEST/CERTIFICATIONS			
Electromagnetic compatibility	IEC EN 60947-5-2		
ENVIRONMENTAL DATA			
Operating Temperature	-10 ... 55 °C (without freeze)		
Shocks and vibrations	Vibration IEC 60068-2-6 / Shock IEC 60068-2-27		
Ambient light immunity	5000 lux (fluorescent lamp); 50000 lux (sunlight)		

AVAILABLE MODELS

Distance between beams	Nominal sensing distance	Sensitivity adjustment	Controlled height	Beams number	Connections	Output type	Output function	Part number
10 mm	0.2 ... 4.5 m	Teach-in	149 mm	14 (8 em. +7 ric.)	Pigtail 240 mm PVC Cable + M12 5P Plug	NPN + PNP	NO/NC	**CR1/0B-1V**
					Pigtail 240 mm PVC Cable + M12 4P Plug	IO-Link		**CR1/0I-1V**
						Push-Pull		**CR1/0T-1V**
						PNP	NO+NC	**CR1/BP-1V**
						NPN		**CR1/BN-1V**
			309 mm	30 (16 em.+ 15 ric.)		Push-Pull	NO/NC	**CR2/0T-1V**
						NPN	NO+NC	**CR2/BN-1V**
						PNP		**CR2/BP-1V**
					Pigtail 240 mm PVC Cable + M12 5P Plug	NPN + PNP		**CR2/0B-1V**
					Pigtail 240 mm PVC Cable + M12 4P Plug	IO-Link		**CR2/0I-1V**
			69 mm	6 (4 em. + 3 ric.)	Pigtail 240 mm PVC Cable + M12 5P Plug	NPN + PNP	NO/NC	**CR0/0B-1V**
					Pigtail 240 mm PVC Cable + M12 4P Plug	IO-Link		**CR0/0I-1V**
						Push-Pull		**CR0/0T-1V**
						PNP	NO+NC	**CR0/BP-1V**
						NPN		**CR0/BN-1V**

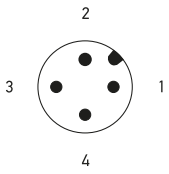
PLUGS

CR*/0B-1V



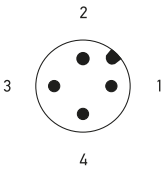
Brown	1	12...30 Vdc
White	2	NPN output
Blue	3	0 Vdc
Black	4	PNP output
Grey	5	Selectable NO/NC

CR*/0I-1V



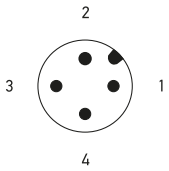
Brown	1	12...30 Vdc
White	2	Multifunc-tion: In/Q
Blue	3	0 Vdc
Black	4	IO-Link interface: C/Q

CR*/0T-**



Brown	1	12...30 Vdc
White	2	Selectable NO/NC
Blue	3	0 Vdc
Black	4	Push-pull output

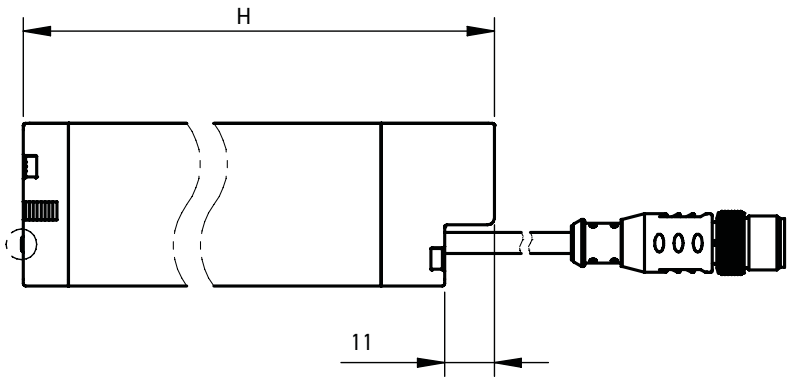
CR*/B*-**

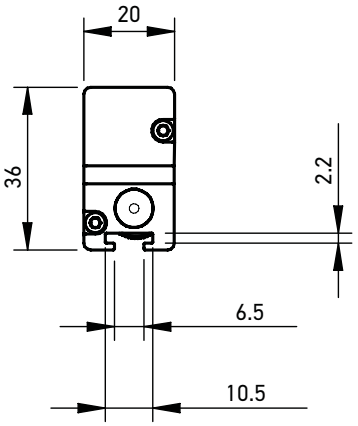


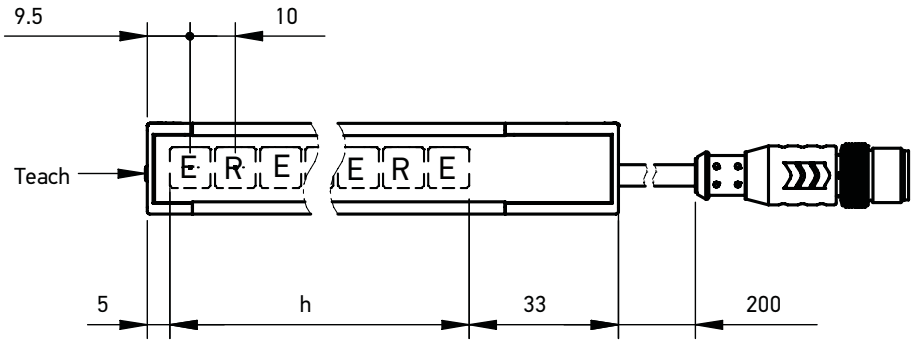
Brown	1	12...30 Vdc
White	2	NC output
Blue	3	0 Vdc
Black	4	NO output

MECHANICAL DRAWINGS

CR*/-****







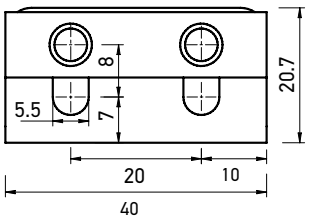
Models	h = height controlled	H = height of the product
CR0/**-1V	69 mm	107 mm
CR1/**-1V	149 mm	187 mm
CR2/**-1V	309 mm	347 mm

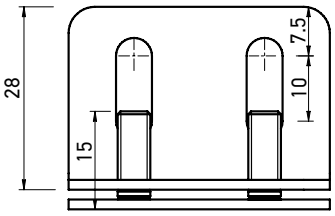
RESPONSE DIAGRAMS

Reflectors for CR0	ExG = 1 (m)	ExG ≥ 1.5 (m)	ExG = 1 (m)
RL106 G	0.15	0.2...4.5	5.5
RL135	0.25	0.3...4	5
RL100DCR0	0.25	0.3...2.5	3
Reflectors for CR1	**ExG = 1 (m)**	**ExG ≥ 1.5 (m)**	**ExG = 1 (m)**
RL136	0.15	0.2...4.5	5.5
RL100DCR1	0.25	0.3...2.5	3
Reflectors for CR1	**ExG = 1 (m)**	**ExG ≥ 1.5 (m)**	**ExG = 1 (m)**
2 x RL136 (coples)	0.15	0.2...4.5	5.5
RL100DCR2	0.25	0.3...2.5	3

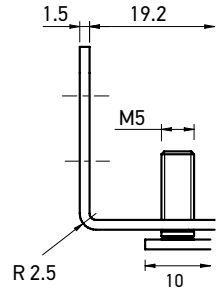
ACCESSORIES INCLUDED WITH ALL MODELS

Accessories fixing kit ST151



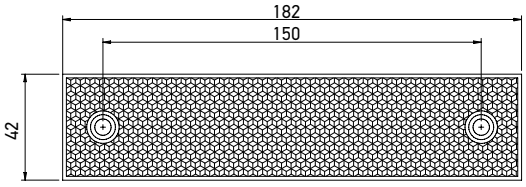
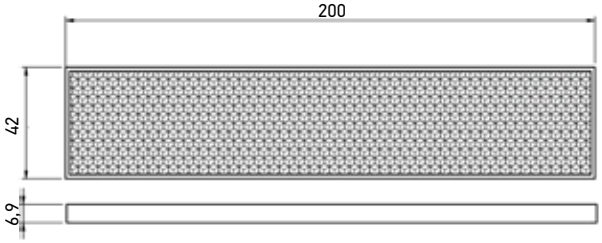


T insert, two M5 nuts and split washers included



L bracket

mm

product	dimensions (mm)
RL106G[1] 	
RL136[2] 	

[1] included for CR0
[2] included for CR1 and quantity 2 for CR2