

Mini Photoelectric Sensor (red emission)



type	sensing range	adjustment	model
background suppression	30...200 mm	yes	QMR5/ 0 P - 0 A
	100 mm	yes	QMR6/ 0 P - 0 A
direct diffuse	400 mm	yes	QMR7/ 0 P - 0 A
	1,000 mm	yes	QMR8/ 0 P - 0 A
polarized	5 m	yes	QMRN/ 0 P - 0 A
polarized for transparent objects	4 m	yes	QMR/L 0 P - 0 A
	1,5 m	yes	QMRG/ 0 P - 0 A
emitter + receiver	20 m	yes	QMRHD/ 0 P - 0 A
NO/NC selectable output			0
PNP logic			P
NPN logic			N
plastic body			0
cable exit			A
M8 plug exit			F

Maxi Photoelectric Sensors



type	sensing range	adjustment	model
background suppression (BGS)	50...300 mm	si	RXS/ 0 0 - 1 A
	0,25...1 m	si	RXL/ 0 0 - 1 A
	1 m	si	RX6/ 0 0 - 1 A
direct diffuse	2 m	si	RX8/ 0 0 - 1 A
	4,5 m	si	RX8/ 0 0 - 1 A
reflex	12 m	si	RXC/ 0 0 - 1 A
polarized	6 m	si	RXP/ 0 0 - 1 A
receiver	16/32 m	si	RXR/ 0 0 - 1 A
PNP/NPN selectable logic			0
without temporizer			T
with temporizer			3
emitter (1)			3 A
10...30 Vdc supply			1
20...60 Vdc / 20...253 Vac supply			3
M12 plug exit			A
M12 plug exit with fixing slide			B
long range model			37

(1) only multi voltage version

High optical performance forks Photoelectric forks



output	model
M8 - 4 pin	FC6 / 0 B 05 06 -1F
IR emitter	I
LASER emitter	L
LO/DO output	0
NPN + PNP logic	B
30 mm width	03
60 mm width	05
80 mm width	08
120 mm width	12
42 mm depth	04
59 mm depth	06

Midi Photoelectric Sensor



type	sensing range	regulation	model
background suppression (1)	130...500 mm	yes	Q501S/ B 0 - 0 A
	1 m	yes	Q501B/ B 0 - 0 A
direct diffuse	2 m	yes	Q501B/ B 0 - 0 A
	6 m	yes	Q501R/ B 0 - 0 A
polarized receiver	20 m	yes	Q501D/ B 0 - 0 A
Lo + Do (complementary outputs) (1)			B
Lo/Do selectable (2)			0
emitter	20 m	no	Q501H/ 0 0
10...30 Vdc supply			0
12...240 Vdc / 24...240 Vac supply			T
plastic body			0
cable exit			A
M12 plug exit (1)			E

(1)available only with 10...30 Vdc supply

Photoelectric forks without adjustment Photoelectric forks



output	model
M8 - 3 pin	FC5R/ L P - 05 06 -1F
Light-ON models	L
Dark-ON models	D
PNP logic	P
NPN logic	N
50 mm width	05
80 mm width	08
120 mm width	12
60 mm depth	06
120 mm depth	12

Photoelectric forks for labels Photoelectric forks



output	model
M8 - 4 pin	FC71/0 P - M304-0F
PNP logic	P
NPN logic	N
NPN/PNP logic	B

Ultrasonic forks for labels Ultrasonic forks

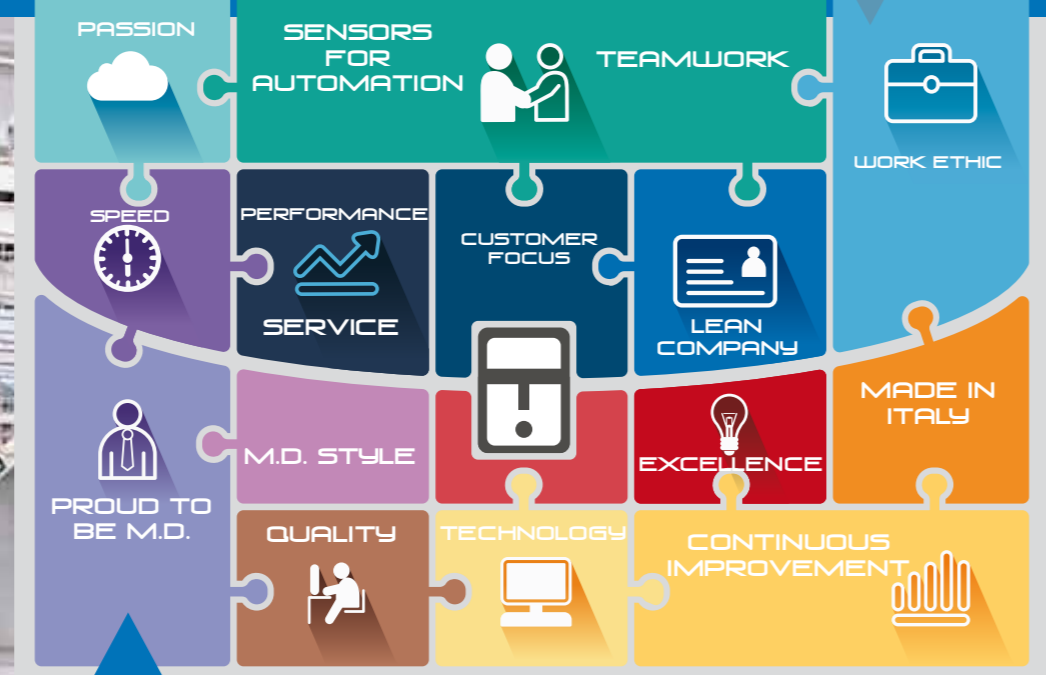


output	model
M8 - 4 pin	FC8U/0 P - M307-1F
PNP logic	P
NPN logic	N
NPN/PNP logic	B

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guide

Edition 01/2016



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M.D. Micro Detectors S.p.A. has been designing and manufacturing a wide range of industrial sensors since 1971. Our company's strong commitment to future developments and innovations is based on over 40 years of knowledge.

Our product portfolio is the following:

- Photoelectric Sensors
- Proximity Sensors
- Ultrasonic Sensors
- Area Sensors
- Safety Devices
- Accessories
- Coils for inductive sensors.

Variation and customization of catalogue products are also an important part of our activity, as well as products specifically developed to satisfy our customers' needs. Moreover, we develop innovative solutions for industrial applications using our technology.

Our organization and competences allow us to manufacture our products quickly and with guaranteed results for our customers. Fast deliveries is one of our biggest strengths.

Over 1.3 million pieces are entirely manufactured in our Modena plant. Our Made in Italy production is synonymous for quality, accuracy, experience and reliability.

Since the beginning, our products have been renowned on the market for their quality, robustness, ease of use and for outstanding performance. This is the result of a manufacturing process carried out at the highest level of capacity, quality, efficiency and flexibility.

All processes, from research and development of new

products to manufacturing and final shipment, are carried out by our personnel at our site. This allows us to keep all of our processes completely under control and to be flexible and reactive to customers' needs.

We are organized according to the principles of Lean Thinking. All products manufactured in our plant undergo constant controls and they are always double-checked.

The human and material assets of our Company guarantee the best results and a constant support at all times. Work ethic, customer orientation and continuous improvement, passion and commitment to excellence, search for professional challenges: the professional background of our people is made of this and more.

The quality of M.D. Micro Detectors S.p.A. has also been certified throughout the years: our Quality Management System has been certified ISO 9001:2008 and several products have obtained the CE, ATEX, UL, cULus, Diversey, TÜV and ECOLAB certification.

CAT7E001674901



LED M18 Photoelectric Sensors



type	sensing distance	adjustment	model
background suppression	30...130 mm	yes	FAR5/ B P - 0 A
	100 mm	no	FAR2/ B P - 0 A
		yes	FAR3/ B P - 0 A
direct diffuse	400 mm	no	FAI6/ B P - 0 A
		yes	FAI7/ B P - 0 A
		yes	FAI8/ B P - 0 A
		no	FAI9/ B P - 0 A
polarized	4 m (2)	no	FARP/ B P - 0 A
		yes	FARN/ B P - 0 A
reflex	5 m (2)	no	FAIC/ B P - 0 A
		yes	FAIM/ B P - 0 A
receiver	20 m (4)	no	FAIZ/ B P - 0 A
		yes	FAID/ B P - 0 A
complementary output NO + NC			B
PNP logic			P
NPN logic			N
emitter		without checking	FAIH/ 0 0 - 0 A
		with checking	FAIH/ X 0 - 0 A
plastic axial body			0
metallic axial body			1
90° plastic body			2
90° metallic body			3
cable exit			A
M12 plug exit			E

(1) 90° models, sensing range: 800 mm (2) 90° models, sensing range: 2,5 m (3) 90° models, sensing range: 4 m (4) models, sensing range: 16 m

LASER M18 Photoelectric Sensors



type	sensing distance	adjustment	model
background suppression (1)	30...100 mm		FAL5/ B P - 1 E
	30...150 mm		FALW/ B P - 1 E
	25...120 mm (2)		FALW/ B P - 3 E
direct diffuse (focalized)	300 mm	yes	FAL4/ B P - 0 A
	200 mm (2)		
polarized	20 m (con RL110)		FALN/ B P - 0 A
	30 m (con RL201)		
	5 m (con RL100D)		
receiver	50 m		FALD/ B P - 0 A
NO + NC complementary output			B
PNP logic			P
NPN logic			N
emitter	50 m	con check	FALH/ X 0 - 0 A
axial plastic body			0
metallic axial body			1
90° plastic body			2
90° metallic body			3
cable exit			A
M12 plug exit			E

(1) only with metallic body and M12 plug exit (-1E or -3E versions) (2) 90° versions

LASER M18 Photoelectric Sensor FAL Precise detection

- Visible class 1 and class 2 red laser emission
- Diffuse, polarized, through beam models.
- Background suppression models, axial and 90° optics.
- High sensing distance.
- IP67 protection degree.
- Metal or plastic housing, axial or radial (90°) optic.
- ATEX certified (cat.3) models available.

DECOUT® M18 Photoelectric Sensors



type	sensing distance	adjustment	model
background suppression (BGS)	50 mm	no	MS0/ 0 0 - 0 A
	100 mm	no	MS1/ 0 0 - 0 A
BGS focalized (1)	12 mm / 25 mm	no	MS7/ 0 0 - 0 A
		no	MS2/ 0 0 - 0 A
direct diffuse	100 mm	yes	MS3/ 0 0 - 0 A
	200 mm	no	MS4/ 0 0 - 0 A
	400 mm	no	MS6/ 0 0 - 0 A
		yes	MS7/ 0 0 - 0 A
reflex	4.5 m	no	MSC/ 0 0 - 0 A
polarized	3.5 m	no	MSP/ 0 0 - 0 A
		yes	MSN/ 0 0 - 0 A
receiver	16 m	no	MSR/ 0 0 - 0 A
	32 m	no	MSD/ 0 0 - 0 A
NO/NC selectable output			0
PNP/NPN logic selectable			P
emitter		without check	MSE/ 0 0 - 0 A
		with check	MSX/ X 0 - 0 A
axial plastic body			0
axial metallic body			1
cable exit			A
M12 plug exit			E

(1) use with STF12 or STF25 focusers

Fixed distance background suppression M18 Photoelectric Sensors



type	sensing range	adjustment	model
background suppression (BGS)	50 mm	no	SS0/ 0 P - 0 A
	100 mm	no	SS1/ 0 P - 0 A
BGS focalized (1)	12 mm / 25 mm	no	MS7/ 0 0 - 0 A
NO/NC selectable output			0
PNP/NPN selectable logic			P
PNP/NPN selectable logic			N
plastic axial body			0
metallic axial body			1
cable exit			A
M12 plug exit			E

(1) use with STF12 or STF25 focusers


QM-Cubic Miniaturized Photoelectric Sensor High Optical performance



type	sensing range	adjustment	model
background suppression	30...400 mm	yes	QM5/ 0 P - 0 A
direct diffuse	400 mm	yes	QM7/ 0 P - 0 A
	1,500 mm	yes	QM9/ 0 P - 0 A
reflex	7 m	yes	QM/C/ 0 P - 0 A
reflex for transparent objects	0,05...1 m	yes	QM/G/ 0 P - 0 A
emitter + receiver	30 m	yes	QMRHD/ 0 P - 0 A
NO/NC selectable output			0
PNP logic			P
NPN logic			N
plastic body			0
cable exit			A
M12 plug exit			F

- Photoelectric Sensors
- Ultrasonic Sensors
- Proximity Sensors
- Area Sensors
- Safety
- Accessories

Inductive Sensors standard body Proximity Sensors



power supply	output	assembly	sensing range	M8	sensing range	M12	sensing range	M18	sensing range	M30	sensing range	M8 short body	sensing range	M12 short body	sensing range	M18 short body	
10 ... 30 Vdc	cable	shielded	1.5 mm	AE1/A P-1A	2 mm	AM1/A P-1A	5 mm	AK1/A P-1A	10 mm	AT1/A P-1A	1.5mm	AE6/A P-1A	2 mm	AM6/A P-1A	5 mm	AK6/A P-1A	
		unshielded	2.5 mm	AE1/A P-2A	4 mm	AM1/A P-2A	8 mm	AK1/A P-2A	15 mm	AT1/A P-2A	2.5 mm	AE6/A P-2A	4 mm	AM6/A P-2A	8 mm	AK6/A P-2A	
		shielded	2 mm	AE1/A P-3A	4 mm	AM1/A P-3A	8 mm	AK1/A P-3A	15 mm	AT1/A P-3A	2 mm	AE6/A P-3A	4 mm	AM6/A P-3A	8 mm	AK6/A P-3A	
		unshielded	4 mm	AE1/A P-4A	8 mm	AM1/A P-4A	12 mm	AK1/A P-4A	20 mm	AT1/A P-4A	4 mm	AE6/A P-4A	8 mm	AM6/A P-4A	12 mm	AK6/A P-4A	
		shielded	1.5 mm	AE1/A P-1H	2 mm	AM1/A P-1H	5 mm	AK1/A P-1H	10 mm	AT1/A P-1H	2 mm	AE6/A P-1H	5 mm	AK6/A P-1H	10 mm	AK6/A P-1H	
		unshielded	2.5 mm	AE1/A P-2H	4 mm	AM1/A P-2H	8 mm	AK1/A P-2H	15 mm	AT1/A P-2H	4 mm	AE6/A P-2H	8 mm	AK6/A P-2H	15 mm	AK6/A P-2H	
	M12 plug	shielded	2 mm	AE1/A P-3H	4 mm	AM1/A P-3H	8 mm	AK1/A P-3H	15 mm	AT1/A P-3H	2 mm	AE6/A P-3H	4 mm	AM6/A P-3H	8 mm	AK6/A P-3H	
		unshielded	4 mm	AE1/A P-4H	8 mm	AM1/A P-4H	12 mm	AK1/A P-4H	20 mm	AT1/A P-4H	4 mm	AE6/A P-4H	8 mm	AM6/A P-4H	12 mm	AK6/A P-4H	
		M8 plug	shielded	1.5 mm	AE1/A P-1F							1.5 mm	AE6/A P-1F				
			unshielded	2.5 mm	AE1/A P-2F							2.5 mm	AE6/A P-2F				
			shielded	2 mm	AE1/A P-3F							2 mm	AE6/A P-3F				
			unshielded	4 mm	AE1/A P-4F							4 mm	AE6/A P-4F				
PNP logic			P		P		P		P		P		P		P		
NPN logic			N		N		N		N		N		N		N		
20 ... 253 Vac	cable	shielded			2 mm	VM2/A 0-1B	5 mm	VK2/A 0-1B	10 mm	VT2/A 0-1B							
		unshielded			4 mm	VM2/A 0-2B	8 mm	VK2/A 0-2B	15 mm	VT2/A 0-2B							
	plug	shielded			2 mm	VM2/A 0-1H	5 mm	VK2/A 0-1H	10 mm	VT2/A 0-1H							
		unshielded			4 mm	VM2/A 0-2H	8 mm	VK2/A 0-2H	15 mm	VT2/A 0-2H							
NO output					A		A		A		A		A		A		
NC output					C		C		C		C		C		C		
NC + NC output																B	

Inductive Sensors short body Proximity Sensors

UT1 - M30 Ultrasonic Sensors

body	sensing range	output	model
plastic	250...3.500 mm	M12 plug	UT1B/E P-0EUL
		2 m cable	UT1B/E P-0AUL
metallic	350...3.500 mm	M12 plug	UT1B/E P-1EUL
		2 m cable	UT1B/E P-1AUL
PNP- NO/NC output (only plastic models) P			
NPN- NO/NC output (only plastic models) N			
0 ... 10 V output (only plastic models) 1			
4 ... 20 mA output (only plastic models) 2			
1 x NPN - NO/NC + 1 x 4 ... 20 mA 4			
1 x PNP - NO/NC + 1 x 4 ... 20 mA 6			
1 x PNP - NO/NC + 1 x 0 ... 10 V 7			
1 x NPN - NO/NC + 1 x 0 ... 10 V 9			
2 x PNP - NO/NC - window + hysteresis W			
2 x NPN - NO/NC - window + hysteresis M			

Standard and cCSAus certified Connectors

type	pins	LED	model
M8	3	no	CD08/0A- 020 A 1
	4	no	CD08/0B- 020 A 1
M12	3 - NO	no	CD12M/AA- 020 A 1
	4	no	CD12M/0B- 020 A 1
2 m length 020			
5 m length 050			
10 m length 100			
15 m length (1) 150			
20 m length (1) 200			
axial plug A			
90° plug C			
PVC cable 1			
PUR cable 5			
standard plugs -			
cCSAus certified plugs US			

Not cabled M8 Connectors

dimension	LED	model
M8	no	C V 08/ 1 B 00 A
male plug	V	
female plug	L	
spring block	1	
screw block	0	
3 pins	A	
4 pins	B	
axial model	A	

Relays Modules

relay module	model
relay module	SB300
relay module with restart button	SB400
relay module with restart button and muting function	SB400M

Deviating Mirrors Safety accessories

for 160 mm protected height grids	model
for 310 mm protected height grids	SL 015
for 460 mm protected height grids	030
for 610 mm protected height grids	045
for 760 mm protected height grids	060
for 910 mm protected height grids	075
for 1,060 mm protected height grids	090
for 1,210 mm protected height grids	105
for 1,360 mm protected height grids	120
for 1,510 mm protected height grids	135
	150

Not cabled M12 Connectors

dimension	LED	model
M12	no	C V 12/ 0 B -00 A
male plug	V	
female plug	L	
spring block	1	
screw block	0	
4 pins	B	
5 pins	H	
axial model	A	
90° model (male 4 pins)	B	
90° model	C	

IP69K Connectors

type	pins	LED	models
M12 IP69K	4	no	CD12F/0B- 050 A 1
M12 IP69K LED	4	no	CD12F/LB- 050 A 1
5 m length 050			
axial plug A			
radial plug C			
PVC cable 1			

With LED Connectors

type	pins	LED	model
M12	3 - NO - NPN	2	CD12M/NA- 020 C 1
	3 - NO - PNP	2	CD12M/PA- 020 C 1
	4 - NO/NC - PNP	2	CD12M/VB- 020 C 1
	4 - DECOUT	2	CD12M/DB- 020 C 1
M12 PUR	3	Bi-LED	CD12M/LB- 050 C 5
2 m length 020			
5 m length 050			
10 m length 100			
90° plug C			
PVC cable 1			
PUR cable (1) 5			

Connectors for LS Safety light curtains

emitter	receiver	model
		CD12M/0H- 050 A 5
5 m length		050
10 m length		100
15 m length (1)		150
axial model		A
90° model		C
PUR cable		5
		CD12M/0E- 050 A 1
5 m length		050
10 m length		100
15 m length (1)		150
axial model		A
90° model		C
PVC cable		1

M12 for VAC Sensors Connectors

type	pins	LED	model
M12 AC	2 + PE	no	CD12M/AC- 050 A 5
5 m length 050			
axial plug A			
radial plug C			
PUR cable 5			

DECOU NPN/PNP-NO/NC selectable Proximity Sensors

power supply	output	assembly	sensing range	M12	sensing range	M18
10 ... 30 Vdc	cable	shielded	2 mm	PM3/ 0 0-1A	5 mm	PK3/ 0 0-1A
		unshielded	4 mm	PM3/ 0 0-2A	8 mm	PK3/ 0 0-2A
	M12 plug	schermato	2 mm	PM3/ 0 0-1H	5 mm	PK3/ 0 0-1H
		non schermato	4 mm	PM3/ 0 0-2H	8 mm	PK3/ 0 0-2H
NO/NC output state selectable 0						
PNP/NPN logic selectable 0						

BX10 - 10 optics (KIT Em. + Rec.) Area Sensors

controlled area	resolution	model
90 mm	Ø 5 mm...Ø 15 mm	BX10SR/ 0 A
emitter		0 A
NO receiver		A
NC receiver		C
emitter		0
NPN+PNP receiver		D
M12 plug exit		
sensing range 0.3...2 m		
sensing range 0.3...4 m		
sensing range 0.3...6 m		

UK6 - M18 short body Ultrasonic Sensors

body	sensing range	output	model	sensing range	model
plastic	40...300 mm	conn. M12	UK6A/H P-0EUL	80...800 mm	UK6C/H P-0EUL
		cavo 2 m	UK6A/H P-0AUL		UK6C/H P-0AUL
metallic	40...300 mm	conn. M12	UK6A/H P-1EUL	80...800 mm	UK6C/H P-1EUL
		cavo 2 m	UK6A/H P-1AUL		UK6C/H P-1AUL
PNP - NO/NC output (only plastic models) P					
NPN - NO/NC output (only plastic models) N					
0 ... 10 V output (only plastic models) 1					
4 ... 20 mA output (only plastic models) 2					

UT2 - M30 with Ø 38,8 mm large front Ultrasonic Sensors

body	sensing range	output	model	body	sensing range	output	model
M30 plastic	350...6,000 mm	M12 plug	UT2F/E P-0EUL	M30 plastic	350...6,000 mm	M12 plug	UT2F/E P-0EUL
		2 m cable	UT2F/E P-0AUL			2 m cable	UT2F/E P-0AUL
1 x NPN - NO/NC + 1 x 4 ... 20 mA 4							
1 x PNP - NO/NC + 1 x 4 ... 20 mA 6							
1 x PNP - NO/NC + 1 x 0 ... 10 V 7							
1 x NPN - NO/NC + 1 x 0 ... 10 V 9							
2 x PNP - NO/NC - window + hysteresis W							
2 x NPN - NO/NC - window + hysteresis M							

UK1 - M18 standard body Ultrasonic Sensors

body	sensing range	output	model	sensing range	model	sensing range	model
plastic	50...400 mm	M12 plug	UK1A/E P-0EUL	100...900 mm	UK1C/E P-0EUL	150...1,600 mm	UK1D/E P-0EUL
		2 m cable	UK1A/E P-0AUL		UK1C/E P-0AUL		
metallic	50...400 mm	M12 plug	UK1A/E P-1EUL	100...900 mm	UK1C/E P-1EUL	200...1,500 mm	UK1D/E P-1EUL
		2 m cable	UK1A/E P-1AUL		UK1C/E P-1AUL		
PNP - NO/NC output (only plastic models) P							
NPN - NO/NC output (only plastic models) N							
0 ... 10 V output (only plastic models) 1							
4 ... 20 mA output (only plastic models) 2							
1 x NPN - NO/NC + 1 x 4 ... 20 mA 4							
1 x PNP - NO/NC + 1 x 4 ... 20 mA 6							
1 x PNP - NO/NC + 1 x 0 ... 10 V 7							
1 x NPN - NO/NC + 1 x 0 ... 10 V 9							
2 x PNP - NO/NC - window + hysteresis W							
2 x NPN - NO/NC - window + hysteresis M							

Capacitive Sensors Proximity Sensors

power supply	body	assemble	sensing range	M18	sensing range	M30	assembly	sensing range	15 x 35 x 55 mm
10 ... 30 Vdc	plastic	shielded	8 mm	C18P/ B P-1 A	16 mm	C30 P / B P-1A	shielded	25 mm	CO55/ B P-3 A
		unshielded	12 mm	C18P/ B P-2 A	25 mm	C30 P / B P-2A	unshielded		
	metallic	-	-	-	16 mm	C30 M / B P-1A			
		-	-	-	25 mm	C30 M / B P-2A			
NO + NC complementary exit B									
PNP logic P									
NPN logic N									
20 ... 250 Vac	plastic	shielded	8 mm	C18P/ A 0-1 A	16 mm	C30 P / 0 0-1A			
		unshielded	12 mm	C18P/ A 0-2 A	25 mm	C30 P / 0 0-2A			
	metallic	-	-	-	16 mm	C30 M / 0 0-1A			
		-	-	-	25 mm	C30 M / 0 0-2A			
NO output state A									
NC output state C									
NO/NC output state selectable 0									
2 m cable exit A									
M12 plug exit E									

Reflectors Accessories

adhesive paper	sensing range	dimensions	model
	RL 100	user defined	not suitable for polarized sensors
	RL 100D	user defined	-
	RL 100A4	200 x 300 mm	-
	RL 100C4	50 x 300 mm	-
	RL 100DQ1	100 x 100 mm	-
rounds	RL 102	Ø 25.2 mm	-
	RL 103	Ø 34.5 mm	-
	RL 104	Ø 46 mm	-
	RL 109G	Ø 83 mm	-
	RL 110	Ø 84 mm	-
	RL 105G	38 x 95 mm	-
	RL 106G	42 x 182 mm	-
	RL 107	100 x 100 mm	-
	RL 111G	23.5 x 47.5 mm	-
	RL 112G	19 x 73 mm	-
	RL 113G	51 x 61 mm	-
	RL 116	40 x 60 mm	-
RL 130	23 x 69 mm	-	
RL 131	23 x 43 mm	-	
RL 133	12.5 x 54 mm	-	
RL 201	60 x		