

APPLICATION

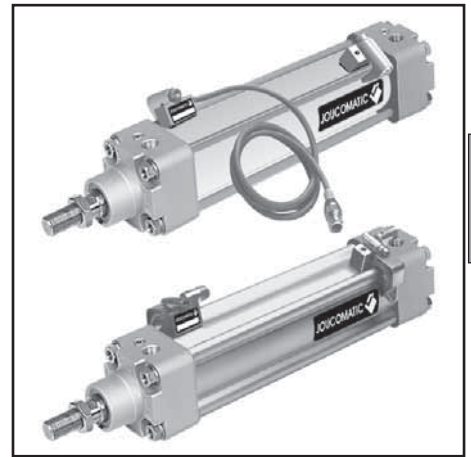
This **four-wire** proximity sensor will monitor stroke end and intermediate positions of pneumatic cylinders equipped with built-in permanent magnets.
Do not use near welding areas.

OPERATING SYSTEM

The permanent magnet is mounted in the piston head. On getting closer, its own magnetic field generates variations of the current within the detector oscillator. An amplifier converts them into switch signals.

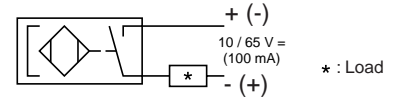
GENERAL CHARACTERISTICS

- | | |
|----------------------------------|--|
| Function | : closing |
| Switching voltage | : 10 to 65 V DC |
| Residual ripple | : < 10% |
| Residual current (opening) | : < 0.8 mA |
| Max. switching current | : 100 mA |
| Min. switching current | : 3 mA |
| I _L max. voltage drop | : < 5 V |
| Hysteresis | : < 1 mm |
| Ambient temperature | : -10°C ; +70°C |
| Housing | : circuit protected by an aluminium box |
| External protection | : IP65 |
| Electrical protection | : non-polarised detector protected against short circuits and overcharges |
- Connection (three possibilities):
- 0.8 m cable + four-pin male connector Ø 12 mm, CNOMO E03.62.520.N
 - 2 m cable with stripped ends
 - integrated male connector Ø 12 mm (for different extension cords available, see overleaf)
 - diode (yellow LED) which lights up when the contact is closed
 - any way - **Do not use near welding areas**
 - ISO 15552 - AFNOR NF ISO 15552 - DIN ISO 15552, type PES series 450 Ø 32 to 200 mm with tie rods and Ø 32 to 125 mm with profiled barrel.
 - ISO 6431 Ø 32 to 200 mm with tie rods, type TRINORM PIS series 436
 - CNOMO 06.07.02/03 - NFE 49001/002 Ø 32 to 200 mm with tie rods, type TRINORM PCN series 437
- Indicator lamp : diode (yellow LED) which lights up when the contact is closed
- Mounting direction : any way - **Do not use near welding areas**
- Mounting on cylinder : ISO 15552 - AFNOR NF ISO 15552 - DIN ISO 15552, type PES series 450 Ø 32 to 200 mm with tie rods and Ø 32 to 125 mm with profiled barrel.



CONNECTION DIAGRAM

No serial connection can be performed with several detectors.



CHOICE OF EQUIPMENT

Adaptation for CNOMO PCN Ø 25 mm cylinder : consult us

DESCRIPTION	Can be mounted on cylinders	CODE of one detector	
		with bracket	on its own
Inductive magnetic position detector, with wire 0.8 m long and four-pin male connector Ø 12 mm type conprox (1) to CNOMO E03.40.150.N and E03.62.520.N, CNOMO cutting oil resistant wire, delivered with mounting bracket for cylinders:	with tie rods Ø 32 to 100 mm	88143676 *	88143672 *
	with tie rods Ø 125 to 200 mm	88143678	
Inductive magnetic position detector, with wire 2 m long, stripped ends without connector, CNOMO cutting oil resistant wire , delivered with mounting bracket for cylinders:	with tie rods Ø 32 to 100 mm	88143677 *	88143673 *
	with tie rods Ø 125 to 200 mm	88143679	
Inductive magnetic position detector, with integrated four-pin male connector Ø 12 mm (2) type conprox, delivered with mounting bracket for cylinders:	with tie rods Ø 32 to 100 mm	88143617 *	88143616 *
	with tie rods Ø 125 to 200 mm	88143680	
	with profiled barrel Ø 32 to 125 mm	88143618 *	

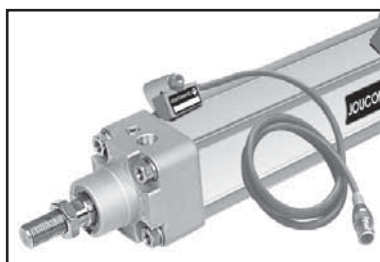
(1) Wires connected to pins 1 and 4 of the connector (car industry applications)

(2) Wires connected to pins 3 and 4 of the connector

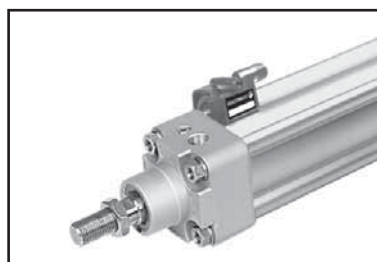
* In the case of use of a BIM magnetic detector on PES series 450 Ø 32, it is necessary to add the option code = **995125**



Mounting on U or H guiding units:
The forward position detector support is specified (consult us)



Detector with wire



Detector with integrated connector



Extension cord (see Accessories overleaf)

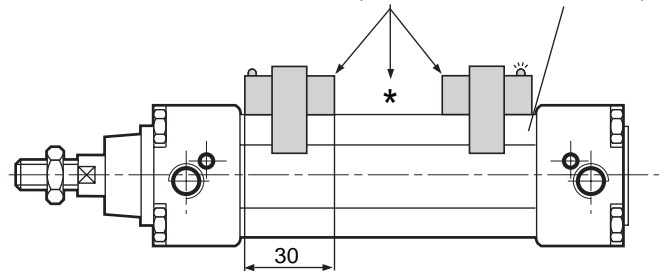
ACCESSORIES-MOUNTINGS

DESCRIPTION		CODE
EXTENDING CORDS	CNOMO extension cord, cutting oil resistant 4 wire conductors, 0.5 mm ² with 1 five-pin straight socket connector Ø 12 mm, CNOMO E03.62.520.N (1) (other end of wire stripped) 5 m long	88143675
	Standard PVC extension cord, 4 wire conductors, 0.5 mm ² with 1 four-pin straight socket connector Ø 12 mm (2) (other end of wire stripped) 5 m long	88143619
	Standard PVC extension cord, 4 wire conductors, 0.5 mm ² with 1 four-pin curved socket connector Ø 12 mm (2) (other end of wire stripped) 5 m long	88143620
MOUNTING DEVICES	Mounting device type KLI 1 for cylinders with tie rods Ø 32 to 100 mm	88143625
	Mounting device type KLI 3 for cylinders with tie rods Ø 125 to 200 mm	88143674
	Mounting device type KLI 2 for cylinders with profiled barrels Ø 32 to 125 mm	88143626

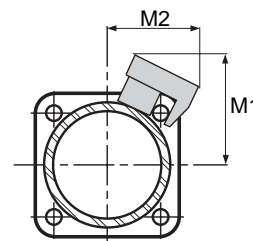
- (1) Wires connected to pins 1 (brown) and 4 (black) of the connector
(2) Wires connected to pins 3 (blue) and 4 (black) of the connector

DIMENSIONS AND WEIGHTS

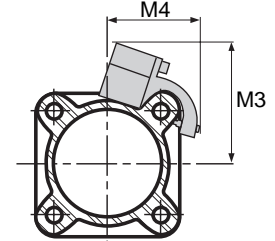
It is possible to install magnetic detectors to monitor stroke end or intermediate positions. Detectors may be mounted on any of the 4 tie rods or profiled barrels.



MOUNTING ON CYLINDER WITH TIE RODS



MOUNTING ON CYLINDER WITH PROFILED BARREL

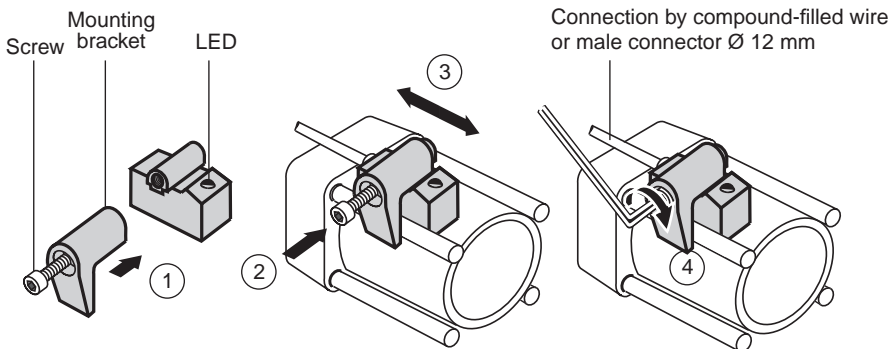


Dimensions (mm)	cylinder Ø (mm)									Weight* (in g)
	32	40	50	63	80	100	125	160	200	
M1	46	50	54	58	65	72	84	97	111	67
M2	39	41	48	52	60	68	78	96	110	
M3	46	50	55	60	67	75	88	-	-	
M4	38	42	46	50	56	65	76	-	-	

* Weight of detector + bracket

MOUNTING ON CYLINDERS

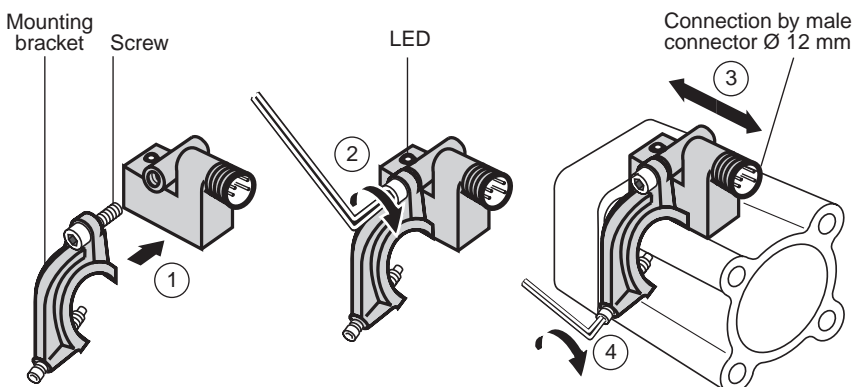
MOUNTING ON CYLINDERS WITH TIE RODS Ø 32 TO 200 mm



Mounting instructions

- 1 - Install mounting bracket on detector
- 2 - Start screwing in the detector
- 3 - Position at measuring point
- 4 - Check that the detector is in contact with the tube and tighten on cylinder, screwing down moderately with key (2.5 mm hexagonal)

MOUNTING ON CYLINDERS WITH PROFILED BARREL Ø 32 TO 125 mm

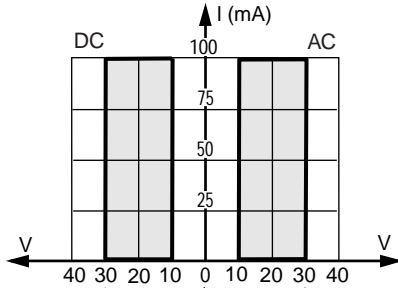


Mounting instructions

- 1 - Install mounting bracket on detector
- 2 - Start screwing bracket on detector
- 3 - Position at measuring point
- 4 - Check that the detector is in contact with the tube and tighten on cylinder, screwing down moderately with key (2.5 hexagonal)

MAXIMUM ELECTRICAL CHARACTERISTICS AND PROTECTION OF MAGNETIC DETECTOR (REED SWITCH)

Note: The switching point must remain within the limits of the shaded area. Any excess voltage or power may damage the detector.



INDUCTIVE LOAD		100 Ω 4 W	100 Ω 4 W
		0,1 μF 250 V	0,1 μF 250 V
RESISTIVE LOAD		Protection not necessary	

PARTICULAR APPLICATIONS (valid for all models)

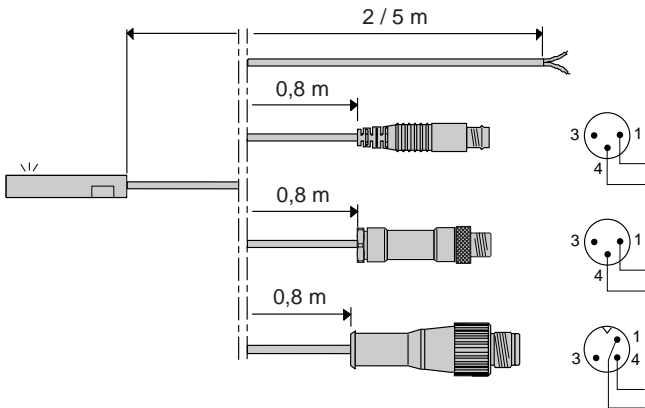
- Detectors used for direct control of incandescent lamps: The capacity specified on the lamp is based on its resistance when hot. When switched on, the resistance of the cold lamp is very low. Therefore, the current rises quickly and may exceed the reed switch rating. Allowance should therefore be made for the real power of the cold lamp.
- With leads longer than 10 m, a 1000 Ω resistor must be fitted in series with the detector to reduce the capacitive effect caused by the wiring.

R = 4 W resistor. Standard CCTU resistors code RP 59, C = paper, polycarbonate or metallized mylar capacitor. The user is responsible for supplying and assembling of components.

REED SWITCH CONNECTION : 4 possibilities

View from male contact side of connector

The detectors reed switch are not polarized



PVC lead outlet Ø 3 mm with stripped ends, 2 wires 0.14 mm²

PVC lead outlet Ø 3 mm with 3-pin plug-in male connector + screw Ø 8 mm (2 pins connected)

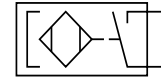
PVC lead outlet Ø 3 mm with 3-pin screw-type male connector, Ø M8, VCS compatible (2 pins connected)

PUR lead outlet Ø 3 mm resistant to cutting fluids, with 3-pin screw-type male connector, Ø M12 (2 pins connected)

ACCESSORIES

Description		CODE
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M8 connector (other end plain) (1) (2)		88100239
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M12 connector (other end plain) (2)		88100238
Straight 3-pin female connector Ø M8, IP67		88100202
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		88100203
Cable cover and holder (sold by the metre - minimum length = 1 m)		88144212 (3)

(1) Extension for M8 connector detectors.
 (2) Detector connection: **brown and black wires (detector is unpolarised)**, blue wire not used
 (3) For your order please add the requested length (in metres) to the order code - example: 2 m = 88144212 2



PRINCIPLE

Static non-contact proximity switch on air cylinders equipped with built-in permanent magnets.

FUNCTIONAL DESCRIPTION




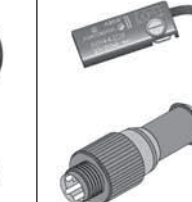

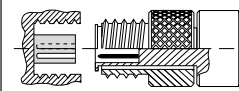

When the permanent magnet which is mounted on the piston approaches the detector the magnetic field it generates causes the semiconductors' resistors to change. This current variation increases the resistance and a switching signal is generated.



B

DETECTOR CHARACTERISTICS

MAX. SWITCHING POWER	3 W
SWITCHING VOLTAGE 10 to 30 VDC	
MAX. SWITCHING CURRENT	100 mA
CONNECTION	PNP
VOLTAGE DROP (EN 60.947-5-2)	< 1,1 volt (I = 50 mA)
VOLTAGE DROP (EN 60.947-5-2)	< 1,2 volt (I = 100 mA)
MAX: LEAKAGE CURRENT	10 µA
MAX. ALLOWABLE OVERVOLTAGE	max. 40 volt (10 seconds)
INSULATION RESISTANCE (500V)	20x10 ⁶ ohm
SENSITIVITY	min. 2 mTesla (20 Gauss)
RESPONSE TIME	opening 0,2 ms closing 0,1 ms
REPEATABILITY	± 0,1 mm
LIFE	5x10 ⁷ operations
WORKING TEMPERATURE	- 25°C , + 70°C
ELECTRICAL PROTECTION	Polarized detector, protectec against short-circuits and overloads (see opposite)
HOUSING	Thermoplastic housing (PA-FV) with polyamide resin encapsulated printed circuit
DEGREE OF PROTECTION (CE I 529)	IP67
SIGNAL INDICATION	Yellow diode (LED) which lights up during switching

CONNECTION (4 possibilities / 5 types at choice)	PVC lead, 2 or 5 m long, 3 wires 0.14 mm ² , strip- ped ends	0,8 m PVC lead + 3-pin plug-in male connector and Ø M8	0,8 m PVC lead + 3-pin screw-type male connector, Ø M8	0,8 m PUR lead + 3-pin screw-type male connec- tor, Ø M12
				
	2 metres 5 metres			

Weight (g)	23	54	14	61	24
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Compatible cylinders	Description	CODES				
K KN PEC P2L - P2B PES 453 PESΩ (453)	Magneto-resistive type COMPACT detector + mounting kit (1) (for direct mounting on cylinders with swallow tail grooves)	88144205	88144206	88144207	88144210	88144208
ISOCLAIR PES 450 + PES 450, PESΩ (450), PCN with tie rods	Magneto-resistive type COMPACT detector + the mounting kit for each cylinder is ordered separately (see following pages)					

(1) Detector supplied with mounting kit (special nut + screw) for direct fitting to cylinder grooves

(2) PUR cable resistant to cutting fluids

ACCESSORIES AND OTHER ELECTRICAL CHARACTERISTICS: see following page

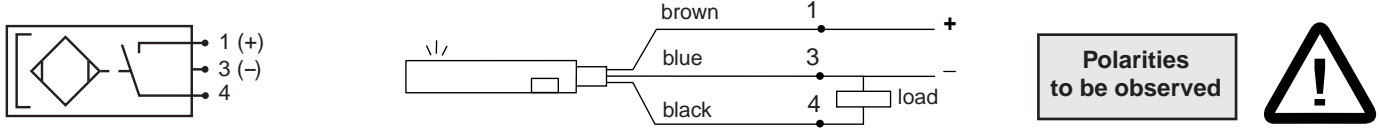


All leaflets are available on: www.ascojoucomatic.com

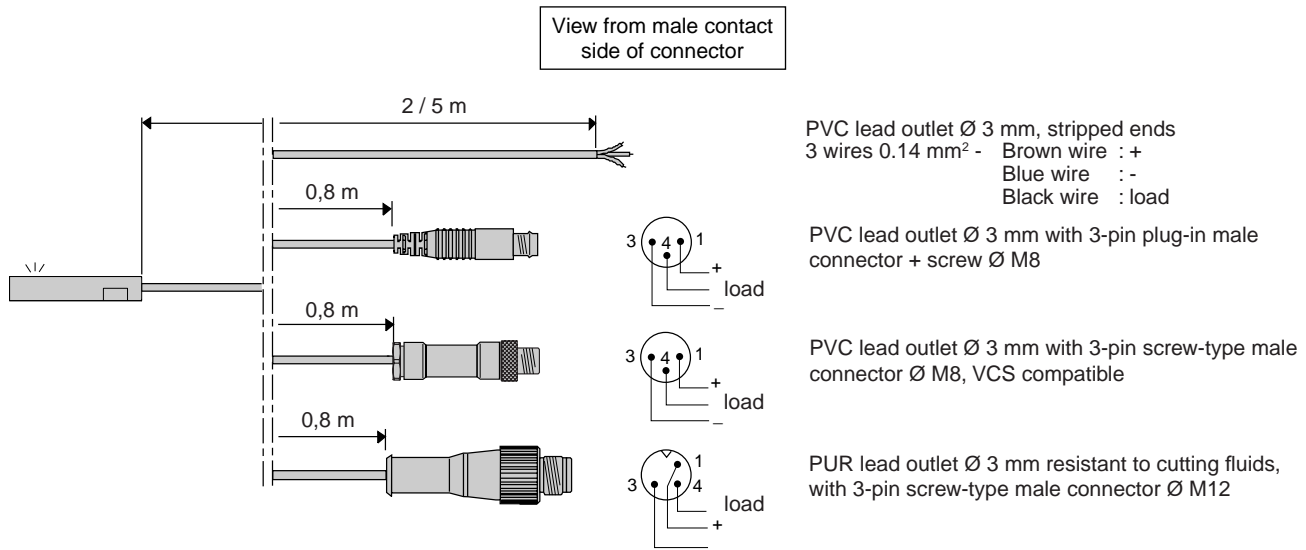
ELECTRICAL PROTECTION

- Output protected against short-circuit as long as the output current is restricted to 0.1 A.
- Improper wire connection may prevent the detector from operating or even destroy it.
- It is recommended to install a protection diode (mounted in parallel) on an inductive load in spite of the internal protection.

CONNECTION (PNP)



CONNECTION OF MAGNETO-RESISTIVE DETECTORS: 4 possibilities



ACCESSORIES

Description		CODE
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M8 connector (other end plain) (1) (2)		88100239
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M12 connector (other end plain) (2)		88100238
Straight 3-pin female connector Ø M8, IP67		88100202
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		88100203
Cable cover and holder (sold by the metre - minimum length = 1 m)		88144212 (3)

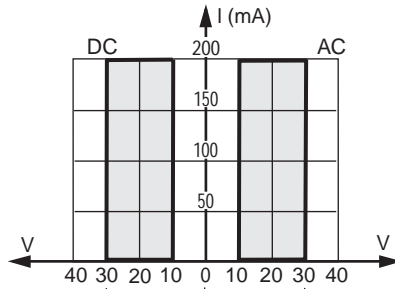
(1) Extension for M8 connector detectors.

(2) **Detector connection, brown wire = +, blue wire = -, black wire = load**

(3) For your order please add the requested length (in metres) to the order code - example: 2 m = 88144212 2

MAXIMUM ELECTRICAL CHARACTERISTICS AND PROTECTION OF MAGNETIC DETECTOR (REED SWITCH)

Note: The switching point must remain within the limits of the shaded area. Any excess voltage or power may damage the detector.



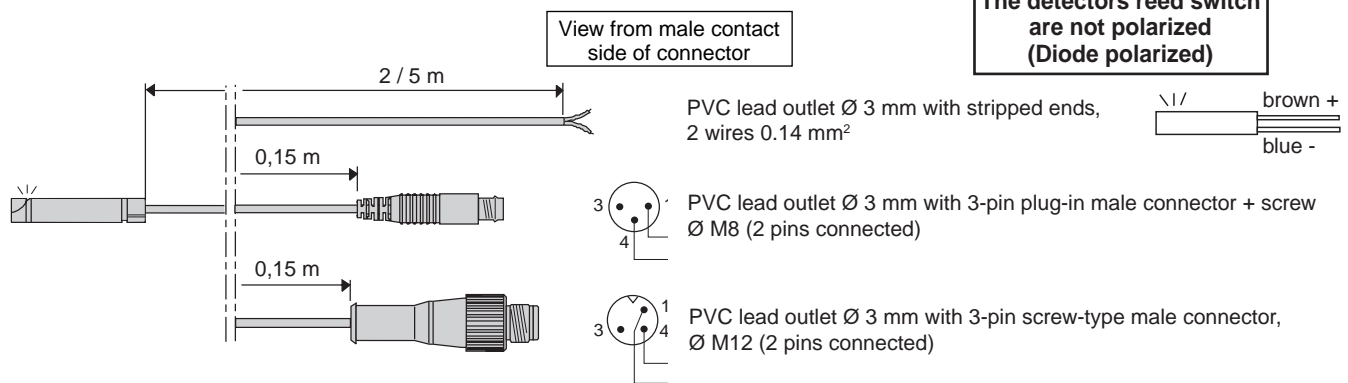
INDUCTIVE LOAD		100 Ω 4 W	100 Ω 4 W
		0,1 μF 250 V	0,1 μF 250 V
RESISTIVE LOAD		Protection not necessary	

PARTICULAR APPLICATIONS (valid for all models)

- Detectors used for direct control of incandescent lamps: The capacity specified on the lamp is based on its resistance when hot. When switched on, the resistance of the cold lamp is very low. Therefore, the current rises quickly and may exceed the reed switch rating. Allowance should therefore be made for the real power of the cold lamp.
- With leads longer than 10 m, a 1000 W resistor must be fitted in series with the detector to reduce the capacitive effect caused by the wiring.

R = 4 W resistor. Standard CCTU resistors code RP 59, C = paper, polycarbonate or metallized mylar capacitor.
The user is responsible for supplying and assembling of components.

REED SWITCH CONNECTION : 3 possibilities



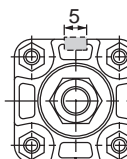
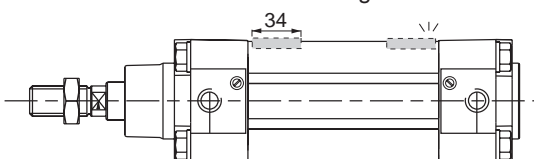
ACCESSORIES

Description		CODE
Extension cord made of PVC, length 5 m, 3 wires 0.25 mm ² with 1 screw-type female M8 connector (other end stripped) (1) (2)		88100239
Extension cord made of PVC, length 5 m, 3 wires 0.25 mm ² with 1 screw-type female M12 connector (other end stripped) (2)		88100238
Straight 3-pin female connector Ø M8, IP67		88100202
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		88100203
Cable cover and holder (sold by the metre - minimum length = 1 m)		88100746 (3)

- (1) Extension for M8 connector detectors.
 (2) Detector connection: **brown and black wires (detector is unpolarised)**, blue wire not used
 (3) For your order please add the requested length (in metres) to the order code **88100746**. Example: 2 m = 88100746 2, 2,5 m = 88100746 3

DIMENSIONS

The magnetic detector fits directly into the grooves in the cylinder body. Detection of very small movements or very short strokes means that more than one groove will have to be used.

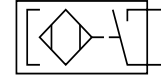


INSTALLATION RECOMMENDATION

In order to control the **max. end** of cylinder stroke, the detectors must be mounted in the following direction:
PES cylinders series 453 Ø 32-100 : cable oriented towards the cylinder barrel.

"T SLOT" MAGNETIC POSITION DETECTORS

magneto-resistive (MR)
for series 453 PES type cylinders



Series
881
Type
3 wires

PRINCIPLE





Static non-contact proximity switch on air cylinders equipped with built-in permanent magnets.

FUNCTIONAL DESCRIPTION

When the permanent magnet which is mounted on the piston approaches the detector the magnetic field it generates causes the semiconductors' resistors to change. This current variation increases the resistance and a switching signal is generated.



DETECTOR CHARACTERISTICS

MAX. SWITCHING POWER	4 W			
SWITCHING VOLTAGE 10 to 30 VDC				
MAX. SWITCHING CURRENT	200 mA			
CONNECTION	PNP N.O.			
VOLTAGE DROP (EN 60.947-5-2)	< 0,7 volt (I = 200 mA)			
INSULATION RESISTANCE	> 1 GΩ			
SENSITIVITY	min. 2,5 mTesla (25 Gauss)			
RESPONSE TIME	opening	0,8 μs		
	closing	0,3 μs		
REPEATABILITY	± 0,2 mm			
LIFE	10 ¹¹ operations (resistive load)			
WORKING TEMPERATURE	- 15°C , + 80°C			
ELECTRICAL PROTECTION	Polarized detector, protectec against short-circuits and overloads (see opposite)			
HOUSING	Thermoplastic housing (PA) with epoxy resin encapsulated printed circuit			
DEGREE OF PROTECTION (CE I 529)	IP67			
SIGNAL INDICATION	orange diode (LED) which lights up during switching			
CONNECTION (3 possibilities / 4 types at choice)	PVC lead, 2 m long, 3 wires 0.14 mm ² , stripped and tinned ends	PVC lead, 5 m long, 3 wires 0.14 mm ² , stripped and tinned ends	0,15 m PVC lead + 3-pin plug-in male connector and Ø M8	0,15 m PCV lead + 3- pin screw-type male connector, Ø M12
				
	2 metres	5 metres		
Weight (g)	23	53	7	14
Compatible cylinders	Description			
	CODES			
PES series 453	Magneto-resistive type "T" detector + mounting kit (1)	88100737	88100738	88100739
Coaxial valve series 287 - 387	(for direct mounting on cylinders with "T" slot)			88100740

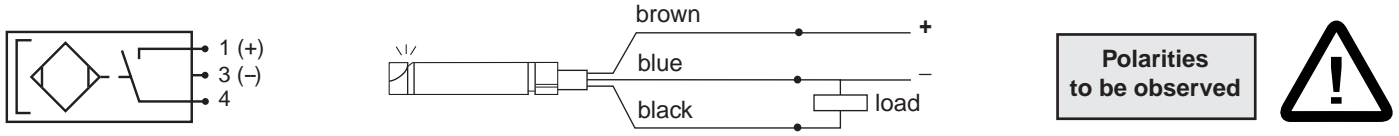
(1) Detector supplied with mounting (integrated) kit for direct fitting to cylinder grooves

ACCESSORIES AND OTHER ELECTRICAL CHARACTERISTICS: see following page

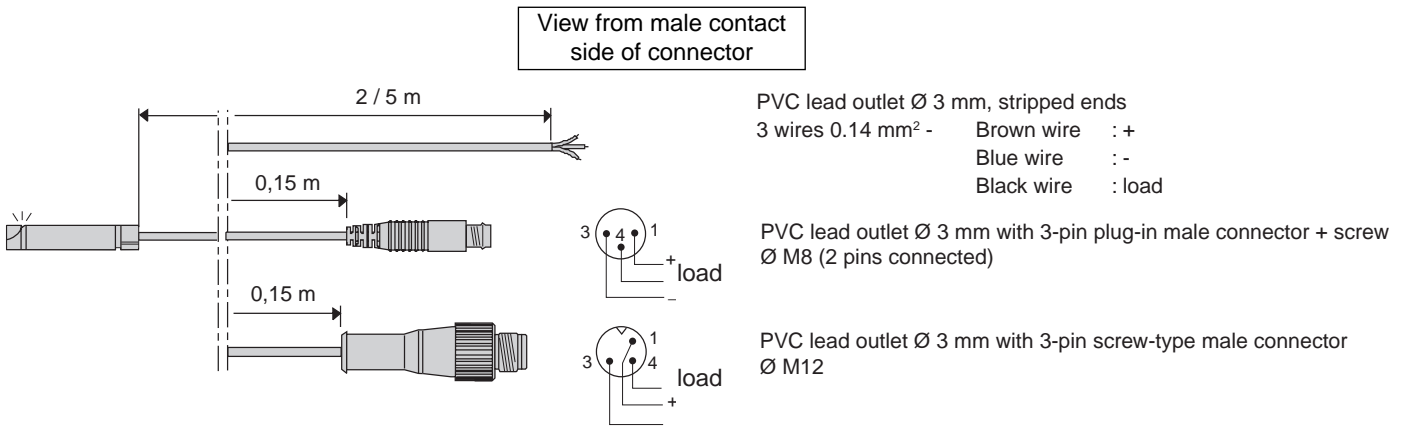
ELECTRICAL PROTECTION

- Improper wire connection may prevent the detector from operating or even destroy it.

CONNECTION (PNP)



CONNECTION OF MAGNETO-RESISTIVE DETECTORS: 3 possibilities



ACCESSORIES

Description		CODE
Extension cord made of PVC, length 5 m, 3 wires 0.25 mm ² with 1 screw-type female M8 connector (other end stripped) (1) (2)		88100239
Extension cord made of PVC, length 5 m, 3 wires 0.25 mm ² with 1 screw-type female M12 connector (other end stripped) (2)		88100238
Straight 3-pin female connector Ø M8, IP67		88100202
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		88100203
Cable cover and holder (sold by the metre - minimum length = 1 m)		88100746 (3)

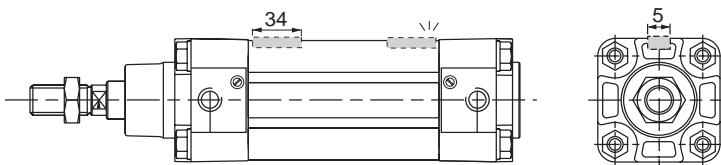
(1) Extension for M8 connector detectors.

(2) **Detector connection, brown wire = +, blue wire = -, black wire = load**

(3) For your order please add the requested length (in metres) to the order code **881 00 746**. Example: 2 m = 88100746 2, 2,5 m = 88100746 3

DIMENSIONS

The magnetic detector fits directly into the grooves in the cylinder body. Detection of very small movements or very short strokes means that more than one groove will have to be used.



INSTALLATION RECOMMENDATION

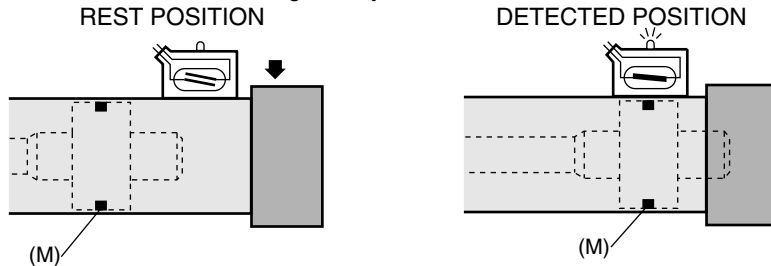
In order to control the **max. end** of cylinder stroke, the detectors must be mounted in the following direction:

PES cylinders series 453, Ø 32-100 : cable oriented towards the cylinder barrel



FUNCTIONAL DESCRIPTION

A permanent magnet (M) which is mounted on the piston of the air cylinder activates the reed switch of the non-contact magnetic position detector fastened on the outside of the non-magnetic cylinder barrel.



DETECTOR CHARACTERISTICS

MAX. SWITCHING POWER	DC = 10 W / AC = 1.2 VA
SWITCHING VOLTAGE	10 to 60 V DC and AC
MAX. SWITCHING CURRENT	500 mA
VOLTAGE DROP (EN 60.947-5-2)	< 2.7 volt (I = 200mA) < 2.9 volt (I = 500mA)
CONTACT RESISTANCE	max. 0.1 ohm
INSULATION RESISTANCE	10 ¹⁰ ohm
WITHSTAND VOLTAGE	DC = 470 V - AC = 600 V
SENSITIVITY	min. 3 mTesla (30 Gauss)
RESPONSE TIME opening	0.2 ms
closing	0.6 ms
REPEATABILITY	± 0.1 mm
LIFE	10 ⁷ operations
WORKING TEMPERATURE	-20 °C , +70 °C
HOUSING	Thermoplastic housing (PPS) with epoxy resin encapsulated printed circuit
DEGREE OF PROTECTION (CE I 529)	IP67
SIGNAL INDICATION	Green diode (LED) which lights up when the contact is established

**60 V⁽¹⁾
max.**

CONNECTION (5 possibilities / 6 types at option)	Integrated connector		45° lead outlet protected by feed-through sleeve				
	3-pin screw-type male connector, Ø M8	PVC lead, 2 or 5 m long, 2 wires 0.14 mm ² , stripped ends	0.8 m PVC lead + 3-pin plug-in male connector, Ø 8	5 m PVC lead + 3-pin screw-type male connector, Ø M8	0.8 m PVC lead + 3-pin screw-type male connector, Ø M12		
<p>Recommendation for application For cylinder + detector applications with long travels and large movements you must use the mini-detector with M8 connector integrated in the housing and lead outlets with cable (2- or 3- wire) type class 6 especially intended for this purpose (specific accessory: consult us)</p>							
	6	2 metres 30 5 metres 70	22	86	35		
Weight (g)	6	30 70	22	86	35		
Compatible cylinders	CODES						
CAS - CIS CIB PES-PES Ω 450 PCN TUB R - RS	Reed switch type UNI detector only the mounting kit for each cylinder is ordered separately (see following pages)	88100140	88100142	88100144	88100146	88100594	88100148
K KN PEC P2L - P2B PES-PES Ω 453	Reed switch type UNI detector + mounting kit (*) (for direct mounting on cylinders with swallow tail grooves)	88100185	88100186	88100189	88100190	88100592	88100191

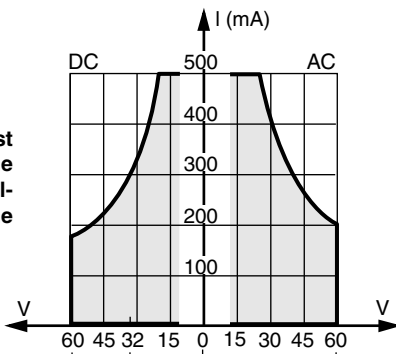
* UNI detector supplied with mounting kit (special nut + screw) for direct fitting to cylinder grooves
(1) Version for 230 V AC/DC max. (50 mA - 11.5 VA), on request, with 2 m PUR cable, detector **only**, code: **88100418**
detector + **mini mounting kit** (*), code: **88100417**



ACCESSORIES AND OTHER ELECTRICAL CHARACTERISTICS: see opposite
MOUNTING KITS, INSTALLATION ON CYLINDERS: see following pages

MAXIMUM ELECTRICAL CHARACTERISTICS AND PROTECTION OF MAGNETIC DETECTOR (REED SWITCH)

60 V max. models

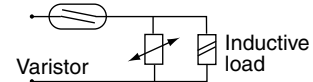


Note: The switching point must remain within the limits of the shaded area. Any excess voltage or power may damage the detector.

230 V max. (AC/DC) model

Max. power = 11,5 VA (50 mA max.)
Life = 10⁶ operations

To obtain the maximum service life, there should be no arcing between contacts. The voltage and current values indicated must therefore not be exceeded.
In the case of electrical circuits with induction coils, protection devices should be used to absorb cut-off overvoltage. The ideal protection component is the varistor (507K250).



INDUCTIVE LOAD		220 Ω 4 W	100 Ω 4 W	100 Ω 4 W
		0,1 μF/250 V		0,1 μF 250 V
RESISTIVE LOAD		Protection not necessary		

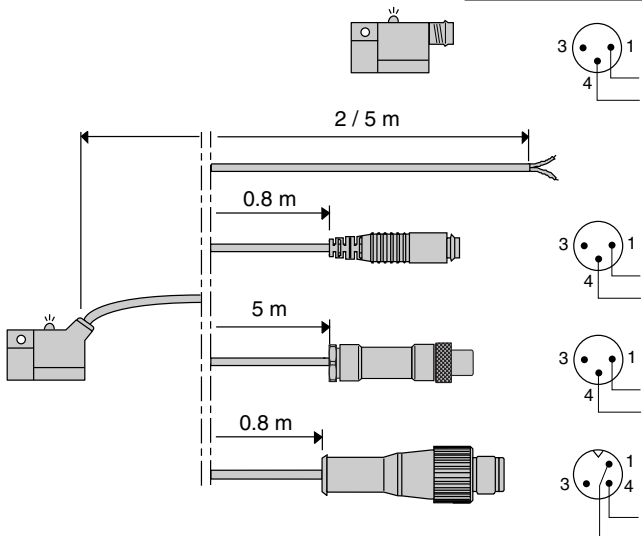
R = 4 W resistor. Standard CCTU resistors code RP 59, C = paper, polycarbonate or metallized mylar capacitor.
The user is responsible for supplying and assembling of components.

PARTICULAR APPLICATIONS (valid for all models)

- Detectors used for direct control of incandescent lamps: The capacity specified on the lamp is based on its resistance when hot. When switched on, the resistance of the cold lamp is very low. Therefore, the current rises quickly and may exceed the reed switch rating. Allowance should therefore be made for the real power of the cold lamp.
- With leads longer than 10 m, a 1000 Ω resistor must be fitted in series with the detector to reduce the capacitive effect caused by the wiring.

REED SWITCH CONNECTION : 5 possibilities

View from male contact side of connector



The UNI detectors reed switch are not polarized

3-pin screw-type male connector Ø M8 (2 pins connected)

Lead outlet Ø 3 mm with stripped ends, 2 wires 0.14 mm²

Lead outlet Ø 3 mm with 3-pin plug-in male connector, Ø 8 mm (2 pins connected)

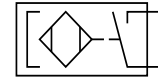
Lead outlet Ø 3 mm with 3-pin screw-type male connector, Ø M8 (2 pins connected) (adaptable on inputs VCS connectors)

Lead outlet Ø 3 mm with 3-pin screw-type male connector, Ø M12 (2 pins connected)

ACCESSORIES

Description		CODE
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M8 connector (other end plain) (1) (2)		88100239
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M12 connector (other end plain) (2)		88100238
Straight 3-pin female connector Ø M8, IP67		88100202
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		88100203

(1) Extension for integral M8 connector detectors. Coupling to snap-on Ø 8 male connectors is **not advised**.
(2) Detector connection: **brown and black wires (detector is unpolarised)**, blue wire not used

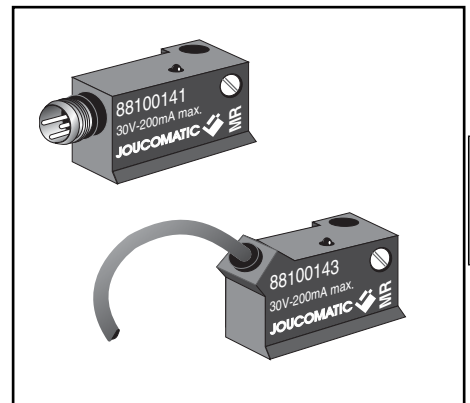


PRINCIPLE

Static non-contact proximity switch on air cylinders equipped with built-in permanent magnets.

FUNCTIONAL DESCRIPTION

When the permanent magnet which is mounted on the piston approaches the detector the magnetic field it generates causes the semiconductors' resistors to change. This current variation increases the resistance and a switching signal is generated.



B

DETECTOR CHARACTERISTICS

MAX. SWITCHING POWER	6 W
SWITCHING VOLTAGE 10 to 30 V DC	
MAX. SWITCHING CURRENT	200 mA
CONNECTION	PNP
VOLTAGE DROP	< 1.1 Volt (I = 50 mA) < 1.4 Volt (I = 200 mA)
MAX. LEAKAGE CURRENT	10 µA
MAX. ALLOWABLE OVERVOLTAGE	50 Volt (10 seconds)
INSULATION RESISTANCE	10 ¹⁰ ohm
SENSITIVITY	min. 3 mTesla (30 Gauss)
RESPONSE TIME	opening 0.2 ms closing 0.1 ms
REPEATABILITY	± 0.1 mm
WORKING TEMPERATURE	-20°C , +70°C
ELECTRICAL PROTECTION	Polarized detector, protectec against short-circuits and overloads (see opposite) and incorporated recovery diode
HOUSING	Thermoplastic housing (PPS) with epoxy resin encapsulated printed circuit
DEGREE OF PROTECTION (CE I 529)	IP67
SIGNAL INDICATION	Green diode (LED) which lights up during switching

CONNECTION (5 possibilities / 6 types at option)	Integrated connector	45° lead outlet protected by feed-through sleeve				
	3-pin screw-type male connector, Ø M8	PVC lead, 2 or 5 m long, 3 wires 0.14 mm ² , stripped ends	0.8 m PVC lead + 3-pin plug-in male connector, Ø 8	5 m PVC lead + 3-pin screw-type male connector, Ø M8	0.8 m PVC lead + 3-pin screw-type male connector, Ø M12	
Recommendation for application For cylinder + detector applications with long travels and large movements you must use the mini-detector with M8 connector integrated in the housing and lead outlets with cable (3- wire) type class 6 especially intended for this purpose (specific accessory: consult us)						
		2 metres	5 metres			

Weight (g)	6	30	70	22	86	35
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Compatible cylinders	Description	CODES					
CAS - CIS CIB PES-PES Ω 450 PCN TUB R - RS	Magneto-resistive type UNI detector only the mounting kit for each cylinder is ordered separately (see following pages)	88100141	88100143	88100145	88100147	88100595	88100149
K KN PEC P2L - P2B PES-PES Ω 453	Magneto-resistive type UNI detector + mounting kit (*) (for direct mounting on cylinders with swallow tail grooves)	88100192	88100193	88100194	88100195	88100593	88100196

* Detector supplied with mounting kit (special nut + screw) for direct fitting to cylinder grooves



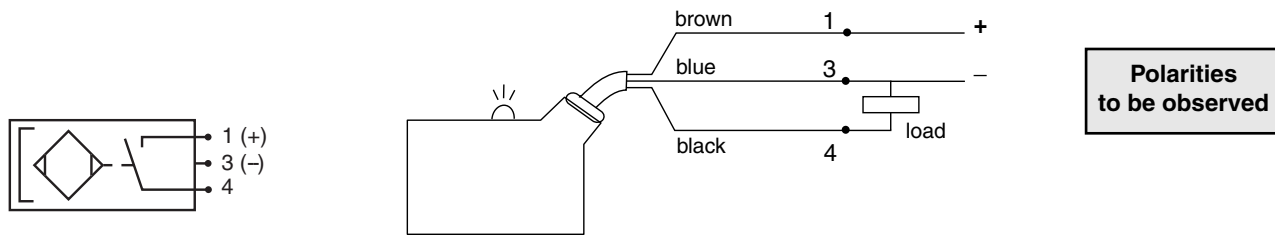
ACCESSORIES AND OTHER ELECTRICAL CHARACTERISTICS: see opposite
MOUNTING KITS, INSTALLATION ON CYLINDERS: see following pages

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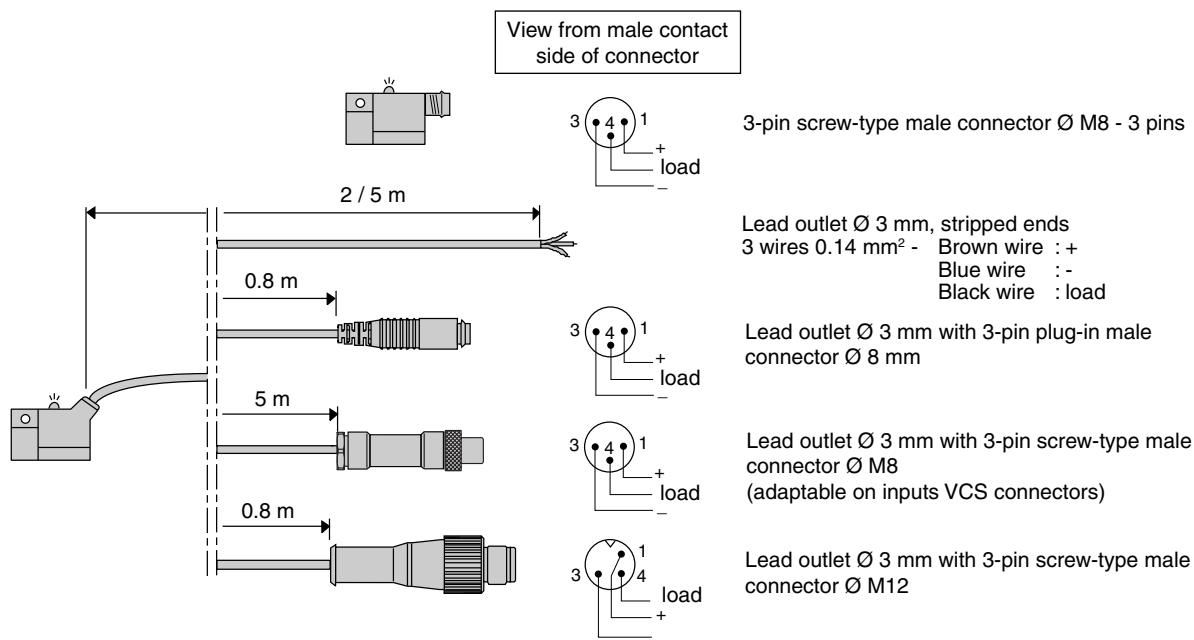
ELECTRICAL PROTECTION

- Output protected against short-circuit as long as the output current is restricted to 0.2 A.
- Improper wire connection may prevent the detector from operating or even destroy it.
- It is recommended to install a protection diode (mounted in parallel) on an inductive load in spite of the internal protection.

CONNECTION (PNP)



CONNECTION OF MAGNETO-RESISTIVE DETECTORS: 5 possibilities



ACCESSORIES

Description		CODE
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M8 connector (other end plain) (1) (2)		88100239
Extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm ² with 1 screw-on femal M12 connector (other end plain) (2)		88100238
Straight 3-pin female connector Ø M8, IP67		88100202
Right angle 3-pin female connector Ø M8, orientable 90° x 90°, IP67		88100203

- (1) Extension for integral M8 connector detectors. Coupling to snap-on Ø 8 male connectors is **not advised**.
 (2) **Detector connection, brown wire = +, blue wire = -, black wire = load**