

#### FEATURE

- **An universal detector** for any range of cylinders and actuators (cylinders with tie rods, profiled barrels, rounds...)

#### 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	3 W
SWITCHING VOLTAGE	10 to 30 V DC
MAX. SWITCHING CURRENT	100 mA
WIRING	PNP - NPN (3)
REVERSE POLARITY PROTECTION	yes
OVERLOAD PROTECTION	yes
SHORT-CIRCUIT PROTECTION	yes
VOLTAGE DROP (EN 60947-5-2)	< 1,5 volt (I = 50 mA) < 2,5 volts (I = 100 mA)
MAX. LEAKAGE CURRENT	< 50 µA
MAX. ALLOWABLE OVERVOLTAGE	32 VCC max. (100 ms)
SENSITIVITY	2 mTesla (20 Gauss)
RESPONSE TIME	110 µs opening - 220 µs closing
REPEATABILITY	< 0,2 mm
WORKING TEMPERATURE	- 25°C , + 85°C
HOUSING	PA + FG overmolding
CABLE	PUR, resistant to cutting oils (PVC for M12 IP69K version)
DEGREE OF PROTECTION (CEI 60529)	IP67 / IP69K
PROTECTION CLASS	class III
SIGNAL INDICATION	yellow diode (LED) which lights up during switching
APPROVAL	CE - UL and cUL for 2 m and M8 connection

#### CHOICE OF DETECTOR

Voltage		10 to 30 Volt DC						
Raccordement	PUR lead, 2 or 5 m long, 3 wires 0.14 mm <sup>2</sup> , stripped ends, IP67	3 pin screw-type male connector Ø M8		0,3 m PUR lead + 3-pin plug-in male connector and Ø M8, IP67		0,3 m PUR lead + 3-pin screw-type male connector, Ø M12, IP67		0,3 m PVC lead + 3-pin screw-type male connector, Ø M12, IP69K
	2 m	5 m	-	0,3 m	0,3 m	0,3 m	0,3 m	0,3 m
	PNP	NPN	PNP	PNP	PNP	NPN	PNP	PNP
weight (g)	22	22	50	5	7	7	16	25
compatible series:	<b>STANDARD CATALOGUE NUMBER detector</b> detector supplied with cable holding clip (versions with lead outlet only) and adjustment position stop (all versions)							
449 <sup>(1)</sup> 453 ----- 435 - 438 <sup>(2)</sup> 441 - 447 450 - 454 437 (PCN) 431 (IP69K)	P494A0022300A00	P494A0022400A00	P494A0022100A00	P494A0022500A00	P494A0022600A00	P494A0022700A00	P494A0022800A00	P494A0022900A00
		(3)				(3)		

<sup>(1)</sup> Detector allow direct fitting on "T" cylinder grooves

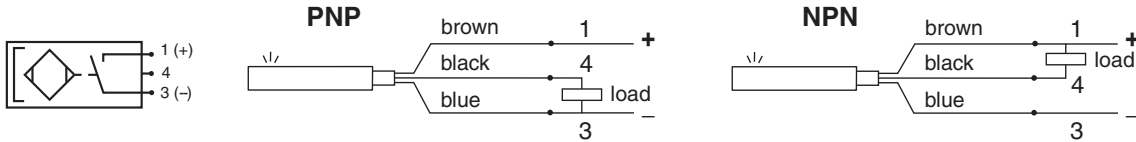
<sup>(2)</sup> Need a kit of fixation, see following pages (454 Series, see preceding pages)

<sup>(3)</sup> U.S. market

## ELECTRICAL PROTECTION

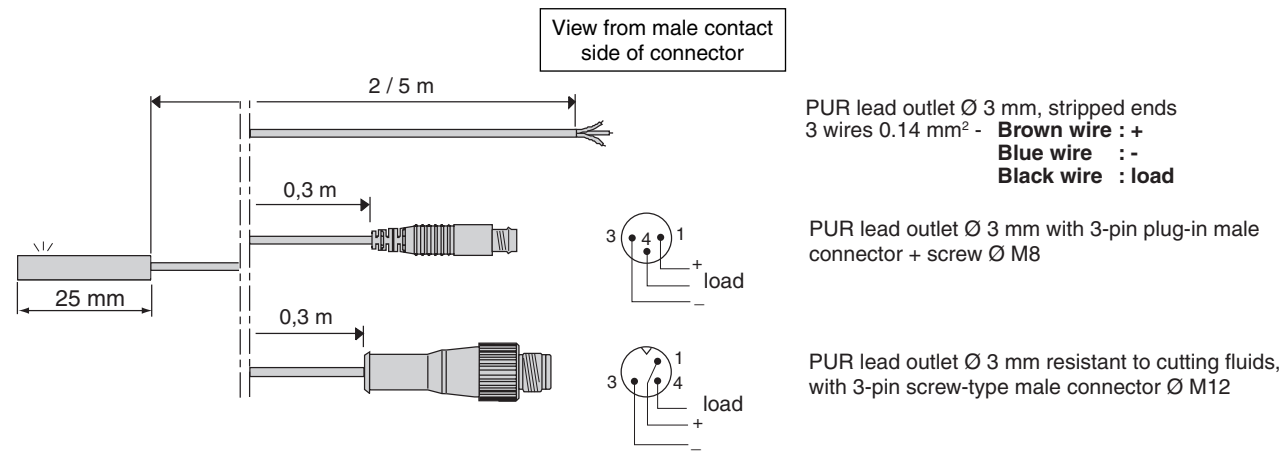
- Output protected against short-circuit as long as the output current is restricted to 0.1 A.
- Improper wire connection may prevent the detector from operating or even destroy it.
- It is recommended to install a protection diode (mounted in parallel) on an inductive load in spite of the internal protection.

## CONNECTION



**Polarities  
to be observed**

## CONNECTION OF MAGNETO-RESISTIVE DETECTORS: 3 possibilities



## Mounting recommendation:

Do not subject the detector's power supply cable to damaging traction / torsion during its service life.

## ACCESSORIES

description		catalogue number
extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm <sup>2</sup> with 1 screw-on <b>female M8</b> connector (other end plain) (1)		<b>P4994406200N001</b>
extension consisting of PVC, length 5 m, 3 wire conductors 0.25 mm <sup>2</sup> with 1 screw-on <b>female M12</b> connector (other end plain) (1)		<b>P4994406210N001</b>
<b>straight</b> 3-pin female connector Ø M8, IP67		<b>P4994406220N001</b>
<b>Right angle</b> 3-pin female connector Ø M8, orientable 90° x 90°, IP67		<b>P4994406230N001</b>
Block of memorizing position of adjustment detector		<b>P4994406160N001</b>

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