MAGNETIC POSITION DETECTORS for "T" grooves magneto-resistive (MR)

ATEX

Series **494**
Type
2 and 3 wires

Detectors designed for use in explosive atmosphere zones 0-20, 1-21, 2-22, according to **ATEX directive 2014/34/EU**.

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

ATEX APPROVAL	**II 1GEx ia IIC T4 Ga II 1D Ex ia IIIC T135°C Da**	**II 3G Ex nA IIC T4 Gc X II 3D Ex tc IIIC T125°C Dc X**
MAX. SWITCHING POWER	-	3 W
SWITCHING VOLTAGE	-	10 to 30 VDC
MAX. SWITCHING CURRENT	-	100 mA
WIRING	-	PNP
REVERSE POLARITY PROTECTION	yes	yes
OVERLOAD PROTECTION	no	yes
SHORT-CIRCUIT PROTECTION	no	yes
VOLTAGE DROP (EN 60.947-5-2)	-	< 2,5 volt
CURRENT CONSUMPTION	≤ 1 mA* , ≥ 2 mA**	< 10 mA
NOMINAL VOLTAGE	8,2 V	-
INTERNAL CAPACITANCE	140 nF	-
INTERNAL INDUCTANCE	400 µH	-
HYSTERESIS	1 mm	1 mm
SWITCHING FREQUENCY	-	> 6000 Hz
SENSITIVITY	2 mTesla	2 mTesla
RESPONSE TIME	-	30 ms
REPEATABILITY	< 0,2 mm	< 0,2 mm
WORKING TEMPERATURE	- 25°C , + 70°C	- 20°C , + 60°C
HOUSING	PA + GF overmoulding	PA + GF overmoulding
CABLE	PVC	PVC
DEGREE OF PROTECTION (IEC 60529)	IP67	IP65 / IP67
PROTECTION CLASS	class III	class III
SIGNAL INDICATION	yellow diode (LED) which lights up when the contact is established	
ELECTROMAGNETIC COMPATIBILITY (EMC)	EN 61000-4-2 ESD (electrostatic discharge): -CD/8kV AD	
	EN 61000-4-3 radiated RF fields: 10 V/m (80 ... 2000MHz)	
	EN 61000-4-4 electrical fast transients/burst: 2kV	
	EN 61000-4-6 conducted RF fields: 10 V (0,15 ... 80 Mhz)	
	EN 55011: class B	
CERTIFICATION	CE, ATEX 1G/D, ATEX 3G/D	

* without signal ** with signal

CHOICE OF DETECTOR

	Use with barrier Max. values: U=15 V, I=50 mA, P=120 mW	**10 to 30 Volt DC**
Connection	PVC lead, 5 m long 2 wires 0,14 mm² stripped ends	PVC lead, 5 m long 3 wires 0,14 mm² stripped ends
	-	PNP
Protective cover supplied with detector	-	
Weight (g)	50	
Compatible cylinders:	**STANDARD CATALOGUE NUMBER detector** detector supplied with cable holding clip and adjustment position stop	
449 - 453 (1) 441 - 435 - 438 - 450 - 454 (2)	**P494A0023100AT0**	**P494A0022100AT2**

(1) Detector designed for direct fitting to "T" cylinder grooves
(2) Fastening kit required

ACCESSORIES AND OTHER ELECTRICAL CHARACTERISTICS: see following page

All leaflets are available on: **www.asco.com**

Cable 5 m long, 2 wires 0,14 mm² stripped ends		
zones	**classification**	**type approval certificate no.**
0-20/1-21/2-22	**II 1G Ex ia IIC T4 Ga** (1) **II 1D Ex ia IIIC T135°C Da**	DEKRA BVS 10 ATEX 023
2-22	**II 3G Ex nA IIC T4 Gc X** **II 3D Ex tc IIIC T125°C Dc X**	-

(1) Compatible barriers and interfaces

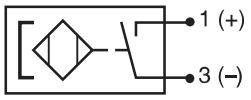
Manufacturer	Version	Module type
MTL	1 way	MTL501 1B, Zener MTL7741,
	2 way	Zener MTL7743, MTL5018, MTL5018ac
PEPPERL & FUCHS	1 way	KFD2-SR2-Ex1.W, KFA6-SR2-Ex1.W KFA6-SR2-Ex1.W
	2 way	KFD2-SR2-Ex2.W, KFA6-SR2-Ex2.W, KFA6-SR2-Ex2.W

ELECTRICAL PROTECTION

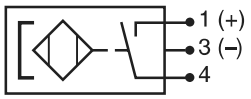
- Output protected against short-circuit as long as the output current is restricted to 0.1 A.
- Improper wire connection may prevent the detector from operating or even destroy it.
- It is recommended to install a protection diode (mounted in parallel) on an inductive load in spite of the internal protection.

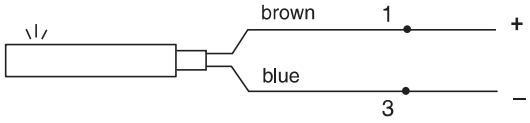
Connection

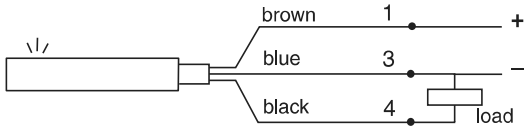
2 wires (for barrier protection)



3 wires (PNP)

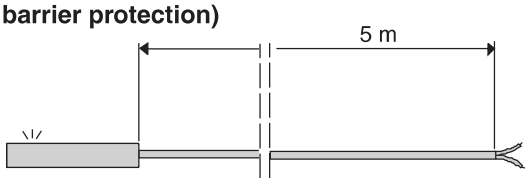






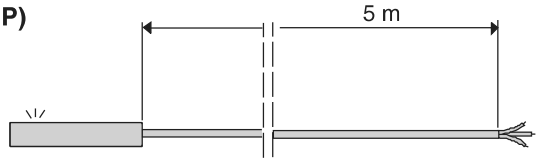
CONNECTION OF MAGNETO-RESISTIVE DETECTORS:

2 wires (for barrier protection)



PVC lead outlet Ø 3 mm, stripped ends
2 wires 0,14 mm² - **Brown wire : +**
Blue wire : -

3 wires (PNP)



PVC lead outlet Ø 3 mm, stripped ends
3 wires 0,14 mm² - **Brown wire : +**
Blue wire : -
Black wire : load

ACCESSORIES

description		catalogue number
detector position adjustment memory unit		**P4994406160N001**