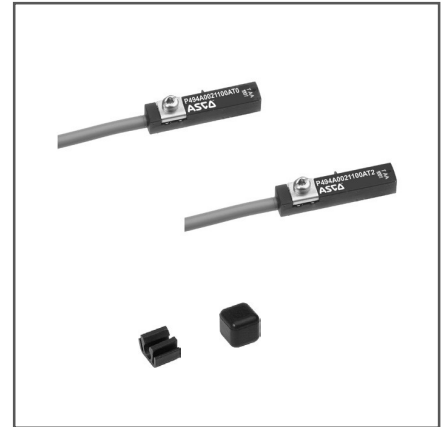
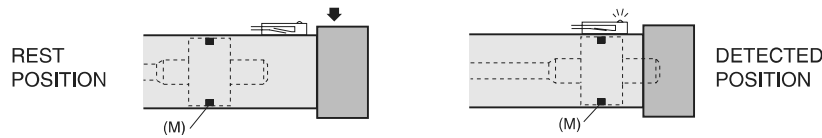


Detectors designed for use in explosive atmosphere zones 0-20, 1-21, 2-22, according to **ATEX directive 2014/34/EU**.

### 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

ATEX APPROVAL	II 1G Ex 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	-	5 W
SWITCHING VOLTAGE	-	5 to 30 VDC
MAX. SWITCHING CURRENT	-	100 mA
WIRING	-	PNP
REVERSE POLARITY PROTECTION	yes	yes
OVERLOAD PROTECTION	no	no
SHORT-CIRCUIT PROTECTION	no	no
VOLTAGE DROP (EN 60,947-5-2)	-	< 5 volt
CURRENT CONSUMPTION	≤ 1 mA* , ≥ 2 mA**	-
NOMINAL VOLTAGE	8,2 V	-
INTERNAL CAPACITANCE	10 nF	-
INTERNAL INDUCTANCE	400 µH	-
HYSTERESIS	1 mm	1 mm
BOUNCE TIME	0,6 ms	≤ 0,6 ms
BREAK TIME	0,1 ms	≤ 0,1 ms
SENSITIVITY	2,1 mTesla	2,1 mTesla
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	PUR
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	5 to 30 Volt DC
Connection	PVC lead, 5 m long 2 wires 0,14 mm² stripped ends 	PUR lead, 5 m long 2 wires 0,14 mm² stripped ends 
Protective cover supplied with detector	-	
Weight (g)	50	
Compatible cylinders:	<b>STANDARD CATALOGUE NUMBER detector</b> detector supplied with cable holding clip and adjustment position stop	
449 - 453 <sup>(1)</sup>	<b>P494A0021100AT0</b>	<b>P494A0021100AT2</b>
441 - 435 - 438 - 450 - 454 <sup>(2)</sup>		

<sup>(1)</sup> Detector designed for direct fitting to "T" cylinder grooves

<sup>(2)</sup> Fastening kit required

**ACCESSORIES AND OTHER ELECTRICAL CHARACTERISTICS:** see following page

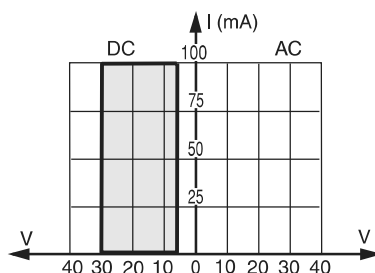
Cable 5 m long, 2 wires 0,14 mm <sup>2</sup> stripped ends		
zones	classification	type approval certificate no.
0-20/1-21/2-22	II 1G Ex ia IIC T4 Ga <sup>(1)</sup> II 1D Ex ia IIIC T135°C Da	DEKRA BVS 10 ATEX 023
2-22	II 3G Ex nA IIC T4 Gc X II 3D Ex tc IIIC T125°C Dc X	-

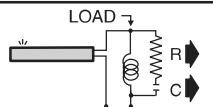
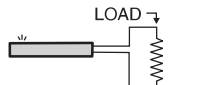
(1) Compatible barriers and interfaces

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

## 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.



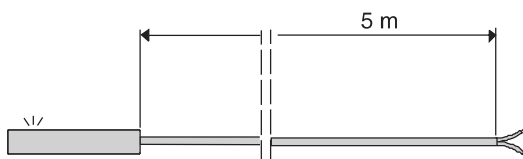
INDUCTIVE LOAD		100 Ω 4 W	100 Ω 4 W
		0,1 μF 250 V	0,1 μF 250 V
RESISTIVE LOAD		Protection not necessary	

### 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 resistor code RP 59,  
C = Paper, polycarbonate or metallised mylar capacitor.  
*The user is responsible for supplying and assembling the components.*

## REED SWITCH CONNECTION



Lead outlet Ø 3 mm, stripped ends  
2 wires 0,14 mm<sup>2</sup> - brown wire = +  
blue wire = -

## ACCESSORIES

description	catalogue number
detector position adjustment memory unit 	P4994406160N001