

M18 Inductive DC Proximity Switch AK1



Compact inductive proximity switch for DC operation

- $\varnothing 18 \times 50\text{mm}$
- Shielded and unshielded models
- IP67 nickel-plated brass housing
- 2 / 3 wire DC
- Short-circuit protection
- LED status indicator 360° visible
- Additional cable exit options available
- Nominal sensing range: Shielded 5mm
Unshielded 8mm
- Long distance: Shielded 8mm
Unshielded 12mm
- UL and CUL approved



Options and ordering codes

AK1	/	AN	-	1A
Standard proximity				
NO output state		A		
NC output state		C		
NPN output type		N		
PNP output type		P		
2 wire DC		O		
				1 Shielded
				2 Unshielded
				3 Long distance shielded
				4 Long distance unshielded
				A Standard cable exit
				H M12 plug cable exit

Specification

Model	AK1
Hysteresis	10% maximum
Repeatability	5%
Supply voltage	10-30 VDC
Ripple	10% maximum
Maximum consumption	20mA
Switching frequency	0.5kHz
Output type	NPN or PNP
Output state	NO or NC
Load current	≤ 400mA
Residual output voltage	1.2V max. $I_L = 100\text{mA}$
Leakage current	<10 μA
Time delay before availability	100ms
Output current limit	450-500mA
Short circuit protection	autoreset
Polarity reversal protection	yes
Inductive loads protection	yes
LED status indicator	yes (at the rear)
Insulation resistance	>1000m Ω to 1000VDC
Dielectric strength	1500VAC 50Hz for 1 min
Protection degree	IP67
Temperature range	-25° + 70°C
Temperature drift	10% Sn
Housing material	nickel-plated brass
Front material	POM
Tightening torque	40 Nm max
Ambient humidity	35%-85% r.h.
Weight (approx.)	cable: 120g, plug: 60g

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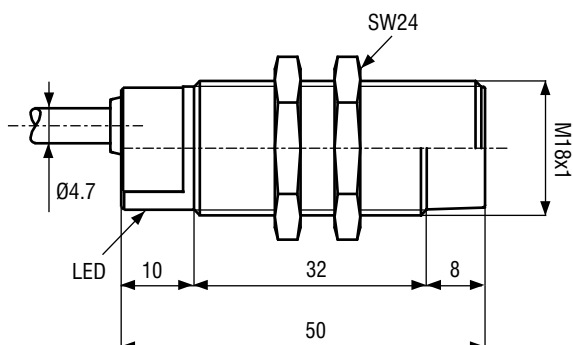
IMO

continued

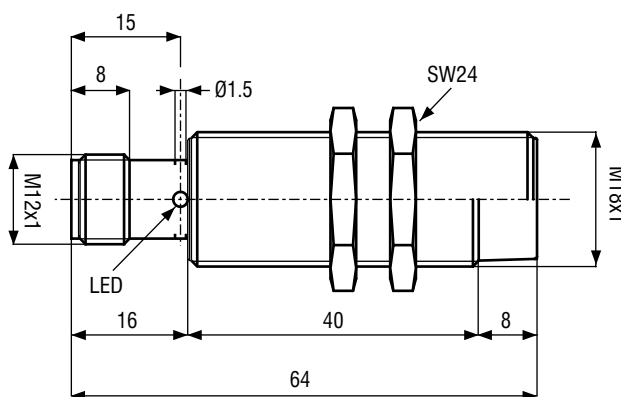
Dimensions (mm)

AK1/**-*A standard cable exit

Cable: $\varnothing 4.75\text{mm}$, 2m length
0.34mm² conductor section, PVC material

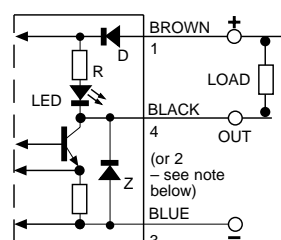


AK1/**-*H M12 plug cable exit

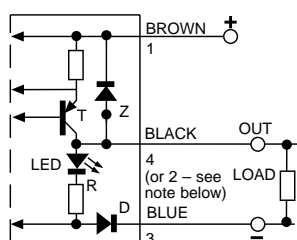


Output circuit - wiring connections

NPN output



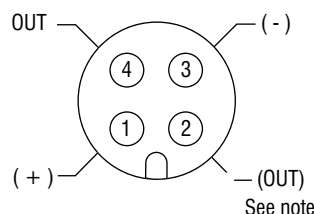
PNP output



NOTE: in case of combined load, i.e. resistive and capacitive, the maximum admissible capacity (C) is 1 μF for maximum output voltage and current.

M12 plug - pin connections

Cable exit option H



Other cable options:

Right angle cable
Customised cables
Please contact IMO for
price and availability

NOTE: (pin connections): At present, all plug exit sensors have the output on pin 4. According to EEC Directives, the output of NC plug exit models will be changing to pin 2 (NO will remain on pin 4). A plug cable to match these NC sensors MUST be a 4-wire type as 3-wire cables are connected to pins 1, 3 and 4 – contact IMO to check stock types.