

Photoelectrics

Diffuse-reflective

Type EO1804.PAS, DC, Metal-housing

CARLO GAVAZZI



- Range: 400 mm adjustable
- Modulated, infrared light
- Supply voltage: 10 to 40 VDC
- Output: 200 mA NPN or PNP
- Make and break switching function, LED indication
- Protection: Reverse polarity, short-circuit, transients
- High immunity to ambient light
- Heavy duty M18 metal housing, IP67
- Cable and plug versions

Product Description

The EO1804 is a family of general purpose Diffuse-reflective sensors in a short M18 metal housing for heavy duty applications. They are useful for simple applications where a basic sensor provides adequate

sensing performance. The sensors are easy to adjust with 270° single turn potentiometer. The output is a 4-wire complementary (NO and NC) output in NPN (current sinking) or PNP (current sourcing).

Ordering Key

EO 18 04 NPA S-1

Type	EO
Housing diameter	18
Range	04
Output type	NPA
Housing material	S
Connection type	-1

Type Selection

Housing diameter	Rated operating dist. (S _n)	Ordering no. NPN/cable Make & break swit.	Ordering no. NPN/plug Make & break swit.	Ordering no. PNP/cable Make & break swit.	Ordering no. PNP/plug Make & break swit.
M18	400 mm	EO 1804 NPAS	EO 1804 NPAS-1	EO 1804 PPAS	EO 1804 PPAS-1

Specifications

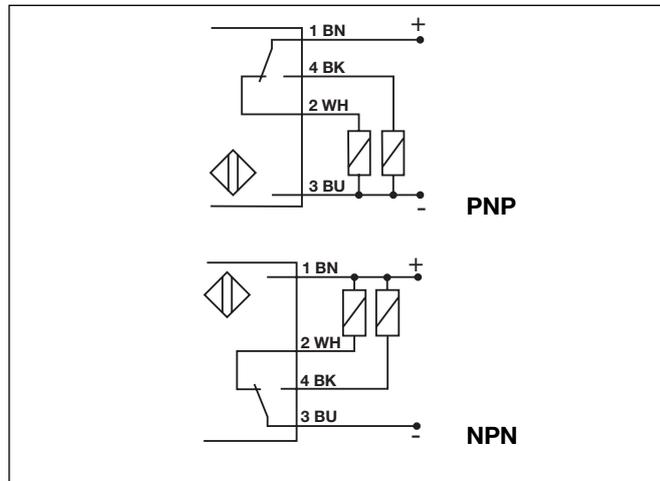
Rated operating dist. (S_n) Adjustable	Up to 400 mm Reference target: Kodak test card R27, white, 90% reflectivity 200 x 200 mm	Light type	Infrared, modulated synchronized
Sensitivity	270° turn potentiometer	Sensing angle	± 25° at 1/2 range
Temperature drift	0.4%/K	Ambient light	Max. 10,000 lux
Hysteresis (H) (Differential travel)	3 to 20%	Operating frequency (f)	120 Hz, light/dark ratio 1:2
Rated operational volt. (U_B)	10 to 40 VDC (ripple included)	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 3.2 ms ≤ 5 ms
Ripple (U_{rpp})	Max. 10%	Power ON delay (t_v)	Typ. 100 ms
Output current Continuous (I _e) Short-time (I)	Max. 200 mA 200 mA, max. load capacity 100 nF	Indication function Output ON	Dark and light (complementary switch) LED, yellow
No load supply current (I_o)	Max. 20 mA	Environment Overvoltage category Pollution degree Degree of protection	III (IEC 60664/60664A; 60947-1) 3 (IEC 60664/60664A; 60947-1) IP 67 (IEC 60529; 60947-1)
Min. operational current (I_m)	0.5 mA	Temperature Operating Storage	-20° to +60°C (-4° to 140°F) -30° to +70°C (-22° to 158°F)
OFF-state current (I_s)	Max. 100 μA	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Voltage drop (U_d)	Max. 2.5 V @ 200 mA	Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Protection	Reverse polarity, short circuit, transients	Dielectric voltage	500 VAC (IEC 60365-4-41)
Transient voltage	Max. 1 kV/0.5 J		
Light source	GaAlAs LED, 880 nm		



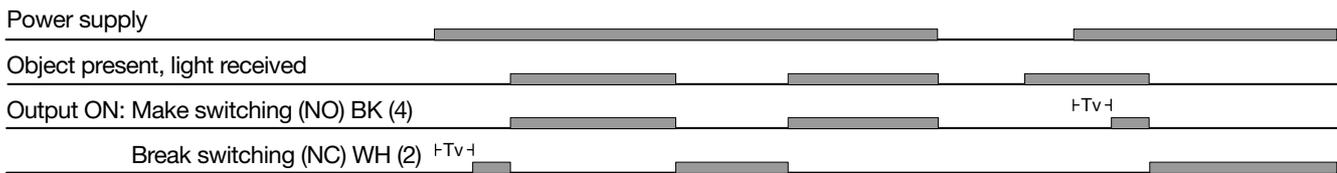
Specifications (cont.)

Housing material	
Body	Nickel plated brass
Front	Luran®, black
Cable end	Polyester, black
Nuts	Nickel plated brass
Connection	
Cable	Grey, 2 m, 4 x 0.35 mm ² oilproof PVC
Plug	M12 x 1
Cables for plug (-1)	CON.1-.... series
Weight	
Cable version	140 g
Plug version	55 g
Approvals	UL, CSA
CE-marking	Yes

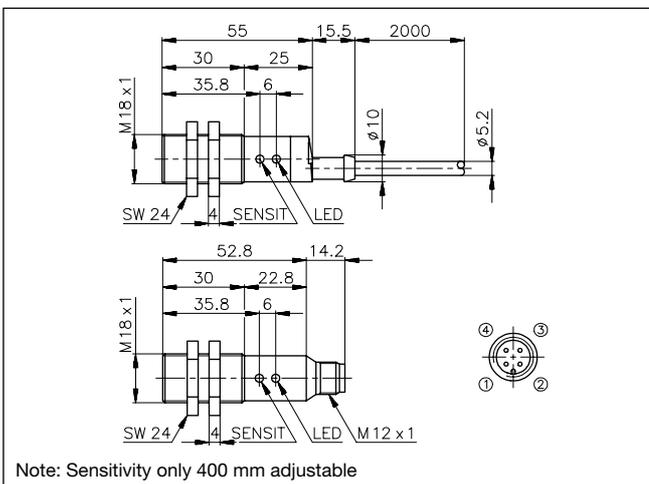
Wiring Diagrams



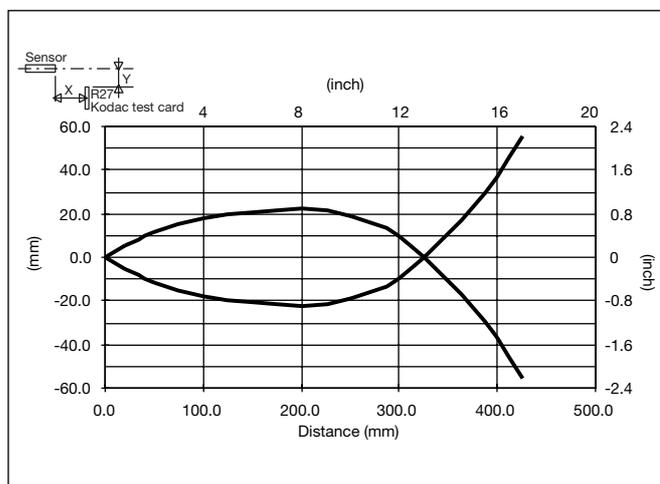
Operation Diagram



Dimensions



Detection Diagram



Delivery Contents

- Photoelectric switch EO1804.PAS(-1)
- 2 nuts
- **Packaging:** plastic bag

Accessories

- MB18A
- Plugs CON.1A-... .
- Screw driver for adjustments: 77-000
- APA18-RAR

For further information refer to “Accessories”