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 souring).

Ordering Key

EO 18 04 NPA S-1

- **Type**
- **Housing diameter**
- **Range**
- **Output type**
- **Housing material**
- **Connection type**

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
Sensitivity	270° turn potentiometer
Temperature drift	0.4%/K
Hysteresis (H) (Differential travel)	3 to 20%
Rated operational volt. (U_B)	10 to 40 VDC (ripple included)
Ripple (U_{rpp})	Max. 10%
Output current Continuous (I_e) Short-time (I)	Max. 200 mA 200 mA, max. load capacity 100 nF
No load supply current (I_O)	Max. 20 mA
Min. operational current (I_m)	0.5 mA
OFF-state current (I_r)	Max. 100 μA
Voltage drop (U_d)	Max. 2.5 V @ 200 mA
Protection	Reverse polarity, short circuit, transients
Transient voltage	Max. 1 kV/0.5 J
Light source	GaAlAs LED, 880 nm
Light type	Infrared, modulated synchronized
Sensing angle	± 25° at 1/2 range
Ambient light	Max. 10,000 lux
Operating frequency (f)	120 Hz, light/dark ratio 1:2
Response time OFF-ON (t_{ON}) ON-OFF (t_{OFF})	 ≤ 3.2 ms ≤ 5 ms
Power ON delay (t_V)	Typ. 100 ms
Indication function Output ON	Dark and light (complementary switch) LED, yellow
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)
Temperature Operating Storage	 -20° to +60°C (-4° to 140°F) -30° to + 70°C (-22° to 158°F)
Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
Dielectric voltage	500 VAC (IEC 60365-4-41)

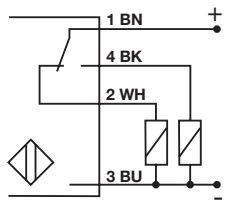
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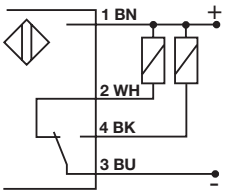
Specifications (cont.)

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 mm² oilproof PVC
Plug	M12 x 1
Cables for plug (-1)	CON.14NF.. series
Weight	
Cable version	140 g
Plug version	55 g
Approvals	UL, CSA
CE-marking	Yes

Wiring Diagrams

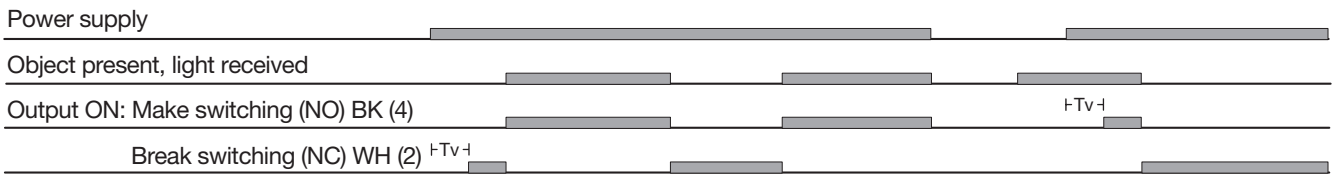


PNP

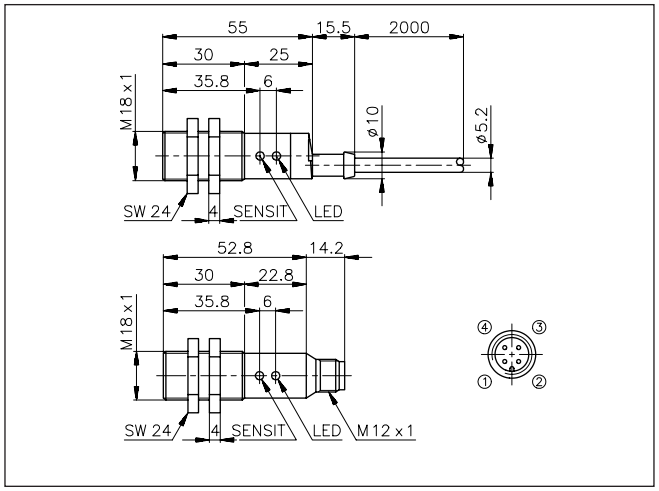


NPN

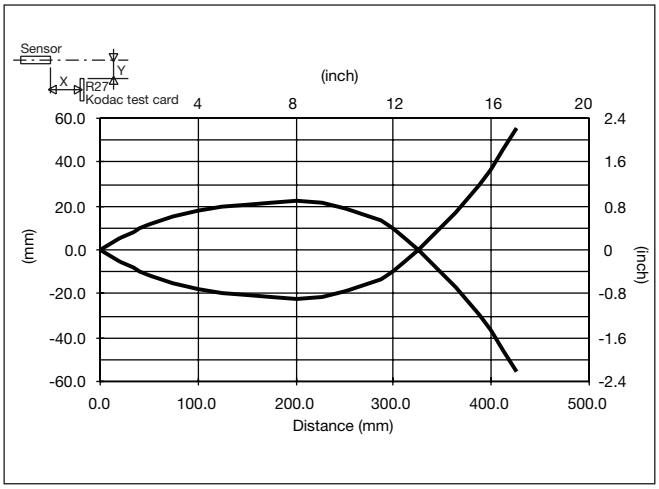
Operation Diagram



Dimensions



Detection Diagram



Delivery Contents

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

Accessories

- MB18A
- Connector type CON.14NF.. series
- Screw driver for adjustments: 77-000
- APA18-RAR

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