

Photoelectrics Retro-reflective Type ER1830.PAS, DC, Metal-housing

CARLO GAVAZZI



- Range: 3 m
- 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
- Cable and plug versions



Product Description

Retro-reflective photoelectric switch with extended range up to 3 m. Easily adjustable sensitivity with 270° potentiometer. LED output indica-

tion. Short M18 metal housing for heavy duty applications. IP 67. Easy mounting. DC and AC types, fully protected.

Ordering Key

ER 18 30 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	3 m	ER 1830 NPAS	ER 1830 NPAS-1	ER 1830 PPAS	ER 1830 PPAS-1

Specifications

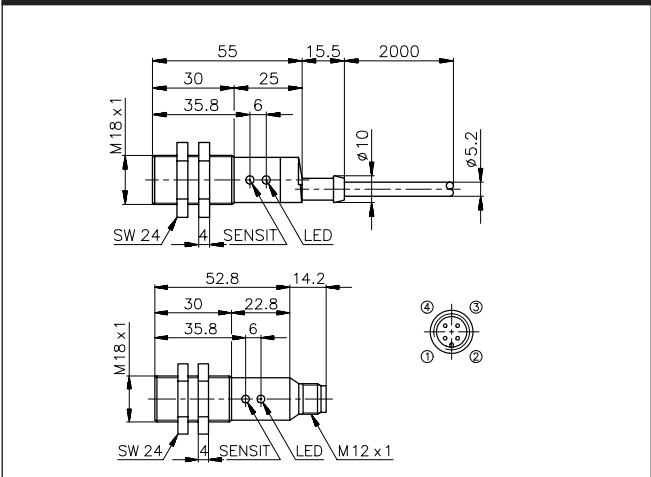
Rated operating dist. (S _n)	Up to 3 m Ref. reflector type ER4 Ø 84 mm	Optical angle	± 2.2°
Sensitivity	Adjustable	Light spot size	150 mm at 2 m
Temperature drift	0.4%/K	Ambient light	Max. 10,000 lux
Hysteresis (H) (Differential travel)	3 to 20%	Operating frequency (f)	Max. 120 Hz, light/dark ratio 1:2
Rated operational volt. (U _B)	10 to 40 VDC (ripple included)	Response time	
Ripple (U _{pp})	Max. 10%	OFF-ON (t _{ON})	≤ 3.2 ms
Output current		ON-OFF (t _{OFF})	≤ 5 ms
Continuous (I _e)	Max. 200 mA	Indication function	Dark and light (complementary switch)
Short-time (I)	200 mA, max. load capacity 100 nF	Output ON	LED, yellow
No load supply current (I _o)	Max. 20 mA @ 200 mA	Environment	
Min. operational current (I _m)	0.5 mA	Overvoltage category	III (IEC 60664/60664A; 60947-1)
OFF-state current (I _r)	Max. 100 µA	Pollution degree	3 (IEC 60664/60664A; 60947-1)
Voltage drop (U _d)	Max. 2.5 V	Degree of protection	IP 67 (IEC 60529; 60947-1)
Protection	Reverse polarity, short circuit overload, transients	Temperature	
Transient voltage	1 kV/0.5 J	Operating	-20° to +60°C (-4° to 140°F)
Power ON delay (t _v)	Typ. 100 ms	Storage	-30° to +70°C (-22° to 158°F)
Light source	GaAlAs LED, 880 nm	Vibration	10 to 150 Hz, 0.5 mm/7.5 g (IEC 60068-2-6)
Light type	Infrared, modulated	Shock	2 x 1 m & 100 x 0.5 m (IEC 60068-2-32)
		Dielectric voltage	600 VAC (IEC 60364-4-41)
		Housing material	
		Body	Nickel plated brass
		Front	Luran®, black
		Cable end	Polyester, black
		Nuts	Nickel plated brass



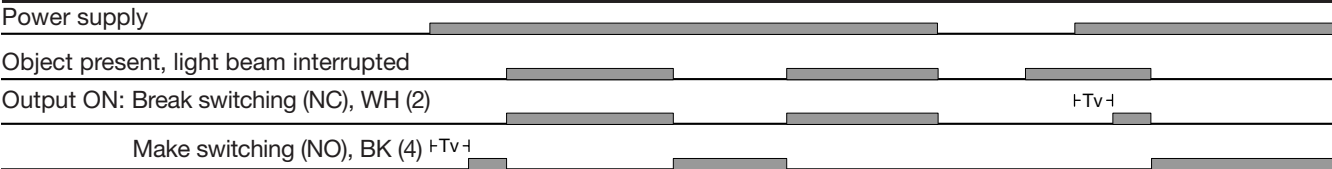
Specifications (cont.)

Connection	
Cable	Grey, 2 m, 4 x 0.35 mm², oilproof PVC
Plug	M12 x 1
Cables for plug (-1)	CON.1A-...series
Weight	
Cable version	140 g
Plug version	55 g
Approvals	UL, CSA
CE-marking	Yes

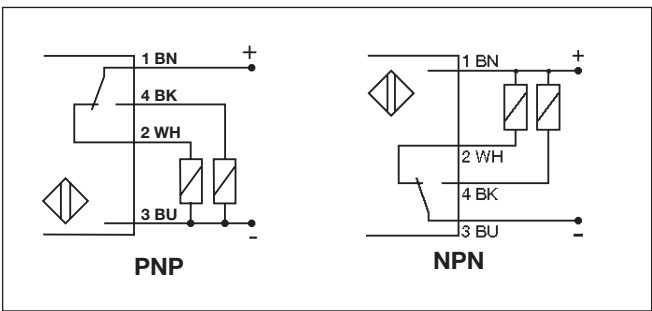
Dimensions



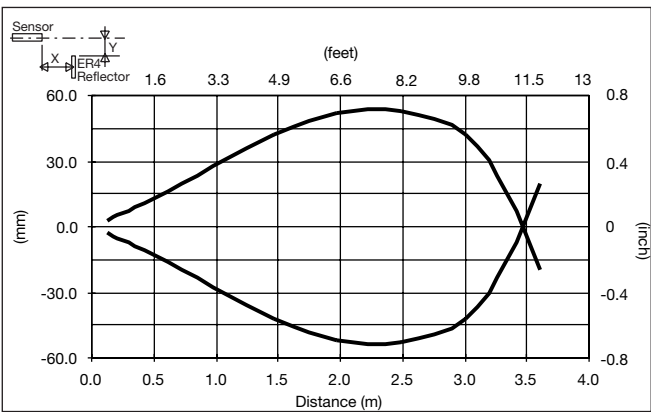
Operation Diagram



Wiring Diagrams



Detection Diagram



Installation Hints

To avoid interference from inductive voltage/current peaks, separate the prox. switch power cables from any other power cables, e.g. motor, contactor or solenoid cables

Relief of cable strain

The cable should not be pulled

Protection of the sensing face

Switch mounted on mobile carrier

Delivery Contents

- Photoelectric switch: ER1830
- 2 nuts
- **Packaging:** plastic bag

Accessories

- Reflectors: ER series
- Connector type CON.1A../CON.14NF.. series
- MB18A
- APA18-RAR

For further information refer to "Accessories"