

Photoelectrics Retro-reflective Type PD30CNR60....SA

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- Miniature sensor range
- Range: 6 m
- Sensitivity adjustment by Potentiometer
- Modulated, infrared light 850 nm
- Supply voltage: 10 to 30 VDC
- Output: 100 mA, NPN or PNP preset
- Make and break switching function
- LED indication for output, stability and power ON
- Protection: reverse polarity, short circuit and transients
- Cable and plug versions
- Excellent EMC performance



Product Description

The PD30CNR60 sensor family comes in a compact 10 x 30 x 20 mm reinforced PMMA/ABS housing. The sensors are useful in applications where high-accuracy detection as well as small size is required. Compact housing and high power LED for excellent performance-size ratio.

The Potentiometer function for adjustment of the sensitivity makes the sensors highly flexible. The output type is preset (NPN or PNP), and the output switching function is NO and NC output.

Ordering Key

PD30CNR60NAM5SA

Type	_____
Housing style	_____
Housing size	_____
Housing material	_____
Housing length	_____
Detection principle	_____
Sensing distance	_____
Output type	_____
Output configuration	_____
Connection type	_____
Sensitivity adjustment	_____

Type Selection

Housing W x H x D	Range S _n	Connection	Ordering no. NPN Make and break switching	Ordering no. PNP Make and break switching
10 x 30 x 20 mm	6 m	Cable	PD 30 CNR 60 NASA	PD 30 CNR 60 PASA
10 x 30 x 20 mm	6 m	Plug	PD 30 CNR 60 NAM5SA	PD 30 CNR 60 PAM5SA

Specifications EN 60947-5-2

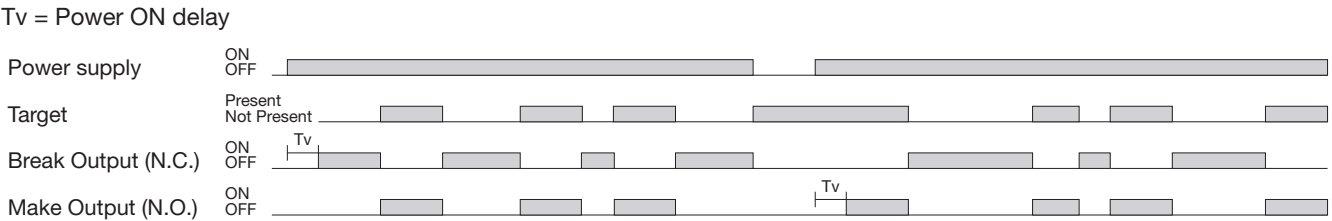
Rated operating distance (S_n) Ø 80 mm (ER4) reflector ER4060 reflector	≤ 6 m ≤ 4 m	Protection	Short-circuit, reverse polarity and transients
Blind zone	≤ 100 mm @ Ø80 mm (ER4) and ER4060 reflector	Light source	LED, 850 nm
Sensitivity Electrical adjustment Mechanical adjustment	210° 240°	Light type	Infrared, modulated
Temperature drift	≤ 0.2%/°C	Emitter angle	± 2° @ half sensing distance
Hysteresis (H)	5% to 20%	Light spot	110 mm @ 1.5 meters
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	Ambient light	≤ 10,000 lux
Ripple (U_{ripple})	≤ 10%	Operating frequency (f)	≤ 1000 Hz
Output current Continuous (I _a) Short-time (I)	≤ 100 mA ≤ 100 mA (max. load capacity 100 nF)	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 0.5 ms ≤ 0.5 ms
No load supply current (I_o)	≤ 20 mA @ U _B max	Power ON delay (t_v)	≤ 30 ms
Minimum operational current (I_m)	≤ 0.5 mA	Output function Open collector	NPN or PNP by sensor type
OFF-state current (I_r)	≤ 100 µA	Output switching function	N.O. and N.C.
Voltage drop (U_d)	≤ 2 VDC @ I _a max	Indication Output ON Power ON	LED, yellow Signal stability ON and LED, green. See curve for condition of stability



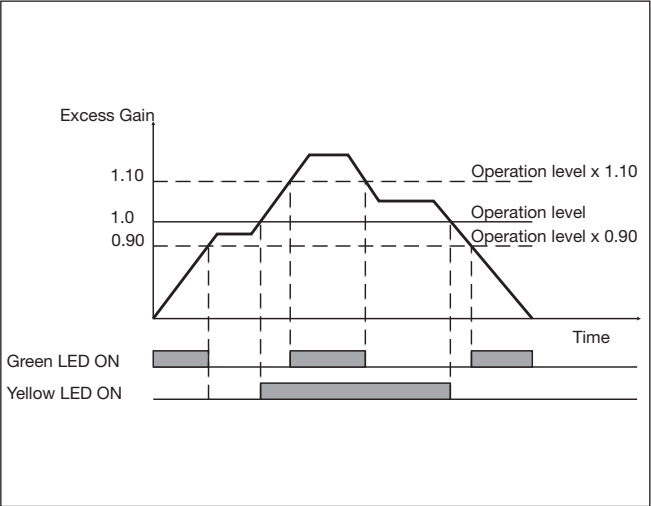
Specifications (cont.)

Environment		Housing material		
Installation category	III (IEC 60664/60664A; 60947-1)	Body	ABS Light Grey	
Pollution degree	3 (IEC 60664/60664A; 60947-1)	Frontglas	PMMA Red	
Degree of protection	IP 67 (IEC 60529; 60947-1)	Trimmer shaft	POM Dark Grey	
Ambient temperature		Connection		
Operating	-25° to +60°C (-13° to +140°F)	Cable	PVC, black, 2 m 4 x 0.14 mm², Ø = 3.3 mm	
Storage	-40° to +70°C (-40° to +158°F)	Plug	M8, 4-pin (CON.54NF.. series)	
Vibration	10 to 150 Hz, 1.0 mm/15 G (IEC 60068-2-6)	Weight		
Shock	30 g / 11ms, 3 pos, 3 neg per axis (IEC 60068-2-6, 60068-2-32)	Cable version	≤ 50 g	
		Plug version	≤ 20 g	
CE-marking		Yes		
Rated insulation voltage		≤ 500 VAC (rms)*	Approvals	cULus (UL508 + CSA)

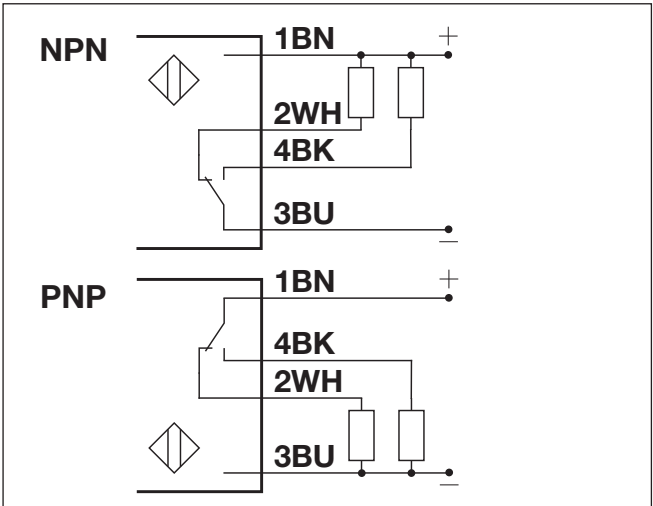
Operation Diagram



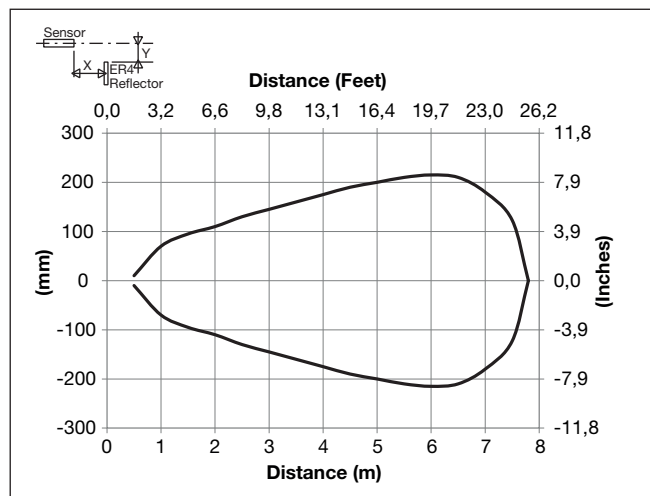
Signal Stability Indication



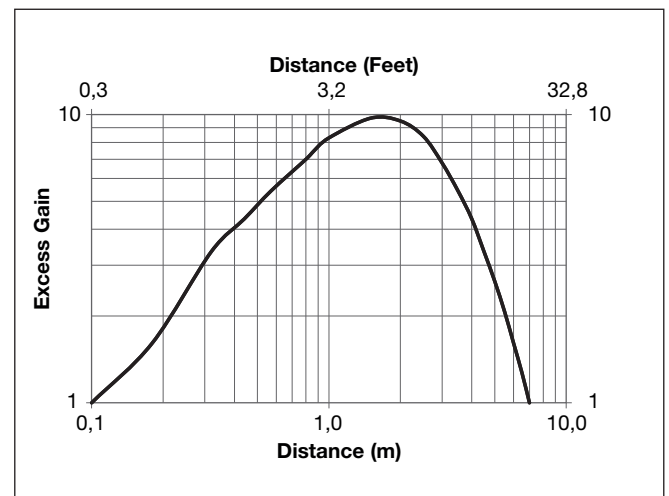
Wiring Diagrams



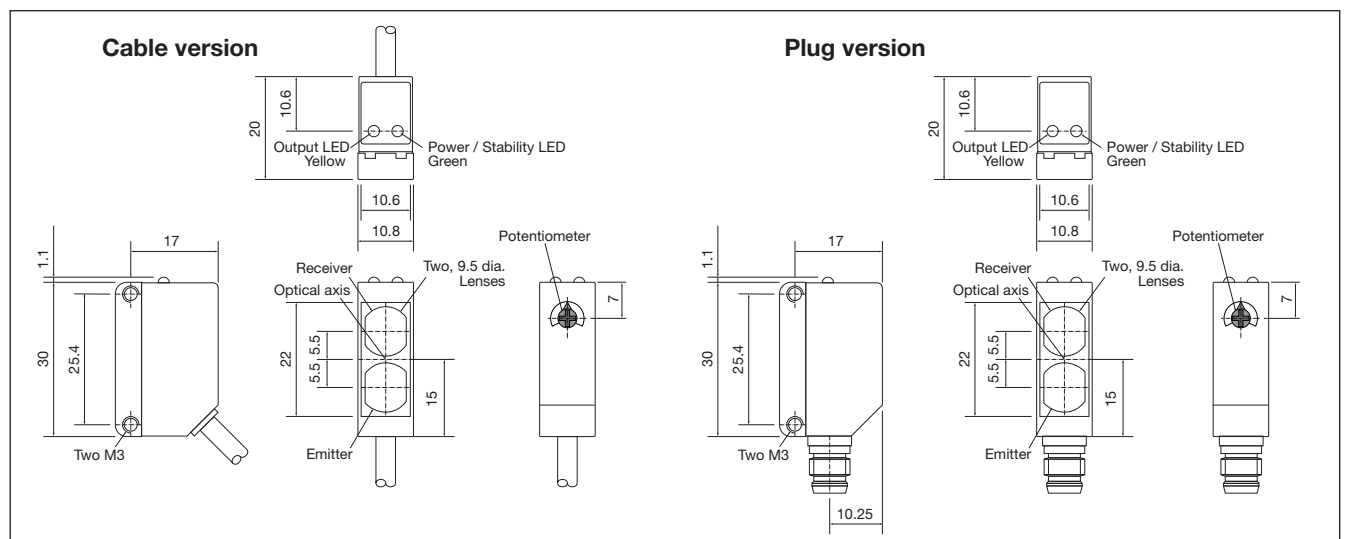
Detection Diagram



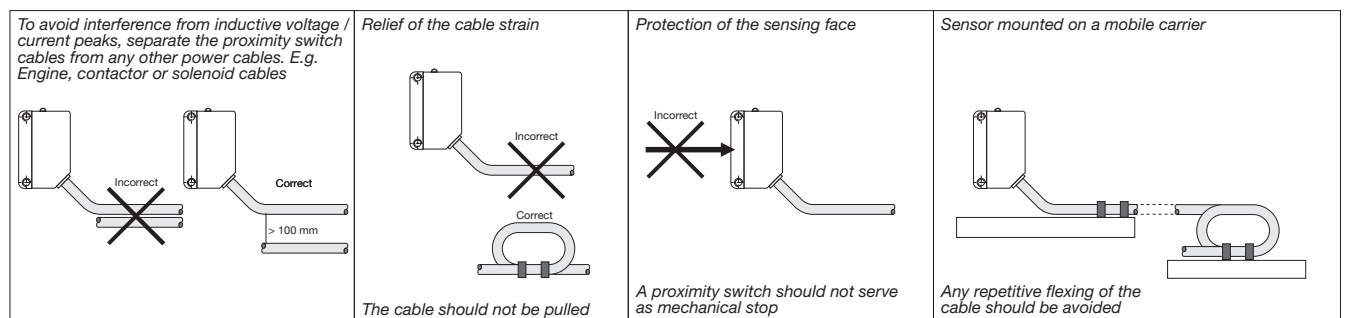
Excess Gain



Dimensions



Installation Hints



Accessories

- Mounting bracket APD30-MB1 or APD30-MB2 to be purchased separately.

Delivery Contents

- Photoelectric switch: PD30CNR60 ...
- Screwdriver
- **Packaging:** Plastic bag