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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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Photoelectrics Diffuse-reflective Type PD30CND10...SA

CARLO GAVAZZI



- Miniature sensor range
- Range: 1 m
- Sensitivity adjustment by Potentiometer
- Modulated, red light 625 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 PD30CND10 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

PD30CND10NAM5SA

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	1000 mm	Cable	PD 30 CND 10 NASA	PD 30 CND 10 PASA
10 x 30 x 20 mm	1000 mm	Plug	PD 30 CND 10 NAM5SA	PD 30 CND 10 PAM5SA

Specifications EN 60947-5-2

Rated operating distance (S_n)	Up to 1 m, reference target Kodak test card R27, white, 90% reflective, 200 x 200 mm	OFF-state current (I_r)	≤ 100 μA
Blind zone	≤ 20 mm @ maximum distance	Voltage drop (U_d)	≤ 2 VDC @ I _e max
Sensitivity Electrical adjustment Mechanical adjustment	210° 240°	Protection	Short-circuit, reverse polarity and transients
Temperature drift	≤ 0.2%/°C	Light source	InGaAlP, LED, 625 nm
Hysteresis (H)	5% to 20%	Light type	Red, modulated
Rated operational volt. (U_B)	10 to 30 VDC (ripple included)	Emitter angle	± 2° @ half sensing distance
Ripple (U_{rpp})	≤ 10%	Light spot 1.5 times the sensing distance	110 mm
Output current Continuous (I _a) Short-time (I)	≤ 100 mA ≤ 100 mA (max. load capacity 100 nF)	Ambient light	≤ 10,000 lux
No load supply current (I_o)	≤ 25 mA @ U _B max	Operating frequency (f)	≤ 1000 Hz
Minimum operational current (I_m)	≤ 0.5 mA	Response time OFF-ON (t _{ON}) ON-OFF (t _{OFF})	≤ 0.5 ms ≤ 0.5 ms
		Power ON delay (t_v)	≤ 30 ms
		Output function Open collector	NPN or PNP by sensor type
		Output switching function	N.O. and N.C.

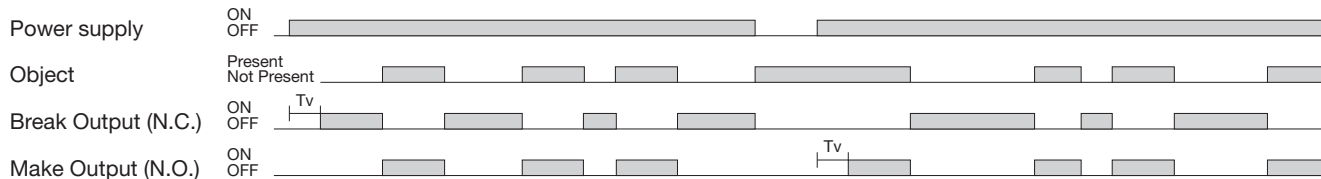


Specifications (cont.)

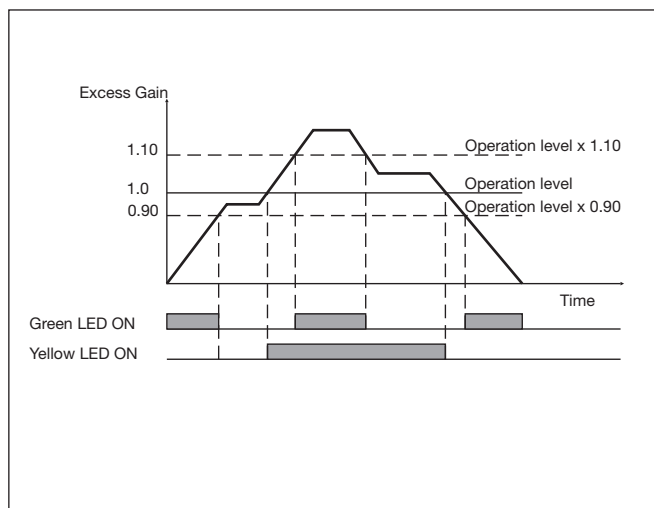
Indication Output ON Power ON	LED, yellow Signal stability ON and LED, green. See curve for condition of stability	Rated insulation voltage Housing material Body Frontglas Trimmer shaft	≤ 500 VAC (rms)
			ABS Light Grey PMMA Red POM Dark Grey
Environment Installation category Pollution degree Degree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

Operation Diagram

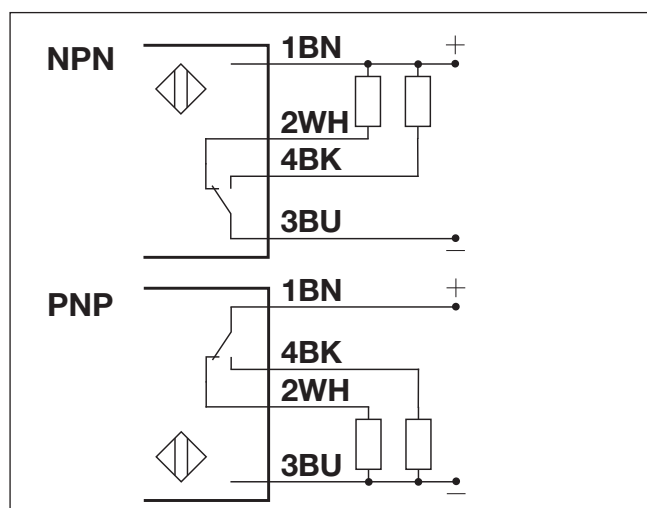
Tv = Power ON delay



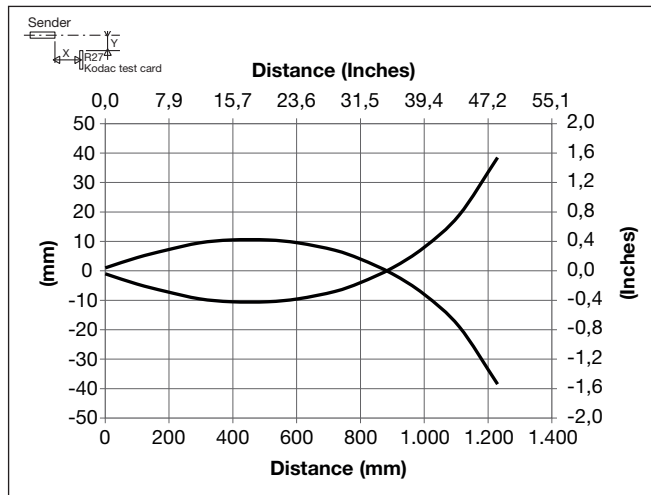
Signal Stability Indication



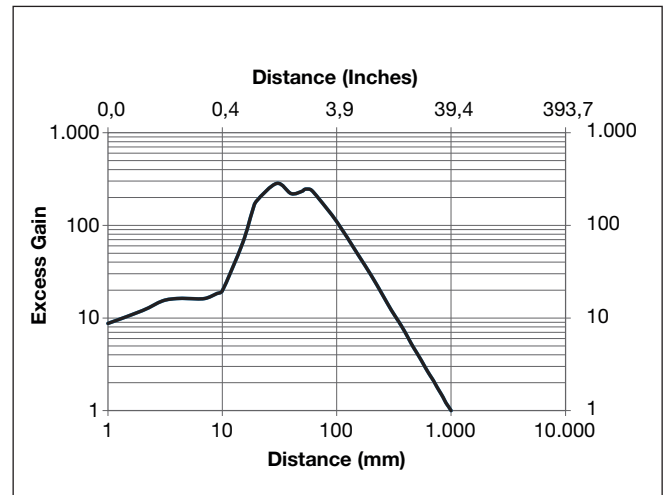
Wiring Diagrams



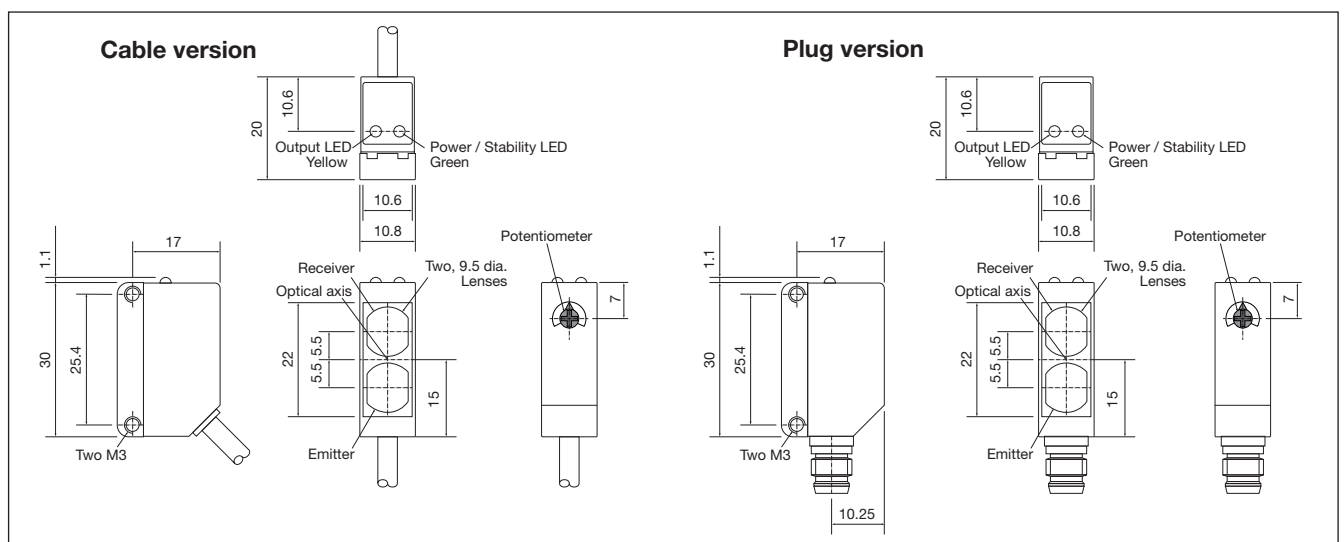
Detection Diagram



Excess Gain



Dimensions



Installation Hints

<p>To avoid interference from inductive voltage / current peaks, separate the proximity switch cables from any other power cables. E.g. Engine, contactor or solenoid cables</p>	<p>Relief of the cable strain</p> <p>The cable should not be pulled</p>	<p>Protection of the sensing face</p> <p>A proximity switch should not serve as mechanical stop</p>	<p>Sensor mounted on a mobile carrier</p> <p>Any repetitive flexing of the cable should be avoided</p>
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Delivery Contents

- Photoelectric switch: PD30CND10 ...
- Screwdriver
- **Packaging:** Plastic bag

Accessories

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