

Ultrasonic Diffuse, Digital Output Types UA30CAD.....TI

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- Cylindrical M30 PBT housing
- Sensing distance: 250-3500 mm
- Power supply: 12 to 30 VDC
- Outputs: Two multi function switching outputs. PNP or NPN
- Setup: Normal switching or adjustable hysteresis
- Repeatability 0.2%
- Beam angle. $\pm 6^\circ$
- Protection: Short-circuit, reverse polarity and overvoltage
- Protection degree IP 67, Nema 4X
- 2 m cable or M12 plug



Product Description

A self-contained multi function diffuse ultrasonic sensor with a sensing range of 250 to 3500 mm. 2 switching outputs - easily set up for two different output modes and adjusted by teach-in - makes it ideal for level control tasks in a wide variety of vessels. A sturdy one-piece polyester

housing provides the perfect packaging for the sophisticated microprocessor controlled and digitally filtered sensor electronics. Excellent EMC performance and precision are typical features of this sensor on true distance measurement.

Ordering Key

UA30CAD35NPM1TI

Ultrasonic sensor	_____
Housing style	_____
Housing size	_____
Housing material	_____
Housing length	_____
Detection principle	_____
Sensing distance	_____
Output type	_____
Output configuration	_____
Connection	_____
Teach-in	_____

Type Selection

Housing diameter	Connection	Rated operating dist. (S_n)	Digital output NPN/PNP	Ordering no.
M30	Plug M12	250-3500 mm	2 x NPN	UA 30 CAD 35 NP M1 TI
M30	Cable	250-3500 mm	2 x NPN	UA 30 CAD 35 NP TI
M30	Plug M12	250-3500 mm	2 x PNP	UA 30 CAD 35 PP M1 TI
M30	Cable	250-3500 mm	2 x PNP	UA 30 CAD 35 PP TI

Specifications

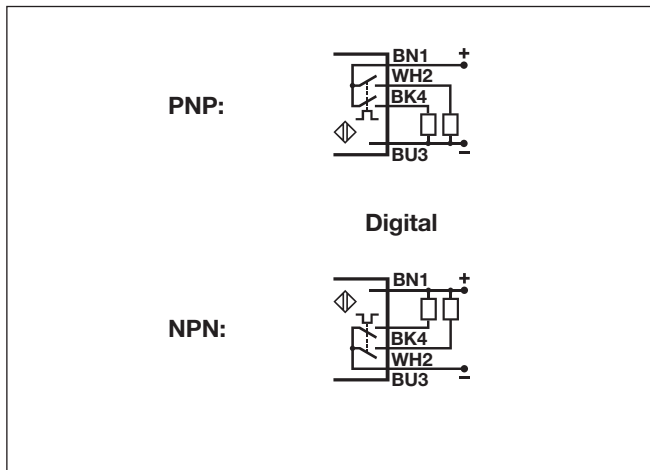
Rated operating distance (S_n)	Reference target: 1 mm metal rolled finish, size 200 x 200 mm. 250 - 3500 mm	Max. load capacity 100 nF	≤ 300 mA
Blind zone	≤ 250 mm	UL508 specification	≤ 100 mA
Repeatability	0.2%	Output current short-time (I)	≤ 300 mA
Beam angle	$\pm 6^\circ$	Max. load capacity 100 nF	≤ 100 mA
Adjustment	P1 (farthest setpoint) P2 (nearest setpoint)	UL508 specification	
Temperature drift	$\leq 0.1\%/^\circ\text{C}$ @ -20° to $+70^\circ\text{C}$	Minimum operational current (I_m)	≤ 0.5 mA
Temperature compensation	Yes	OFF-state current (I_o)	≤ 10 μA
Hysteresis (H)	Min. 0.5%	Voltage drop (U_d)	≤ 2.2 VDC @ 100 mA
Rated operational voltage (U_B)	12 to 30 VDC (ripple included)	Protection	Short-circuit, overvoltage and reverse polarity
Ripple (U_{rpp})	$\leq 5\%$	Carrier frequency	112 kHz
No-load supply current (I_o)	≤ 50 mA @ U_B max	Operating frequency (f)	≤ 2 Hz
Output current continuous (I_o)		Response time OFF-ON (t_{ON})	≤ 250 ms
		Response time ON-OFF (t_{OFF})	≤ 250 ms
		Power ON delay	≤ 500 ms
		Output function, open collector	



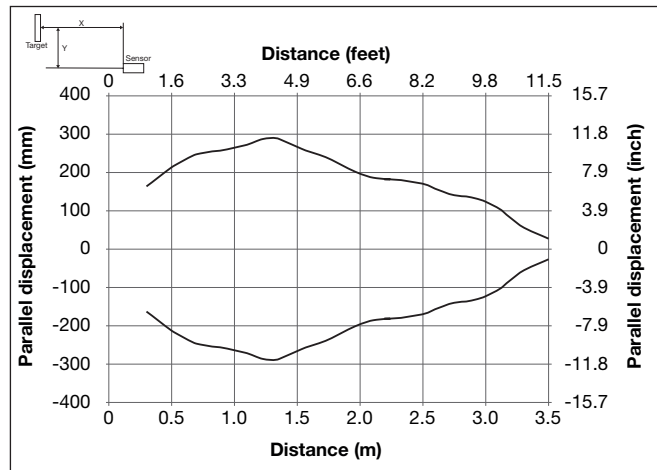
Specifications (cont.)

By sensor type	NPN or PNP	Rated insulation voltage	< 500 VAC (rms)
Output switching function	Two open collector transistor outputs to be configured as: - Normal Switching function with N.O output. - Adjustable hysteresis Filling or emptying control	Housing	Material body: PBT Material front: Epoxy-glass resin Material back, plug: Grilamid Material back, cable: Grilamid Material push-button: TPE Sealing around push-button: TPE Material sealing front: TPE
Indication	Output ON: Yellow LED Echo received: Green LED	Connection	Cable: PVC, grey, 2 m, 4 x 0.34 mm ² , Ø = 4.7 mm Plug: M12, 4-pin (CON. 14-series)
Environment	Installation category: III (IEC 60664/60664A; 60947-1) Pollution degree: 3 (IEC 60664/60664A; 60947-1) Degree of protection: IP67 (IEC 60529; 60947-1) Nema 4X	Tightening torque	≤ 1.5 Nm
Ambient temperature	Operating: -20° to +70°C (-4° to +158°F) Storage: -35° to +70°C (-31° to +158°F)	Weight	Cable version: 160 g Plug version: 90 g
Vibration	10 to 55 Hz, 1.0 mm/6G. (IEC/EN 60068-2-6)	CE-marking	Yes
Shock	30 g / 11 mS, 3 directions (IEC/EN 60068-2-27)	Approvals	cULus (UL508)

Wiring Diagram



Detection Range



Dimensions

