

# Ultrasonic Diffuse, Analogue Output with Teach-in Types UA 30 CLD .. .. M1 TI

CARLO GAVAZZI



- Cylindrical M30 polyester housing
- Sensing distance: 100-1500 mm, 200-2000 mm or 300-3500 mm
- Outputs: Analogue 0-10 V or 4-20 mA and 2 switching outputs PNP, NO or NC
- Teach-in functionality
- Power supply: 19 to 30 VDC
- 8° beam angle
- Protection: Short-circuit, reverse polarity, transients
- Protection degree IP 67
- M12 plug, 5 pin

## Product Description

A family of diffuse ultrasonic sensors with sensing range from 100-1500 mm, 200-2000 mm and 300-3500 mm with teach-in adjustment. Adjustments by teach-in make it possible to set the analog angle according to the requests and program the output to NO or NC switching as well. The outputs are either 0-10 V or 4-20 mA which make

it an ideal choice for distance measurement, level measurement, diameter measurement or slope control with customised settings. Due to use of microprocessor control the digital filtering makes the sensor very immune against most electromagnetic interferences and enables synchronisation in an easy way.

## Ordering Key UA 30 CLD 35 AK M1 TI

Ultrasonic sensor	UA
Housing style	30
Housing size	CLD
Housing material	35
Housing length	AK
Detection principle	M1
Sensing distance	TI
Output type	
Output configuration	
Connection	
Teach-in	

## Type Selection

Housing diameter	Connection	Rated operating dist. (S <sub>n</sub> )	Analogue output and 2 PNP outputs NO/NC	Ordering no. Teach-in
M30	Plug M12	100-1500 mm	0-10 VDC and 2 x PNP	<b>UA 30 CLD 15 AK M1 TI</b>
M30	Plug M12	200-2000 mm	0-10 VDC and 2 x PNP	<b>UA 30 CLD 20 AK M1 TI</b>
M30	Plug M12	200-2000 mm	4-20 mA and 2 x PNP	<b>UA 30 CLD 20 AG M1 TI</b>
M30	Plug M12	200-2000 mm	2 x PNP	<b>UA 30 CLD 20 PO M1 TI</b>
M30	Plug M12	300-3500 mm	0-10 VDC and 2 x PNP	<b>UA 30 CLD 35 AK M1 TI</b>

## Specifications

<b>Rated operational volt. (U<sub>e</sub>)</b>	19 to 30 VDC (ripple included)	<b>Teach-in</b>	Set point adjustment NO/NC selection
<b>Ripple</b>	≤ 10%	<b>Indication</b>	Set points, 2 LED's
<b>Output current (I<sub>o</sub>)</b>	max. 100 mA (continuous) for switching outputs	<b>Rated operating distance</b>	100-1500 mm 200-2000 mm 300-3500 mm
<b>No-load supply current (I<sub>o</sub>)</b>	≤ 45 mA	UA30CLD15 .. M1 TI	
<b>Protection</b>	Short-circuit, transients and reverse polarity	UA30CLD20 .. M1 TI	
<b>Rated insulation voltage</b>	> 1 kV	UA30CLD35 .. M1 TI	
<b>Output</b>		<b>Operating frequency</b>	1 Hz
UA30CLD..AKM1TI	Analogue 0-10 VDC, 2 PNP open collector outputs, NO or NC	<b>Response times</b>	60 ms (target speed 1 m/s) 300 ms (step response)
UA30CLD20AGM1TI	Analogue 4-20 mA, 2 PNP open collector outputs, NO or NC	UA30CLD35 AG M1 TI	120 ms (target speed 1 m/s) 500 ms (step response)
UA30CLD20POM1TI	2 PNP open collector outputs, NO or NC	<b>Hysteresis (H) (differential travel)</b>	Programmable
		<b>Temperature compensation</b>	Yes
		<b>Beam angle</b>	8°



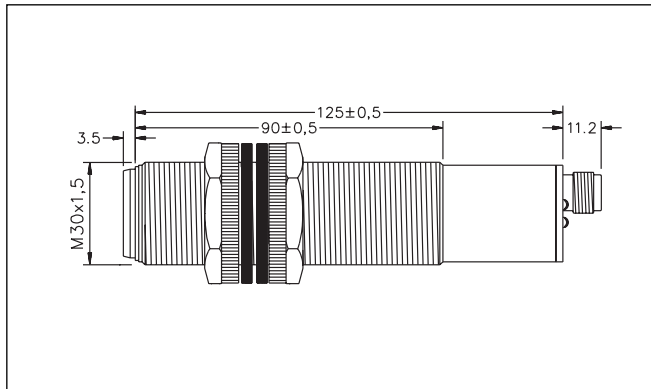
## Specifications (cont.)

<b>Ambient temperature</b>	
Operating	-15° to +70°C (5° to +158°F)
Storage	-25° to +85°C (-13° to +185°F)
<b>Degree of protection</b>	IP 67 (Nema 1, 3, 4, 6, 13)
<b>Housing material</b>	Polyester PBTP
<b>Connection</b>	
Plug	M12, 5-pin
<b>Weight</b>	148 g
<b>Tightening torque</b>	7.5 Nm
<b>CE-marking</b>	Yes

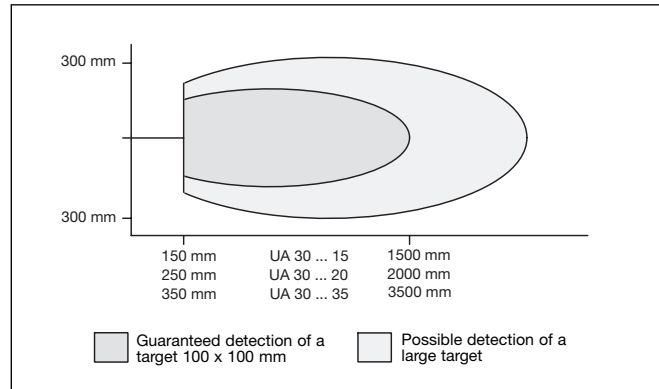
## Wiring

Pin	Function
1	24 VDC
2	SP 2
3	0 V GND
4	SP 1
5	0 ... 10 V

## Dimensions



## Detection Range



## Installation Hints

<p><i>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</i></p>	<p><b>Relief of cable strain</b></p> <p>Incorrect</p> <p>Correct</p> <p>The cable should not be pulled</p>	<p><b>Protection of the sensing face</b></p> <p>A proximity switch should not serve as mechanical stop</p>	<p><b>Switch mounted on mobile carrier</b></p> <p>Any repetitive flexing of the cable should be avoided</p>
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