Ultrasonic
Diffuse, Programmable Outputs
Types UA 30 CLD .. F. M7

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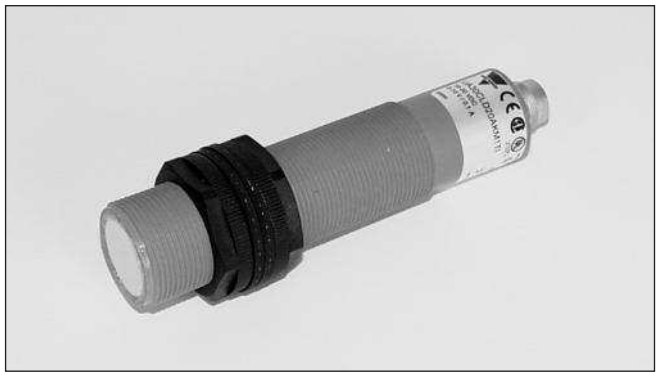


- **Cylindrical M30 polyester housing**
- **Sensing distance: 150-1500 mm, 250-2000 mm or 350-3500 mm**
- **Programmable outputs: Analogue (0-10 V or 4-20 mA, inverted or non-inverted) and 2 PNP open collector, NO/NC switching outputs, 100 mA**
- **Programmable hysteresis, switching frequency and set points**
- **RS 232 interface**
- **Power supply: 19 to 30 VDC**
- **8° beam angle**
- **Protection: Short-circuit, reverse polarity, transients**
- **Protection degree IP 67**
- **M16 plug**

Product Description

A family of diffuse ultrasonic sensors with sensing range from 150-1500 mm, 250-2000 mm and 350-3500 mm with programmable settings by Windows based software. The programmability of the sensors gives the possibility of an universal application in any area of industrial environment. The outputs are 0-10V or 4-20mA and RS232 interface, which make it possible to communicate with BUS-systems. Due to use of microprocessor control the digital filtering makes the sensor immune to most electromagnetic interferences. The control input enables synchronisation in an easy way.

Ordering Key

UA 30 CLD 15 FK M7

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

Type Selection

Housing diameter	Connection	Rated operating dist. (S_n)	Ordering no. Analogue 0-10 V	Ordering no. Analogue 4-20 mA
M30	M16	150-1500 mm	**UA 30 CLD 15 FK M7**	**UA 30 CLD 15 FG M7**
M30	M16	250-2000 mm	**UA 30 CLD 20 FK M7**	**UA 30 CLD 20 FG M7**
M30	M16	350-3500 mm	**UA 30 CLD 35 FK M7**	**UA 30 CLD 35 FG M7**

Specifications

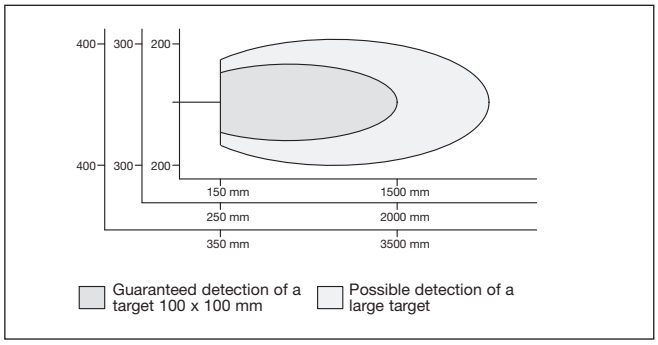
Rated operational volt. (U_e)	19 to 30 VDC (ripple incl.)
Ripple	≤ 10%
Output current (I_e)	max. 100 mA (continuous)
No-load supply current (I_o)	≤ 35 mA
Off-state current (I_r)	200 μA
Voltage drop (U_d)	4.5 V
Power-on delay	< 10 ms
Carrier frequency	200 KHz
Protection	Short-circuit, transients and reverse polarity
Rated insulation voltage	> 1 kV
Control input	Hold/Synchronisation
Output, analogue	
UA30CLD..FKM7	Analogue 0-10 or 10-0 VDC, programmable Load: > 1 kΩ
UA30CLD..FGM7	Analogue 4-20 or 20-4 mA, programmable Load: < 500 Ω
Scaling	Programmable
Linearity	± 0.5%/3 mm
Repeatabilty	± 0.2%/0.4 mm
Load	
4 - 20 mA	max. 500 Ω
0 - 10 V	min. 1 kΩ
Output, switching	2 x PNP, open collector, NO/NC, 100 mA, programmable.
Programming (Windows based software)	- sensor address - analogue output offset, range, inversion - 2 set points/Limits NO/NC, position, hysteresis - digital output Hex, BCD - cycle time - over/under range - transmit time - offset - slope
Output, information	Serial HEX/BCD

Specifications (cont.)

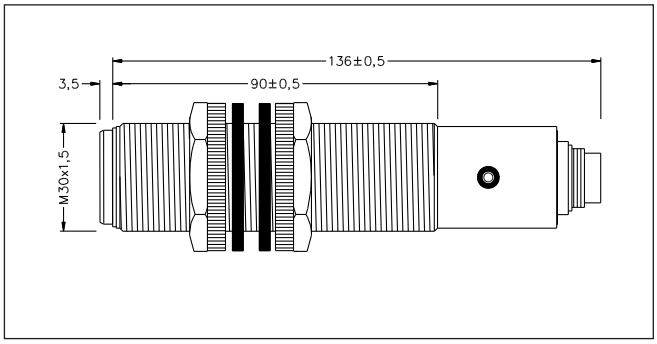
Interface	RS 232
Indication	Alignment LED
Repeat accuracy (R)	≤ 0.2%
Rated operating distance / resolution	
UA30CLD15	150-1500 mm / < 1 mm
UA30CLD20	250-2000 mm / < 1 mm
UA30CLD35	350-3500 mm / < 1 mm
Operating frequency	5-30 Hz, programmable
Response times	
UA30CLD15	100 ms
UA30CLD20	300 ms
UA30CLD35	500 ms
Hysteresis (H) (differential travel)	Programmable

Temperature compensation	Yes
Beam angle	8°
Ambient temperature	
Operating	-15° to +70°C (5° to +158°F)
Storage	-25° to +75°C (-13° to +167°F)
Degree of protection	IP 67 (Nema 1, 3, 4, 6, 13)
Housing material	Polyester PBTP
Connection	
Plug	M16, 8-pin
Weight	154 g
Tightening torque	7.6 Nm
CE-marking	Yes

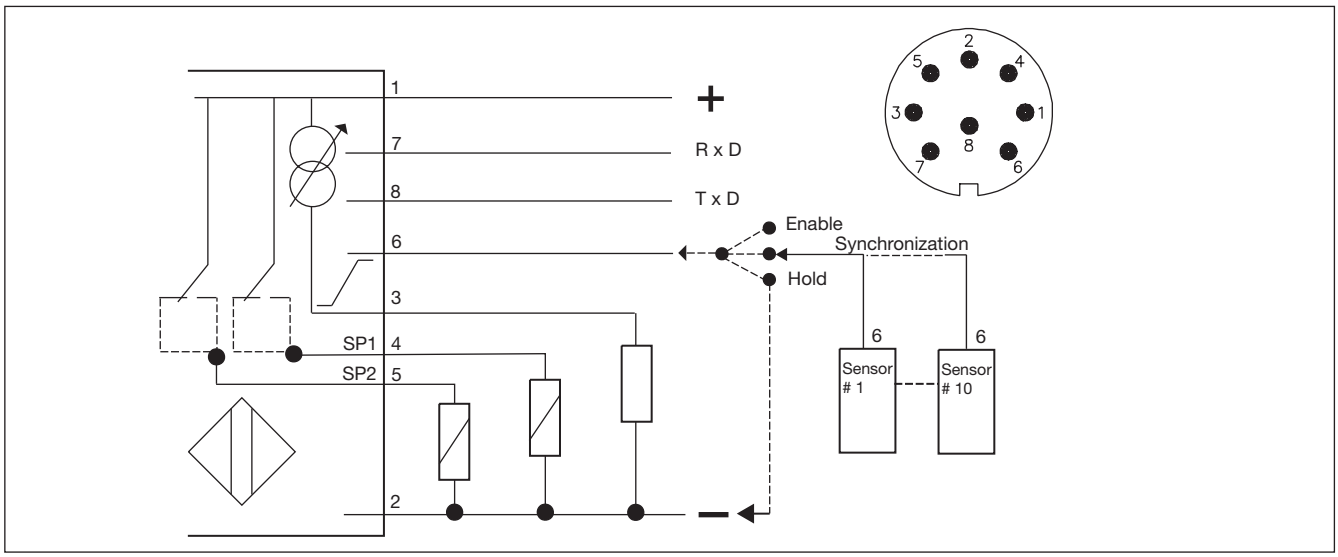
Detection Range



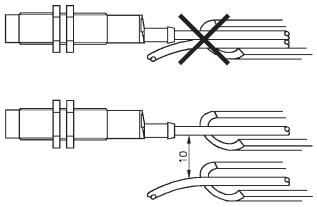
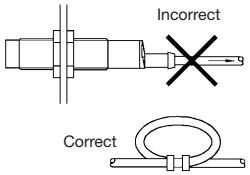
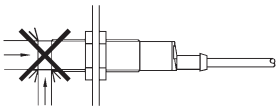
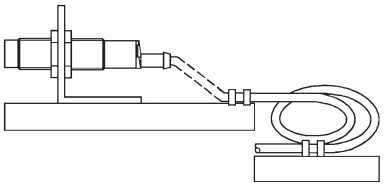
Dimensions



Wiring 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*	*Protection of the sensing face*	*Switch mounted on mobile carrier*
			
	The cable should not be pulled	A proximity switch should not serve as mechanical stop	Any repetitive flexing of the cable should be avoided

Accessories

- UDSprog 2000 PC-software, download from www.carlogavazzi.com/ac
- UCP1 Programming Adaptor