



Ultrasonic sensors for high precision detection of clear and transparent objects

- Clear object detection, inspection on transparent or highly reflective film and liquid level measurement
- Standard M18 tubular and M18 right angle mounting
- 50...500 mm Background and Foreground Suppression
- Teach-in push button or remote input for distance range setting
- Auto-Window function
- Standard M12 4-pole connector and M12 5-pole connector
- PNP or NPN outputs for object detection and 0-10 V or 4-20 mA analog outputs for distance measure
- IP67, NEMA 6P-rated

APPLICATIONS

- Packaging machines
- Beverage & Bottling
- Automotive assembling line



SENSORS

US18		
Tubular		30...300 mm Analog model resolution: 0,5 mm (SLOW mode), 1 mm (FAST mode)
Right angle		50...500 mm Repeatability: 0,7 mm
Power supply	Vdc	10...30 V (US18 tubular), 12...30 V (US18 right angle)
	Vac	
	Vac/dc	
Output	PNP	▪
	NPN	▪
	NPN/ PNP	▪
	relay	
	other	0...10 V, 4...20 mA Analog (US18 tubular)
Connection	cable	
	connector	▪
	pig-tail	
Housing material		Plastic
Mechanical protection		IP67, NEMA 6-P

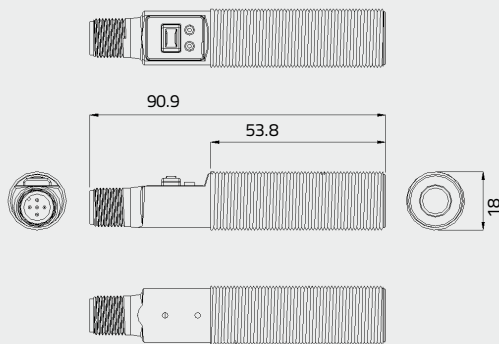
TECHNICAL DATA

	US18-PA/PR-5-N03	US18-PL-5-N03
Operating distance	30...300 mm	50...500 mm
Housing Type	M18 tubular	M18 Right Angle
Power supply	10...30 Vdc	12...30 Vdc
Ripple		10% max.
Current consumption	65 mA max.	25 mA max.
Output current		100 mA max.
Output saturation voltage	1,6 V max.	3 V max.
Output	PNP and NPN 0...10 V or 4...20 mA analog output	PNP or NPN
Delay at powering		300 ms
Response time	8 ms (NPN/PNP) 2,5 ms (Analog out. FAST mode) 30 ms (Analog out. SLOW mode)	15 ms
Switching frequency	62,5 Hz (NPN/PNP) 200 Hz (Analog out. FAST mode) 16 Hz (Analog out. SLOW mode)	32 Hz
Repeatability	0,5 mm	0,7 mm
Indicators	yellow/green OUTPUT LED red POWER LED	red/green RANGE LED yellow/red OUTPUT LED
Setting	Teach-in push-button or remote input	
Ultrasonic emission frequency	300 kHz	
Minimum detection window	5 mm	
Operating temperature	-25...+55 °C	-20...+60 °C
Vibration	0.5 mm amplitude, 10 ... 55 Hz frequency, for every axis (EN60068-2-6)	
Shock resistance	11 ms (30 G) 6 shock for every axis (EN60068-2-27)	
Housing material	thermoplastic polyester	ABS
Protection class	IP67, NEMA 6-P rated	
Connections	M12 5-pole connector	M12 4-pole connector

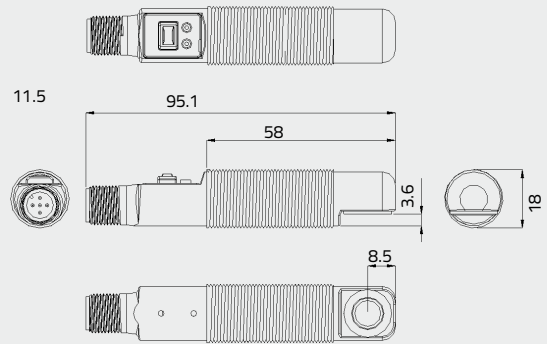
DIMENSIONS

M18 Tubular

AXIAL VERSION - US18 PA-5-N03-XX

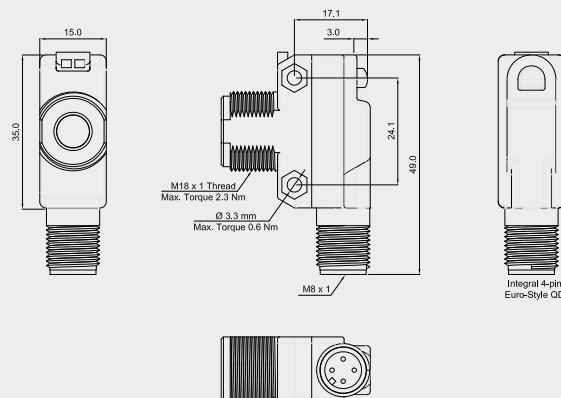


RADIAL VERSION - US18 PR-5-N03-XX



M18 Right Angle

US18 PL-5-N03-NH/PH



mm

ACCESSORIES SELECTION AND ORDER INFORMATION

DESCRIPTION	MODEL	ORDER No.
ST-5011	M18 mounting bracket short	95ACC5240
ST-5012	M18 mounting bracket long	95ACC5250
ST-5017	M18 mounting bracket standard profile	95ACC5270
SP-40	Mounting support for tubular M18 sensors	95ACC1370
Plastic Nut	Flared mounting nut	95ACC2630
SWING-18	Adjustable support for plastic tubular M18 sensors	895000006

CABLES

CONNECTOR	DESCRIPTION	LENGTH	MODEL	ORDER No.
Axial M12 connector	4-pole, Grey, P.V.C.	3 m	CS-A1-02-G-03	95ACC1380
		5 m	CS-A1-02-G-05	95ACC1270
		7 m	CS-A1-02-G-07	95ACC1280
		10 m	CS-A1-02-G-10	95ACC1390
Radial M12 connector		3 m	CS-A2-02-G-03	95ACC1360
		5 m	CS-A2-02-G-05	95ACC1240
		7 m	CS-A2-02-G-07	95ACC1245
		10 m	CS-A2-02-G-10	95ACC1260
Axial M12 connector	5-pole, Grey, P.V.C.	3 m	CS-A1-03-G-03	95ACC2110
		5 m	CS-A1-03-G-05	95ACC2120
		10 m	CS-A1-03-G-10	95ACC2140