

TU Series Ultrasonic Sensors



M30 (30 mm) Plastic – PNP or Analog Output

- High resolution
- PNP output model with adjustable sensitivity
- Complete overload protection
- IP67 rated
- LED status indicator on PNP models
- Purchase cable separately
- Lifetime warranty



TU Series Ultrasonic PNP Output Sensor Selection Chart

Part Number	Price	Sensing Range	Output State	Logic	Connection	Wiring
TU1-C0-0E	\$371.00	300 to 2500 mm [11.81-98.43 in]	N.O.	PNP	M12 [12 mm] connector	Diagram 1

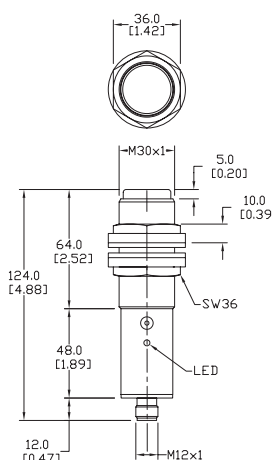
TU Series Ultrasonic Analog Output Sensor Selection Chart

Part Number	Price	Sensing Range	Output	Connection	Wiring
TU1-C1-0E	\$371.00	300 to 2500 mm [11.81-98.43 in]	0 to 10 VDC	M12 [12 mm] connector	Diagram 2

Dimensions

mm [inches]

Specifications		
Mounting Type	TU1-C0-0E	TU1-C1-0E
Nominal Sensing Distance	300 to 2500 mm [11.81-98.43 in]	300 to 2500 mm [11.81-98.43 in]
Operating Distance	NA	NA
Output Type	PNP / N.O.	0 to 10 VDC
Operating Voltage	19 to 30 VDC	
No-load Supply Current	≤ 35 mA	
Operating (Load) Current	≤ 500 mA	≤ 5 mA
Off-state (Leakage) Current	≤ 10 μA	
Voltage Drop	≤ 2.5 volts	NA
Switching Frequency	1Hz	NA
Differential Travel	±2.0%	NA
Repeat Accuracy	0.2%	±2 mm
Linearity Error	-	≤ 0.3%
Ultrasonic Frequency	130kHz	
Ultrasonic Beam Angle	8°	
Max. Response Time	-	100 ms
Time Delay Before Availability (tv)	≤ 200 ms	≤ 1 s
Control Input	Hold / Sync	
Sensitivity Adjustment	Yes	-
Reverse Polarity Protection	Yes	
Short-Circuit Protection	Yes (switch auto-resets after overload is removed)	
Operating Temperature	-25 to +70°C [-13 to 158°F]	
Temperature Compensation	Yes	
Protection Degree	IEC IP67	
Indication/Switch Status	Yellow (output energized)	NA
Housing Material	Polybutylene Terephthalate [PBT]	
Tightening Torque	3 Nm [2.21 lb-ft]	
Weight (connector)	124g [4.37 oz]	
Connection	M12 [12mm] connector	
Agency Approvals	CE, UL listed file E187310	



Wiring Diagrams

Diagram 1*

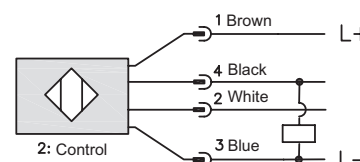
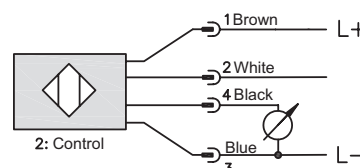


Diagram 2*



*Note: Control wire can be used to inhibit sensor or to synchronize with another sensor.

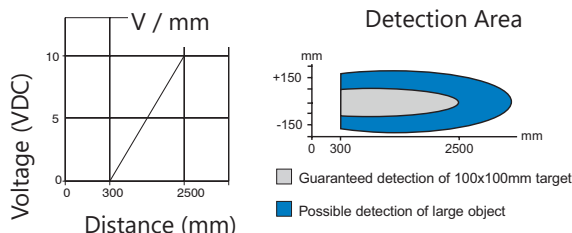
Connector

M12 connector



Must be used with 2M or 7M cable

Characteristic Curves (analog)



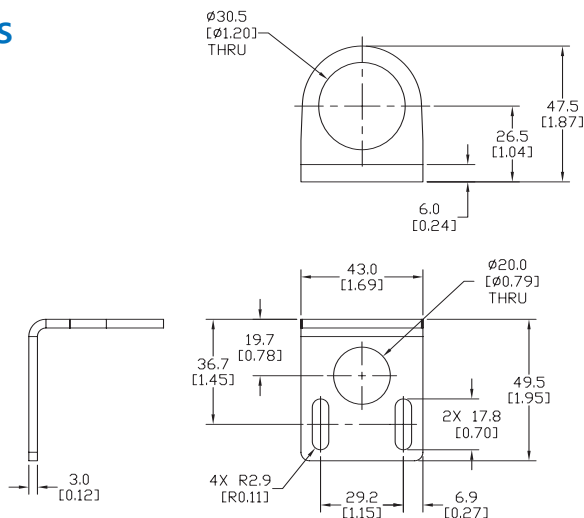
Right-angle Mounting Bracket

Mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.

Accessories for FW Series Sensors			
Part Number	Price	Description	Weight lb [g]
<u>ST30C6W</u>	\$5.50	AutomationDirect mounting bracket, right-angle, 304 stainless steel. For use with 30mm sensors.	0.15 (68.0)

Dimensions

mm [inches]



ST30C6W

Right-angle Swivel Mounting Systems

Mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 12mm rod mount. For use with 30mm sensors. Available in all 304 stainless steel or with an aluminum head with a 304 stainless steel mounting plate.

Accessories for 30mm Sensors						
Part Number	Price	Description	Mounting Head	Mounting Plate	Drawing Link	Weight lb [g]
<u>OPT2118</u>	\$11.50	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, aluminum, 12mm rod mount. For use with 30mm sensors.	Aluminum	304 Stainless steel	<u>PDF</u>	0.18 [81.7]
<u>OPT2119</u>	\$21.00	Wenglor mounting bracket, right-angle swivel, 360 degree vertical and horizontal adjustment, 304 stainless steel, 12mm rod mount. For use with 30mm sensors.	304 Stainless Steel	304 Stainless steel	<u>PDF</u>	0.18 [81.7]

Note: 304 Stainless steel mounting rods sold separately: [OPT2109](#) (200mm [7.87 in] length), [OPT2110](#) (300mm [11.81 in] length), and [OPT2111](#) (500mm [19.69 in] length).



OPT2118, OPT2119

Mounting Rods and Brackets

Mounting Rods

304 Stainless steel rods for mounting swivel brackets [OPT2112](#) - [OPT2127](#). Available in three lengths: 200mm, 300mm, and 500mm. 12mm diameter.

Mounting Rods for OPT2112-2127 Swivel Mounting Brackets				
Part Number	Price	Description	Drawing Link	Weight lb (g)
OPT2109	\$13.00	Wenglor mounting rod, 12mm diameter, 200mm length, 304 stainless steel.	PDF	0.41 [185.97]
OPT2110	\$16.00	Wenglor mounting rod, 12mm diameter, 300mm length, 304 stainless steel.	PDF	0.60 [272.16]
OPT2111	\$21.00	Wenglor mounting rod, 12mm diameter, 500mm length, 304 stainless steel.	PDF	0.98 [444.52]



Right-angle Mounting Bracket

Mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods [OPT2109](#), [OPT2110](#) & [OPT2111](#).

Right-angle Mounting Brackets for 12mm Sensors				
Part Number	Price	Description	Drawing Link	Weight lb [g]
OPT2108	\$16.00	Wenglor mounting bracket, right-angle, nickel-plated brass. For use with 12mm mounting rods OPT2109, OPT2110 & OPT2111.	PDF	0.07 [31.8]

