



ID/RTX-P510 SERIES - Rotary Position Transducer

0 to 5, 0 to 10, ±5, ±10 VDC ANALOG OUTPUT

The **ID/RTX-P510 series** rotary position transducer offers a voltage output with wide adjustability to give a 0 to 5, 0 to 10, ±5 or ±10 VDC output. The device may be powered with any voltage in the range of 4.9 to 30 VDC. With the zero position set anywhere within the first 30% of total travel, the span may be adjusted to give a full 0 to 5 or 0 to 10 VDC output with the span set anywhere within the last 20% of travel. Alternatively, the zero position may be set anywhere between 40% and 60% of full travel to give an output of ±5 or ±10 VDC with the span set between 80% to 100% of the longest travel from the zero position. The **ID/RTX-P510 series** shares similar traits of other **ID/RTX**



series rotary transducers including chemical resistant thermoplastic case, IP-65 (NEMA 4) ingress protection, body mounted electrical connector or bulkhead fitting with length of electrical cable, and side or end mounted electrical connection location.

SPECIFICATIONS

GENERAL

Sensing Device.....	Precision Potentiometer
Resolution	Essentially Infinite
Linearity all ranges	±0.30% Full Scale
Repeatability	±0.015% Full Scale
Shaft Radial Load.....	4.5 Kg (10 lb.) maximum within length of shaft only
Weight	255 gm. (9 oz.)
Electrical Connection	Plastic Connector or Bulkhead Fitting with Electrical Cable
Construction.....	Anodized Aluminum or Stainless Steel Base & Thermoplastic Cover
Life.....	50,000,000 Revolutions Minimum
Shaft Breakaway Torque.....	3 oz-in (0.021 N-m) Maximum

ENVIRONMENTAL

Operating Temperature.....	-40°C to 85°C
Storage Temperature.....	-55°C to 95°C
Operating Humidity	100% R.H.
Vibration	15 G's 0.1 ms max.
Shock	50 G's 0.1 ms max.
Ingress Protection	IP-65 (NEMA 4)

ELECTRICAL

Output	0 to 5, 0 to 10, ±5, ±10 VDC
Excitation Voltage.....	4.9 to 30 VDC
Excitation Current.....	25 mA max.
Output Impedance	10Ω max.
Output Load	5KΩ min.

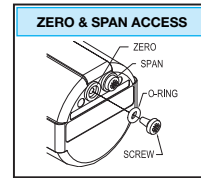
ADJUSTMENT RANGE- 0 to 5 or 0 to 10 VDC

Zero	0 to 30% of Range
Span	80% to 100% of Range

ADJUSTMENT RANGE- ±5 or ±10 VDC

Zero	40% to 60% of Range
Span	80% to 100% of Longest Possible Travel from Zero Position

Protection.....Reversed Polarity



MODEL NUMBER CONFIGURATION

RTX-P510- 0 - 1 2 3 - 4 5 6

BASIC CONFIGURATION (FOR ALL RANGES)

ID/RTX-P510-50-A10-S1C

0 ROTATIONAL RANGE	
Designator	Rotation
45D	45°
90D	90°
180D	180°
1	1 Rev.
2	2 Rev.
3	3 Rev.
5	5 Rev.
10	10 Rev.
15	15 Rev.
20	20 Rev.
25	25 Rev.
30	30 Rev.
40	40 Rev.
50	50 Rev.
60	60 Rev.
80	80 Rev.
100	100 Rev.
125	125 Rev.
150	150 Rev.
200	200 Rev.

1 HOUSING TYPE	
A	Aluminum Base
S	Servo/Face Mount
S	Corrosion Resistant Servo/Face Mount

2 SHAFT DIAMETER	
1	Ø10 mm
2	Ø6 mm
3	Ø0.375 inch
4	Ø0.25 inch

3 0	
0	Required Designator

4 OUTPUT VOLTAGE POLARITY	
S	Clockwise Increasing
R	Counter Clockwise Increasing

(When viewed from shaft end of unit)

5 ELECTRICAL CONNECTION EXIT LOCATION	
1	End
2	Side

(Bulkhead fitting with electrical cable shown)

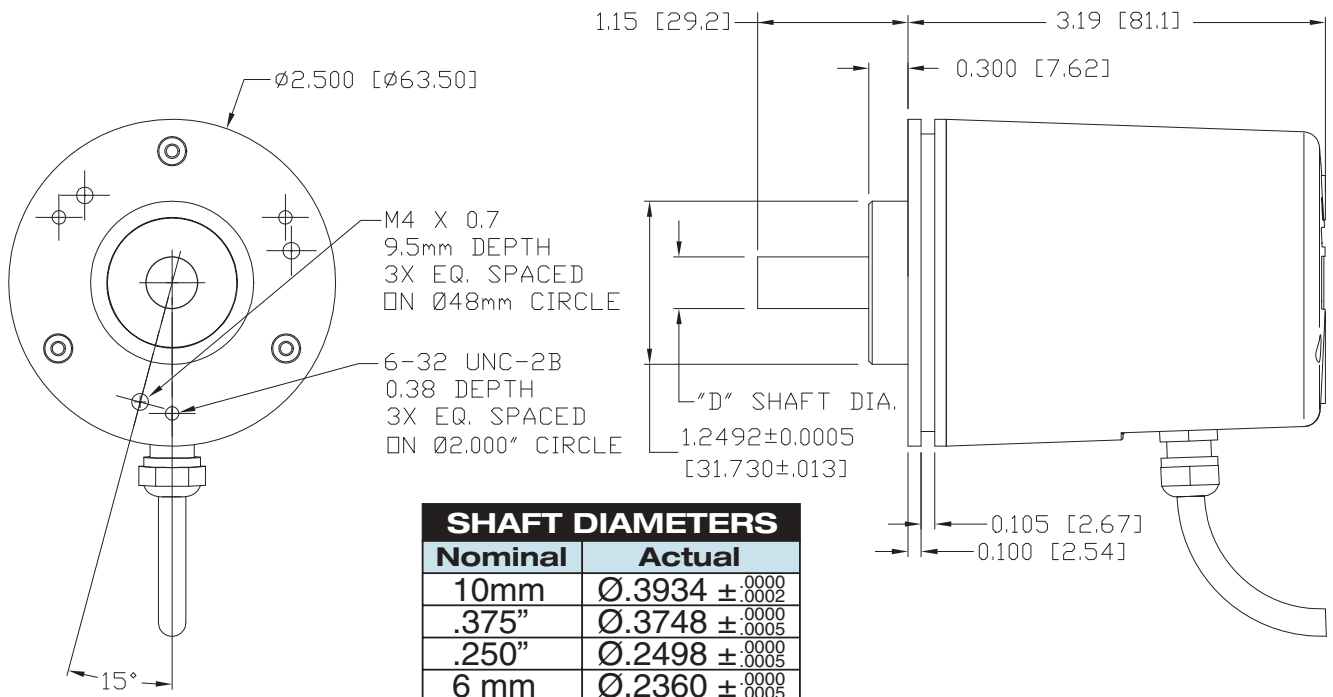
6 ELECTRICAL CONNECTION	
C	Connector with Mating Connector
K	Connector with No Mating Connector-- <i>Electrical cable with mating connector may be ordered separately as item number 10248-xM where 'x' is the required length in meters.</i>
P	Bulkhead Fitting + 150 mm (6") Pigtail
1	Bulkhead Fitting + 1 m (3') Electrical Cable
2	Bulkhead Fitting + 2 m (6.5') Electrical Cable
3	Bulkhead Fitting + 3 m (10') Electrical Cable
4	Bulkhead Fitting + 4 m (13.5') Electrical Cable
5	Bulkhead Fitting + 5 m (16.5') Electrical Cable
6	Bulkhead Fitting + 6 m (20') Electrical Cable
7	Bulkhead Fitting + 7 m (23') Electrical Cable
8	Bulkhead Fitting + 8 m (26') Electrical Cable



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DIMENSIONAL INFORMATION

ID/RTX Series — ALL RANGES



Dimensions in brackets are millimeters

ACCESSORIES

10349 – SERVO CLEAT KIT

10349 – Servo Cleat Kit – 4-40 screws
Includes 3 each servo cleats with 4-40 x 0.37 long screws. Order no.: **10349**



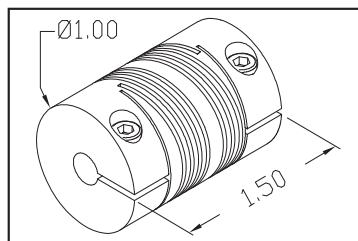
10350 – SERVO CLEAT KIT (Metric)

10350 – Servo Cleat Kit – M3 screws
Includes 3 each servo cleats with M3 x 10mm long screws. Order no.: **10350**



HELICAL BEAM COUPLINGS

A number of helical beam couplings are available to adapt the standard 10mm shaft of the ID/RTX to other popular shaft sizes. The couplings accommodate axial misalignment and offer zero backlash. Coupling material is aluminum. Order by number shown.



ORDER No.	COUPLING SIZE
10388	10 mm to 6 mm
10389	10 mm to 0.250"
10390	10 mm to 0.375"
10391	10 mm to 10 mm
10392	10 mm to 0.500"

10248-xM – MATING CONNECTOR WITH ELECTRICAL CABLE

10248-xM – Mating connector with electrical cable. Electrical cable is 3 conductor, shielded cable with drain wire. Replace 'x' in part number with the required length in meters to nearest whole meter. Order no.: **10248-xM**, where 'x' = length required in meters.