



RTX-P420 SERIES - Rotary Position Transducer

4 to 20 mA CURRENT OUTPUT



The UniMeasure RTX-P420 Series rotary position transducer with 4 to 20 mA current output is primarily for use in moderate duty applications in wet or dry environments. The chemical resistant thermoplastic case of the transducer provides IP-65 (NEMA 4) ingress protection for applications where exposure to washdown, rain, oil and other liquids may occur. The sealed case is achieved through the use of o-rings and a shaft seal. Electrical connection options include a body mounted sealed plastic connector with mating connector or a sealed bulkhead fitting and multi conductor electrical cable of user specified length. Alternatively, the mating connector may be ordered with electrical cable as a separate item. As an installation convenience, end mounted or radial mounted connection locations are offered.

SPECIFICATIONS

GENERAL

Sensing Device.....Precision Potentiometer
 Resolution.....Essentially Infinite
 Linearity all ranges.....±0.30% Full Scale
 Repeatability.....±0.02% 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

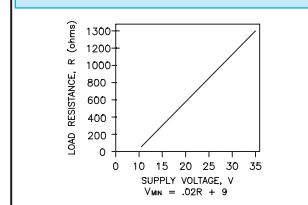
ENVIRONMENTAL

Operating Temperature.....-40°C to 95°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)

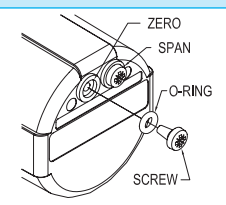
ELECTRICAL

Output.....4 to 20 mA
 Load Resistance (Total Loop).....See Graph Below
 Excitation Voltage.....9 to 35 VDC
 Minimum Supply Voltage.....(0.02 X Load Res.) +9 VDC
 Zero Adjustment Range.....0 to 30% of Total Range
 Span Adjustment Range.....80% to 100% of Range
 Protection.....Fused & Reversed Polarity

LOAD RESISTANCE VS INPUT VOLTAGE



ZERO & SPAN ACCESS



MODEL NUMBER CONFIGURATION

RTX-P420- 0 1 2 3 4 5 6

BASIC CONFIGURATION (FOR ALL RANGES)

RTX-P420-50-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
 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

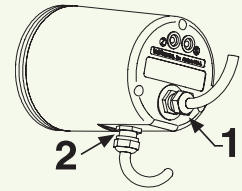
3 0.....Required Designator

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)

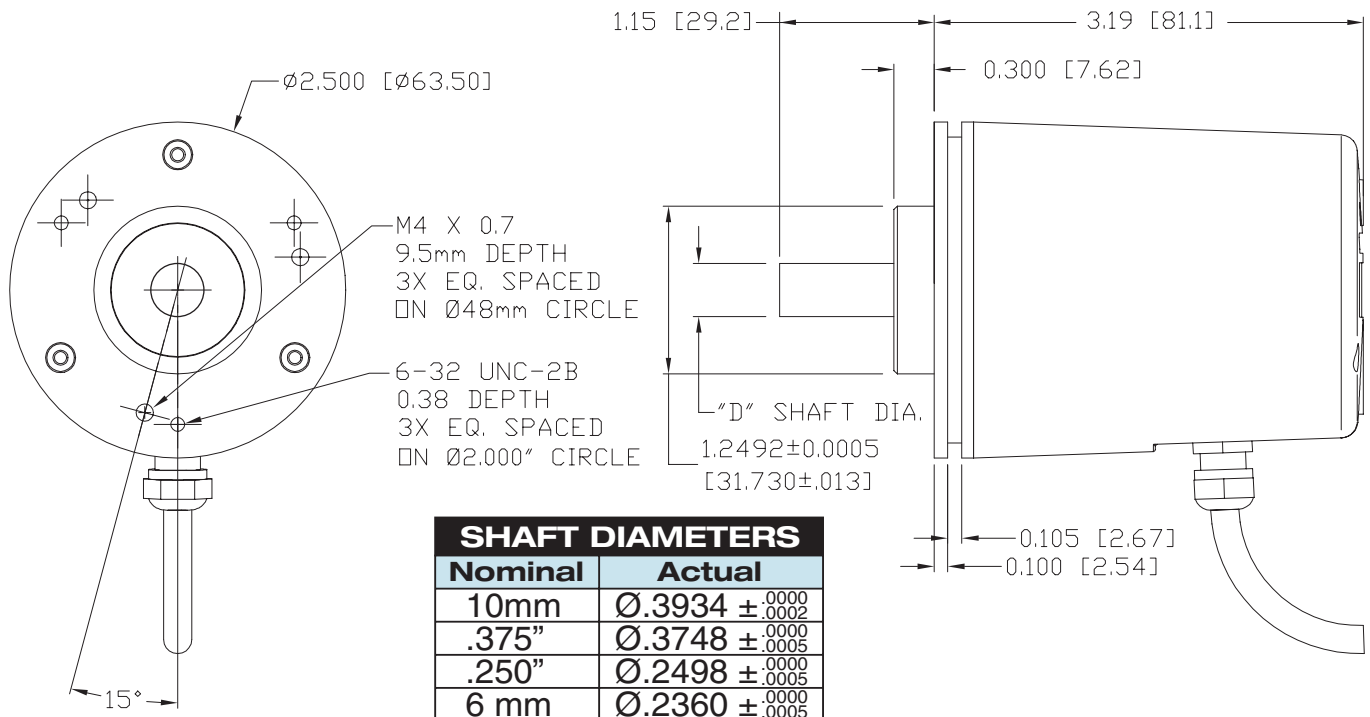
6 ELECTRICAL CONNECTION

C.....Connector with Mating Connector
 K.....Connector with **No** Mating Connector--*Electrical cable with mating connector may be ordered separately as item number 10248-xM where 'x' is the required length in meters.*

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

DIMENSIONAL INFORMATION

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**



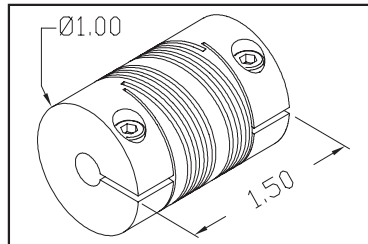
10350 – SERVO CLEAT KIT (Metric)

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 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.