



- ▶ **Outstanding Repeatability and Linearity**
- ▶ **Rugged Construction**
- ▶ **Versatile Mounting Options**
- ▶ **Free Release mitigated design**
- ▶ **Cost Effective solution for OEMs**

The CPI-CTU series cable extension transducer is available in 4 stroke lengths ranging from 120mm – 1270 mm. Working in partnership with the well renowned potentiometer manufacturer Bourns, Inc.,® to ensure outstanding electrical performance over competing products.

With the enclosure being manufactured from Nylon 66 and utilising a proprietary blend of reinforcing fibres, in conjunction with the bespoke draw wire cable for improved tensile strength - this provides an overall rugged construction suitable for a variety of harsh and demanding environments.

The CTU size envelope allows it to be fitted into small spaces, with a permissible misalignment and ships with; a stainless steel mounting bracket, x2 T-Nuts - to give the user as many mounting orientations /options as possible as standard.

Bespoke mounting solutions can also be accounted for.

Specifications	
General	
Available Stroke Ranges	see ordering information
Output Signal	Voltage Divider (Potentiometer)
Independent Linearity	±0.25 % to ±0.50 % (see ordering information)
Repeatability	±0.05 %
Resolution	Essentially infinite
Measuring Cable	0.8 mm dia. ETFE-coated stainless steel
Measuring Cable Tension	2.5 N ± 25%
Maximum Cable Acceleration	15 g
Enclosure Material	Nylon 66
Sensor	Precision Potentiometer
Weight, Max. (Includes bracket)	135 g



Specifications				
Electrical				
Total Resistance	10 kΩ ±3%			
Max Wiper Current at 5 kΩ	20 mA			
Power Rating				
Temperature	Power Rating [W] (Voltage Limited by Power dissipation or 300VAC, whichever is less)			
	CTU-4	CTU-12	CTU-25	CTU-50
+70 °C	1.0	1.0	1.5	2
+125 °C	0	0	0	0
Recommended Maximum Input Voltage	30 V (AC/DC)			
Output Signal Change over Full Stroke Range	94 % ±4 %			
Electrical Connection	Solder Terminals			
Environmental				
Operating Temperature	-40 to +125 °C			
Sensor IP Rating	IP65			
Enclosure IP Rating	IP56			
Vibration	20g/ 20-2000Hz in 3 axes, 10 cycles each (DIN EN60068-2-6)			
Shock	Half Sine, 500g / 1ms in 3 axes, 3 cycles each (BS EN 60068-2-27:2009)			
Drop	3m , 2 drops per face (BS EN 60068-2-31:2008)			

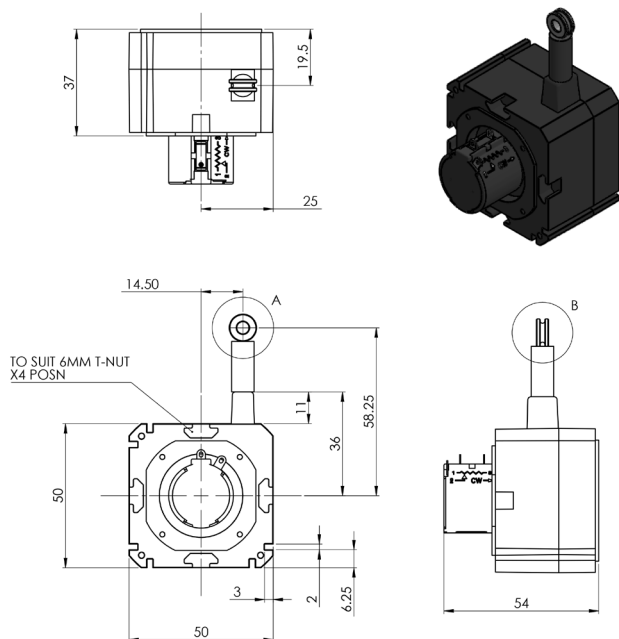
CABLE EXTENSION TRANSDUCER CTU SERIES



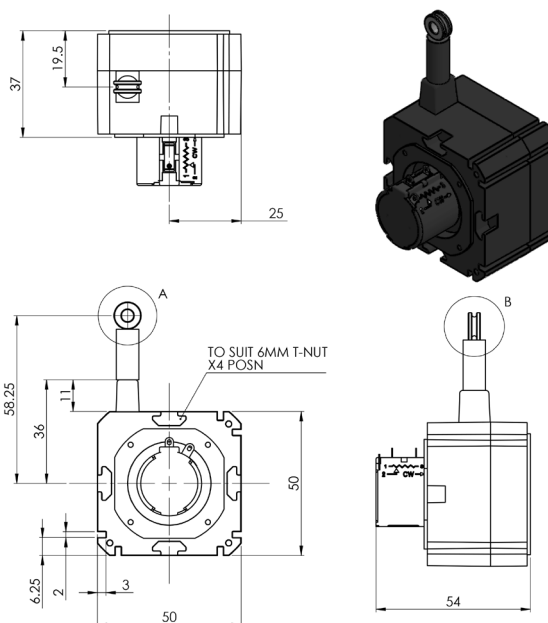
Dimensions (mm)

ALL DIMENSIONS ARE $\pm 1.00\text{mm}$, UNLESS SPECIFIED OTHERWISE.

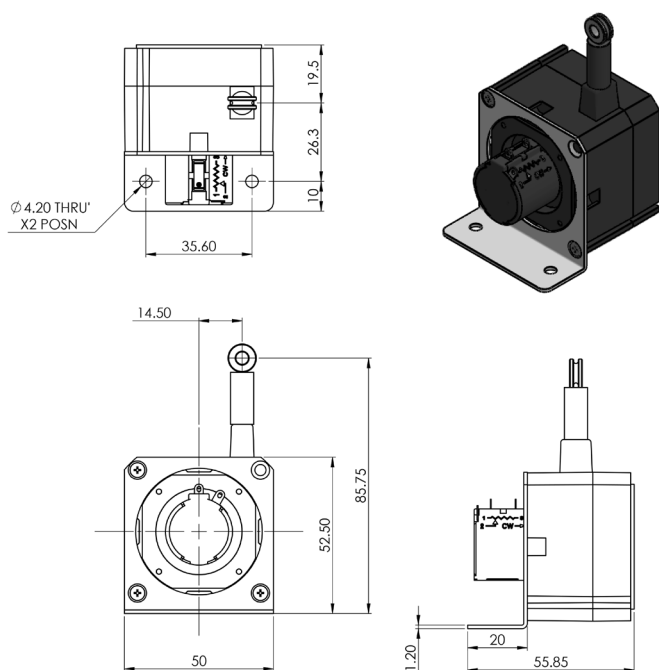
CTU-XX-X (W/O MOUNTING BRACKET)



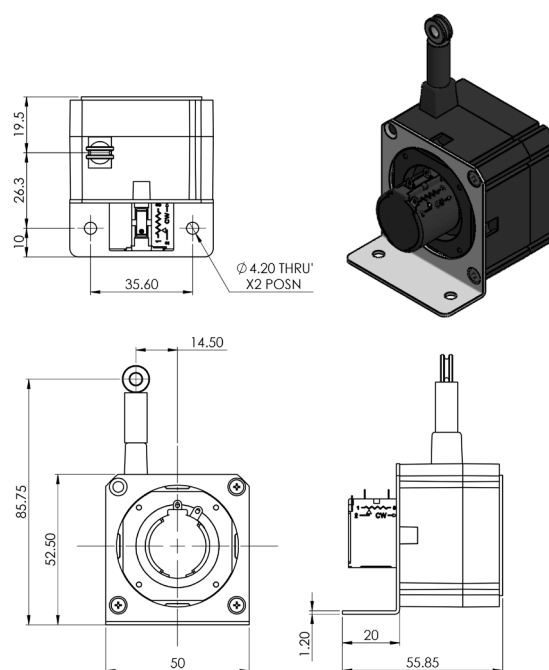
CTU-XX-X-R (W/O MOUNTING BRACKET)



CTU-XX-A (W/ MOUNTING BRACKET)



CTU-XX-A-R (W/ MOUNTING BRACKET)

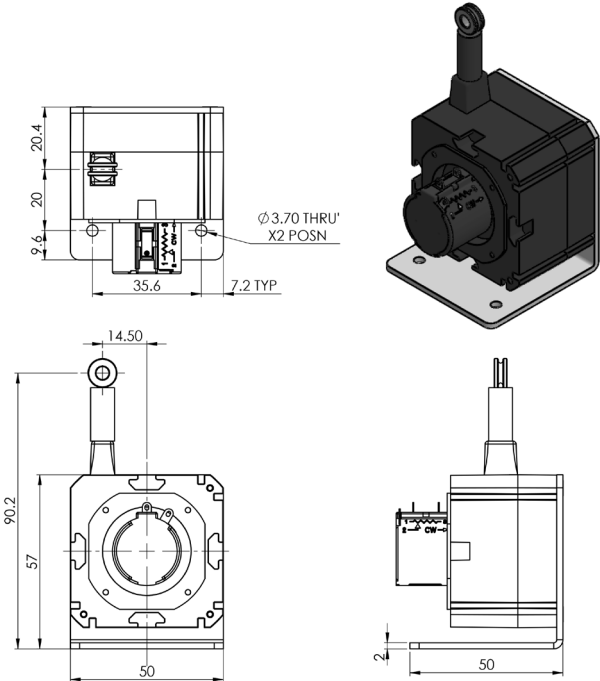
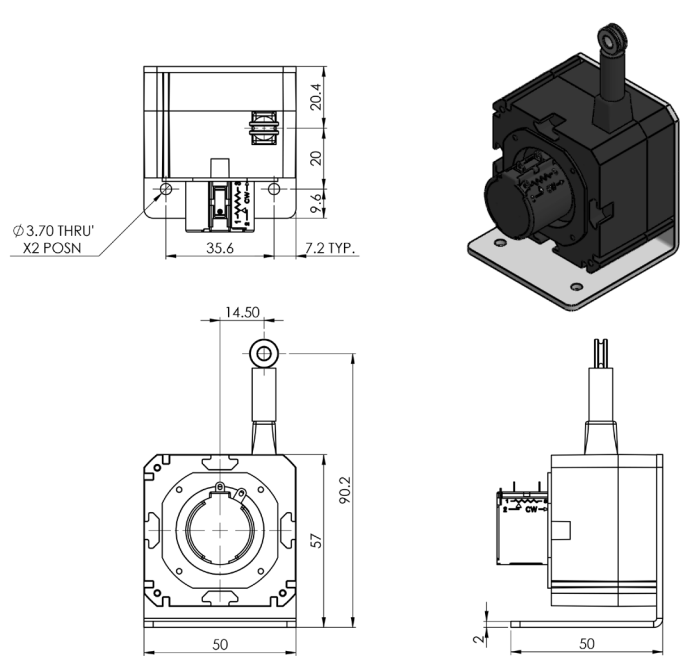


CABLE EXTENSION TRANSDUCER
CTU SERIES



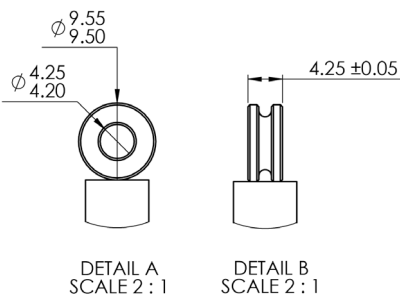
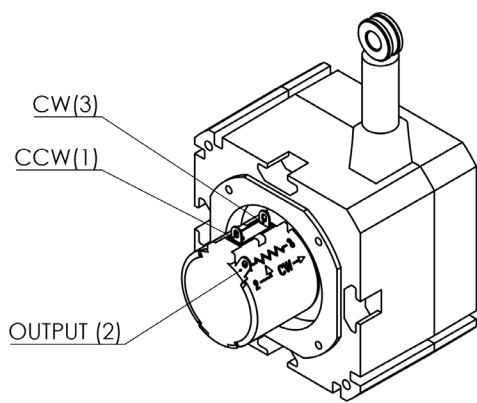
CTU-XX-B (W/ MOUNTING BRACKET)

CTU-XX-B-R (W/ MOUNTING BRACKET)



Solder Terminal Location

Eyelet Detail



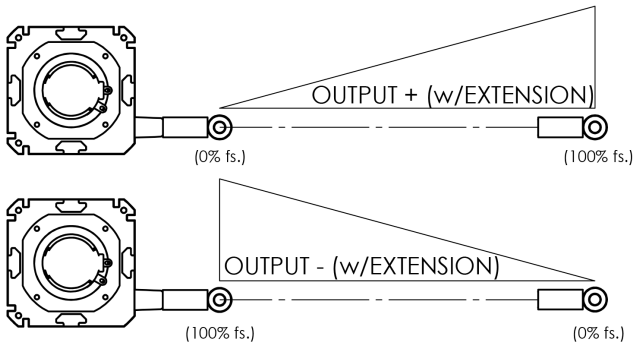
CABLE EXTENSION TRANSDUCER
CTU SERIES



Wiring information

OUTPUT + (w/Extension)	
INPUT	SOLDER TERMINAL
+VE	CW (3)
GND	CCW (1)
OUTPUT	OUTPUT (2)
OUTPUT - (w/Extension)	
INPUT	SOLDER TERMINAL
+VE	CCW (1)
GND	CW (3)
OUTPUT	OUTPUT (2)

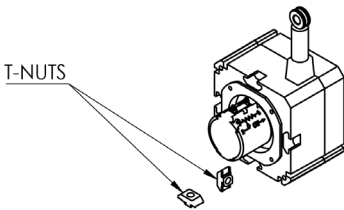
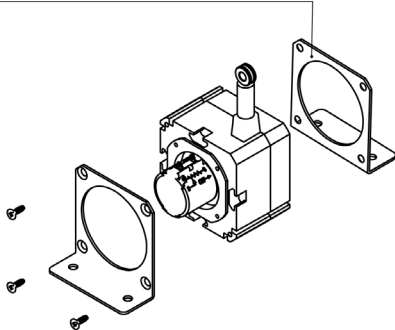
Output Signals



Standard Mounting Options (Supplied)

- TO CHANGE CABLE EXIT ORIENTATION:
1. REMOVE THE X3 BRACKET SCREWS.
 2. ROTATE SENSOR BODY TO DESIRED CABLE EXIT ORIENTATION.
 3. RE-INSTALL X3 BRACKET SCREWS AND TORQUE TO 1NM.
- FOR ALTERNATE BRACKET MOUNTING POSITIONS, THE BRACKET CAN BE EASILY SWITCHED TO THE OPPOSITE FACE.

- TO MOUNT USING T-NUTS:
1. INSTALL T-NUT (S) INTO CORRESPONDING FEATURE ON HOUSING.
 2. PLACE APPROPRIATELY SIZED M4 X 0.7 BOLTS THROUGH YOUR APPLICATIONS LOCATING FEATURE.
 3. APPLY SUITABLE THREADLOCKER (RECOMMEND THREEBOND 1360 OR SIMILAR).
 4. TORQUE BOLTS TO 3-4NM.

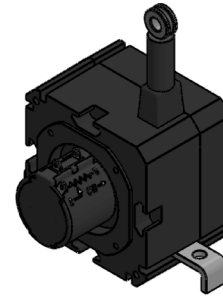
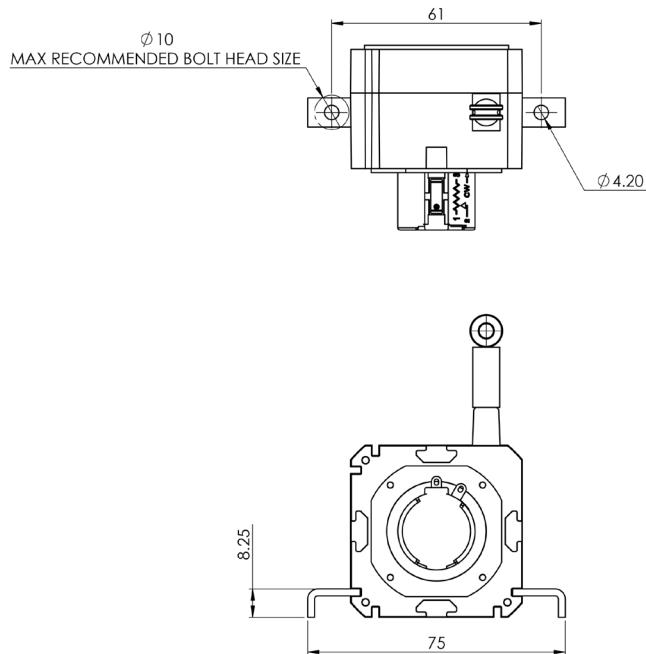


CABLE EXTENSION TRANSDUCER CTU SERIES

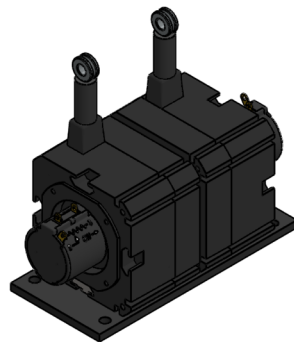
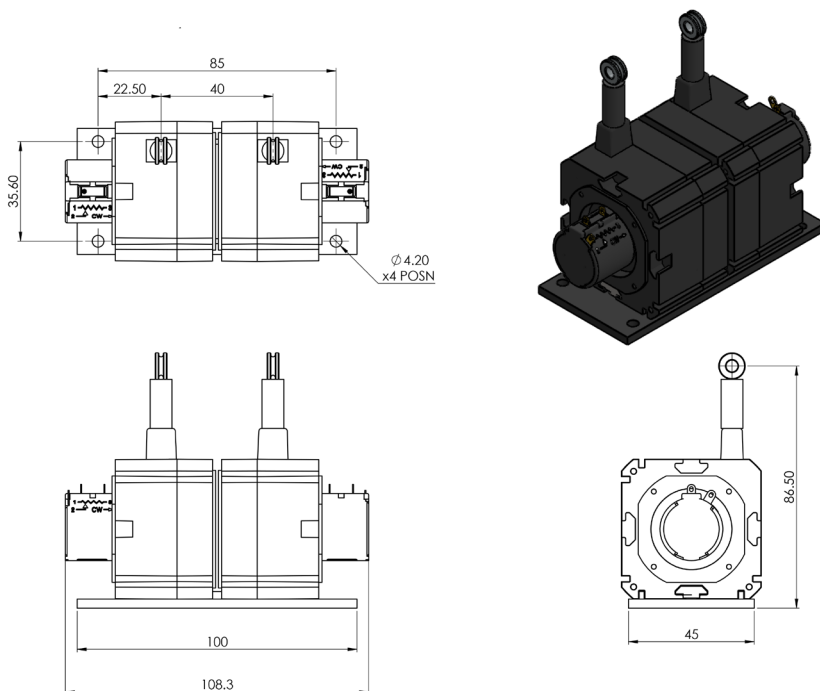


Non-standard Mounting Options (Examples)

Sheet Metal Clips



Sensor Array



Custom arrays on request.



Ordering information

Part Number	Sample Code	Full Stroke Range	Accuracy	Typical Life Cycle
95404	CTU-4-A	120mm	±0.50%	2.5 Million
95405	CTU-12-A	317.5mm	±0.25%	500k
95406	CTU-25-A	635mm	±0.25%	500k
95407	CTU-50-A	1270mm	±0.25%	250k
95545	CTU-4-B	120mm	±0.50%	2.5 Million
95546	CTU-12-B	317.5mm	±0.25%	500k
95547	CTU-25-B	635mm	±0.25%	500k
95543	CTU-50-B	1270mm	±0.25%	250k

Ordering information

(Please use the characters in the chart below to create your product code)

Sample Code

CTU - 50 - A - X

Series

CTU

Stroke Range

4120 mm

12317.5 mm

25635 mm

501270 mm

Bracket option

ACompact Bracket

BAM Bracket

Cable Exit Orientation

Viewed from label face, omit if not requiring R.

RRight