

Cable-Extension Position Transducer

- ▼ Short to Medium Range
- ▼ Industrial Grade - High Cycle Applications
- ▼ Incremental Encoder Output

Specification Summary:

GENERAL

Full Stroke Ranges 0-50 to 0-150 inches, see ① next page
 Output Signal incremental encoder (quadrature) signal
 Output Driver TTL/CMOS, open collector or line driver, see ④
 Accuracy
 Typical the lesser of 0.02% f.s. or 0.04% of measurement $\pm 1/2$ pulse max.
 Best not less than 0.001 in. (0.03 mm)
 Repeatability 0.02% of measurement $\pm 1/2$ pulse max.
 Resolution 10 to 250 pulses per inch, see ③
 Measuring Cable thermoplastic or stainless steel, see ②
 Enclosure Material hard-anodized aluminum
 Sensor optical encoder
 Weight 5 lbs., max.

ENVIRONMENTAL

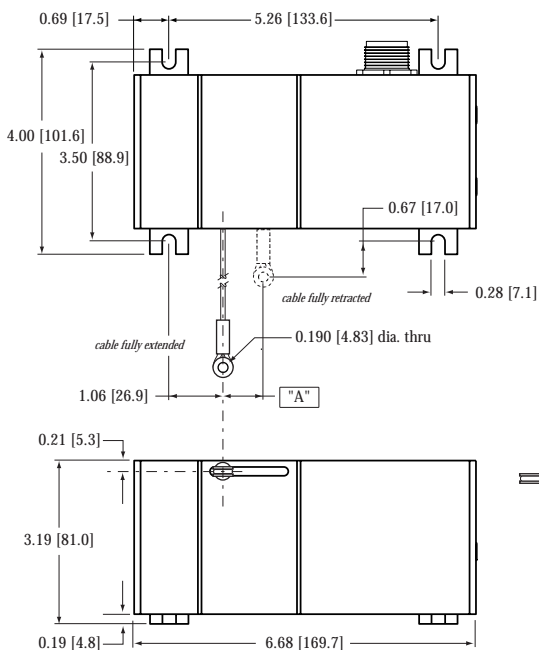
Enclosure Design NEMA 4, IP 65/67, see ⑤ and ⑥
 Operating Temperature 0° to 160°F
 Vibration up to 10 G's to 2000 Hz maximum

PT5E



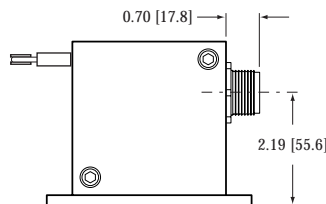
The PT5E encoder-based cable-extension transducer uses a unique thermoplastic cable that has virtually an infinite fatigue life. This cable, known as V62, has properties that are superior for high cycle and rugged applications.

Like Celesco's other transducers, the PT5E installs in minutes, functions properly without perfectly parallel alignment, and fits easily into small areas. The PT5E offers additional installation flexibility since its cable exit can be rotated relative to the mounting surface, providing four different cable exit orientations.

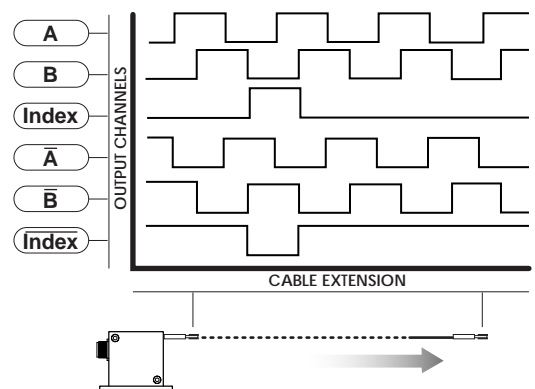


| stroke range | "A" Dimension | |
|--------------|---------------|-------------|
| | S47 | V62 |
| 10 | 0.06 [1.5] | 0.08 [2.0] |
| 15 | 0.09 [2.3] | 0.12 [3.1] |
| 20 | 0.12 [3.1] | 0.16 [4.1] |
| 30 | 0.18 [4.6] | 0.23 [5.8] |
| 40 | 0.24 [6.1] | 0.31 [7.9] |
| 50 | 0.30 [7.6] | 0.39 [9.9] |
| 60 | 0.36 [9.1] | 0.47 [11.9] |
| 80 | 0.48 [12.2] | 0.62 [15.7] |
| 100 | 0.60 [15.2] | 0.78 [19.8] |
| 125 | 0.75 [19.1] | 0.97 [24.6] |
| 150 | 0.90 [22.9] | 1.17 [29.7] |

ALL DIMENSIONS ARE IN INCHES [MM]
 tolerances are +/- 0.03 inches [0.8 mm]
 unless otherwise noted



Electrical Output Signal:



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▼ Ordering Information

Model Number:



Full Stroke Range:

| R order code: | 50 | 100 | 150 | 1250 | 2500 | 3750 |
|----------------------------|-----------|------------|------------|-------------|-------------|-------------|
| ① full stroke range, min: | 50 in. | 100 in. | 150 in. | 1250 mm | 2500 mm | 3750 mm |
| std. cable tension (±20%): | 17 oz. | 16 oz. | 15 oz. | 17 oz. | 16 oz. | 15 oz. |

Measuring Cable:

| A order code: | V62 | S47 |
|-----------------------|--------------------|----------------------|
| ② cable construction: | .062 thermoplastic | .047 stainless steel |
| | | |

Cable Exit:

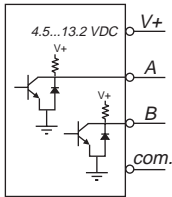
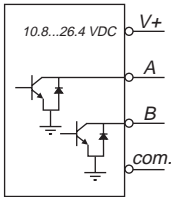
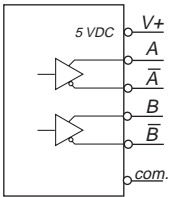
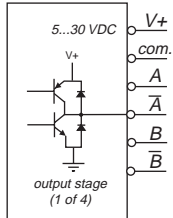
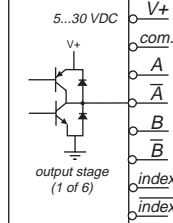
| B order code: | UP | DN | FR | BK |
|----------------------|-----------|-----------|-----------|-----------|
| direction: | up | down | front | back |
| | | | | |

Resolution:

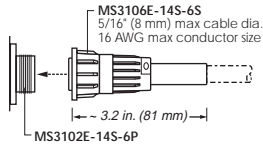
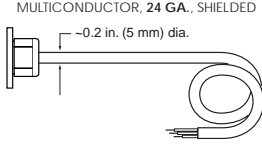
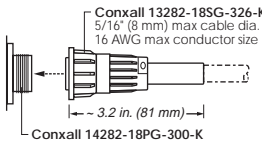
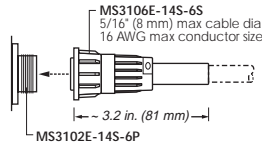
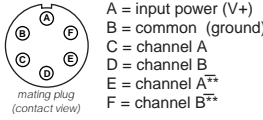
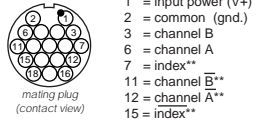
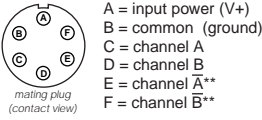
| C order code: | 10 | 100 | 200 | 250 |
|---|-------------------------|------------------------|------------------------|-------------------------|
| ③ resolution for english ranges: | 10 ±0.2 pulses per inch | 100 ±2 pulses per inch | 200 ±4 pulses per inch | 250 ±5 pulses per inch |
| C order code: | .5 | 5 | 10 | 12.5 |
| resolution for metric ranges: | 0.5 ±0.01 pulses per mm | 5 ±0.1 pulses per mm | 10 ±0.2 pulses per mm | 12.5 ±0.3 pulses per mm |

PT5E • Cable-Extension Transducer • Incremental Encoder Output

Output Signals:

| | | | | | | |
|---|-------------------------|---|---|--|---|---|
| ④ | ① <i>order code:</i> | AB - TTL | AB - OC | ABC - LD | ABC - UD | ABZC - UD |
| | output driver: | TTL-CMOS compatible | Open Collector | 5 volt Line Driver | Universal Line Driver | |
| | input voltage (V+): | 4.5...13.2 VDC | 10.8...26.4 VDC | 5 VDC | 5...30 VDC | |
| | input current: | 80 mA max. | 80 mA max. | 150 mA max. | 50 mA max. (no load) | |
| | sink / source current: | 20 mA sink max. | 20 mA sink max. | 20 mA sink max. | 20 mA source/sink max. | |
| | input / output signals: |  |  |  |  |  |

Electrical Connection:

| | | | | | |
|---|------------------------|---|---|--|---|
| | ② <i>order code:</i> | M6* | C25 | M18 | M6M* |
| | electrical connection: | 6-pin plastic connector and mating plug | 25 ft. instrumentation cable | 18-pin plastic connector and mating plug | 6-pin metal connector and mating plug |
| | |  |  |  |  |
| | | connections | connections | connections | connections |
| | |  | RED = input power (V+) BLK = common (gnd.) GRN = channel A WHT = channel B BLU = channel A** BRN = channel B** YEL = index** ORG = index** |  |  |
| ⑤ | IP rating: | 67 | 67 | 67 | 65 |
| ⑥ | NEMA rating: | 6 | 6 | 6 | 4 |

notes: *-6-pin connector not available when Index channels are required
**-no signal present when TTL-CMOS or Open Collector output drivers are selected

▼ Sample Model Number

PT5E - 50 - V62 - UP - 100 - AB-TTL - M6

| | | |
|-----------------|-----------------------------|-----------------------------------|
| Specifications: | Full Stroke Range: | 50 inches |
| | Measuring Cable: | 0.062-in dia. thermoplastic cable |
| | Measuring Cable Exit: | Up |
| | Resolution: | 98-102 pulses per inch |
| | Output Channels and Driver: | A, B - TTL/CMOS compatible |
| | Electrical Connection: | 6-pin plastic connector |