

Inclinometer

- ▼ Measurement Range up to 270°
- ▼ Voltage Divider (Potentiometer) Output
- ▼ Rugged Industrial Applications



IT9101



Specification Summary:

GENERAL

Available Full Stroke Ranges 0-105 to 0-270 degrees
 Weight 5 lb. typical (aluminum enclosure)
 Enclosure Material aluminum (stainless steel available)
 Sensor precision potentiometer
 Electrical Connector MS3102E-14S-6P
 Mating Plug (included) MS3106E-14S-6S

ELECTRICAL

Output Signal voltage divider (potentiometer)
 Input Resistance 5K Ω ($\pm 10\%$)
 Recommended Maximum Input Voltage 30 V (AC or DC)
 Output Signal Change Over Measurement Range 92% \pm 6% of input voltage

PERFORMANCE

Accuracy* $\pm 1\%$ full stroke
 Accuracy Option $\pm 0.5\%$ full stroke—please contact factory
 Resolution essentially infinite
**—when plane of pendulum motion parallel to plane of rotation within $\pm 3^\circ$*

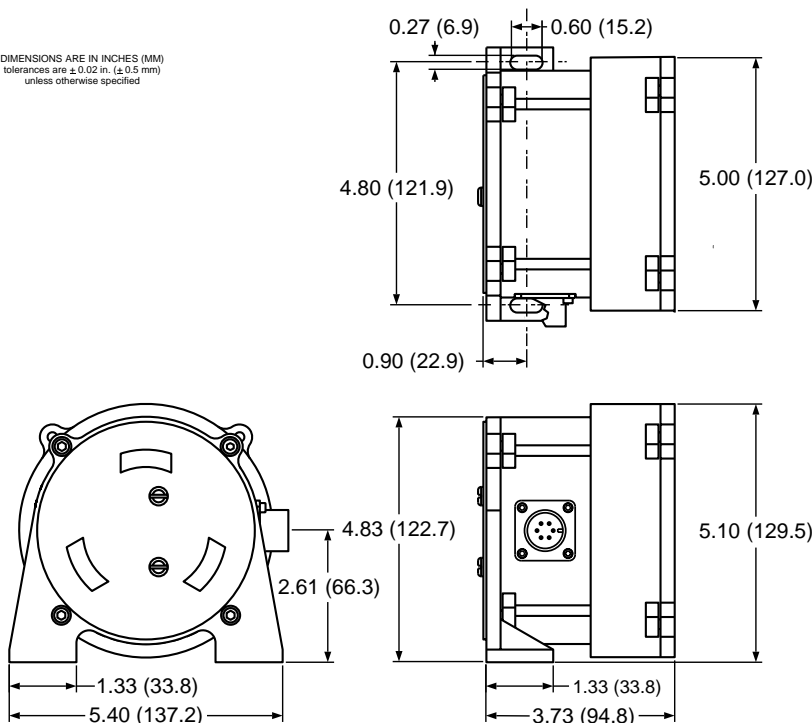
ENVIRONMENTAL

Operating Temperature -30° F to 200° F
 Environmental Suitability indoor/outdoor
 Operating Humidity, Splash NEMA 6 /IP67 (NEMA 4X /IP68 optional)
 Vibration up to 10 G's to 2000 Hz

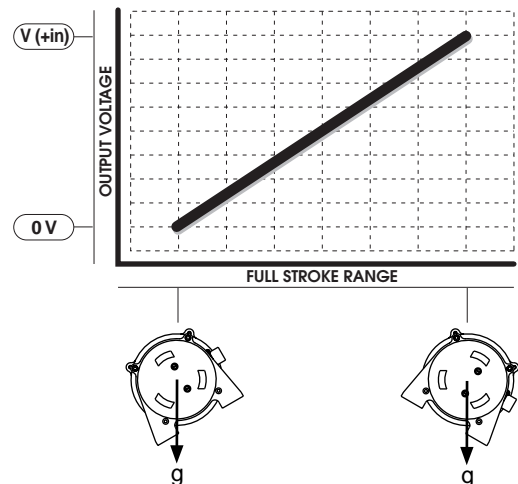
The model IT9101 is a rugged and simple device which provides a voltage divider feedback signal for incline position. The heart of the IT9101 is a magnetically-damped pendulum coupled to a conductive plastic precision potentiometer.

A highly linear relationship between inclination and the output signal is maintained over the full range of the IT9101.

DIMENSIONS ARE IN INCHES (MM)
 tolerances are ± 0.02 in. (± 0.5 mm)
 unless otherwise specified



Electrical Output Signal:



Celeco Transducer Products, Inc.
 20630 Plummer Street • Chatsworth, CA • 91311
 tel: (800) 423-5483 • (818) 701-2750 • fax: (818) 701-2799
www.celesco.com • info@celesco.com

▼ Ordering Information

Model Number:

IT9101 - - - **1**

order code: **CW** **CCW** **A** **B** **C** **D**

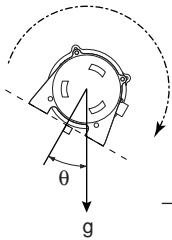
Sample Model Number:

IT9101 - 060 - 120 - 1110

- | | | | |
|------------|-----------------------------|-------------------------|-------------------------|
| CW | clockwise rotation: | 60° | } total rotation = 180° |
| CCW | counter-clockwise rotation: | 120° | |
| A | enclosure: | aluminum | |
| C | electrical connection: | 6-pin plastic connector | |
| D | magnetic dampening: | yes | |

Full Clockwise Rotation:

| CW order code: | 000 | 015 | 030 | 045 | 060 | 075 | 090 | 105 | 120 |
|--------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| θ (clockwise rotation): | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° |

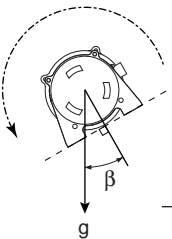


Important--

the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 105° to 270°.

Full Counter-Clockwise Rotation:

| CCW order code: | 000 | 015 | 030 | 045 | 060 | 075 | 090 | 105 | 120 |
|---------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| β (counter-clockwise rotation): | 0° | 15° | 30° | 45° | 60° | 75° | 90° | 105° | 120° |



Important--

the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 105° to 270°.

Enclosure Material:

| A order code: | 1 | 2 |
|----------------------|-------------------------|---------------------|
| enclosure material: | powder-painted aluminum | 303 stainless steel |

Electrical Connection:

④ order code:

electrical connection:

| | 1 | 2 | 4 |
|--------------|---|---|---|
| | 6-pin plastic connector and mating plug | 10 ft. waterproof cable | 25 ft. instrumentation cable |
| | | | |
| | | connections | connections |
| | A = 12...40 VDC B = 4...20 mA out D = case ground | White = 12...40 VDC Black = 4...20 mA out Green = case ground | Red = 12...40 VDC Black = 4...20 mA out Green = case ground |
| IP rating: | 67 | 67, 68* | 67 |
| NEMA rating: | 6, 4X** | 6, 4X** | 6 |

note: *requires factory submersion test

**applies to stainless steel enclosure only

Dampening Option:

① order code:

dampening:

| | 0 | 1 |
|--|-------------------------|----------------------------|
| | with magnetic dampening | without magnetic dampening |