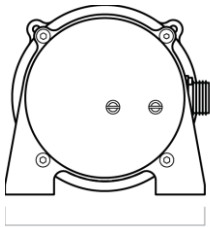
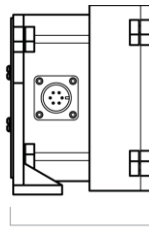




CE



5.4" [137 mm]

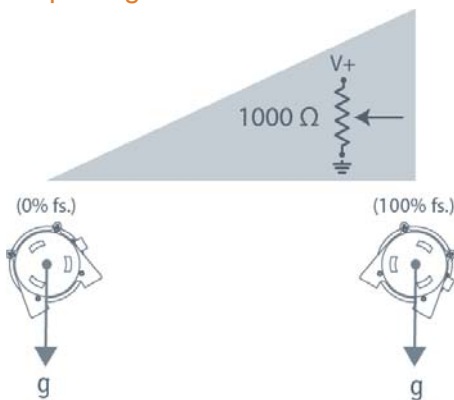


3.7" [95 mm]

The model IT9101 is a rugged and simple device which provides a voltage divider feedback signal for incline position up to 240 degrees. 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.

### Output Signal



## IT9101 Inclinometer • Voltage Divider

Measuring Range Options from 0-105° to 0-240°

Aluminum or Stainless Steel Enclosure Options

Perfect for Water Management/ Tainter Gate Position

IP68 • NEMA 6 Protection

### General

Available Full Stroke Ranges	0-105 to 0-240 degrees
Enclosure Material Options	powder-painted aluminum or stainless steel
Sensor	plastic-hybrid precision potentiometer
Electrical Connector	MS3102E-14S-6P
Mating Plug (included)	MS3106E-14S-6S
Weight, Aluminum (Stainless Steel) Enclosure	5 lbs. (10 lbs.) max.

### Electrical

Output Signal	voltage divider (potentiometer)
Input Resistance	1000 $\Omega$ ( $\pm 10\%$ )
Recommended Maximum Input Voltage	30 V (AC/DC)
Full Scale Output Signal Change (Vdc)	92% $\pm$ 6% of input voltage

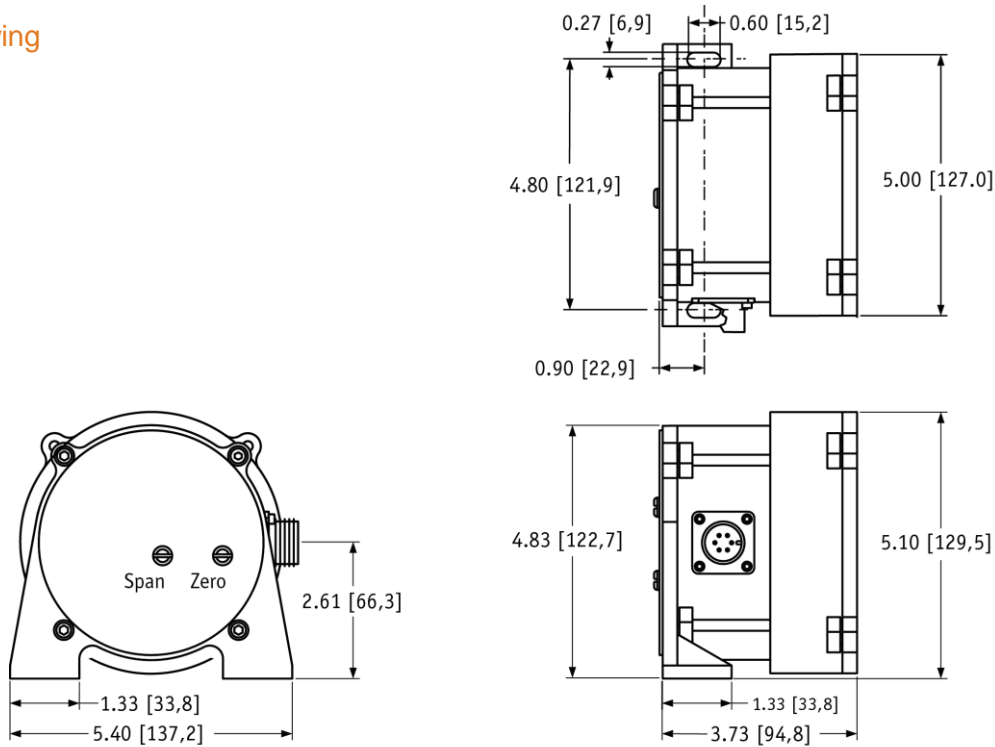
### Environmental

Enclosure	NEMA 4/4X/6, IP 67/68
Operating Temperature	-30° to 200°F (-34° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum

# IT9101

Inclinometer • Voltage Divider

## Outline Drawing



DIMENSIONS ARE IN INCHES [MM]  
tolerances are ±0.02 in. [±0,5 mm] unless otherwise noted

## Ordering Information

Model Number:

**IT9101** -      -      -      -      **1** -      -      -     

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

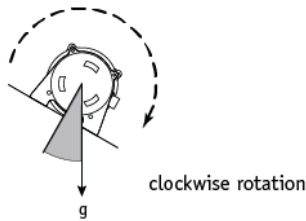
Sample Model Number:

**IT9101 - 060 - 120 - 1110**

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

Full Clockwise Rotation:

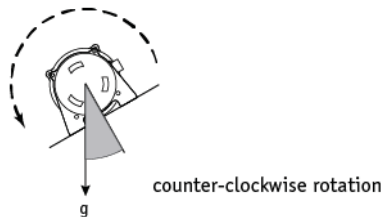
<b>CW</b> <i>order code:</i>	<b>000</b>	<b>015</b>	<b>030</b>	<b>045</b>	<b>060</b>	<b>075</b>	<b>090</b>	<b>105</b>	<b>120</b>
	0°	15°	30°	45°	60°	75°	90°	105°	120°



**Important--**  
the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 105° to 240°

Full Counter-Clockwise Rotation:

<b>CCW</b> <i>order code:</i>	<b>000</b>	<b>015</b>	<b>030</b>	<b>045</b>	<b>060</b>	<b>075</b>	<b>090</b>	<b>105</b>	<b>120</b>
	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 240°

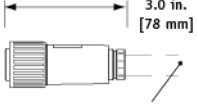
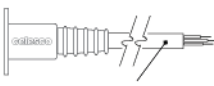

# IT9101

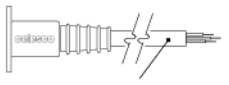
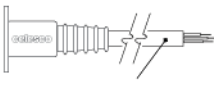
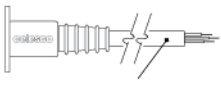
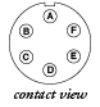
Inclinometer • Voltage Divider

## Enclosure Material

<b>A</b> order code:	<b>1</b>	<b>2</b>
	powder-painted aluminum	303 stainless steel

## Electrical Connection:

<b>C</b> order code:	<b>1</b>	<b>2</b>	<b>4</b>
	<p>6-pin plastic connector w/mating plug IP 67, NEMA 4X**, 6</p>  <p>1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S</p>	<p>10-ft. [3 M] waterproof cable IP 67, NEMA 4X**, 6</p>  <p>10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTOW</p>	<p>25-ft. [7.5 M] instrumentation cable IP 67, NEMA 6</p>  <p>25 ft. x 0.2-in. dia. [7.5 M x 5 mm dia.] 24 AWG, shielded</p>

<b>C</b> order code:	<b>5</b>	<b>6</b>	<b>7</b>																																	
	<p>100-ft. [30 M] waterproof cable IP 67, NEMA 4X**, 6</p>  <p>100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTOW</p>	<p>10-ft. [3 M] pressure tested* waterproof cable IP 68, NEMA 4X**, 6P</p>  <p>10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTOW</p>	<p>100-ft. [30 M] pressure tested* waterproof cable IP 68, NEMA 4X**, 6P</p>  <p>100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTOW</p>																																	
	<p><b>6-pin Mating Plug</b></p> <table border="0"> <tr> <td>pin</td> <td>signal</td> <td></td> </tr> <tr> <td>A</td> <td>+ in</td> <td></td> </tr> <tr> <td>B</td> <td>common</td> <td></td> </tr> <tr> <td>C</td> <td>+ out</td> <td></td> </tr> <tr> <td>D</td> <td>-</td> <td></td> </tr> </table>  <p style="text-align: center;"><i>contact view</i></p>	pin	signal		A	+ in		B	common		C	+ out		D	-		<p><b>Waterproof Cable</b></p> <table border="0"> <tr> <td>color code</td> <td>signal</td> </tr> <tr> <td>WHITE</td> <td>+ in</td> </tr> <tr> <td>BLACK</td> <td>common</td> </tr> <tr> <td>GREEN</td> <td>+ out</td> </tr> </table>	color code	signal	WHITE	+ in	BLACK	common	GREEN	+ out	<p><b>Instrumentation Cable</b></p> <table border="0"> <tr> <td>color code</td> <td>signal</td> </tr> <tr> <td>RED</td> <td>+ in</td> </tr> <tr> <td>BLACK</td> <td>common</td> </tr> <tr> <td>GREEN</td> <td>+ out</td> </tr> <tr> <td>WHITE</td> <td>-</td> </tr> </table>	color code	signal	RED	+ in	BLACK	common	GREEN	+ out	WHITE	-
pin	signal																																			
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D	-																																			
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WHITE	+ in																																			
BLACK	common																																			
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color code	signal																																			
RED	+ in																																			
BLACK	common																																			
GREEN	+ out																																			
WHITE	-																																			

\*-Test pressure: 100 feet [30 meters] H<sub>2</sub>O (40 PSID) Test Medium: Air; Duration: 2 hours. \*\* -applies to stainless steel enclosure only.

## Dampening Option:

<b>D</b> order code:	<b>0</b>	<b>1</b>
	with magnetic dampening	without magnetic dampening

## NORTH AMERICA

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