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

CE



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 Ω (±10%)
Recommended Maximum Input Voltage	30 V (AC/DC)
Full Scale Output Signal Change (Vdc)	92% ± 6% of input voltage

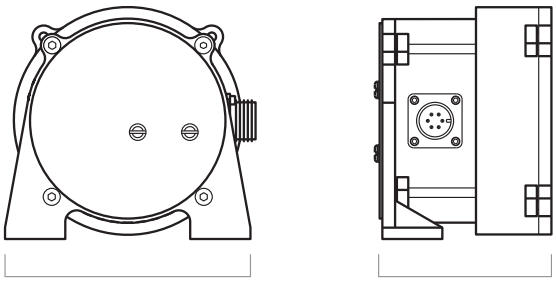
PERFORMANCE

Accuracy*	± 1% full stroke
Accuracy Option	± 0.5% full stroke—please contact factory
Resolution	essentially infinite

**–when plane of pendulum motion parallel to plane of rotation within ± 3°*

ENVIRONMENTAL

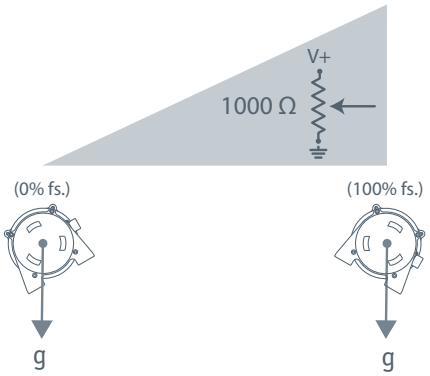
Enclosure	NEMA 4/4X/6, IP 67/68
Operating Temperature	-30° to 200°F (-34° to 90°C)
Vibration	up to 10 g to 2000 Hz maximum



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.

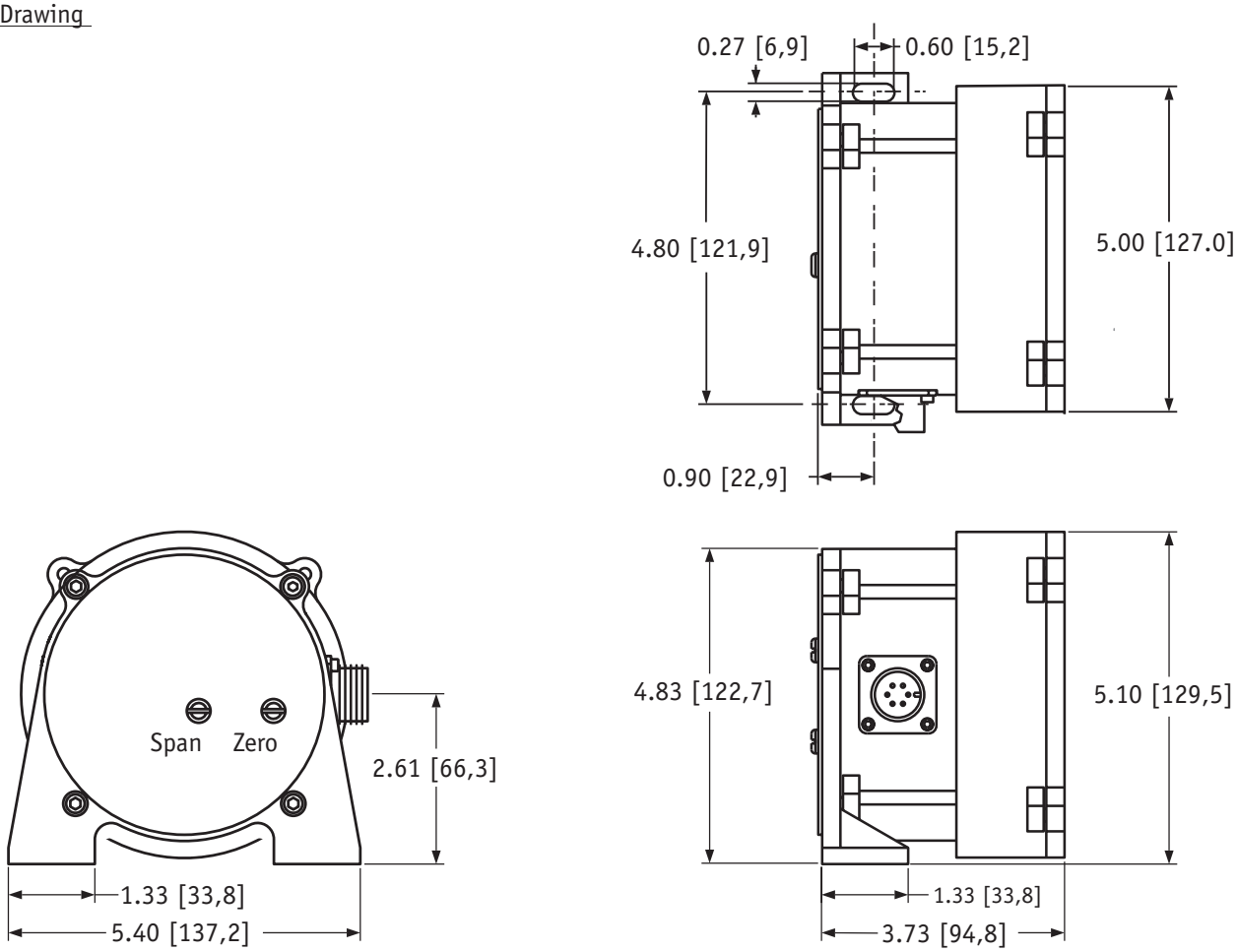
Output Signal:



20630 Plummer Street • Chatsworth, CA 91311
tel: 800.423.5483 • +1.818.701.2750 • fax: +1.818.701.2799

celesco

Outline Drawing



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

Ordering Information:

Model Number:

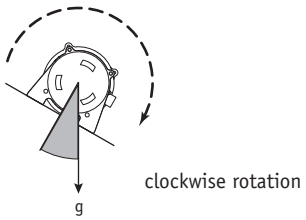
IT9101 - ____ - ____ - ____ ____ ____ ____
order code: **CW** **CCW** **A** **B** **C** **D**

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 conncector	
D	magnetic dampening:	yes	

Full Clockwise Rotation:

CW *order code:*	**000**	**015**	**030**	**045**	**060**	**075**	**090**	**105**	**120**
	0°	15°	30°	45°	60°	75°	90°	105°	120°

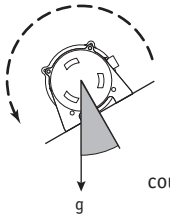


Important--
the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 105° to 240°

Ordering Information (cont.):

Full Counter-Clockwise Rotation:

CCW order code:	000	015	030	045	060	075	090	105	120
	0º	15º	30º	45º	60º	75º	90º	105º	120º



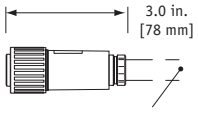
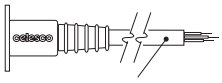
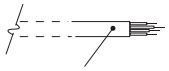
counter-clockwise rotation

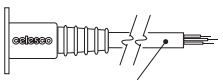
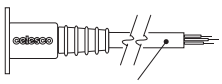
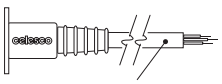
Important--
the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 105º to 240º

Enclosure Material:

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

Electrical Connection:

Ⓒ order code:	1	2	4
	6-pin plastic connector w/mating plug **IP 67, NEMA 4X**,6**	10-ft. [3 M] waterproof cable **IP 67, NEMA 4X**, 6**	25-ft. [7.5 M] instrumentation cable **IP 67, NEMA 6**
			
	1/2 - 5/16" [14 - 8 mm] cable dia. 16 AWG max conductor size connector: MS3102E-14S-6P mating plug: MS3106E-14S-6S	10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTOW	25 ft. x 0.2-in. dia. [7,5 M x 5 mm dia.] 24 AWG, shielded

Ⓒ order code:	5	6	7
	100-ft. [30 M] waterproof cable **IP 67, NEMA 4X**,6**	10-ft. [3 M] **pressure tested*** waterproof cable **IP 68, NEMA 4X**, 6P**	100-ft. [30 M] **pressure tested*** waterproof cable **IP 68, NEMA 4X**, 6P**
			
	100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTOW	10 ft. x 0.4-in. dia. [3 M x 10 mm dia.] 18 AWG, type SJTOW	100 ft. x 0.4-in. dia. [30 M x 10 mm dia.] 18 AWG, type SJTOW

6-pin Mating Plug

pin	signal
A	+ in
B	common
C	+ out
D	-



contact view

Waterproof Cable

color code	signal
WHITE	+ in
BLACK	common
GREEN	+ out

Instrumentation Cable

color code	signal
RED	+ in
BLACK	common
GREEN	+ out
WHITE	-

**–Test pressure: 100 feet [30 meters] H_2O (40 PSID) Test Medium: Air; Duration: 2 hours. ** –applies to stainless steel enclosure only.*

Dampening Option:

Ⓓ order code:	0	1
	with magnetic dampening	without magnetic dampening

version: **4.0** last updated: **August 13, 2014**