

- ▼ Measurement Range up to 270°
- ▼ Voltage Divider (Potentiometer) Output
- ▼ Precision Potentiometric Output



IT9101



Specification Summary:

GENERAL

Available Full Stroke Ranges 0-45 to 0-270 degrees
 Weight 11 lb. typical
 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 ohms ($\pm 10\%$)
 Recommended Maximum Input Voltage 30 V(AC or DC)
 Output Signal Change Over Measurement Range 94% $\pm 3\%$ of input voltage

PERFORMANCE

Accuracy*, with Dampening Option** $\pm 2\%$ full stroke
 Accuracy*, w/o Dampening Option** $\pm 1\%$ full stroke
 Resolution essentially infinite
 Zero and Span Adjustment Range 2:1 turndown
 *--when plane of pendulum motion parallel to plane of rotation within $\pm 3^\circ$
 **--refer to order code, back page

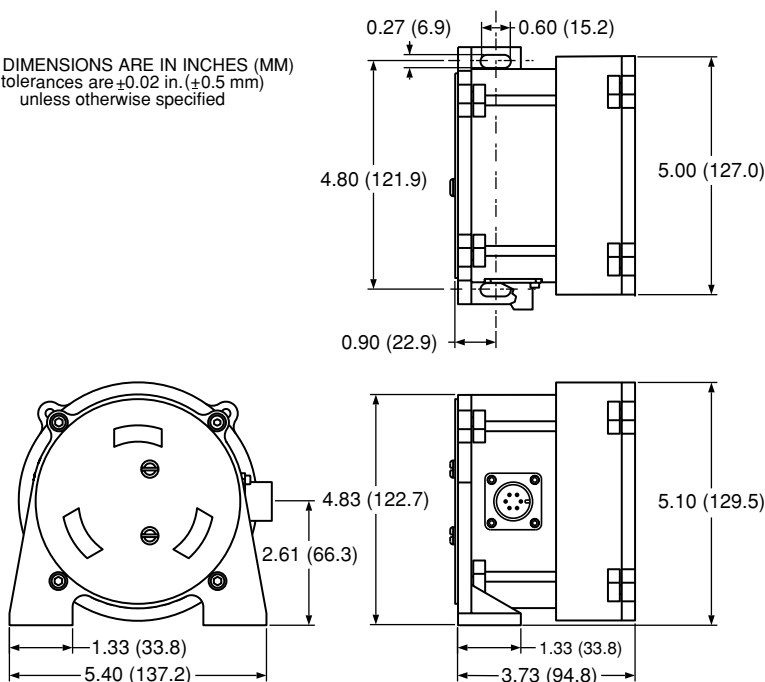
ENVIRONMENTAL

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

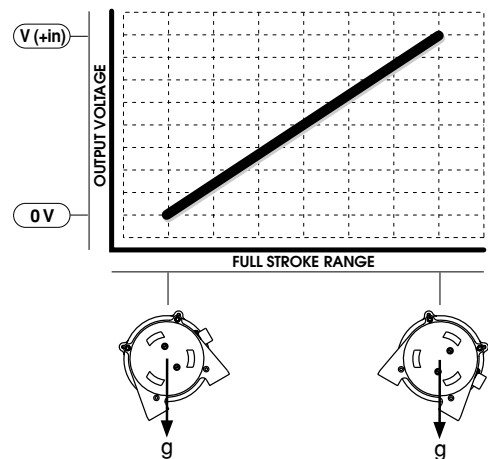
The model IT9101 is a rugged and simple device which provides a voltage divider feedback signal for incline position. The heart of the IT9101 is a magnetically-damped pendulum coupled to a conductive plastic precision potentiometer. A highly linear relationship between inclination and the output signal is maintained over the full range of the IT9101.

The IT9101 is easy to use: simply attach it to the object of measurement and install two wires for the current loop.

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



Electrical Output Signal:



IT9101 • Inclinometer • Potentiometric Output

▼ Ordering Information

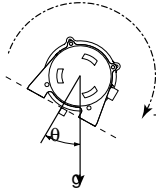
Model Number:

IT9101 - - - - - - - -

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

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°

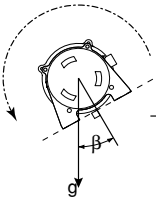


Important--

the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 45° 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 45° to 270°.

Enclosure Material:

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

Electrical Connection:

order code:	1	2	4
electrical connection:	6-pin plastic connector and mating plug	10 ft. waterproof cable	25 ft. instrumentation cable
	connections A = +IN B = COMMON C = +OUT	connections WHT = +IN BLK = COMMON GRN = OUT	connections RED = +IN BLK = COMMON GRN = OUT
IP rating:	67	67, 68*	67
NEMA rating:	6, 4X**	6, 4X**	6

note: *requires factory submersion test

**applies to stainless steel enclosure only

IT9101 • Rotational Transducer • Potentiometric Output

Dampening Option:

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

▼ Sample Model Number

IT9101- **030** - **120** - **1** **1** **1** - **1**
order code: CW CCW A B C D

Specifications:	Full Clockwise Rotation:	30 degrees
	Full Counter-Clockwise Rotation:	120 degrees
	Enclosure Material:	powder-painted aluminum
	Electrical Connection:	6-pin plastic connector
	Dampening:	magnetic dampening



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Agent

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- ▼ Measurement Range up to 240°
- ▼ 4...20 mA Output
- ▼ Rugged Industrial Applications



IT9420

Specification Summary:

GENERAL

Available Full Stroke Ranges 0-45 to 0-240 degrees
 Weight (aluminum enclosure) 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 4 to 20 mA
 Input Voltage 12 to 40 VDC (24 VDC recommended)
 Circuit Protection 38 mA maximum

PERFORMANCE

Accuracy* ± 1% full stroke
 Accuracy Option ± 0.5% full stroke
 Resolution essentially infinite
 Zero and Span Adjustment Range:

Full Stroke Ranges of 45° - 105° 20%
 Full Stroke Ranges of 120° - 240° 40%

*--when plane of pendulum motion parallel to plane of rotation within ± 3°
 **--refer to order code, back page

ENVIRONMENTAL

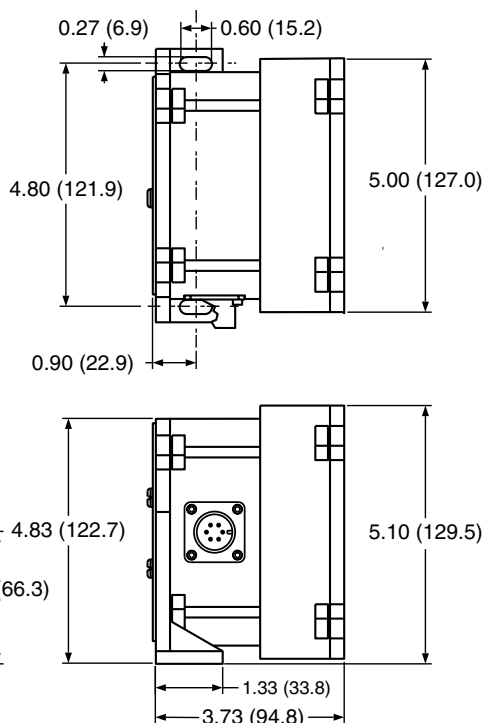
Operating Temperature -30° F to 200° F
 Environmental Suitability indoor/outdoor
 Operating Humidity, Splash NEMA 6 /IP67 (NEMA 4X /IP68 optional)
 Vibration up to 10 G's to 2000 Hz



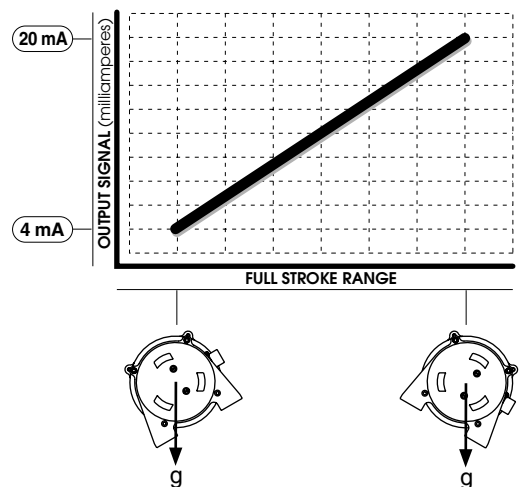
The model IT9420 is a rugged and simple device which provides a 4 to 20 mA current feedback signal for incline position. The heart of the IT9420 is a magnetically-damped pendulum coupled to a conductive plastic precision potentiometer. A highly linear relationship between inclination and a 4 to 20 mA output is maintained over the full range of the IT9420.

The IT9420 is easy to use: simply attach it to the object of measurement and install two wires for the current loop.

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



Electrical Output Signal:



IT9420 • Inclinometer • 4...20 mA Output

▼ Ordering Information

Model Number:

IT9420 - _____ - _____ - _____ - _____ - _____
order code: **CW** **CCW** **A** **B** **C** **D**

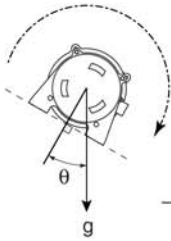
Sample Model Number:

IT9420 - 060 - 120 - 1110

- | | | | |
|------------|-----------------------------|-----------------------------------|-------------------------|
| CW | clockwise rotation: | 60° | } total rotation = 180° |
| CCW | counter-clockwise rotation: | 120° | |
| A | enclosure: | aluminum | |
| B | output signal: | 4 mA @ 120° CCW
20 mA @ 60° CW | |
| C | electrical connection: | 6-pin plastic connector | |
| D | magnetic dampening: | yes | |

Full Clockwise Rotation:

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

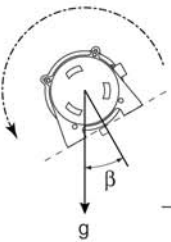


Important--

the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 45° to 240°.

Full Counter-Clockwise Rotation:

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



Important--

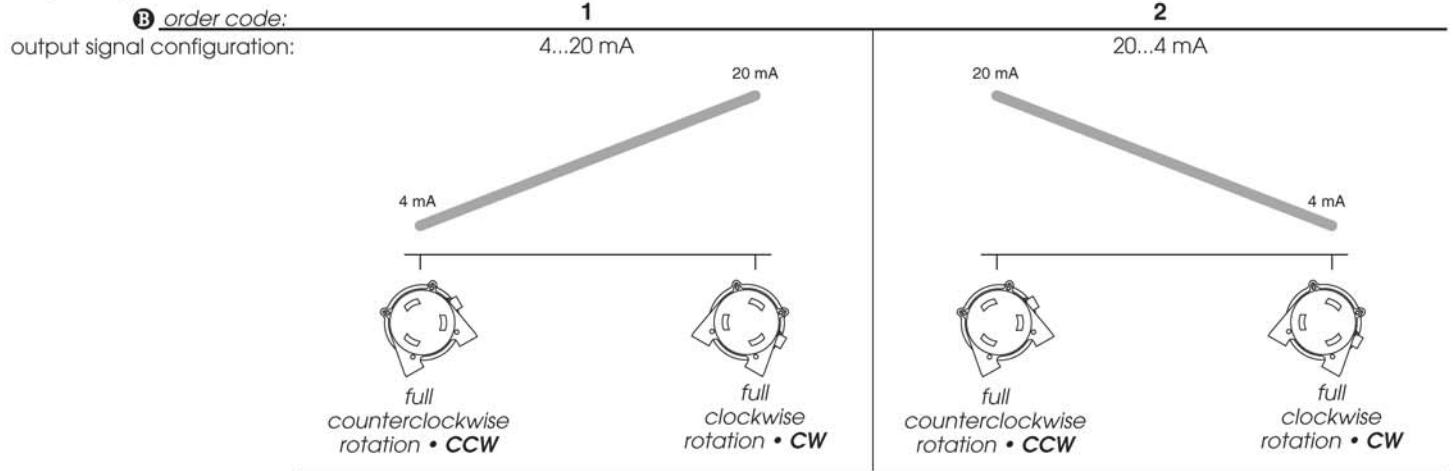
the sum of the Clockwise and Counter-Clockwise Rotations must be in the range of 45° to 240°.

Enclosure Material:

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

IT9420 • Rotational Transducer • 4...20 mA Output

Output Signal:



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
contact view			
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:

⑤ order code:

dampening:

	0	1
	with magnetic dampening	without magnetic dampening



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FT-IT9420-E-0204