

ISA miniature s-beam force transducer



product description

The ISA is a series of miniature force transducers designed for applications in general test and measurement as well as machine monitoring and control. The compact design enables the ISA to be easily embedded into machinery or test equipment – ideal for packaging machinery, assembly machinery or end-of-line test equipment.

Available in a range of standard capacities from 1lb through to 10lb; the ISA is configured for tension and compression force measurement. Full-bridge, bonded foil strain gauge technology provides excellent long-term stability and ensures high performance even in applications requiring in excess of 1 million load cycles. The ISA built-in overload protection operates in both tension and compression modes. Constructed from high grade aluminium, the sensor is protected by means of a stainless-steel cover.

The ISA can be supplied with standard cable configurations or with industry standard connectors. As an additional aid to system integrators, the ISA can be supplied as a TEDS (Transducer Electronic Data Sheet) enabled smart transducer this provides an on-board memory chip storing manufacturing and calibration data.

Comprehensive range of electronic modules available.

applications

General test and measurement as well as machine monitoring and control. Ideal for packaging machinery, assembly machinery or end-of-line test equipment.

key features

Capacities includes 1, 2, 5 and 10lb

Aluminium construction

Environmental protection to IP40

High accuracy $\pm 0.1\%$

Compact and low weight design

Built-in overload protection

Temperature compensated from -15°C to $+71^{\circ}\text{C}$

options

Range of cable lengths

Flying leads or cable connectors

TEDS IEEE 1451.4 memory chip

Multi-point calibration available



RoHS
compliant

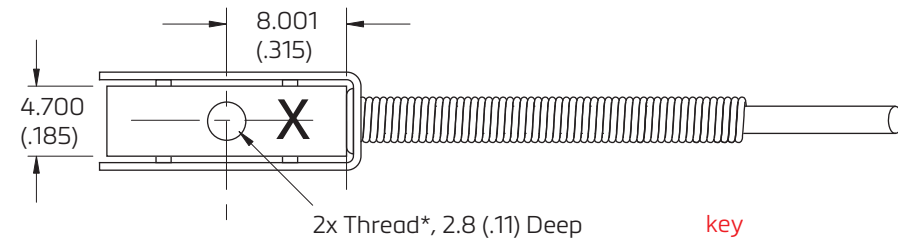


specifications

Rated capacity (RO)	lb	1, 2, 5, 10
Rated output	mV/V	2
Safe overload	% RO	1,000
No load offset (zero balance)	% RO	±3
Excitation (vdc or vac)	V	5 (recommended), 10 (max)
Input impedance	Ω	1,000
Output impedance	Ω	1,000
Non-linearity	% RO	±0.1%
Hysteresis	% RO	±0.1%
Nonrepeatability	% RO	±0.1%
Temp. Shift zero	% RO/°C	±0.018 (±0.01% of RO/°F)
Temp. Shift span	% load/°C	±0.036 (0.02% of load/°F)
Compensated temp.	°C	-15 to 71 (5 to 160 °F)
Operating temp.	°C	-51 to 93 (-60 to 200 °F)
Weight (approx)	g	9 (0.02lb)
Material	-	Aluminium
Deflection	mm	0.1 (0.004")
IP rating	-	IP40
Calibration test excitation	VDC	5
Calibration (std)	-	5 Pt. tension & compression
Connector	-	DB9 male or female (specify at time of order)
Thread	-	M3x0.5 Or #4-40 (specify at time of order)

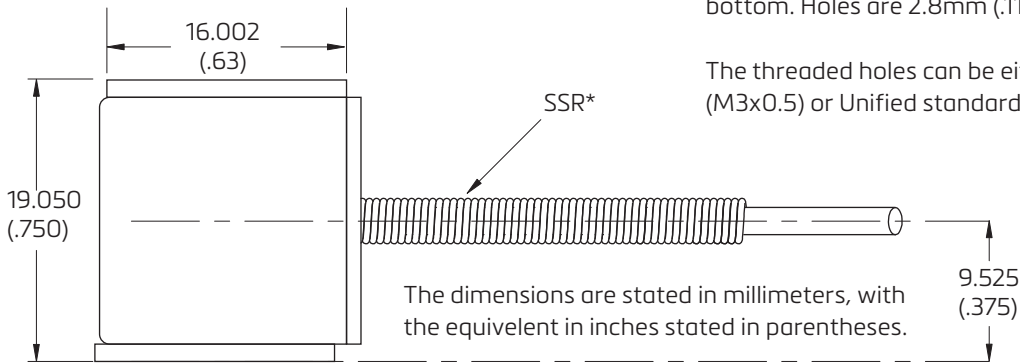


product dimensions (mm)



key

SSR* - Spring strain relief
 Thread* - 2x threaded holes; one on the top and bottom. Holes are 2.8mm (.11 inches) deep.



wiring

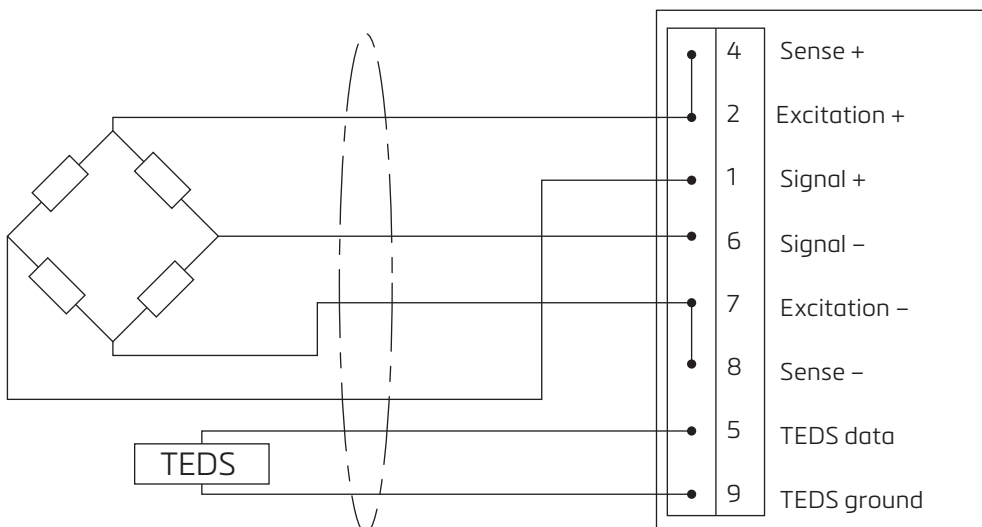
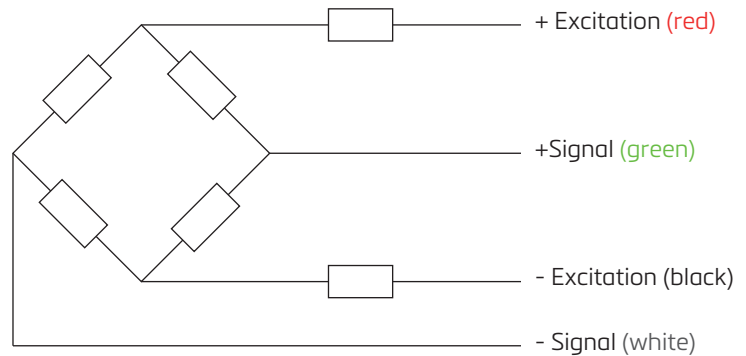
The sensor is provided with a #32 AWG 4-conductor braided shielded cable.

Outer jacket diameter: 2.2 mm (0.087")

Cable length: 1.5m (5ft)

No connection between the shield and the sensor body.

For additional protection, the cable is contained within a stainless-steel spring for strain relief purposes for the first 25mm (1").



Connector pin configuration for the with-connector version is shown to the left.

Specifications and dimensions are subject to change without notice.