MBA-TW button force transducer

product description

The MBA-TW is a series of miniature force transducers designed for applications in general test and measurement as well as machine monitoring and control.

The low profile, small diameter design enables the MBA-TW to be easily embedded into machinery or test equipment – ideal for packaging machinery, assembly machinery or end-of-line test equipment.

Available in standard capacities of 25lb and 50lb; the MBA-TW is configured for 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.
Constructed from stainless steel and protected from moisture with an epoxy bonded cover.

The MBA-TW can be supplied with standard cable configurations or with industry standard connectors. As an additional aid to system integrators, the MBA-TW 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 and accessories are 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 of 25 and 50lbf
- Stainless steel construction
- Environmental protection to IP64
- High accuracy ± 0.25%
- Low profile, small diameter and low weight design
- Temperature compensated from -10°C to + 40°C

options

- Range of cable lengths
- Flying leads or cable connectors
- TEDS IEEE 1451.4 memory chip
- Multi-point calibration available

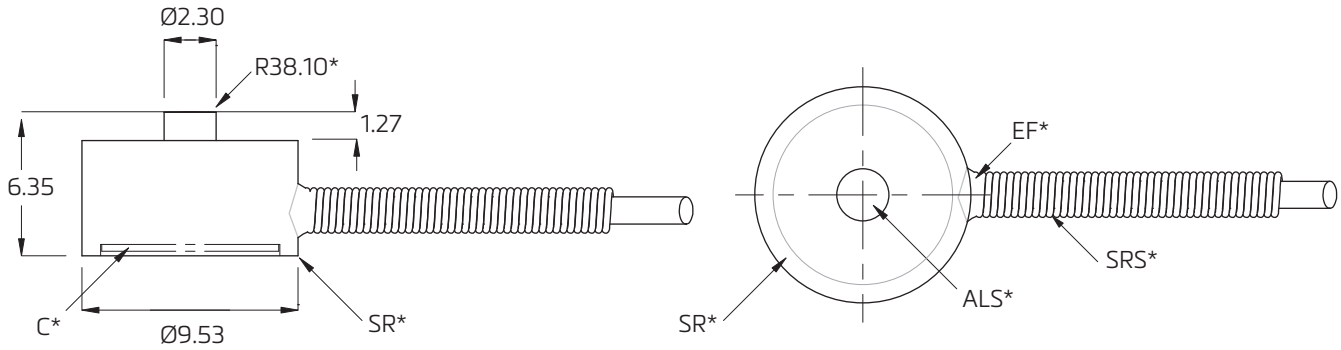
CE RoHS compliant IP64

flintec quality + precision

specifications

Rated capacity	lbf	25, 50
Rated output (RO)	mV/V	2
Temperature effect on zero output (TC_0)	%*RO/°C	±0.018 (±0.01 %*RO/°F)
Temperature effect on sensitivity (TC_{RO})	%*RO/°C	±0.018 (±0.01 %*RO/°F)
Non-linearity	%*RO	±0.25
Hysteresis	%*RO	±0.25
Non-Repeatability	%*RO	±0.1
Zero Balance	%*RO	±10
Calibration (std)	-	5 pt. Compression
Calibration test excitation	VDC	5
Excitation voltage	V	5 recommended, 10 max
Input Impedance	Ω	350
Output Impedance	Ω	350
Safe load limit	%*E_{max}	150
Deflection	mm	0.02 (0.0008 inch)
Compensated temperature range	°C	-10...+40 (+14...+104°F)
Operating temperature range	°C	-51...+93 (-60...+200°F)
Sealing	-	Potted and bonded cover
Protection according EN 60529	-	IP64
Data Storage	-	IEEE 1451.4 TEDS memory chip
Connector	-	DB9 male or female (specify at time of order)
Sensor Material	-	Stainless steel
Weight	g	8.5 (0.02lb)

product dimensions (mm)



key

R38.10* – Curvature of the top surface of the load button
SR* - Support outer ring
C* - Cover; non-loading surface
EF* - Epoxy fillet
SRS* - Strain relief spring covering the first 25mm of cable
ALS* - Active loading surface

wiring

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

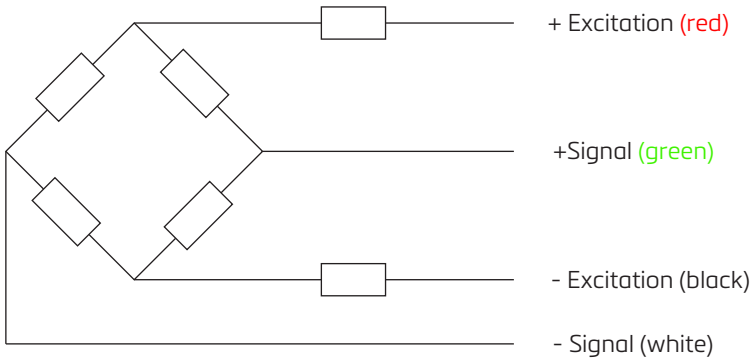
Cable jacket: polyurethane

Cable diameter: 1.63mm

Cable length: 2m

Shield unconnected to sensor body

Additional protection is provided by a stainless steel spring for the first 25mm of cable



Specifications and dimensions are subject to change without notice.