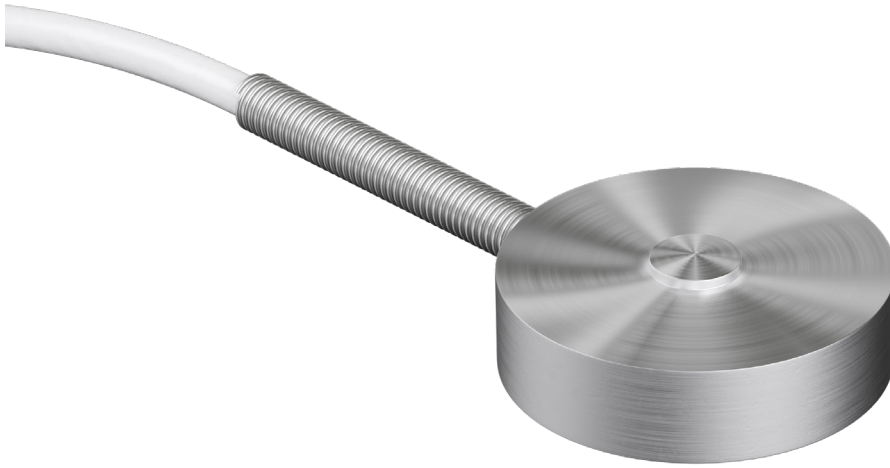


# MSA subminiature load button



## product description

The MSA is a subminiature load button capable of measuring between 5 and 1,000 pounds. With subminiature dimensions, including diameters as small as 9.6mm, the MSA is easily incorporated into systems having limited space.

The MSA provides low deflection and a high-frequency response to achieve non-linearity and hysteresis of 0.50% full scale, respectively. The spherical radius on the integrated load button minimizes the effects of off-axis loading. This unit is also temperature compensated from -10° to +40°C to provide reliable results in the midst of thermal gradients. These units are environmentally sealed for protection against most industrial environments. When space is limited and performance is required, the MSA is a solid choice.

## applications

Medical devices, Process control, Industrial automation, Chemical Mechanical Planarization, General Test & Measurement

## key features

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Capacity models of 25, 50, 100, 250, 500 and 1,000lbf available

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Miniature size (Ø from 9.60mm)

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Low height (from 3.00mm)

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Integrated spherical loading surface

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Temperature compensation

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Multi-point calibration

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Compression only

## accessories

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Compatible range of hardware

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Compatible range of electronics



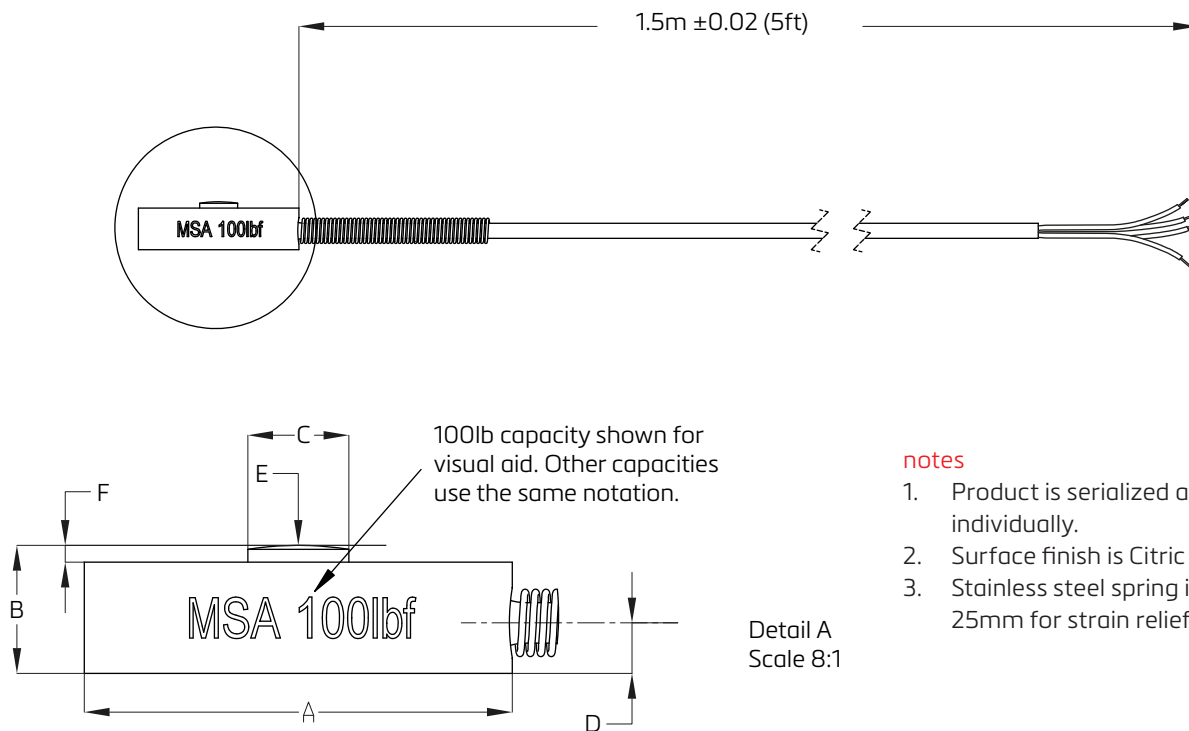
RoHS  
compliant



## specifications

Rated capacity ( $E_{max}$ )	lbf	25	50	100	250	500	1,000
Rated output (RO)	mV/V	1.5 - 2.5					
Temperature effect on zero output ( $TC_0$ )	%*RO/°C	$\pm 0.009$ ( $\pm 0.005$ %*RO/°F)					
Temperature effect on sensitivity ( $TC_{R0}$ )	%*RO/°C	$\pm 0.018$ ( $\pm 0.01$ %*RO/°F)					
Non-linearity	%*RO	$\pm 0.50$					
Hysteresis	%*RO	$\pm 0.50$					
Non-Repeatability	%*RO	$\pm 0.1$					
Zero Balance	%*RO	$\pm 2$					
Excitation voltage	V	5...7					
Input Impedance	$\Omega$	350 $\pm$ 7					
Output Impedance	$\Omega$	350 $\pm$ 7					
Safe load limit	%* $E_{max}$	150					
Deflection	mm	0.02 (0.0008inch)					
Compensated temperature range	°C	-10...+40 (+14F...+104F)					
Operating temperature range	°C	-51...+93 (-60F...+200F)					
Sealing	-	Potted and bonded cover					
Protection according EN 60529	-	IP64					
Cable length	m	1.5					
Sensor Material	-	Stainless steel 17-4PH					
Surface finish	-	Citric Passivation					

## product dimensions (mm)



### notes

1. Product is serialized and packed individually.
2. Surface finish is Citric Passivation.
3. Stainless steel spring is used up to 25mm for strain relief purposes.

Dimension (mm) \ Capacity	25lbf & 50lbf	100lbf	250lbf	500lbf & 1,000lbf
Outer diameter (A)	9.6	12.7	12.7	19
Height (B)	3.0	3.8	3.8	6.4
Spherical load button diameter (C)	2.2	3.0	3.00	6.1
Wire hole position (D)	1.1	1.5	1.35	2.5
Spherical load button radius (E)	9.65	9.65	9.65	9.65
Spherical load button height (F)	0.6	0.5	0.5	0.8

## wiring

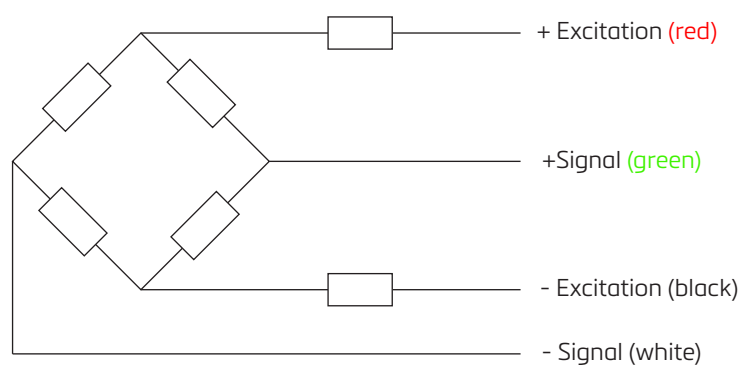
The sensor is provided with a 32 AWG  
4-conductor braided shielded cable

Cable colour: white

Cable diameter: 1.63mm

Cable length: 1.5m

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



Specifications and dimensions are subject to change without notice.