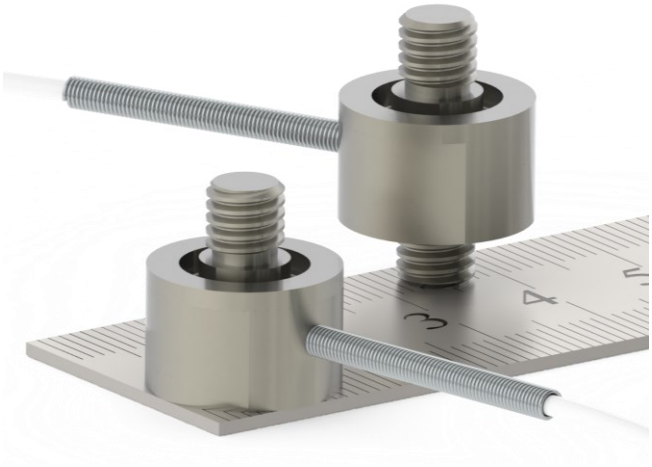
S402 THREADED IN-LINE LOAD CELL

STRAIN MEASUREMENT DEVICES

smdsensors.com



The S402 Threaded In-Line Load Cell is a strong and reliable bi-directional single-point OEM load cell.
Designed and built for in-line force measurement and press control applications using our 'Thin-Film' technology combined with a 5KΩ Wheatstone Bridge, the S402 provides extremely low power consumption and unmatched long-term stability.
It is available in 7 standard ranges from 25N up to 2000N. If your application requires a force sensor outside these parameters, please contact us and our engineering team will strive to design a custom solution to meet your requirements.

SPECIAL FEATURES

- **LOW PROFILE**
- **LOW POWER CONSUMPTION**
- **LOW HYSTERESIS**
- **LONG TERM STABILITY**

KEY SPECIFICATIONS

- **5KΩBRIDGE**
- **0.01% REPEATABILITY**
- **UP TO 200% SAFE OVERLOAD**
- **0.08%/YEAR DRIFT**

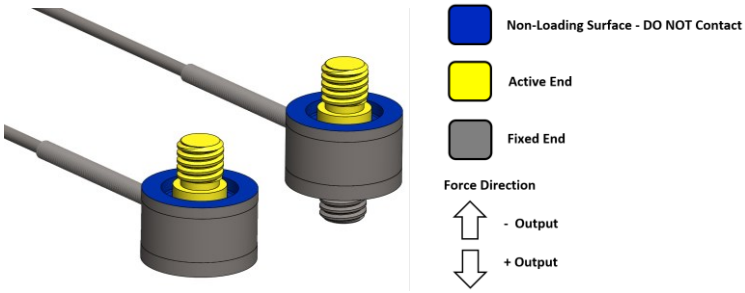
APPLICATIONS

- **ORTHOPAEDIC INSTRUMENTS**
- **HYDRAULIC FORCE CONTROL**
- **PRESS TOOL**
- **PRINTING**
- **PROCESS CONTROL**

PRODUCT SPECIFICATION*							
RANGES [N]	**25**	**50**	**100**	**200**	**500**	**1000**	**2000**
MAXIMUM SAFE LOAD [N]	50	100	200	400	750	1400	2500
DEFLECTION [µM][1]	11.325	9.399	11.059	10.038	12.982	16.254	14.820
NATURAL FREQUENCY [kHz][1]	7.600	11.825	117.250	178.28	258.87	345.23	430.67
BRIDGE CONFIGURATION	4-WIRE FULL BRIDGE						
BRIDGE RESISTANCE	5000 Ω NOMINAL						
RECOMMENDED EXCITATION VOLTAGE	10 V DC/AC [20 V MAX]						
INSULATION RESISTANCE	>1000 MΩ @ 50 V DC						
FULL SCALE OUTPUT [FSO]	2 MV/V NOMINAL						
ZERO BALANCE	±0.3 MV/V						
REPEATABILITY	±0.01% FSO						
LINEARITY	±0.03% FSO						
HYSTERESIS	±0.03% FSO						
LONG TERM STABILITY	<0.1% FSO/YEAR						
CREEP/CREEP RECOVERY [20 MIN]	±0.02% FSO						
TEMPERATURE EFFECT ON ZERO	±0.6UV/V/°C						
TEMPERATURE EFFECT ON SPAN	±0.03% READING/°C [TIGHTER TOLERANCES AVAILABLE]						
OPERATING TEMPERATURE	-40°C TO +140°C						
BODY MATERIAL	15-5PH STAINLESS STEEL [25N & 50N ALSO AVAILABLE IN ALUMINIUM – PLEASE SEE ALUMINIUM SPECIFIC DATASHEET]						
CABLE	CUSTOMER SPECIFIC						

Strain Measurment Devices adopts a continuous development program which can result in specification changes without notice.
[1] Theoretical nominal values

Please observe the diagram below when considering fitment into your application.



Europe:
Strain Measurement Devices Ltd
Bury Road, Chedburgh
Bury St. Edmunds
IP29 4UQ
United Kingdom
Email: sales@smdsensors.co.uk
P: +44 (0) 1284 852 000
F: +44 (0) 1284 852 371

USA:
Strain Measurement Devices Inc
55 Barnes Park North
Wallingford
CT 06492
USA
Email: askus@smdsensors.com
P: +1 (0) 203 294 5800
F: +1 (0) 203 265 0544

BS EN ISO 9001:2015
Certificate No.
10241

RoHS 3 COMPLIANT EU 2015/863

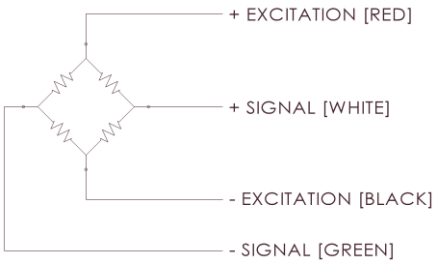
MADE IN BRITAIN

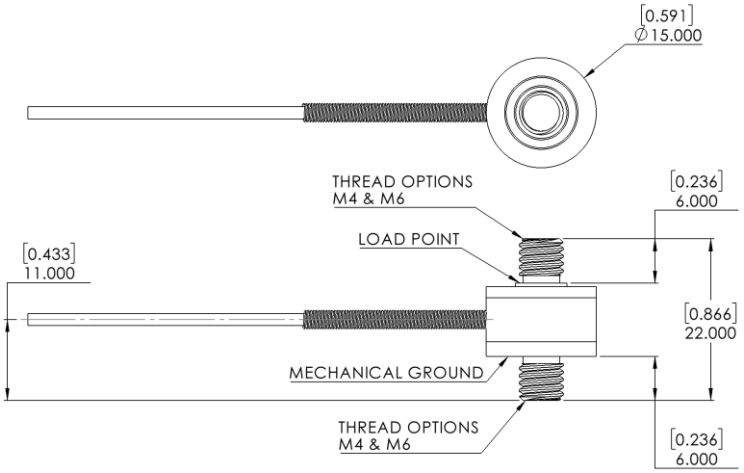
Revision: 3
Last Amended: 29/06/22

SCHEMATIC

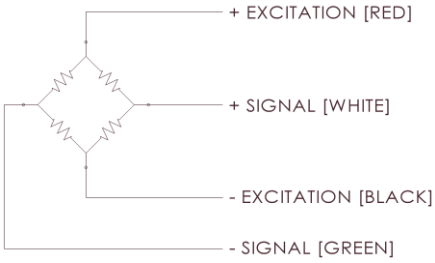
DIMENSIONS IN [INCHES]
MM

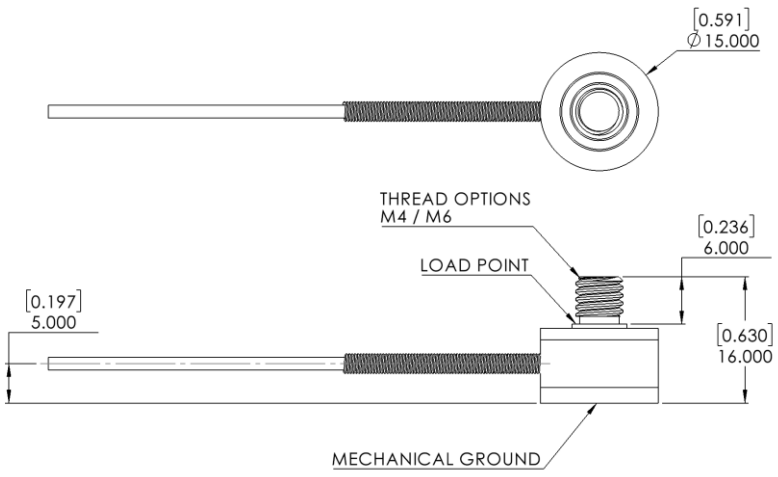
THREADED HOUSING OPTION





NON-THREADED HOUSING OPTION





Europe:
Strain Measurement Devices Ltd
Bury Road, Chedburgh
Bury St. Edmunds
IP29 4UQ
United Kingdom
Email: sales@smdsensors.co.uk
P: +44 (0) 1284 852 000
F: +44 (0) 1284 852 371

USA:
Strain Measurement Devices Inc
55 Barnes Park North
Wallingford
CT 06492
USA
Email: askus@smdsensors.com
P: +1 (0) 203 294 5800
F: +1 (0) 203 265 0544

BS EN ISO 9001:2015
Certificate No.
10241

RoHS 3 COMPLIANT EU 2015/863

MADE IN BRITAIN

PART NUMBER GENERATOR

122-6604 - X X X

PRODUCT NUMBER
122-6604 = S402

LOAD CELL THREAD SIZE CODE
2 = M4 [25N-500N RANGES ONLY]
4 = M6 [100N-2000N RANGES ONLY]

RANGE [N]
1 = 100
2 = 200
3 = 500
4 = 1000
5 = 2000
6 = 25
7 = 50

FIXED END CONFIGURATION CODE
1 = UNTHREADED [PLAIN HOUSING]
2 = M4 [25N - 500N RANGES ONLY]
4 = M6

Example: A **1000N** Load Cell with an **M6** Thread and **M6** Housing

Part Number: 122-6604-**444**

Europe:
Strain Measurement Devices Ltd
Bury Road, Chedburgh
Bury St. Edmunds
IP29 4UQ
United Kingdom
Email: sales@smdsensors.co.uk
P: +44 (0) 1284 852 000
F: +44 (0) 1284 852 371

USA:
Strain Measurement Devices Inc
55 Barnes Park North
Wallingford
CT 06492
USA
Email: askus@smdsensors.com
P: +1 (0) 203 294 5800
F: +1 (0) 203 265 0544

BS EN ISO 9001:2015
Certificate No.
10241

RoHS 3 COMPLIANT EU 2015/863

MADE IN BRITAIN