SHEAR BEAM AND BENDING LOAD CELL

TENSION & COMPRESSION



- LOW PROFILE
- COMBINED ERROR ≤ ±0.024 %
- IP68 PROTECTION RATING
- 17-4PH STAINLESS STEEL | 1.4542

CE RoHS COMPLIANT IP68 Stainless Steel 17-4 PH · 1.4542 High Temperature −40...250 °C Dynamic Measurement REACH COMPLIANCE ISO 17025 ACCREDITED LABORATORY mV/V

NOMINAL LOAD (FS)

kg	N	Net weight (kg)	Combined error	ISO 17025	High Temperature -40...250°C	Rated Output (mV/V)
110	1 100	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1
220	2 200	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1
550	5 500	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1
1 100	11 000	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1
1 760	17 600	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1
2 200	22 000	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1
4 400	44 000	0.9 – 1.6	≤±0.024 %	(optional)	(optional)	1.94±0.1

TECHNICAL DATA

PRECISION

Rated Output (C_n)	1.94 mV/V ±0,1 % at FS
Zero Balance	< ±2.0 %
Combined error	≤ ±0.024 %FS
Non-linearity	≤ ±0.017 %FS
Hysteresis	≤ ±0.017 %FS
Repeatability	≤ ±0.017 %FS
Creep	≤ ±0.0166 %FS (at 30 min FS)
Temperature coefficient of zero	0.0125 %FS/°C
Temperature coefficient of sensitivity	0.014 %FS/°C
Compensated temperature range	-10...+40 °C
Operating temperature range	-30...+70 °C
Reference Temperature	23 °C

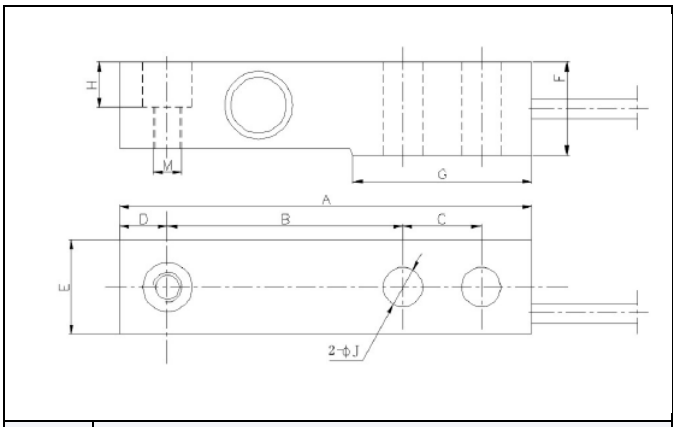
MECHANICAL PROPERTIES

Material	17–4 PH STAINLESS STEEL | 1.4542
Deflection at FN	~ 0.4 mm

ELECTRICAL PROPERTIES

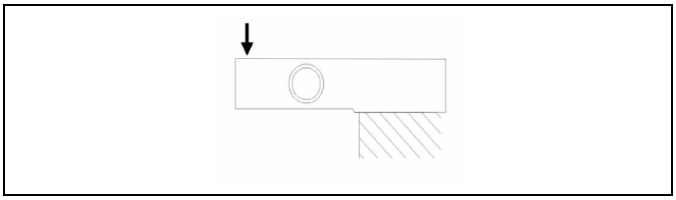
Bridge configuration	Full Wheatstone bridge, 6-wire
Input resistance	390 ± 5 Ω
Output resistance	350 ± 5 Ω
Insulation resistance	≥ 5 000 MΩ at 100 V
Recommended excitation voltage	5 - 15 V
Cable diameter	5.4 mm
Cable length	1500 mm

DIMENSIONS

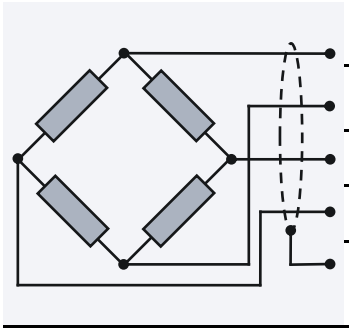


Cap(t)	(mm)									
	A	B	C	B	E	F	G	H	J	M
0.11 - 1.75	133.4	76.2	25.4	25.4	30.7	30.2	57.7	14.2	13.0	M12
2.2	136.6	76.2	25.4	25.4	36.8	36.6	57.9	17.0	13.0	M12
4.4	171.5	95.2	38.1	38.1	42.9	42.9	73.8	20.1	19.0	M20

LOAD DIRECTION



ELECTRICAL CONNECTION



+ EXCITATION	BLUE
+ REF./SENSE	GREEN
– EXCITATION	BLACK
– REF./SENSE	GRAY
+ SIGNAL	WHITE
– SIGNAL	RED
SHIELD	

MECHANICAL LIMITS

Service load	120 %FS	Load without any permanent deformation or change in calibration.
Safe overload	150 %FS	The highest static load that may be applied once or briefly without mechanical damage.
Breaking load	> 300 %FS	Load at which permanent deformation or mechanical failure (fracture) occurs.
Max. transverse load (side)	50 %FS	Maximum lateral or shear load that can be applied (e.g. due to misalignment or friction).
Max. permissible dynamic load	70 %FS	For cyclic or oscillating loads, the amplitude should not exceed this load to prevent fatigue failure.

COMPLIANCE AND CERTIFICATION

Protection Rating	IP68 (IEC 60529)
Compliance	CE, RoHS, REACH
Calibration	Factory-calibrated, ISO 17025 calibration available on request
HS-CODE	9031.80.80