SHEAR BEAM LOAD CELL

TENSION & COMPRESSION



- COMBINED ERROR ≤ ±0.02%.....C3
- COMBINED ERROR ≤ ±0.017%.....C4
- IP68 PROTECTION RATING
- 17-4PH STAINLESS STEEL

Stainless Steel 17-4 PH · 1.4542

mV/V

NOMINAL LOAD (FS) [E_{max}]

kg	N	Net weight (kg)	ACCURACY CLASS C3	ACCURACY CLASS C4	ISO 17025	Rated Output (mV/V)
500	5 000	2.1	•	•	(optional)	2 ±0.2%
1 000	10 000	2.1	•	•	(optional)	2 ±0.2%
2 000	20 000	2.1	•	•	(optional)	2 ±0.2%
5 000	50 000	4.2	•	–	(optional)	2 ±0.2%
7 500	75 000	4.2	•	–	(optional)	2 ±0.2%
10 000	100 000	4.2	•	–	(optional)	2 ±0.2%

ON REQUEST

TECHNICAL DATA

PRECISION

Rated Output (C_n)	2 mV/V ±0.2 % at FS *
Zero Balance	< ±1 %
Combined error	≤ ±0.02 %FS (C3)
	≤ ±0.017 %FS (C4)
Non-linearity	≤ ±0.014 %FS (C3)
	≤ ±0.012 %FS (C4)
Hysteresis	≤ ±0.014 %FS (C3)
	≤ ±0.012 %FS (C4)
Repeatability	-
Creep	≤ ±0.02 %FS (at 30 min FS)
Temperature coefficient of zero	0.0018 %FS/°C
Temperature coefficient of sensitivity	0.0014 %FS/°C
Compensated temperature range	-10...+40 °C
Operating temperature range	-30...+65 °C
Reference Temperature	23 °C

* Calibrated current output

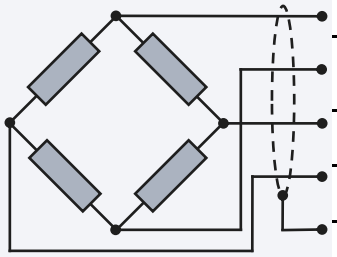
MECHANICAL PROPERTIES

Material	17-4PH stainless steel
Deflection at FN	~ 0.4 mm

ELECTRICAL PROPERTIES

Bridge configuration	Full Wheatstone bridge, 6-wire
Input resistance	350±3.5 Ω
Output resistance	350±3.5 Ω
Insulation resistance	≥ 5,000 MΩ
Recommended excitation voltage	≤ 18 V
Minimum verification interval (V_{min})	E_{max} / 10 000 [C3]
	E_{max} / 15 000 [C4]
Cable diameter	5 mm
Cable length	5 000 mm
Cores	4 x 0.20 mm²

ELECTRICAL CONNECTION

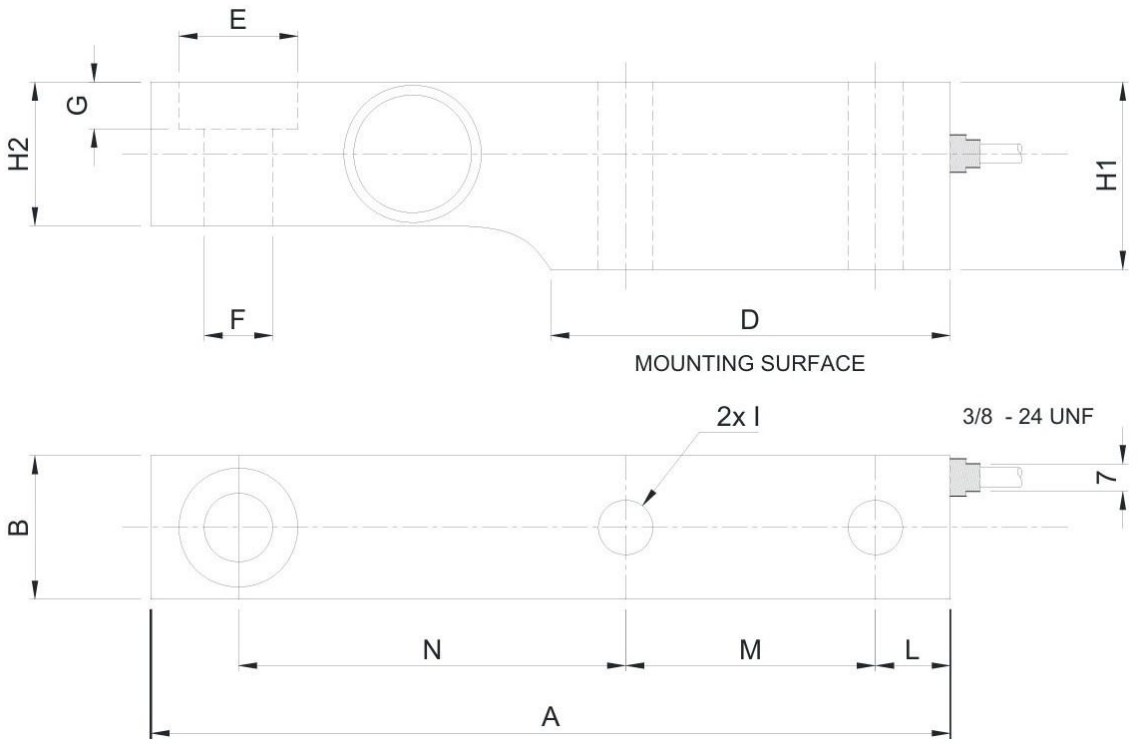


+ EXCITATION	RED
+ REF./SENSE	BLUE
– EXCITATION	BLACK
– REF./SENSE	YELLOW
+ SIGNAL	GREEN
– SIGNAL	WHITE
SHIELD	

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. The dynamic load must be applied to the transducer central thread.

DIMENSIONS (mm)



	500 kg 1 000 kg 2 000 kg	5 000 kg 7 500 kg	10 000 kg
A	203.2	235	235
B	36.48	47.5	55
D	101.6	111.2	111.2
E	Ø30.3	Ø41.3	Ø41.3
F	Ø17.5	Ø25.5	Ø25.5
G	11.9	15.75	15.75
H1	47.63	69.9	69.9
H2	36.5	47.6	47.6
I	Ø14	Ø22	Ø25
L	19.05	20.06	20.06
M	63.5	66.7	66.7
N	98.45	123.8	123.8

For the load cell fixing screws, provide the tightening torque indicated in the table

Screw	M12		M20		M24	
Screw class	6.8	8.8	6.8	8.8	6.8	8.8
Tightening torque	50 Nm	795 Nm	290 Nm	400 Nm	500 Nm	690 Nm

COMPLIANCE AND CERTIFICATION

Protection Rating	IP68 according to IEC 60529	
Compliance	CE, RoHS, REACH	
Calibration	Factory-calibrated, ISO 17025 calibration available on request	
HS-CODE	9031.80.80	
	OIML	OIML R60 C3
	EAC	Complies with the Eurasian Customs Union regulations
	UKCA	Equivalent of the CE marking for the United Kingdom
Certifications (on request)		Calibration report
	ISO 376	LAT Accredia calibration certificate ISO 376 or ASTM E74 for capacities from 1000 kg to 10000 kg
	OIML	OIML R60 C4
	Ex	ATEX (zone 2-22)
	EAC Ex	Complies with the Eurasian Customs Union regulations for use in potentially explosive atmospheres
	Ex NEPSI	Complies with Chinese market regulations for use in potentially explosive atmospheres