

TENSION AND COMPRESSION LOAD CELL

TENSION & COMPRESSION



- 17-4PH STAINLESS STEEL | 1.4542
- COMBINED ERROR $\leq \pm 0.02 \%$
- IP68 PROTECTION RATING

CE

RoHS COMPLIANT

REACH COMPLIANCE

IP68

IP69k

STAINLESS STEEL

17-4PH | 1.4542

OIML

Ex ATEX

IECEx

PA

DYNAMIC MEASUREMENT

FULLY LASER

ISO 376

ISO 17025

EAC

UK CA

EAC

Ex

GT

Ex NEPSI

NOMINAL LOAD (FS) [E_{max}]

kg	kN	Net weight (kg)	Combined error	ISO 17025	ACCURACY Class C3		Rated Output (mV/V)
100	1	0.7	$\leq \pm 0.02 \%$	(optional)	-	-	2.0 $\pm 0.1 \%$
200	2	0.7	$\leq \pm 0.02 \%$	(optional)	-	-	2.0 $\pm 0.1 \%$
300	3	0.7	$\leq \pm 0.02 \%$	(optional)	-	-	2.0 $\pm 0.1 \%$
500	5	1.4	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$
1 000	10	1.4	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$
2 500	25	1.4	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$
5 000	50	2.6	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$
7 500	75	2.7	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$
10 000	100	3.7	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$
12 500	125	4.8	$\leq \pm 0.02 \%$	(optional)	•	•	2.0 $\pm 0.1 \%$

ON REQUEST



TECHNICAL DATA

PRECISION

Rated Output (C_n)	2.0 mV/V $\pm$ 0.1 % at FS
Zero Balance	< $\pm$ 1.0 %
Combined error	$\leq \pm$ 0.02 %FS
Non-linearity	$\leq \pm$ 0.014 %FS
Hysteresis	$\leq \pm$ 0.014 %FS
Creep	$\leq \pm$ 0.05 %FS (at 30 min FS)
Temperature coefficient on zero	0.005 %FS/ $^{\circ}$ C
Temperature coefficient on span	0.003 %FS/ $^{\circ}$ C
Temperature range OIML R60	-10...+40 $^{\circ}$ C
Compensated temperature range	-20...+70 $^{\circ}$ C
Operating temperature range	-30...+90 $^{\circ}$ C
Reference Temperature	23 $^{\circ}$ C

MECHANICAL PROPERTIES

Material	17-4PH STAINLESS STEEL 1.4542
Deflection at FN	$\sim$ 0.3 mm

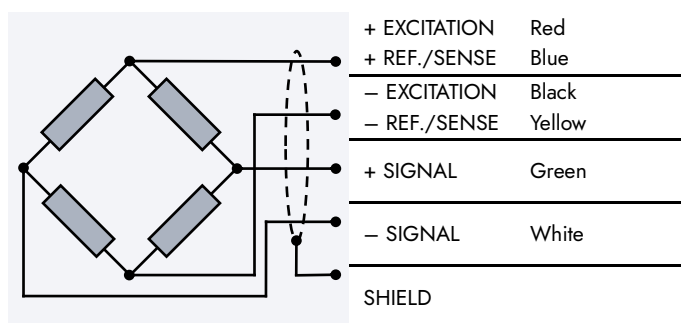
MECHANICAL LIMITS

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.

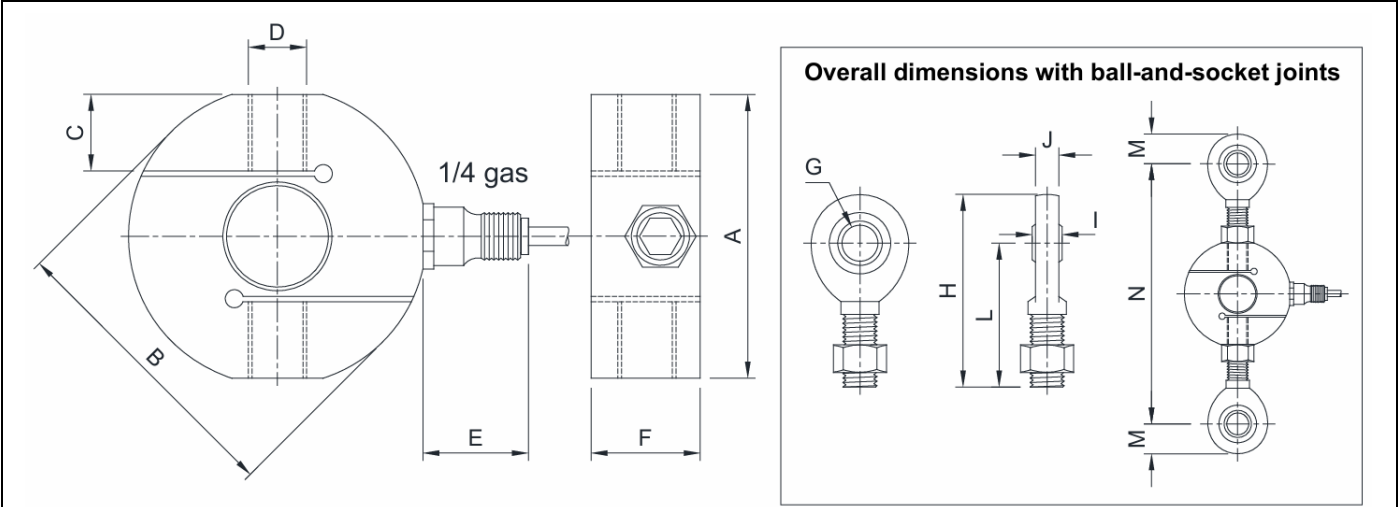
ELECTRICAL PROPERTIES

Bridge configuration	Full Wheatstone bridge, 6-wire
Input resistance	350 $\pm$ 5 Ω
Output resistance	350 $\pm$ 2 Ω
Insulation resistance	$\geq$ 5 000 M Ω at 100 V
Recommended excitation voltage	5 - 15 V
Minimum verification interval (V min)	$E_{max}/10\,000$
Cable diameter	5.0 mm
Cable length	10 m
Cores	6 x 0.14 mm ²

ELECTRICAL CONNECTION



DIMENSIONS (mm)



	100 kg 200 kg 300 kg	500 kg 1 000 kg	2 500 kg	5 000 kg 7 500 kg	10 000 kg	12 500 kg
A	60	78	78	90	103	120
B	63	82	82	102	114	129
C	14.5	21	21	24	30.5	37
D	M12 x 1.75	M16 x 2	M20 x 1.5	M24 x 2	M30 x 2	M36 x 2
E	29	29	29	29	29	29
F	22	30	30	45	50	55
G	Ø12	Ø17	Ø20	Ø25	Ø30	Ø35
H	71	92	104.5	126	146.5	181
I	10	14	16	20	22	25
J	8.5	11.5	13.5	17.5	19.5	21.5
L	54.5	69.5	77.5	94.5	110	140
M	16.5	22.5	27	31.5	36.5	41
N (≈)	143	175	190	235	260	324



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
Certifications	 OIML R60 C3
	 Complies with the Eurasian Customs Union regulations
	 Equivalent of the CE marking for the United Kingdom
Certifications (on request)	 Calibration report
	 Declaration of conformity + IP69K marking protection rating Water protection in case of high-pressure or steam jet cleaning (test: pressurized water is sprayed from a distance of max 150 mm); Water pressure: 100 bar; temperature: 80 °C; test duration: 250 seconds (reference standard: DIN 40050-9)
	 LAT Accredia calibration certificate ISO 376 or ASTM E74 <u>for capacities from 1000 kg to 10000 kg</u>
	 ATEX (zone 2-22)
	 ATEX/IECEx (zone 1-21)
	 Complies with the Eurasian Customs Union regulations for use in potentially explosive atmospheres
	 Complies with Chinese market regulations for use in potentially explosive atmospheres
	 Complies with the regulations of the Russian Federation for legal for trade use
	 Complies with Chinese market regulations for legal for trade use



COMPLEMENTARY ACCESSORIES

LALAR

	Dimensions	Load Cell Capacity
Ball-and-socket with nut:	M12x1.75	100-300 kg
	M16x2	500-1 000 kg
	M20x1.5	2 500 kg
stainless steel	M24x2	5 000-7 500 kg



LALAS

	Dimensions	Load Cell Capacity
Ball-and-socket with nut:	M12x1.75	100-300 kg
	M16x2	500-1 000 kg
	M20x1.5	2 500 kg
galvanized C40 steel	M24x2	5 000-7 500 kg
	M30x2	10 000 kg
	M36x2	12 500 kg

