FORCE TRANSDUCER

TENSION & COMPRESSION



- STAINLESS STEEL
- COMBINED ERROR ≤ ±0.04 %
- IP67 PROTECTION RATING

IP67 | Stainless Steel | Dynamic Measurement | Fully Laser Welded | ISO 376 REFERENCE STANDARD | ISO 17025 ACCREDITED LABORATORY | mV/V

NOMINAL LOAD (FS)

kg	kN	NET WEIGHT (kg)	COMBINED ERROR	ACCURACY CLASS AC 1	AC 0.5	RoHS	ISO 376	Rated Output (mV/V)
500	5.0	2.45	≤±0.04 %	•	•	•	•	2.0 ±0.1%
1 000	10	2.45	≤±0.04 %	•	•	•	•	2.0 ±0.1%
2 500	25	2.45	≤±0.04 %	•	•	•	•	2.0 ±0.1%
5 000	50	2.45	≤±0.04 %	•	•	•	•	2.0 ±0.1%
10 000	100	5.80	≤±0.04 %	•	•	•	•	2.0 ±0.1%
20 000	200	5.80	≤±0.04 %	•	•	•	•	2.0 ±0.1%
30 000	300	5.80	≤±0.04 %	•	•	•	•	2.0 ±0.1%
50 000	500	16.5	≤±0.04 %	•	•	•	•	2.0 ±0.1%
75 000	750	16.5	≤±0.04 %	•	•	•	•	2.0 ±0.1%
100 000	1000	16.5	≤±0.04 %	•	•	•	•	2.0 ±0.1%

office@octogon.org | +43 676 3628453

octogon GmbH | Roseggerstrasse 16 8700 Leoben | Austria

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TECHNICAL DATA

PRECISION

Rated Output (C_n)	2.0 mV/V[1] ±0.1 % at FS
Zero Balance	< ±1.0 %
Combined error	≤±0.04 %
Non-linearity	≤ ±0.03 %FS
Hysteresis	≤ ±0.03 %FS
Creep	AC1: 0.10%FS AC0.5: 0.05%FS
Temperature coefficient on zero	≤ ±0.028 %FS per 10°C
Temperature coefficient on span	≤ ±0.024 %FS per 10°C
Compensated temperature range	-10...+40 °C
Operating temperature range	-10...+70 °C
Reference Temperature	23 °C

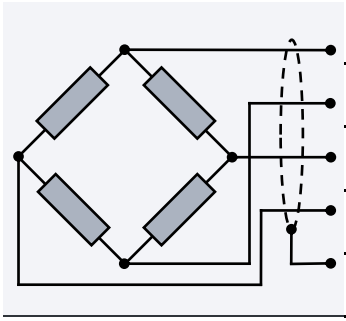
MECHANICAL PROPERTIES

Material	STAINLESS STEEL
Deflection at FN	~ 0.06 mm (5-50 kN) ~ 0.17 mm (100-300 kN) ~ 0.23 mm (500-1 000 kN)

ELECTRICAL PROPERTIES

Bridge configuration	Full Wheatstone bridge, 4-wire
Input resistance	800 ± 20 Ω (5-300 kN) 430 ± 20 Ω (500-1 000 kN)
Output resistance	705 ± 2Ω (5-300 kN) 352 ± 2Ω (500-1 000 kN)
Insulation resistance	≥ 5 GΩ
Recommended excitation voltage	max. 18 V
Cable diameter	5.2 mm
Cable length	5 m

ELECTRICAL CONNECTION



+ EXCITATION	Red
– EXCITATION	Black
+ SIGNAL	WHITE
– SIGNAL	YELLOW
SHIELD	

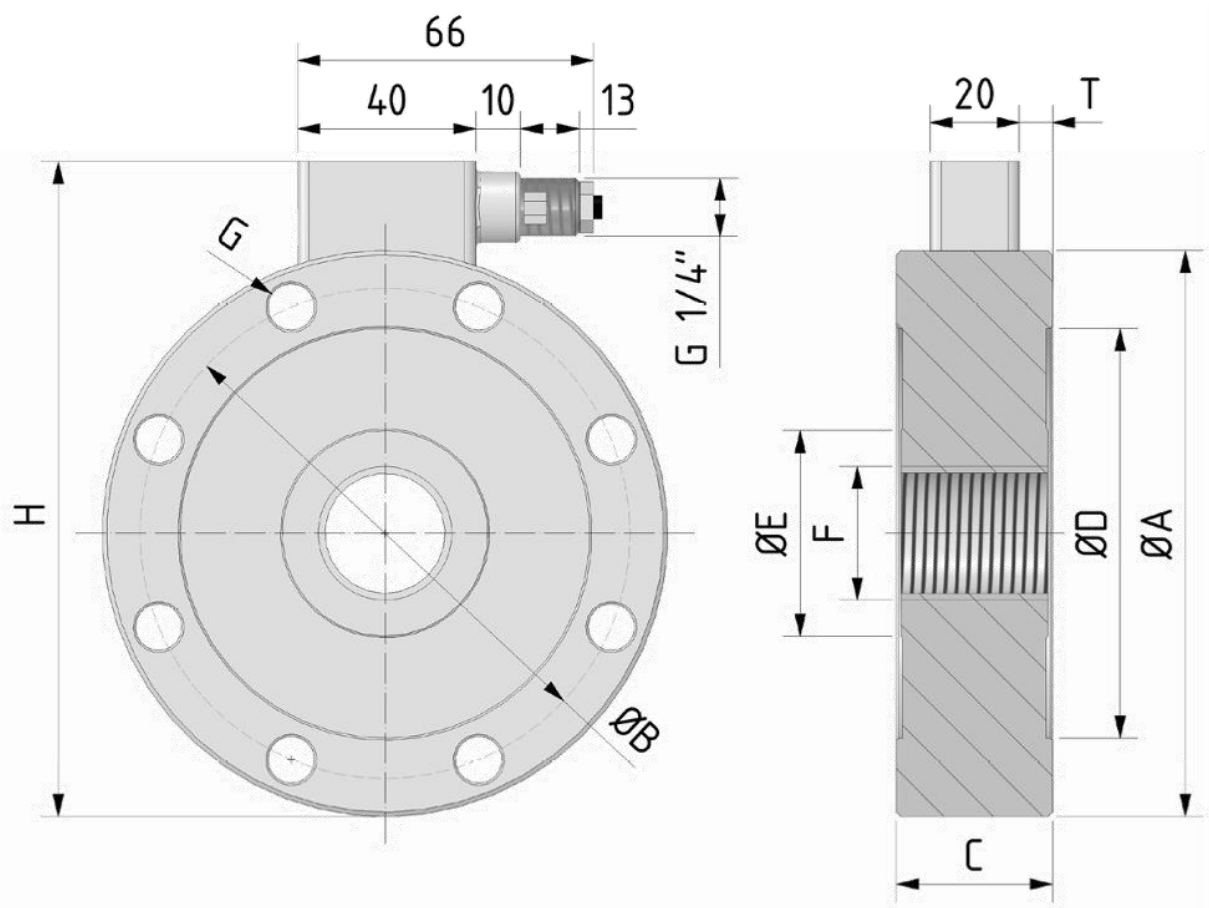
MECHANICAL LIMITS

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)	100 %FS	Maximum lateral or shear load that can be applied (e.g. due to misalignment or friction).
Max. permissible dynamic load	75 %[2] FS	For cyclic or oscillating loads, the amplitude should not exceed this load to prevent fatigue failure.

[1] Tests and calibrations performed in COMPRESSION with the transducer mounted on a bearing support with correctly tightened clamping screws.
[2] The dynamic load must be applied to the transducer central thread and not to the external fixing rim.

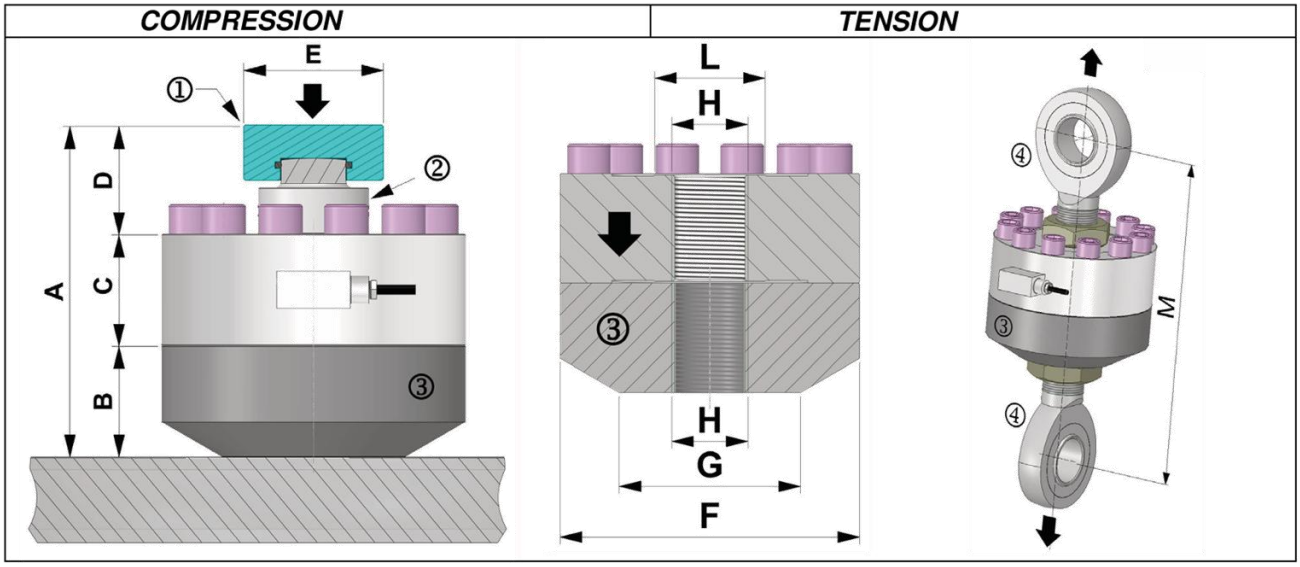
kg calibration on request.
Classifications according to ASTM E74 on request.

DIMENSIONS (mm)



Load	ØA	B	C	ØD	ØE	F	G	n°G	H	T
5 - 50 kN	127	110	35	92	47	M30 x 2	10.5	8	149	7.5
100 - 300 kN	165	138	60	110	62	M42 x 3	17	12	188	20
500 - 1000 kN	230	185	80	147	96	M60 x 3	25	12	254	30

DIMENSIONS WITH APPLICATIONS (mm)

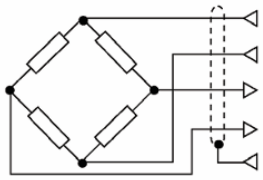


Load	A	B	C	D	E	F	G	H	L	M
5 - 50 kN	108	37	35	36	Ø76	Ø127	Ø100	M30 x 2	Ø47	~200
100 - 300 kN	179	60	60	59	Ø76	Ø165	Ø100	M42 x 3	Ø62	~224
500 – 1000 kN	252	85	80	87	Ø126	Ø230	Ø180	M60 x 3	Ø96	/

Fixing Screws	Steel			
diameter	M8	M10	M16	M24
Tightening torque	40	70	368	460
Resistance class	12.9			
Accessories material: From 5 to 200 kN from 300 to 1000 kN	Stainless Steel RM≥90 kg/mm² Rm≥130 kg/mm²			

WARNING:
Check that the fixing screws and the accessories are correctly tightened.

ELECTRICAL CONNECTIONS

Transducer	OUTPUT	CABLE	MIL7M (*optional*)	DB9M (*optional*)	M12(°) (optional)
	EXCITATION+ EXCITATION - OUTPUT+ OUTPUT- ----------	*Red* *Black* *White* *Yellow* *Shield**	C B A D E	3 4 1 2 5	1 3 2 4 5

PVC 105°C shielded cable Ø 5.2 with 4 tinned Ø 0.35 mm² conductors
Connected to the Body of the Transducer
(°) **OPTION** with M12 output:

- Female 4 poles straight **M12x1** connector complete PVC molded **Cable**, shielded, length:3m

COMPLIANCE AND CERTIFICATION

Protection Rating	IP67	
Compliance	CE, RoHS, REACH	
Calibration	Factory-calibrated in COMPRESSION(1), ISO 17025 calibration available on request	
HS-CODE	9031.80.80	
Certifications	ISO 376	LAT Accredia calibration certificate ISO 376 or ASTM E74 for capacities from 1000 kg to 10000 kg
Certifications (on request)	✓	Accredia traceable calibration report