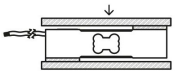
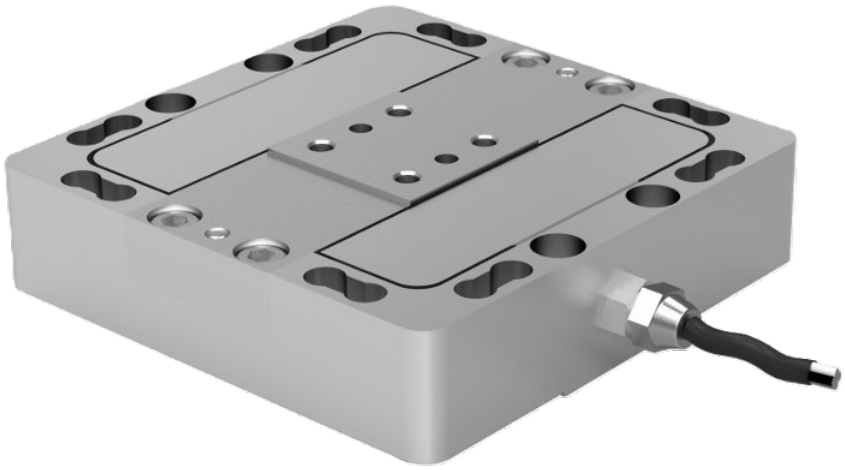
MULTI-AXIS FORCE SENSOR





- COMBINED ERROR ≤ ±0.02%
- ACCURACY 0.5 %
- IP65 PROTECTION RATING

IP65 mV/V

NOMINAL LOAD (FS)

N	kg	ACCURACY	Ex	ISO 17025	Rated Output (mV/V)
50 Aluminum	5	0.5 %	●	(optional)	1 ±0.01%
100 Aluminum	10	0.5 %	●	(optional)	1 ±0.01%
200 Aluminum	20	0.5 %	●	(optional)	1 ±0.01%
500 Aluminum	50	0.5 %	●	(optional)	1 ±0.01%
1 000 Alloy Steel	100	0.5 %	●	(optional)	1 ±0.01%
2 000 Alloy Steel	200	0.5 %	●	(optional)	1 ±0.01%
5 000 Alloy Steel	500	0.5 %	●	(optional)	1 ±0.01%

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TECHNICAL DATA

PRECISION

Rated Output (C_n)	1 mV/V ±0.01 % at FS
Zero Balance	< ±1 mV/V
Combined error	≤ ±0.02 %FS
Non-linearity	≤ ±0.014 %FS
Hysteresis	≤ ±0.014 %FS
Repeatability	-
Creep	≤ ±0.02 %FS (at 30 min FS)
Temperature coefficient of zero	0.002 %FS/°C
Temperature coefficient of sensitivity	0.002 %FS/°C
Compensated temperature range	-10...+40 °C
Operating temperature range	-20...+70 °C
Reference Temperature	23 °C

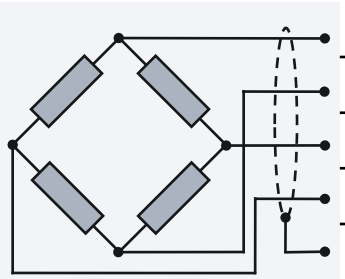
MECHANICAL PROPERTIES

Material	Alloy steel / Aluminum
Deflection at FN	~ 0.4 mm

ELECTRICAL PROPERTIES

Bridge configuration	Full Wheatstone bridge, 4-wire
Input resistance	750±20 Ω
Output resistance	700±5 Ω
Insulation resistance	≥ 5,000 MΩ at 100 V
Recommended excitation voltage	≤ 10 V
Cable diameter	5 mm
Cable length	5 000 mm

ELECTRICAL CONNECTION

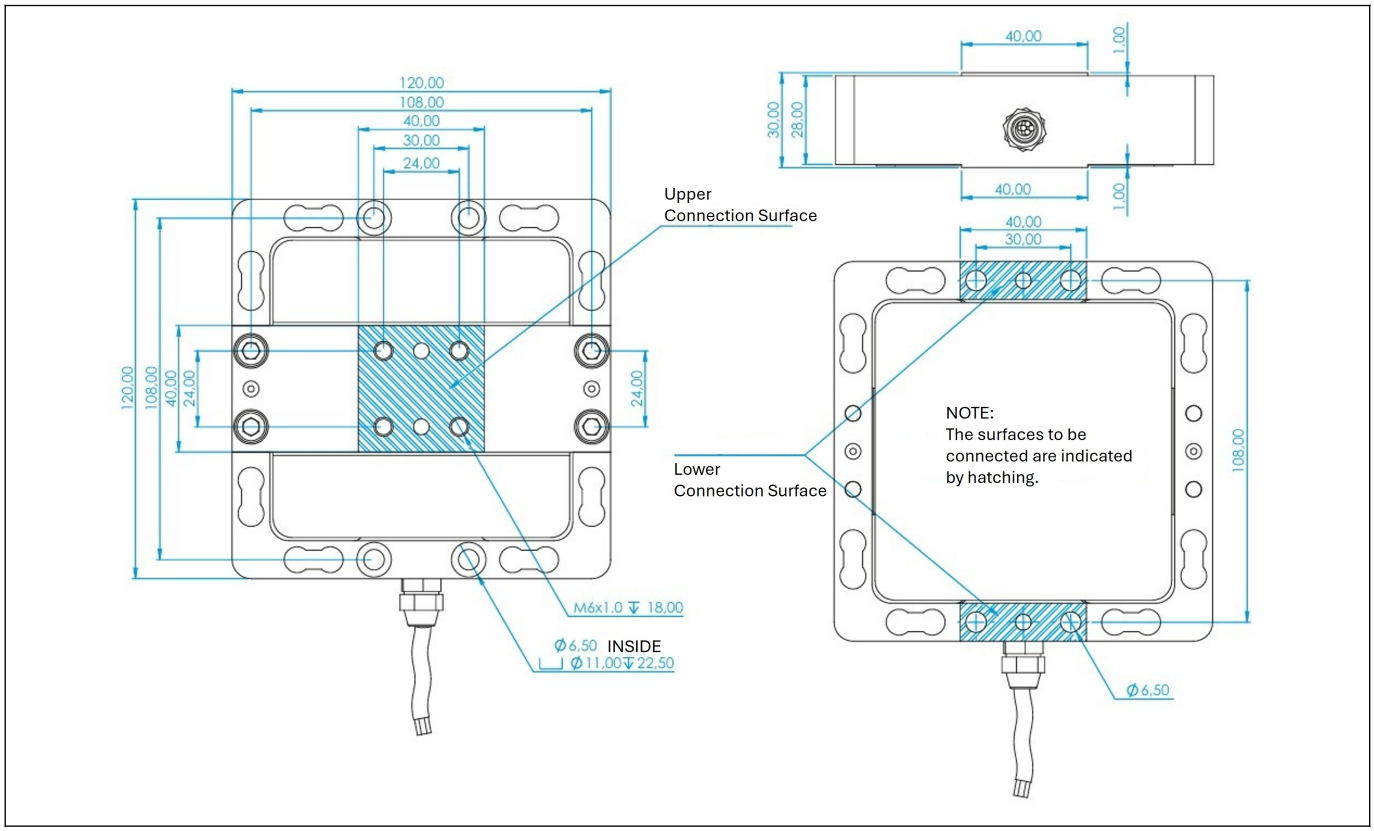


+ EXCITATION	RED
– EXCITATION	BLACK
+ SIGNAL	GREEN
– SIGNAL	WHITE
SHIELD	

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	> 200 %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)



COMPLIANCE AND CERTIFICATION

Protection Rating	IP65 according to IEC 60529
Compliance	CE, RoHS, REACH
Calibration	Factory-calibrated, ISO 17025 calibration available on request
HS-CODE	9031.80.80
Certifications	ATEX II 1G 2D (zone 0-1-2-20-21-22)