

Force Sensor KD191

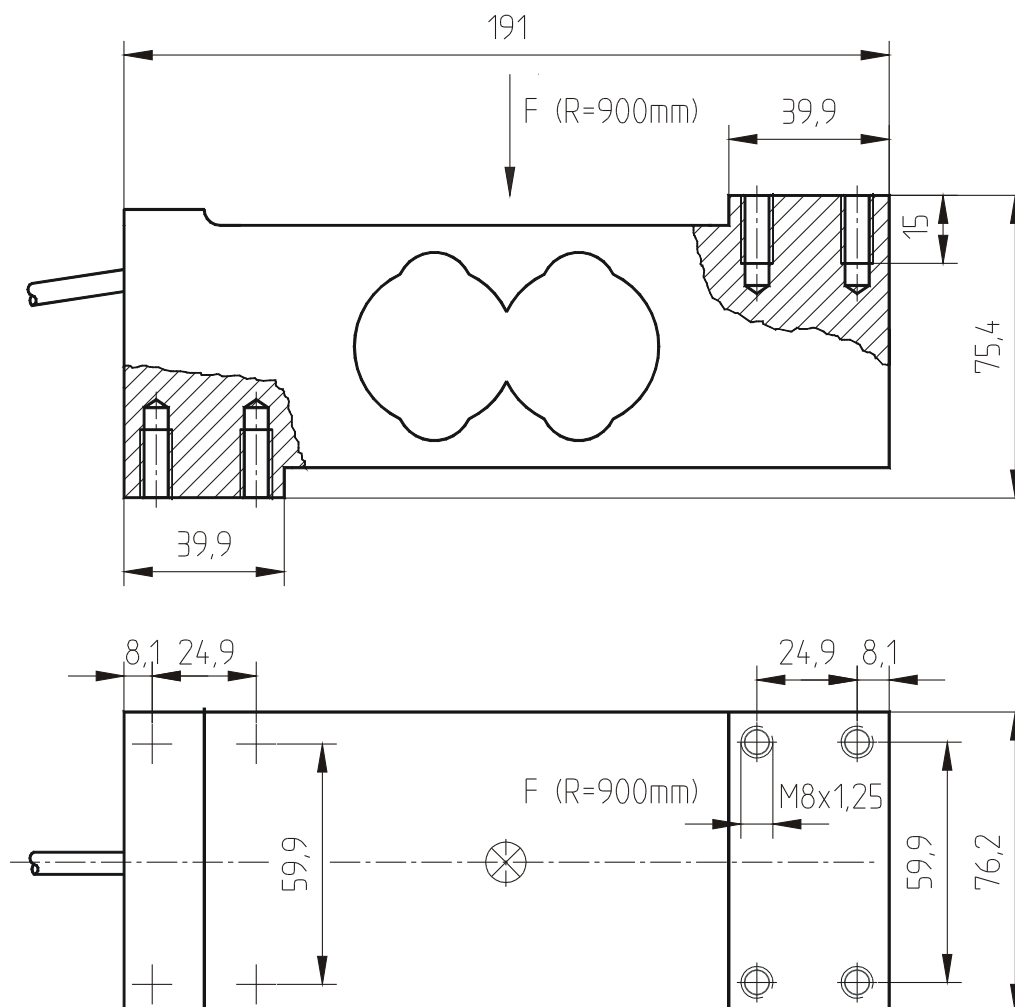
Nominal load ranges (tension/compression) 50kg, 100kg, 200kg, 500kg, 1000kg

The force sensor KD 191 is used in weighing platforms and in test beds. It allows the installation of a platform sized 900 x 900mm (or 600mm x 600mm for the load range 1000kg) for force introduction.

The solid construction allows force transmission over a large surface and incorporates lateral forces and torque without any significant loss of accuracy. The measurement error resulting from an eccentric load of 25% of the nominal load is less than 0.01% of the reference input. This force sensor is ideal for use in industrial test beds and sports medicine.

The force sensor KD 191 conforms to the stringent European requirements for use in trade approved scales. Thanks to a double epoxy resin cover, this force sensor is also able to withstand high humidity. It fulfills the 12-day moisture test according to IEC 68-2-30.

Dimensions





Force sensor KD191

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Technical Data

Force sensor / load cell	Tension / compression		
Construction	Double bending beam for eccentric loads		
Material	Aluminum alloy		
Accuracy classes	CC (0.1%), C3 (0.04%)		
Nominal loads (F _N)	50kg ... 1000kg		
Accuracy class accord. to OIML R60	CC		C3
Maximum scale division value			3000
Minimum scale division value			S _N / 10000
Minimum utilization range			30 % S _N
Combined error	< ±0.05		< ±0.02 % S _N
Zero point return error (30 min)	< ±0.02		< ±0.01 % S _N
Creep error (30 min)	< ±0.05		< ±0.0167 % S _N
Temperature coeff. of the zero signal	< ±0.025		< ±0.0070 % F _N / 5°C
Temp. coeff. of the nominal output	< ±0.025		< ±0.0040 % F _N / 5°C
Operating load	150		% F _N
Breaking load	300		% F _N
Maximum lateral load	100		% F _N
Nominal temperature range	-10...+40		°C
Operating temperature range	-30...+65		°C
Storage temperature range	-40...+70		°C
Nominal output (S _N)	2.0 ± 0.2		mV/V
Zero signal tolerance	±10		% F _N
Max. supply voltage	18		V
Input resistance	390 ± 15		Ohm
Output resistance	350 ± 3.5		Ohm
Insulation resistance	> 5 · 10 ⁹		Ohm
Connection, 6 conductors	3		m

Pin configuration

+U _s	positive bridge supply	red
-U _s	negative bridge supply	black
+U _D	positive bridge output	green
-U _D	negative bridge output	white
+U _F	positive sensor wire	blue
-U _F	negative sensor wire	brown