

Model 1211/1291 Compression Force Transducers



Description

Model 1211/1291 of ring shape force transducer is developed for compressive force measurements. This model is typically used as a force monitoring washer.

Thanks to the unique design, the 12-series offer a low profile design for high capacity applications. The capacity of model 1211/1291 ranges up to 100kN.

The model 1211 is made from mild steel, while the model 1291 from 17-4PH stainless steel which is suitable for corrosive environment application.



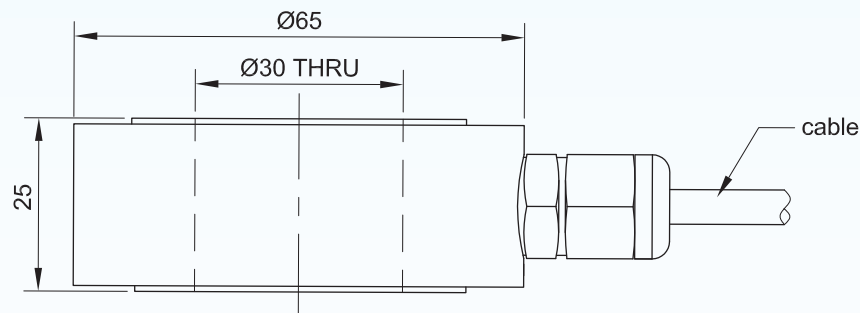
Features

- low profile
- capacity from 30kN to 100kN
- sensor body material: mild steel (1211) or 17-4ph SS (1291)
- compact and robust design
- environment protection up to IP65

Applications

- bolt tightening monitoring
- clamping forces monitoring
- compressive force measuring systems

Dimensions



Note: All dimensions are in mm.

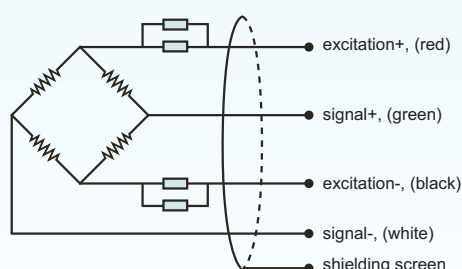
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Technical Data

Parameter	Units	Specifications
capacity	kN	30, 50, 70, 100
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	≥ 1
zero unbalance	%fso	± 2
combined error	%fs	$\leq \pm 1$
creep error (30 min.)	%fs	$\leq \pm 0.1$
excitation	Vdc	5, ..., 10
max. excitation voltage	Vdc	15
input resistance	Ω	700 ± 10
output resistance	Ω	700 ± 7
insulation resistance	M Ω	$\geq 5000 @ 50Vdc$
operating temp. range	$^{\circ}C$	-20 ~ +80
storage temp. range	$^{\circ}C$	-20 ~ +80
compensated temp. range	$^{\circ}C$	-10 ~ +60
temp. coefficient of span	%fso/ $^{\circ}C$	$\leq \pm 0.005$
temp. coefficient of zero	%fso/ $^{\circ}C$	$\leq \pm 0.005$
sensor body material		mild steel (model 1211), 17-4PH stainless steel (model 1291)
mechanical interface		refer to the dimensions on the datasheets
electrical interface		$\Phi 5$, 4-conductor shielded, PVC jacket, 5m length
environment protection		IP65
unit weight	g	~500

Electrical Connections



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Ordering Information

position (pos.) 1: model							
1211 1291							
pos. 2: capacity							
30kN 50kN 70kN 100kN							
pos. 3: output sensitivity							
1mV/V							
pos. 4: combined error							
1%fs							
pos. 5: bridge resistance							
700Ω (Rin = 700±10Ω, Rout = 700±10Ω)							
pos. 6: electrical interface							
5/4/PVC/L = Φ5mm, 4-core shielded, PVC cable, cable length = 5m(#) (#): Cable length can be customized on request.							
pos. 7: environment protection							
IP65							
pos. 8: customized spec's							
“(*)” is necessary only if any customized parameter is required, otherwise it is neglectable.							
pos.1	pos. 2	pos. 3	pos. 4	pos. 5	pos. 6	pos. 7	pos. 8

Examples of Ordering Code

- standard product:
1291-50kN-1mV/V-1%fs-700Ω-5/4/PVC/5-IP65
- customized product:
1291-70kN-1mV/V-1%fs-1000Ω-5/4/PVC/5-IP65-(*)
(*): Customized bridge resistance = 1000Ω.

The listed dimensions, specifications, and ordering information are subject to change without prior notice.

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