

Model 2912 Force Transducers

Features

- robust construction made of mild steel
- small azimuth angle error, perfect for in-line applications
- for tension and compression applications
- capacity from 5kN to 300kN
- non-linearity: 0.1%fs

Applications

- measuring tensile and compressive force
- hopper and crane scales

Description

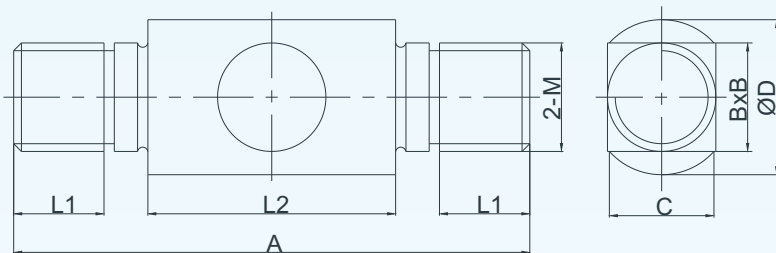
2912 rod end in-line tension and compression force transducers are made of mild steel. These force sensors feature small azimuth angle error, which makes them ideal solutions for in-line applications.

The capacity of model 2912 ranges from 5kN to 300kN, with its non-linearity of 0.1%fs (fs =full scale). These products can be sealed to a protection level of IP67.

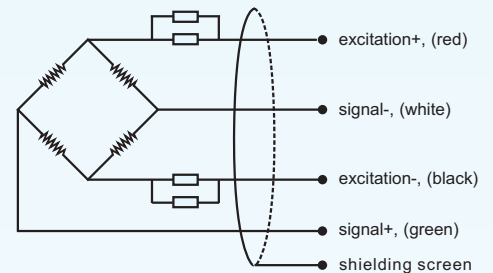


Dimensions

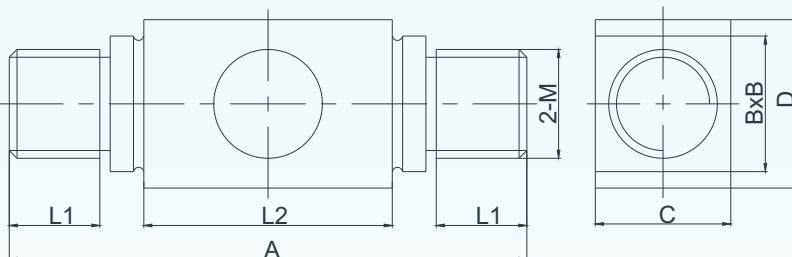
For capacities from 5kN to 100kN:



Electrical Connection



For capacities of 200kN and 300kN:



capacity(kN)	A	B	C	D	L1	L2	2-M
5, 10, 25	140	35x35	35	50	30	60	M35x3
50	180	36x36	36	51	40	70	M36x3
100	206	42x42	42	60	46	78	M42x3
200	250	65x65	65	92	50	94	M52x3
300	270	80x80	90	95	56	100	M64x3

Note: All dimensions in mm.

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Technical Data

Parameter	Units	Specifications
capacity	kN	5, 10, 25, 50, 100, 200, 300
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	1.5 (for capacity \leq 200kN), 1.9 (for capacity = 300kN)
zero unbalance	%fso	$\leq \pm 1$
non-linearity	%fs	$\leq \pm 0.1$
hysteresis	%fs	$\leq \pm 0.1$
repeatability	%fs	$\leq \pm 0.05$
creep error (10 min.)	%fs	$\leq \pm 0.1$
excitation (supply voltage)	Vdc	10 (typical), 6, ..., 15
max. excitation voltage	Vdc	16
input resistance	Ω	760 \pm 20 (standard), 1060 \pm 30
output resistance	Ω	702 \pm 3 (standard), 1002 \pm 3
insulation resistance	M Ω	\geq 5000 @50Vdc
storage temp. range	$^{\circ}$ C	-35 ~ +80
operating temp. range	$^{\circ}$ C	-20 ~ +60
compensated temp. range	$^{\circ}$ C	-10 ~ +40
temp. coefficient of zero	%fso/ $^{\circ}$ C	$\leq \pm 0.003$
temp. coefficient of sensitivity	%fso/ $^{\circ}$ C	$\leq \pm 0.005$
load cell body material		mild steel
sealing		potted + cover
mechanical interface		refer to the dimensions on the datasheets
electrical interface		Φ 5mm, 4-conductor shielded cable, PVC jacket, 12m cable length
environment protection		IP66 (standard), IP67
unit weight	kg	Capacity dependent, to be confirmed when order.

The listed specifications are subject to change without prior notice.

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Ordering Information

position (pos.) 1: model											
2912											
pos. 2: capacities											
5kN		100kN		10kN		200kN		25kN		300kN	
50kN											
pos. 3: output sensitivity											
1.5mV/V (for capacity ≤ 200kN)					1.9mV/V (for capacity = 300kN)						
pos. 4: non-linearity or accuracy class											
0.1%fs											
pos. 5: bridge resistance											
700Ω (R _{in} = 7600±20Ω, R _{out} = 702±3Ω) (standard)					1000Ω (R _{in} = 1060±30Ω, R _{out} = 1002±3Ω)						
pos. 6: mechanical interface											
Refer to the dimensions on the datasheets. Pos. 6 can be omitted from the ordering code.											
pos. 7: electrical interface											
5/4/PVC/12 = Φ5mm, 4-conductors shielded, PVC, length = 12m*											
pos. 8: environment protection											
IP66 (standard) IP67											
pos. 9: accessories for installation											
N = NA**. In case of "NA", pos.9 can be omitted.											
pos. 10: 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	pos. 9	pos. 10		

*: This value can also be a customized value.

** : NA = not available or not applicable

Examples of Ordering Code

- standard load cell:
2912-50kN-1.5mV/V-0.1%fs-700Ω-5/4/PVC/1-IP66
 - customized load cell:
2912-300kN-1.9mV/V-0.1%fs-1000Ω-5/4/PVC/1-IP66-(*)
- (*): Customized bridge resistance = 1000Ω.