

# Model 1212/1292 Compression Force Transmitters

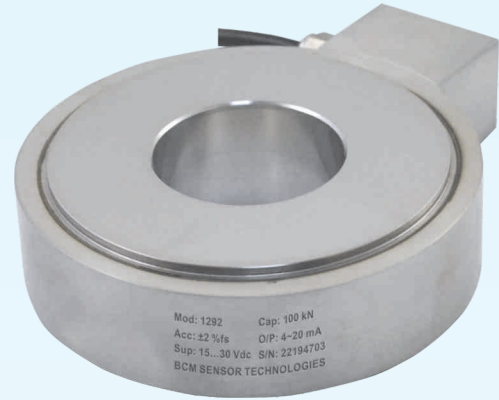


## Description

Model 1212/1292 of ring shape is developed from model 1211/1291 force transducers to function as transmitters for compressive force measurements. This model is typically used either as a force monitoring washer or a compression-force transmitter, both of which can have conditioned 4~20mA or 1~5Vdc output signal.

Thanks to the unique design, the 12-series offer a low profile design for high capacity applications. The capacity of model 1212/1292 ranges up to 100kN. By means of 4~20mA output signal, 1212/1292 force transmitters can be easily integrated into existing automation system in order to set up a wireless monitoring system like Model WMS2000 Wireless Monitoring System from BCM SENSOR.

The model 1212 is made from mild steel, while the model 1292 from 17-4PH stainless steel which is suitable for corrosive environment application.



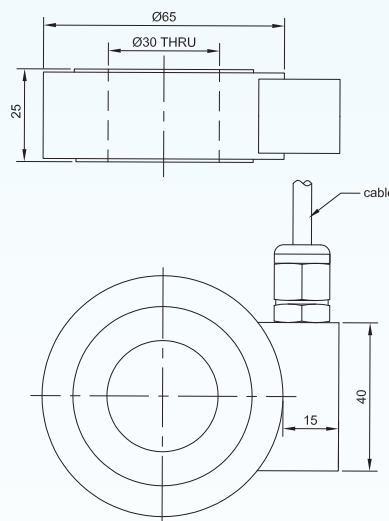
## Features

- low profile
- capacity from 30kN to 100kN
- 4~20mA or 1~5Vdc output
- 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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# Model 1212/1292

## Compression Force Transmitters



### Technical Data

Parameter		Units	Specifications
capacity		kN	30, 50, 70, 100
safe load limit		%fs	150
ultimate overload		%fs	200
output signal			4~20mA (standard), 1~5V
accuracy		%fs	better than $\pm 1$ , better than $\pm 2$ (standard)
creep error (30 min.)		%fs	$\leq \pm 0.1$
supply voltage (Vs)		Vdc	15, ..., 30
load resistance	current loop	$\Omega$	$\leq (Vs - 15V) / 0.02A - R_{cable}$
	voltage output	k $\Omega$	$\geq 5$
insulation resistance		M $\Omega$	$\geq 5000 @50Vdc$
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 1212), 17-4PH stainless steel (model 1292)
mechanical interface			refer to the dimensions on the datasheets
electrical interface			$\Phi 5mm$ , shielded PVC jacket, 5m length
environment protection			IP65
unit weight		g	~600

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## Ordering Information

<b>position (pos.) 1: model</b>						
1212 1292						
<b>pos. 2: capacity</b>						
0/30kN 0/50kN 0/70kN 0/100kN						
<b>pos. 3: output signal</b>						
4/20mA (standard) 1/5V						
<b>pos. 4: accuracy</b>						
1%fs 2%fs (standard)						
<b>pos. 5: electrical interface</b>						
5/2(^)/PVC/L = $\Phi$ 5mm, 2-core(^) shielded, PVC cable, cable length = 5m(#) (^): 2-core: current loop; 3-core: voltage output. (#): Cable length can be customized on request.						
<b>pos. 6: environment protection</b>						
IP65						
<b>pos. 7: customized spec's</b>						
"(*)" is necessary only if any customized parameter is required, otherwise it is neglectable.						
<b>pos.1</b>	<b>pos. 2</b>	<b>pos. 3</b>	<b>pos. 4</b>	<b>pos. 5</b>	<b>pos. 6</b>	<b>pos. 7</b>

### Examples of Ordering Code

- standard product:

1292-0/50kN-4/20mA-2%fs-5/2/PVC/5-IP65

- customized product:

1292-10/70kN-1/5V-1%fs-5/3/PVC/10-IP65-(\*)

(\*): Customized measuring range = 10~70kN, i.e., 10kN corresponding to 1V output while 70kN corresponding to 5V output.

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

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