

# Model 1190

## Miniature Compression Force Transducers

### Description

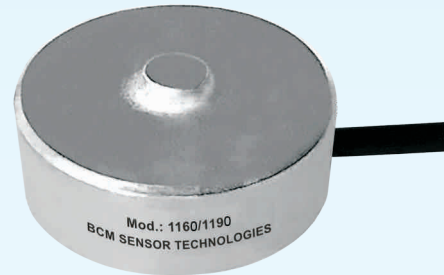
Model 1190 is a low-profile disc-type transducer which is designed to measure compression force in the limited space. The size of this model can be down to  $\varnothing 9.5\text{mm} \times 3\text{mm}$ , so it is called a miniature disc-type transducer.

The 1190 miniature disc-type transducer is widely used in automatic filling lines or testing lines of electronics. This transducer finds also its application in both retrofitment of existing machines and other systems where a compression force has to be measured within a limited space.

The transducer body is made from 17-4PH stainless steel. And the IP rating of 1190 is IP65.

In addition, the 1190 transducer is integrated with TEDS (transducer electronic data sheet), by which it can be easily re-calibrated on site without using conventional calibration facility.

Thanks to advanced strain gauge technology from BCM SENSOR, the 1190 transducers can deliver stable and accurate measuring results.



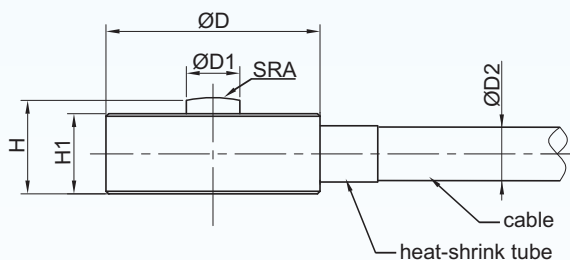
### Features

- miniature and robust design
- TEDS available
- accuracy of 1%fs
- IP65 rating

### Applications

- automatic filling lines
- testing lines of electronics
- retro-fitment of existing machines or systems
- industrial process control

### Dimensions



Capacity (N)	ØD	ØD1	ØD2	SRA	H	H1
50, 100, 200	9.5	2.2	1.6	5	3	2.2
300, 500, 1000	13	3.0	2	15	3.8	3.0
2000, 3000, 5000	19	6.0	2	20	6.5	5.7

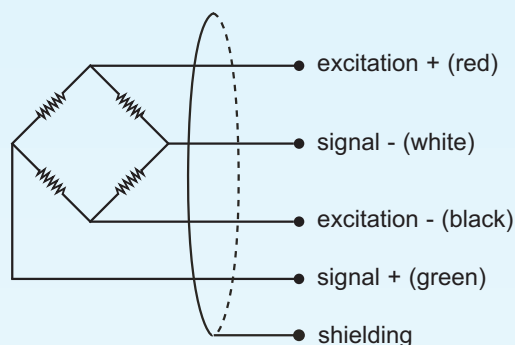
Note: All dimensions are in mm.

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### Electrical Connection



### Technical Data

Parameters	Units	Specifications
capacity	N	50, 100, 200, 300, 500, 1000, 2000, 3000, 5000
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	≥ 1
zero unbalance	%fs	≤ ±2
accuracy	%fs	± 1
creep error (30min)	%fs	≤ ±0.1
excitation (constant voltage source)	Vdc	2.5
max. excitation voltage	Vdc	5
input resistance	Ω	350±10
output resistance	Ω	350±5
insulation resistance	MΩ	≥ 5000 @100Vdc
storage temp. range	°C	-35 ~ +80
operating temp. range	°C	-20 ~ +80
compensated temp. range	°C	-10 ~ +60
temp. coefficient of sensitivity	%fso/°C	≤ ±0.01
temp. coefficient of zero	%fso/°C	≤ ±0.01
body material		17-4PH stainless steel
sealing		welded
mechanical interface		refer to its dimensions
electrical interface		Φ1.6mm or Φ2mm, 4-core shielded, PVC jacket, 0.5m cable length
environment protection		IP65
unit weight (without cable)	g	~20, ..., 40 according to capacity

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### Ordering Information

<b>position (pos.) 1: model</b>								
1190								
<b>pos. 2: capacities</b>								
50N			300N			2000N		
100N			500N			3000N		
200N			1000N			5000N		
<b>pos. 3: output sensitivity</b>								
1mV/V								
<b>pos. 4: accuracy</b>								
1%fs								
<b>pos. 5: bridge resistance</b>								
350Ω								
<b>pos. 6: mechanical interface</b>								
not applicable								
<b>pos. 7: electrical interface</b>								
2/4/PVC/0.5 = Φ1.6mm or Φ2mm, 4-core shielded, PVC, cable length = 0.5m(#) (#): Cable length can be customized on request.								
<b>pos. 8: environment protection</b>								
IP65								
<b>pos. 9: customized specifications</b>								
“(*)” is necessary only if any customized specification 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>	<b>pos. 8</b>	<b>pos. 9</b>

### Examples of Ordering Code

- standard transducer:  
1190-100N-1mV/V-1%fs-350Ω-2/4/PVC/0.5-IP65
- customized transducer:  
1190-100N-1mV/V-1%fs-350Ω-2/4/PVC/1-IP65-(\*)  
(\* ) The customized specification is “cable length = 1m”.

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

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