

# Model 1531

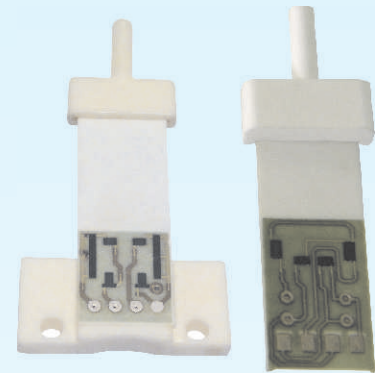
## Single Bending Beam Load Cells

### Features

- made of thick film ceramic technology
- single bending beam working principle
- low profile
- capacity range from 0.1kg to 50kg
- non-linearity of 0.02%fs
- excellent hysteresis, repeatability and creep characteristics
- low temperature effect

### Applications

- tensile force measurement



type 1

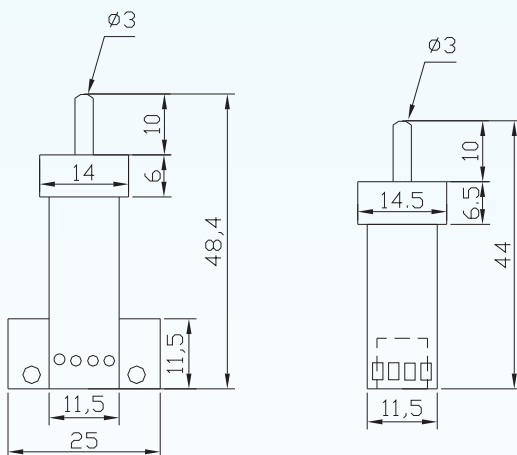
type 2

### Description

1531 single bending beam load cells are made of ceramic thick-film technology. These products feature low profile, good non-linearity, hysteresis, repeatability and creep characteristics.

1531 load cells are available with capacities from 0.1 kg to 50 kg. The non-linearity is 0.02%fs (fs = full scale). These load cells are designed to measure tensile forces and are widely used in automation process control systems.

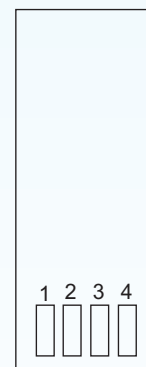
### Dimensions



type 1

type 2

### Electrical Connections



- 1: sig.+
- 2: exc.-
- 3: sig.-
- 4: exc.+

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## Single Bending Beam Load Cells



### Technical Data

parameters	units	specifications
capacity	kg	0.1, 0.2, 0.3, 0.5, 0.7, 1, 2, 3, 5, 7, 10, 20, 30, 50
safe load limit	%fs	150
ultimate overload	%fs	200
output sensitivity at fs	mV/V	3.0 ± 0.1
zero unbalance	mV	± 0.5
non-linearity	%fs	± 0.02
hysteresis	%fs	± 0.02
repeatability	%fs	± 0.02
creep error (30 min.)	%fs	± 0.02
excitation	Vdc	5, ..., 25
max. excitation voltage	Vdc	30
input resistance	kΩ	11 ± 2
output resistance	kΩ	9.5 ± 2
insulation resistance	MΩ	≥100 @50 Vdc
storage temp. range	°C	-25 ~ +85
operating temp. range	°C	-25 ~ +85
compensated temp. range	°C	-20 ~ +55
temp. coefficient of ZERO	%fs/°C	± 0.002
temp. coefficient of SPAN	%fs/°C	± 0.002
load cell body material		ceramic (96% Al <sub>2</sub> O <sub>3</sub> )
mechanical interface		refer to the dimensions on the datasheets
electrical interface		4 solder pads
environment protection		IP 65
unit weight	g	~ 1

The listed specifications are subject to change without prior notice.

**BCM SENSOR TECHNOLOGIES BVBA**

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## Single Bending Beam Load Cells



### Ordering Information

<b>position (pos.) 1: model</b>									
1531 (type 1): made from ceramic (96% Al <sub>2</sub> O <sub>3</sub> ) 1531 (type 2): made from ceramic (96% Al <sub>2</sub> O <sub>3</sub> )									
<b>pos. 2: capacities</b>									
0.1 kg	1 kg	10 kg							
0.2 kg	2 kg	20 kg							
0.3 kg	3 kg	30 kg							
0.5 kg	5 kg	50 kg							
0.7 kg	7 kg	70 kg							
<b>pos. 3: output sensitivity</b>									
3 mV/V									
<b>pos. 4: non-linearity or accuracy class</b>									
0.02 %/fs									
<b>pos. 5: bridge resistance</b>									
11 kΩ (R <sub>in</sub> = 11 kΩ, R <sub>out</sub> = 9.5 kΩ)									
<b>pos. 6: threads (fixed end)</b>									
2xΦ2 (for type1) N: none (for type2)									
<b>pos. 7: electrical interface</b>									
SP: 4 solder pads									
<b>pos. 8: environment protection</b>									
IP 65									
<b>pos. 9: accessories for installation</b>									
NA**. In case of "NA", pos.9 can be omitted.									
<b>pos. 10: customized spec's</b>									
<p>When any customized spec's are required, the customer needs to add "C" as the last parameter in the ordering code, and specifies the wished spec's on his order clearly.</p> <p>The customized spec's needs to be confirmed in advance by BCM's sales representative.</p> <p>Code "C" can be omitted if no customized spec's are required.</p>									
<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>	<b>pos. 10</b>

\*: This value can also be a customized value.

\*\* : NA = not available or not applicable

**example:** 1531(type 2)-30kg-3mV/V-0.02%/fs-11kΩ-N-SP-IP65-C



ISO9001 Certified Company

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