Model 1663
Single Point Load Cells

BCM

SENSOR

Features

- parallel bending beam
- capacity: 20, …, 200 kg
- accuracy: 0.02 %fs
- recommended platform size: 350 X 400 mm
- aluminum construction with surface anodized
- environment protection class: IP 65

type A

Applications

- retail scales
- bench scales
- counting scales

type B

Description

The "single point" load cells are made of parallel bending beam working principle. Only one unit is sufficient to build up a scale. These load cells are moment insensitive. That is, when installed in a platform scale, it reads the same regardless of the position of the load applied to the upper platform.

Model 1663 load cells are designed to this "single point" type and are manufactured from high quality aluminum alloy of aviation standard. 1663 load cells can be used to measure loads ranging from 20 kg to 200 kg with the measuring accuracy of 0.02%fs (fs = full scale).

1663 load cells are widely used to manufacture retail, bench, and counting scales.
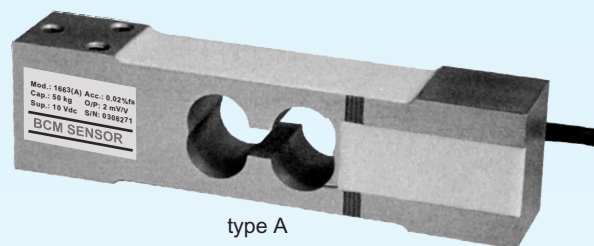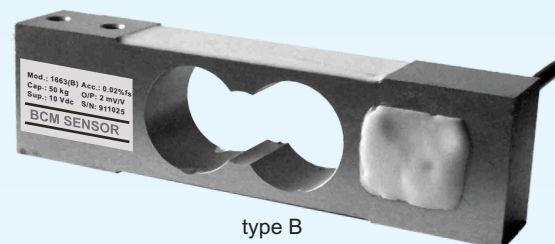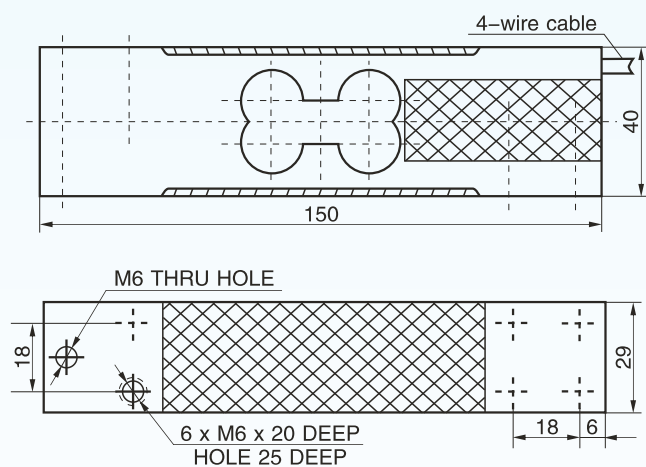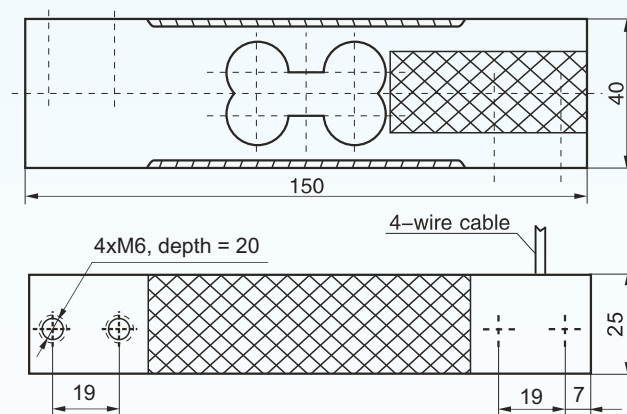
## Dimensions

type A

type B

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Technical Data

parameters		units	specifications
capacity	type A	kg	30, 50, 70, 100, 200
	type B	kg	20, 30, 50, 70, 100
safe load limit		%fs	120
ultimate overload		%fs	150
output sensitivity at fs		mV/V	≥ 1.8 (typically 2mV/V)
zero unbalance		%fso	± 1.5
non-linearity		%fs	± 0.02
hysteresis		%fs	± 0.02
repeatability		%fs	± 0.02
creep error (30 min.)		%fs	± 0.02
excitation (supply voltage)		Vdc	10 (recommended), 9 ..., 12
max. excitation voltage		Vdc	15
input resistance		Ω	410 ± 10
output resistance		Ω	350 ± 10
insulation resistance		MΩ	≥ 5000@50 Vdc
storage temp. range		°C	-35 ~ +80
operating temp. range		°C	-20 ~ +65
compensated temp. range		°C	-10 ~ +40
temp. coefficient of sensitivity		%fs/°C	± 0.002
temp. coefficient of zero		%fs/°C	± 0.003
load cell body material			aluminum alloy
sealing			potted
mechanical interface			refer to the dimensions on the datasheets
electrical interface			Φ5 mm, 4-conductor shielded, PVC jacket, 1 m length
environment protection			IP 65
unit weight		g	~ 400

Electrical Connection

excitation+, (red)

signal-, (white)

excitation-, (black)

signal+, (green)

shielding screen
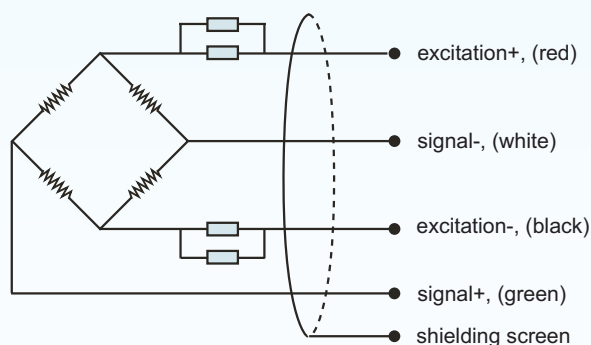
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Ordering Information

position (pos.) 1: model									
1663(A): made from aluminum alloy 1663(B): made from aluminum alloy									
	pos. 2: capacities								
	20 kg (only for type B) 100 kg 30 kg 200 kg (only for type A) 50 kg 70 kg								
		pos. 3: output sensitivity							
		2 mV/V							
			pos. 4: non-linearity or accuracy class						
			0.02 %fs						
				pos. 5: bridge resistance					
				350 Ω (Rin = 410±10Ω, Rout = 350±10 Ω)					
					pos. 6: threads (live end/fixed end)				
					3xM6/4xM6 : for 1663(A), three M6 threads at the live end, four M6 threads at the fixed end 2xM6/2xM6 : for 1663(B), two M6 threads at the live end, two M6 threads at the fixed end				
						pos. 7: electrical interface			
						cable, code = diameter(Φ)/number of conductors/cable jacket/cable length 5/4/PVC/1 = Φ5 mm, 4-conductors shielded, PVC, length = 1* m			
							pos. 8: environment protection		
							IP 65		
								pos. 9: accessories for installation	
								NA**. In case of "NA", pos.9 can be omitted.	
									pos. 10: customized spec's
									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. The customized spec's needs to be confirmed in advance by BCM's sales representative. Code "C" can be omitted if no customized spec's are required.
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

example: 1663(A)-50kg-2mV/V-0.02%fs-350Ω-3xM6/4xM6-5/4/PVC/1-IP65-C

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