

# Type BM8D Load Cell



## Short description

- Stainless steel shear beam load cell (150kg and 300 kg are bending beam load cells)
- Hermetically sealed IP68
- Suitable for floor scales, vehicle-test line, hopper scales and other electronic weighing devices
- High accuracy
- Wide range of capacities



 test certificate no. TC7869 Revision 2  
C of C no R60/2000-NL1-12.11

 Certificate no. 10-056A1

## Available models

| Capacity | Accuracy    | Full article description  |
|----------|-------------|---------------------------|
| 150kg    | C3          | BM8D-C3-150kg-6B-G1       |
| 300kg    | C3          | BM8D-C3-300kg-6B-G1       |
| 500kg    | C3/C4/C5/C6 | BM8D-C3/C4/C5/C6-500kg-6B |
| 1t       | C3/C4/C5/C6 | BM8D-C3/C4/C5/C6-1t-6B-SC |
| 1.5t     | C3/C4/C5/C6 | BM8D-C3/C4/C5/C6-1.5t-6B  |
| 2t       | C3/C4/C5/C6 | BM8D-C3/C4/C5/C6-2t-6B-SC |
| 2.5t     | C3/C4/C5/C6 | BM8D-C3/C4/C5/C6-2.5t-6B  |
| 3t       | C3/C4/C5    | BM8D-C3/C4/C5-3t-6B       |
| 5t       | C3/C4/C5    | BM8D-C3/C4/C5-5t-6B       |
| 7.5t     | C3/C4/C5    | BM8D-C3/C4/C5-7.5t-6B     |
| 10t      | C3/C4/C5    | BM8D-C3/C4/C5-10t-6B      |

Specifications and dimensions are subject to change without notice and do not constitute any liability whatsoever.

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## Detailed specifications BM8D

|                                        |                                         |                                                        |                                    |                |                        |
|----------------------------------------|-----------------------------------------|--------------------------------------------------------|------------------------------------|----------------|------------------------|
| Accuracy class                         |                                         | OIML R60 C3                                            | OIML R60 C4                        | OIML R60 C5    | OIML R60 C6            |
| Output sensitivity ( = FS )            | mV/V                                    | 2.0 ± 0.04                                             |                                    | 3.0 ± 0.08     |                        |
| Maximum capacity ( E <sub>max</sub> )  | t                                       | 0.15, 0.3,<br>0.5, 1, 1.5, 2,<br>2.5, 3, 5, 7.5,<br>10 | 0.5, 1, 1.5, 2, 2.5, 3, 5, 7.5, 10 |                | 0.5, 1, 1.5,<br>2, 2.5 |
| Max.number of load cell intervals      | n <sub>LC</sub>                         | 3000                                                   | 4000                               | 5000           | 6000                   |
| Ratio of min. LC verification interval | Y = E <sub>max</sub> / v <sub>min</sub> | 10000                                                  | 15000                              | 20000          | 20000                  |
| Combined Error                         | %FS                                     | ≤± 0.0230                                              | ≤± 0.0175                          | ≤± 0.0140      | ≤± 0.0116              |
| Minimum dead load                      | Of E <sub>max</sub>                     | 0%                                                     |                                    |                |                        |
| Safe overload                          | of E <sub>max</sub>                     | 150 %                                                  |                                    |                |                        |
| Ultimate overload                      | of E <sub>max</sub>                     | 300 %                                                  |                                    |                |                        |
| Zero balance                           | of FS                                   | < ± 1.0 %                                              |                                    |                |                        |
| Excitation, recommended voltage        | V                                       | 5 ~ 12                                                 |                                    |                |                        |
| Excitation maximum                     | V                                       | 18                                                     |                                    |                |                        |
| Input resistance                       | Ω                                       | 350 ± 3.5                                              |                                    |                |                        |
| Output resistance                      | Ω                                       | 350 ± 3.5                                              |                                    |                |                        |
| Insulation resistance                  | MΩ                                      | ≥5000 ( at 50VDC )                                     |                                    |                |                        |
| Compensated temperature                | °C                                      | -10 ~+40                                               |                                    |                |                        |
| Operating temperature                  | °C                                      | -35 ~ +65                                              |                                    |                |                        |
| Storage temperature                    | °C                                      | -40 ~ +75                                              |                                    |                |                        |
| Element material                       |                                         | Stainless steel                                        |                                    |                |                        |
| Ingress Protection (acc. to EN 60529)  |                                         | IP68                                                   |                                    |                |                        |
| Recommended torque on fixation         | Nm                                      | M12: 75                                                | M20:450                            | M24:750        |                        |
| ATEX classification (optional)         |                                         | II1G Ex ia II1C T4                                     | II1D Ex iaD 20 T73°C               | II3G nL IIC T4 |                        |

## Wiring

### Wiring:

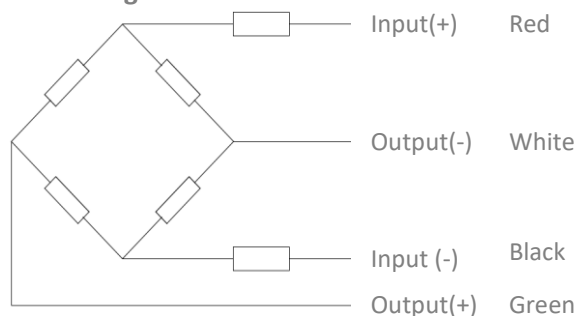
shielded, 4 conductor cable.

Cable diameter: Ø 5mm.

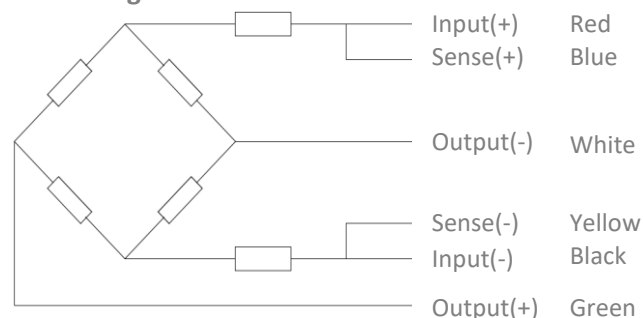
Standard cable length: 6m.

Shield not connected to element.

### 4-wire diagram



### 6-wire diagram



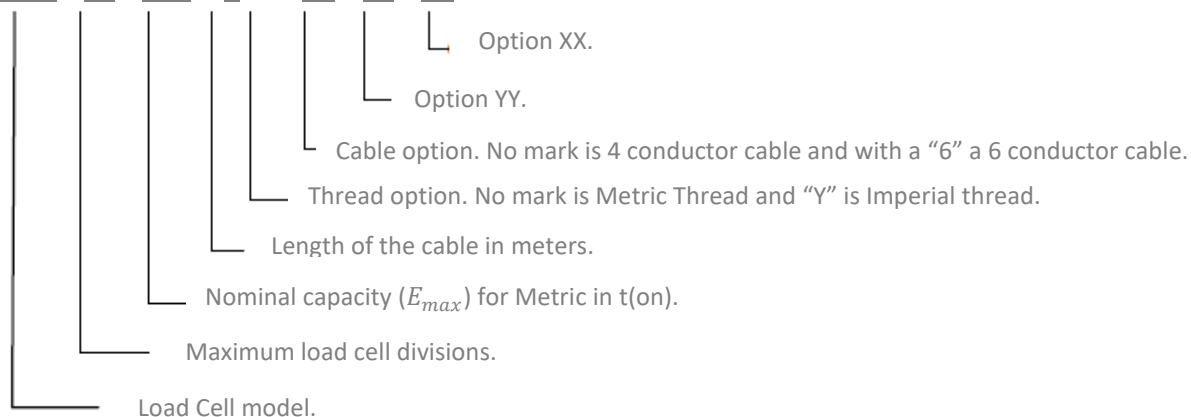
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## Ordering Info:

**BM8D – C3 – 1.0t – 4 – – BX – YY – XX**



| Options<br>Capacity | YY            |               |               | XX                                                        |  |
|---------------------|---------------|---------------|---------------|-----------------------------------------------------------|--|
|                     | G1 (2mV/V-SC) | SC (3mV/V-SC) | None(3mV/V)   | W6(“T” end)                                               |  |
| 0.15t               | Standard      | Not available | Not available | Option only available<br>in combination with<br>G1 option |  |
| 0.3t                |               |               |               |                                                           |  |
| 0.5t                |               |               |               |                                                           |  |
| 1t                  | Option        | Option        | Standard      |                                                           |  |
| 1.5t                |               | Standard      | Option        |                                                           |  |
| 2t                  |               | Option        | Standard      |                                                           |  |
| 2.5t                |               | Standard      | Option        |                                                           |  |
| 3t                  |               | Option        | Standard      |                                                           |  |
| 5t                  |               |               |               |                                                           |  |
| 7.5t                |               |               |               |                                                           |  |
| 10t                 |               |               | Not available |                                                           |  |

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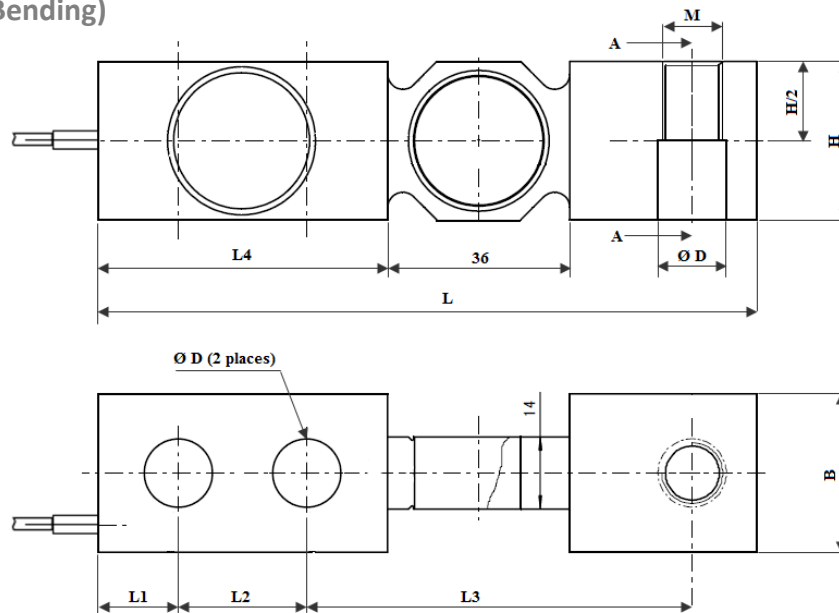
3/5

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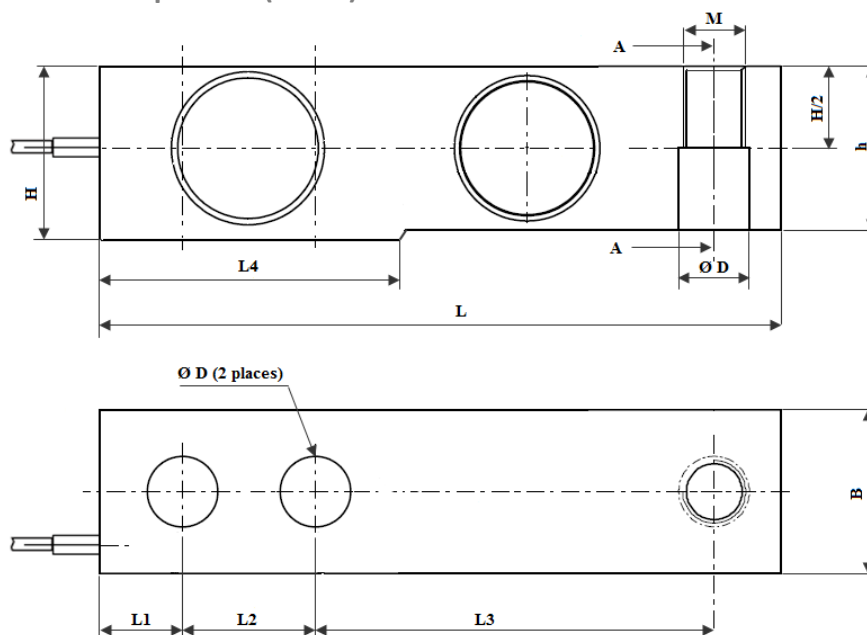
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Dimensions in mm

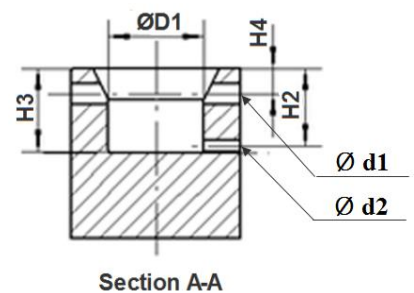
150 – 300kg (Bending)



Other capacities (Shear)



Option W6  
dimensions loading hole

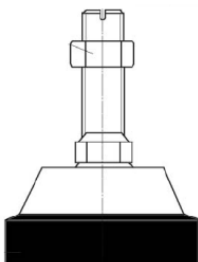
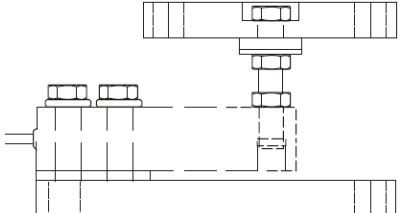
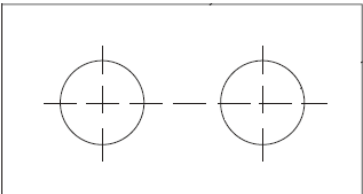
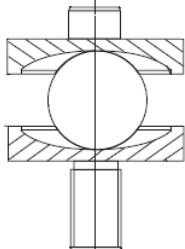
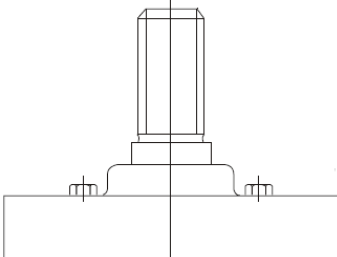
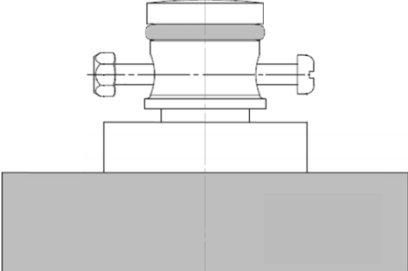


| Dimension Capacity | L   | L1   | L2   | L3    | L4    | B    | H    | h    | ØD   | Ø D1 | Ø d1 | Ø d2 | H2   | H3   | H4  | M   |
|--------------------|-----|------|------|-------|-------|------|------|------|------|------|------|------|------|------|-----|-----|
| 0.15t - 0.3t       | 130 | 15.7 | 25.4 | 76.2  | 57.1  | 31.3 | 31.3 | -    | 13.5 | 18   | 4    | 2    | 14.5 | 15.8 | 4.8 | M12 |
| 0.5t               | 130 | 15.7 | 25.4 | 76.2  | 57.1  | 31.3 | 31.3 | 24.8 | 13.5 | 18   | 4    | 2    | 14.5 | 15.8 | 4.8 | M12 |
| 1t                 | 130 | 15.7 | 25.4 | 76.2  | 57.1  | 31.3 | 31.3 | 26.0 | 13.5 | 18   | 4    | 2    | 14.5 | 15.8 | 4.8 | M12 |
| 1.5t - 2t          | 130 | 15.7 | 25.4 | 76.2  | 57.1  | 31.3 | 31.3 | 28.0 | 13.5 | 18   | 4    | 2    | 14.5 | 15.8 | 4.8 | M12 |
| 2.5t - 5t          | 171 | 19   | 38.1 | 95.2  | 76.2  | 36.8 | 36.8 | 34.8 | 20.5 | 25   | 4    | 2    | 17.5 | 18.8 | 4.8 | M20 |
| 7.5t - 10t         | 222 | 25.4 | 50.8 | 120.7 | 101.6 | 49.5 | 49.5 | 47.5 | 26.9 | -    | -    | -    | -    | -    | -   | M24 |

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## Available accessories

|                                                                                                                                                                                                                                                                                                                                                             |                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <p><b>BJ-8-202-0.5-5t foot</b></p> <ul style="list-style-type: none"> <li>• Ø60-80 and height 92-105 mm</li> <li>• Stainless Steel</li> <li>• Adjustable height</li> </ul>                                                                                                                                                                                  |    |
| <p><b>BM-8-404-0.5-5t mount</b></p> <ul style="list-style-type: none"> <li>• Hardened stainless steel components</li> <li>• Compact construction</li> <li>• Using under heavy static load or slight dynamic load</li> <li>• Good ability against corrosive environments</li> </ul>                                                                          |     |
| <p><b>HD-8-301-0.5-5t spacer plate</b></p> <ul style="list-style-type: none"> <li>• Alloy Steel</li> <li>• Mainly used for platform scales, floor scales and other electronic weighing devices</li> </ul>                                                                                                                                                   |     |
| <p><b>HY-8-102-0.5-5t</b></p> <ul style="list-style-type: none"> <li>• Nickel plated alloy steel</li> <li>• Easy installation</li> <li>• Automatically centralized with steel ball</li> <li>• Good self-alignment ability</li> <li>• Mainly used for platform scales, floor scales and other electronic weighing devices</li> </ul>                         |  |
| <p><b>BJ-8-219-0.5-2t foot</b></p> <ul style="list-style-type: none"> <li>• Ø80 and height 61 mm</li> <li>• Stainless steel</li> <li>• Easy installation</li> <li>• Automatically centralized inside</li> <li>• Good ability of anti-side loading</li> <li>• Mainly used for platform scales, floor scales and other electronic weighing devices</li> </ul> |   |
| <p><b>HJ-8-236-0.15-2t W6-option foot</b></p> <ul style="list-style-type: none"> <li>• Ø60 and height 41 to 50 mm</li> <li>• Zinc plated alloy steel</li> <li>• Easy installation</li> <li>• T-end foot for W6 option load cells</li> </ul>                                                                                                                 |   |

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