

# MB1651

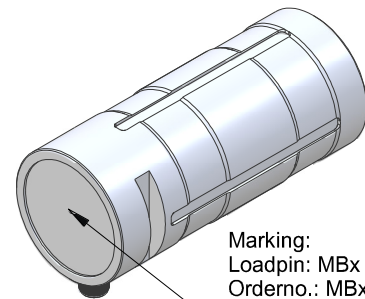
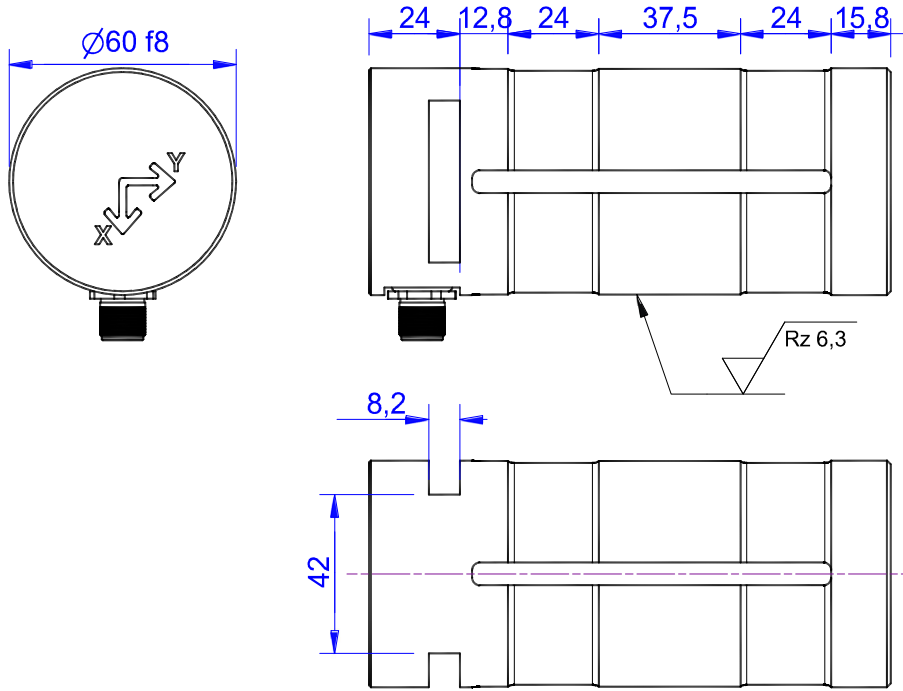
Load Pin

## Content of Loadpin Datasheet

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Marking:  
Loadpin: MBx  
Orderno.: MBx-xxx-x-x  
Serialno.: xxxxxxxx  
www.batarow.com  
Made in Germany

| Ordernumber     | Capacity [kN]<br>(F.S.) | Uncertainty [kN]<br>(k=2) | Review |
|-----------------|-------------------------|---------------------------|--------|
| MB1651-50-x-B   | 50                      | ± 0,25                    | B      |
| MB1651-100-x-B  | 100                     | ± 0,50                    | B      |
| MB1651-200-x-B  | 200                     | ± 1,00                    | B      |
| MB1651-300-x-B  | 300                     | ± 1,50                    | B      |
| MB1651-400-x-B* | 400                     | ± 2,00                    | B      |

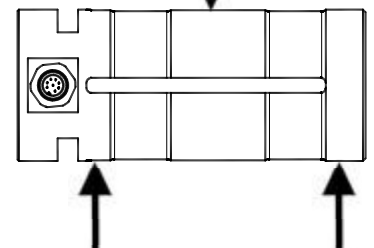
\* above showed version  
fixed dimensions don't change at other capacity

### Specifications:

| Dimension / Material   |              |                 |
|------------------------|--------------|-----------------|
| Material               |              | Stainless Steel |
| Protection class       |              | IP 66           |
| Hardness (load area)   | HRC          | 40..45          |
| <b>Mechanical Data</b> |              |                 |
| Safe Load Limit        | % of F.S.    | 120             |
| Breaking Load          | % of F.S.    | 250             |
| <b>Precision</b>       |              |                 |
| Nonlinearity           | % of F.S.    | ±0,5            |
| Nonrepeatability       | % of F.S.    | ±0,25           |
| Hysteresis             | % of F.S.    | ±0,2            |
| Temp. Shift Zero       | % of F.S./K. | ±0,05           |
| Temp. Shift Span       | % of F.S./K. | ±0,05           |
| <b>Temperature</b>     |              |                 |
| Compensated Temp.      | °C           | -10...+60       |
| Operating Temp.        | °C           | -20...+70       |

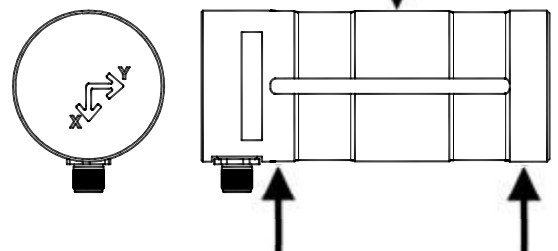
**Y-Axis**

↑ -Output (Tension)  
↓ +Output (Compression)



**X-Axis**

↑ -Output (Tension)  
↓ +Output (Compression)



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# Mounting Situation

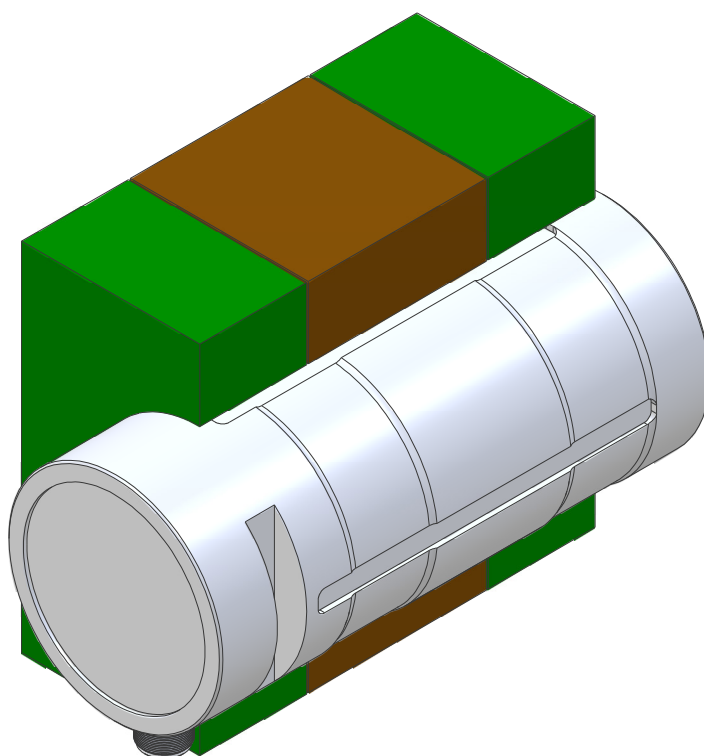
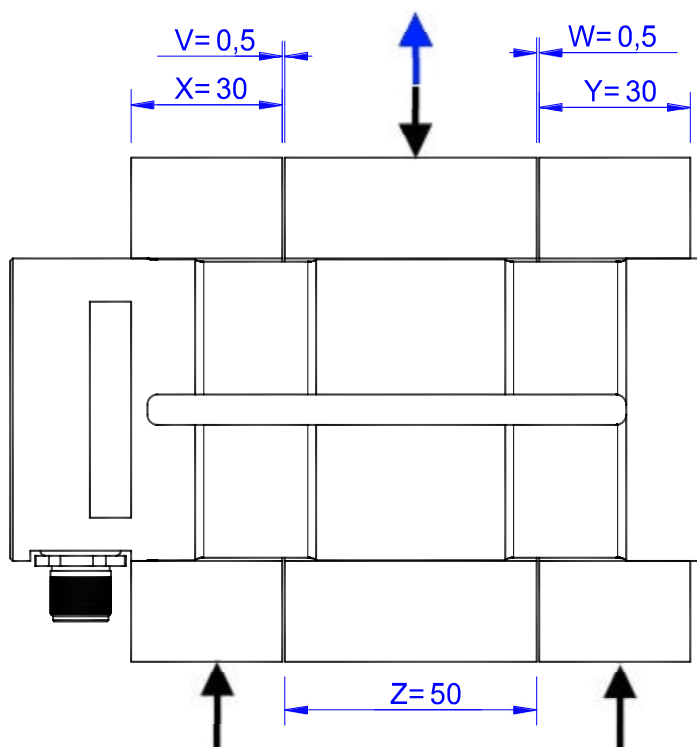
MB1651 Review: B

Bore fit of mounting situation: H7

## Configuration

possible mounting situation / customer mounting could vary

(Please describe mounting situation with Vs, Ws, Xs, Ys and Zs for best possible calibration)



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
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# Output Signal & Wiring

MB1651 Review: B

## Analog Output mV/V (S1)


| Electrical Data       |           |         |
|-----------------------|-----------|---------|
| Rated Output          | mV/V@F.S. | 0,9     |
| Zero Balance          | mV/V      | ±0,05   |
| Excitation (Maximum)  | Volt      | 10      |
| Input Resistance      | Ohm       | 450±100 |
| Output Resistance     | Ohm       | 352±2   |
| Insulating Resistance | GOhm      | >5      |

|  |                |          |              |   |
|--|----------------|----------|--------------|---|
| Wiringcode:WC56                                |                |          |              |  |
| Cabeling: M12 Male Socket / Flanschdose (male) |                |          |              |   |
| +Us (Fx)                                       | Pin 2 / brown  | +Us (Fy) | Pin 6 / pink |   |
| -Us (Fx)                                       | Pin 1 / white  | -Us (Fy) | Pin 5 / grey |   |
| +Ud (Fx)                                       | Pin 3 / green  | +Ud (Fy) | Pin 7 / blue |   |
| -Ud (Fx)                                       | Pin 4 / yellow | -Ud (Fy) | Pin 8 / red  |   |

Ordernumber Add-On:  
MBxxx-x-S1-x

## Analog Output 0V..10V (U1)\*


| Electrical Data U1  |     |            |
|---------------------|-----|------------|
| Output @ 0kN        | V   | 0          |
| Output @ F.S.       | V   | 10         |
| Supply Voltage      | V   | 14..28     |
| Current Consumption | mA  | 25 (@ 24V) |
| Bandwidth           | kHz | 1          |

|   |       |               |       |   |
|---|-------|---------------|-------|---|
| Wiringcode: WC510                                 |       |               |       |  |
| Integrated Amplifier:GSV                          |       |               |       |   |
| Cabeling: M12 Male Socket / Flanschstecker (male) |       |               |       |   |
| Supply(+)   | Pin 1 | Output X-Axis | Pin 4 |   |
| Ground(-)   | Pin 3 | Output Y-Axis | Pin 6 |   |
| Tare X  | Pin 2 | Tare Y        | Pin 7 |   |
| Scale X   | Pin 5 | Scale Y       | Pin 8 |   |

Ordernumber Add-On:  
MBxxx-x-U1-x

## Analog Output 4..20mA (I1)\*


| Electrical Data I1  |     |            |
|---------------------|-----|------------|
| Output @ 0kN        | mA  | 4          |
| Output @ F.S.       | mA  | 20         |
| Supply Voltage      | V   | 14..28     |
| Current Consumption | mA  | 45 (@ 24V) |
| Bandwidth           | kHz | 1          |

|   |       |               |       |   |
|---|-------|---------------|-------|---|
| Wiringcode: WC510                                 |       |               |       |  |
| Integrated Amplifier:GSV                          |       |               |       |   |
| Cabeling: M12 Male Socket / Flanschstecker (male) |       |               |       |   |
| Supply(+)   | Pin 1 | Output X-Axis | Pin 4 |   |
| Ground(-)   | Pin 3 | Output Y-Axis | Pin 6 |   |
| Tare X  | Pin 2 | Tare Y        | Pin 7 |   |
| Scale X   | Pin 5 | Scale Y       | Pin 8 |   |

Ordernumber Add-On:  
MBxxx-x-I1-x

## Analog Output 0V..10V (U4)\*

| Electrical Data U4  |     |            |
|---------------------|-----|------------|
| Output @ -F.S.      | V   | 0          |
| Output @ 0kN        | V   | 5          |
| Output @ +F.S.      | V   | 10         |
| Supply Voltage      | V   | 14..28     |
| Current Consumption | mA  | 25 (@ 24V) |
| Bandwidth           | kHz | 1          |

|   |       |               |       |   |
|---|-------|---------------|-------|---|
| Wiringcode: WC510                                 |       |               |       |  |
| Integrated Amplifier:GSV                          |       |               |       |   |
| Cabeling: M12 Male Socket / Flanschstecker (male) |       |               |       |   |
| Supply(+)   | Pin 1 | Output X-Axis | Pin 4 |   |
| Ground(-)   | Pin 3 | Output Y-Axis | Pin 6 |   |
| Tare X  | Pin 2 | Tare Y        | Pin 7 |   |
| Scale X   | Pin 5 | Scale Y       | Pin 8 |   |

Ordernumber Add-On:  
MBxxx-x-U4-x

Attention: Nipple orientation of connector is not fixed. In case of 90° connector - it is necessary to set by customer.

\*Attention: With this output configuration is no negative signal (Tension) possible. Please ask our engineering for 4..12..20mA; 1..5..9V or ±10V versions.

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