BRIDGE-BOY
Load limitation electronics with 1 or 3 set points
Measurement made easy
Electronics with 1 or 3 set points designed, in combination with a
load cell, to limit the load and/or to detect slack cable of a hoisting
device (EOT cranes)

1 or 3 independent set points

Set point 1 and 2 configured for load limitation

Set point 3 configured by default for slack cable detection

Adjustments by potentiometers easy to reach

Analog outputs: 0 to 10 V and 4 to 20 mA

DIN rail mounting

115 V AC power supply available by internal jumper
Applications
Load limitation on:
• Overhead cranes,
• Container cranes,
• Gantry cranes

Functions
• Internal monitoring system of the integrity of the load cell and the load limitation electronics (positive safety)
• Visualization of overloads by a LED on the front
• TEST button on the front
• Hysteresis
  – Overload: default value: 20 % (0 % or 5 % possible if specified at the order)
  – Slack cable detection: 0 %

Specification

<table>
<thead>
<tr>
<th></th>
<th>BB-48VAC-1R</th>
<th>BB-230VAC-1R</th>
<th>BB-48VAC-3R</th>
<th>BB230VAC-3R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Load limiter with single strain gauge input</td>
<td>Load limiter with single strain gauge input</td>
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<td>Load limiter with single strain gauge input</td>
</tr>
<tr>
<td>Input range</td>
<td>0.4 to 2 mV/V (Wheatstone bridge ≥ 350 Ω)</td>
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</tr>
<tr>
<td>Sensor excitation</td>
<td>10 to 28 mA (maximum 11 V, adjustable by multi-turn potentiometer)</td>
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</tr>
<tr>
<td>Display</td>
<td>—</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.5 % F.S.</td>
<td>±0.5 % F.S.</td>
<td>±0.5 % F.S.</td>
<td>±0.5 % F.S.</td>
</tr>
<tr>
<td>Service temperature range</td>
<td>−20 to 60 °C (−4 to 140 °F)</td>
<td>−20 to 60 °C (−4 to 140 °F)</td>
<td>−20 to 60 °C (−4 to 140 °F)</td>
<td>−20 to 60 °C (−4 to 140 °F)</td>
</tr>
<tr>
<td>Storage temperature range</td>
<td>−40 to 70 °C (−40 to 158 °F)</td>
<td>−40 to 70 °C (−40 to 158 °F)</td>
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<td>−40 to 70 °C (−40 to 158 °F)</td>
</tr>
<tr>
<td>Power supply</td>
<td>48 to 110 V AC (50 / 60 Hz, 4 VA)</td>
<td>115 to 230 V AC (50 / 60 Hz, 3 VA)</td>
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<td>115 to 230 V AC (50 / 60 Hz, 3 VA)</td>
</tr>
<tr>
<td>IP rating</td>
<td>IP 20</td>
<td>IP 20</td>
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<td>IP 20</td>
</tr>
<tr>
<td>Quantity of relay</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Adjustable delay</td>
<td>60 ms to 1 s (adjustable by multi-turn potentiometer)</td>
<td>60 ms to 1 s (adjustable by multi-turn potentiometer)</td>
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</tr>
<tr>
<td>Relay type</td>
<td>Form C activated in safe situation</td>
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<td>Form C activated in safe situation</td>
</tr>
<tr>
<td>Breaking capacity relay</td>
<td>6 A @250 V AC</td>
<td>6 A @250 V AC</td>
<td>6 A @250 V AC</td>
<td>6 A @250 V AC</td>
</tr>
<tr>
<td>Output tension</td>
<td>0 to 10 V (load R ≥ 2.5 kΩ)</td>
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</tr>
<tr>
<td>Output current</td>
<td>4 to 20 mA (load resistance ≤ 500 Ω)</td>
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</tr>
</tbody>
</table>

F.S.: Full scale
Dimensions

Load limiter model BRIDGE-BOY with 1 set point relay

All dimensions in mm (in)

Figure 1: Electrical connections

Figure 2: Other views
Load limiter model BRIDGE-BOY with 3 set point relays

All dimensions in mm (in)

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**Figure 3: Electrical connections**

1. Test button
2. Bicolor control LEDs
3. V+ test point set point N 3
4. V+ test point set point N 1
5. Common test point (Ov)

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**Figure 4: Other views**

1. Test button
2. Bicolor control LEDs
3. V+ test point set point N 3
4. V+ test point set point N 1
5. Common test point (Ov)
Notes
Measurement made easy

Electronics with 1 or 3 set points designed, in combination with a load cell, to limit the load and / or to detect slack cable of a hoisting device (EOT cranes)

- 1 or 3 independent set points
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