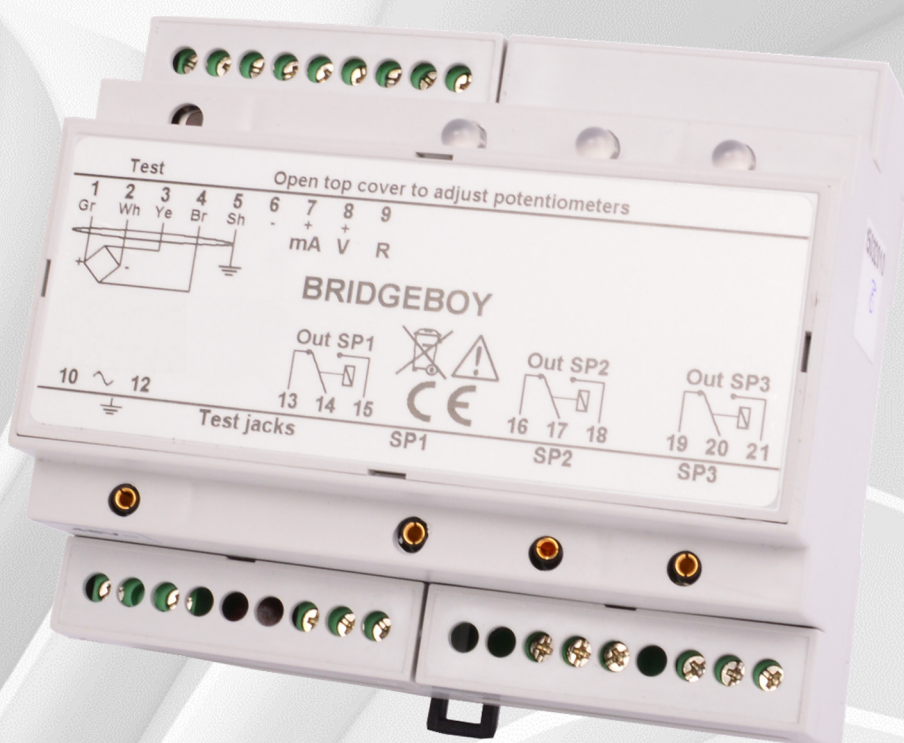


ABB MEASUREMENT & ANALYTICS | DATA SHEET

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

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

F.S.: Full scale



Dimensions

Load limiter model BRIDGE-BOY with 1 set point relay

All dimensions in mm (in)

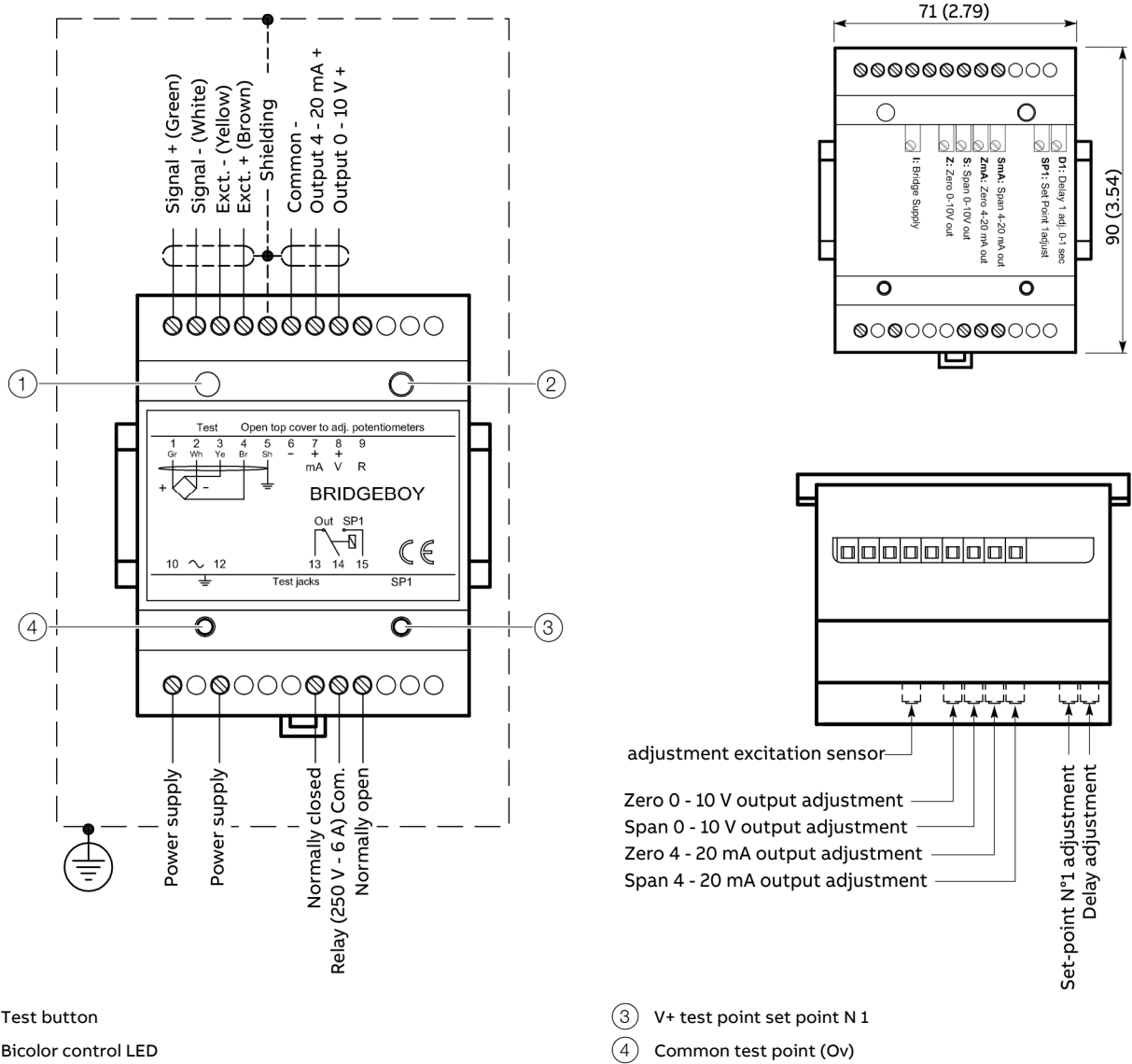


Figure 1: Electrical connections

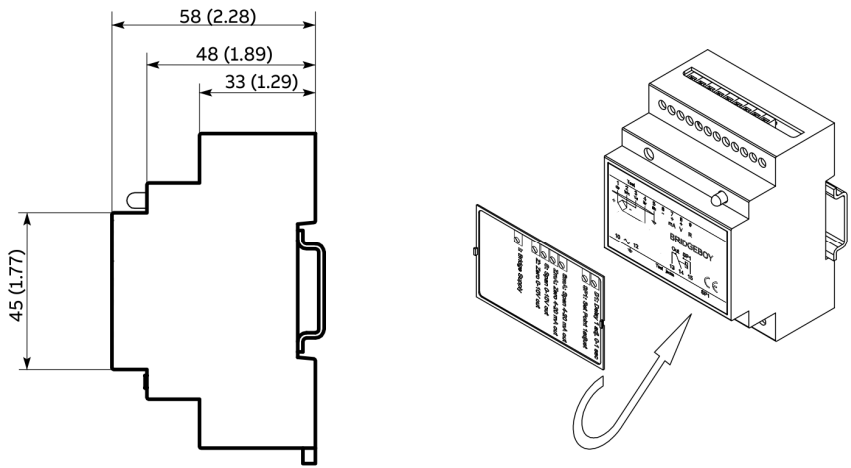


Figure 2: Other views

Load limiter model BRIDGE-BOY with 3 set point relays

All dimensions in mm (in)

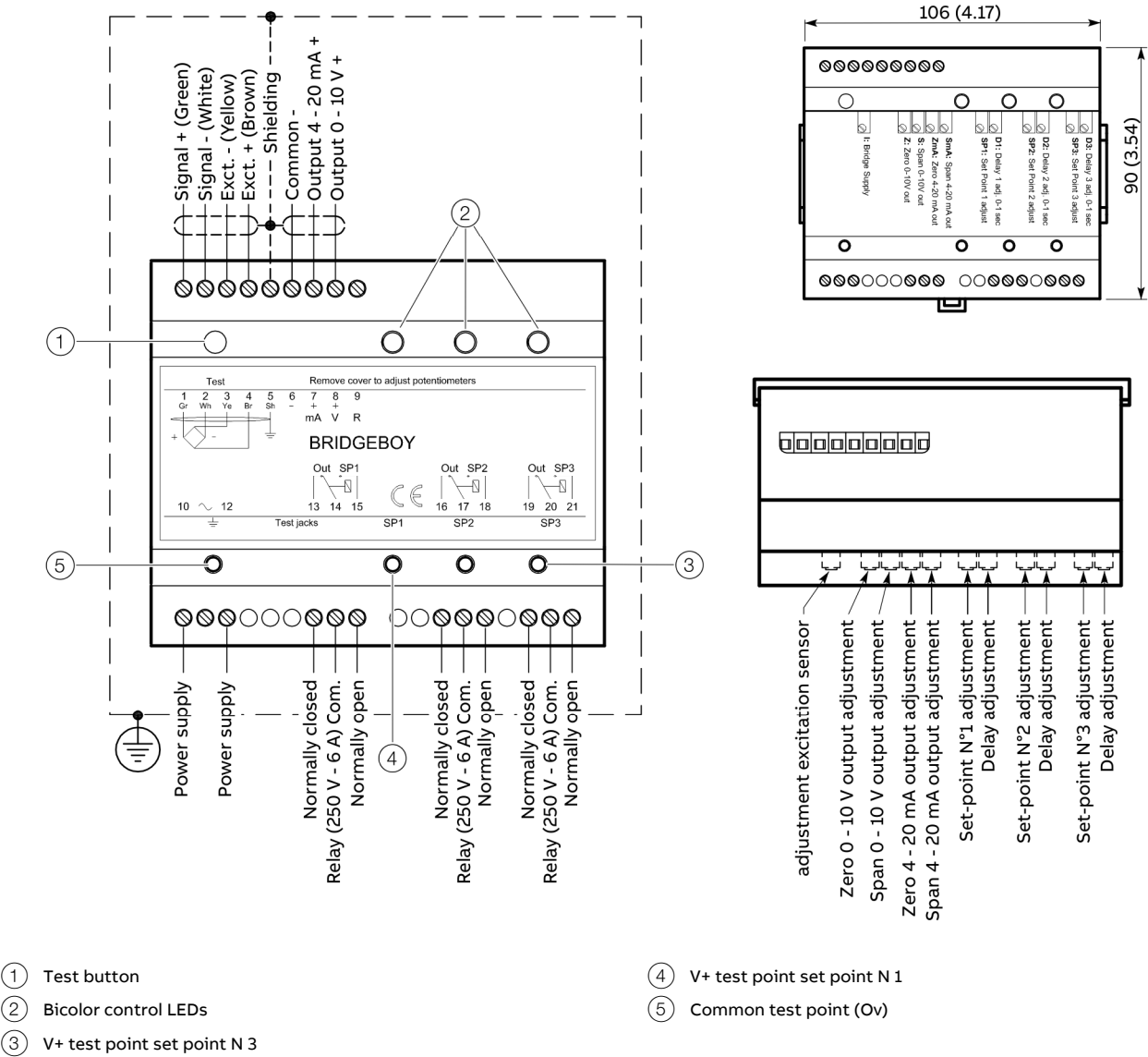


Figure 3: Electrical connections

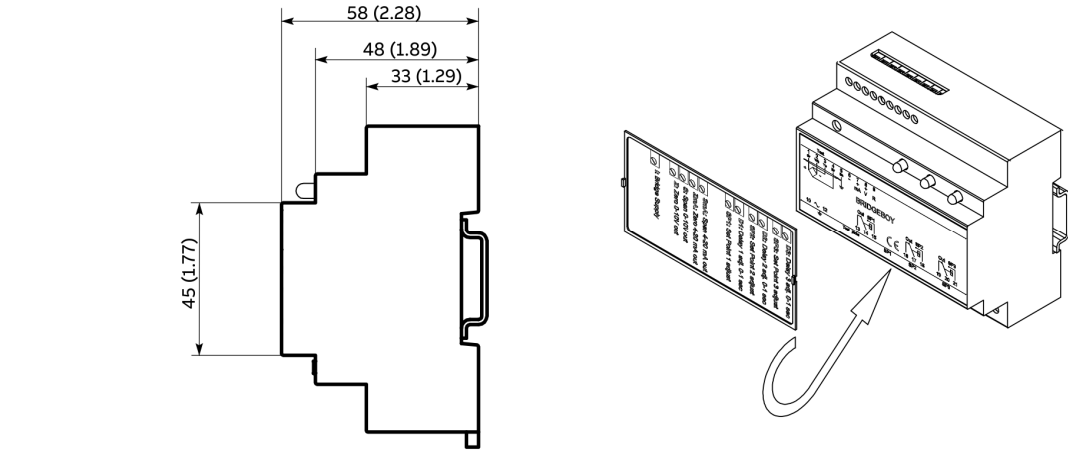


Figure 4: Other views



Notes

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