

ABB MEASUREMENT & ANALYTICS | DATA SHEET

DISP-BOYDP / CRANE-BOYDP

Crane overload protection electronics



Measurement made easy

Crane overload protection electronics for 2 hoisting devices

Easy and intuitive calibration

Display of hoisted loads and input signals

Internal monitoring system of the integrity of the load cells and the load limitation electronic (positive safety)

TEST button on front cover (only CRANE-BOYDP)

Options

- 4 (0) to 20 mA or 0 to 10 V analog output
- RS-232, RS-485 or fieldbus capabilities
- NEMA 4X / IP-rating IP 65
(transparent protection cover – Option ‘COVER PAX’)
- Power supply: 48 V AC (only for 85 to 230 V AC version)
- Rail DIN adaptor
- Also available with industrial metallic housing
(see CRANE-BOYDP products)

Applications

Electronics ensuring the individual limitation of loads lifted by 2 hoisting systems and also the limitation of a function of these loads (sum, difference, multiplication, ratio).

The DISP-BOYDP / CRANE-BOYDP are perfectly designed to the following applications:

- Load limitation on: overhead cranes; container cranes; gantry cranes

Functions

- Internal survey system of the load cell and the electronic (positive safety).
- TEST button in order to check the good working of the detection system.
- Secret code prohibiting programming by unauthorized users.
- Intelligent filter with quick reaction to quick overload while not reacting on transitory non-significant overload.
- Maximum and minimum memories, smart filter
- A math function (+, -, * or %) can be performed on the two signals.

Specification

	DISP-BOYDP	DISP-BOYDP24	CRANE-BOYDP	CRANE-BOYDP24
Type	Load limiter for dual 4 to 20 mA load cell	Load limiter for dual 4 to 20 mA load cell	Load limiter for dual 4 to 20 mA load cell	Load limiter for dual 4 to 20 mA load cell
Input range	2 × 4 to 20 mA	2 × 4 to 20 mA	2 × 4 to 20 mA	2 × 4 to 20 mA
Sensor excitation	18 V DC ±20 % @ 70 mA max. per input channel	18 V DC ±20 % @ 70 mA max. per input channel	18 V DC ±20 % @ 70 mA max. per input channel.	18 V DC ±20 % @ 70 mA max. per input channel
Display	5 digits (14.2 mm [0.56 in])	5 digits (14.2 mm [0.56 in])	5 digits (14.2 mm [0.56 in])	5 digits (14.2 mm [0.56 in])
Accuracy	0.1 % F.S.*	0.1 % F.S.*	0.1 % F.S.*	0.1 % F.S.*
A/D converter	16 bits	16 bits	16 bits	16 bits
Converter rate	Up to 20 readings/s	Up to 20 readings/s	Up to 20 readings/s	Up to 20 readings/s
IP Rating	IP 54**	IP 54**	IP 54	IP 54
Qty of relay	3	3	3	3
Relay type	Form A – potential free	Form A – potential free	Form A – potential free	Form A – potential free
Temperature data				
Service temperature range	0 to 50 °C (32 to 122 °F)	0 to 50 °C (32 to 122 °F)	0 to 50 °C (32 to 122 °F)	0 to 50 °C (32 to 122 °F)
Storage temperature range	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)	-40 to 60 °C (-40 to 140 °F)
Electrical data				
Power supply	85 to 250 V AC (21 VA)	18 to 36 V DC (13 W), 24 V AC (16 VA)	85 to 250 V AC (21 VA)	18 to 36 V DC (13 W), 24 V AC (16 VA)
Contact rating	3A @ 250 V AC or 30 V DC	3A @ 250 V AC or 30 V DC	3A @ 250 V AC or 30 V DC	3A @ 250 V AC or 30 V DC

* F.S. : Full scale

** IP rating only for front panel only

Specifications subjects to change without notice

Dimensions

Crane overload protection electronics for 2 hoisting devices

DISP-BOYDP

All dimensions in mm (in)

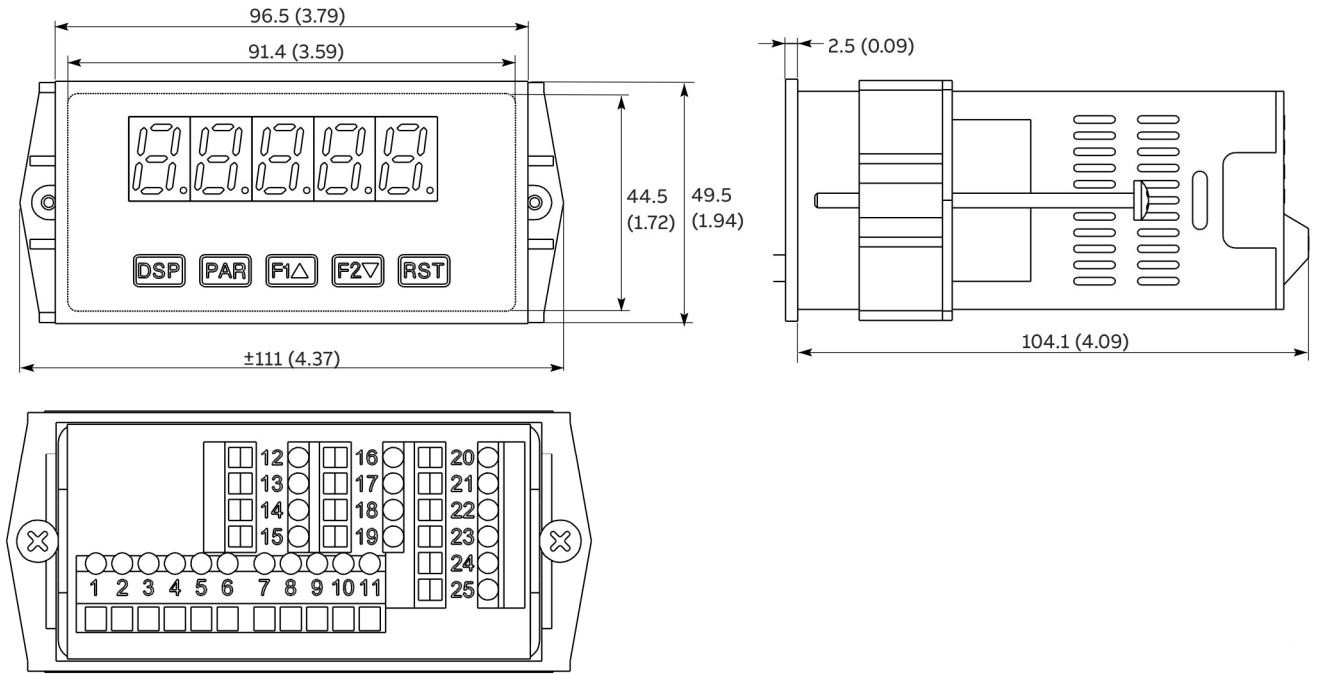


Figure 1: Standard dimensions

Note

Recommended min. clearance (behind the panel) for mounting is depth 140 mm (5.51 in) and height 53.4 mm (2.10 in).
Panel cut-out 92 mm (-0 / +0.8) 45 mm (-0 / +0.5).

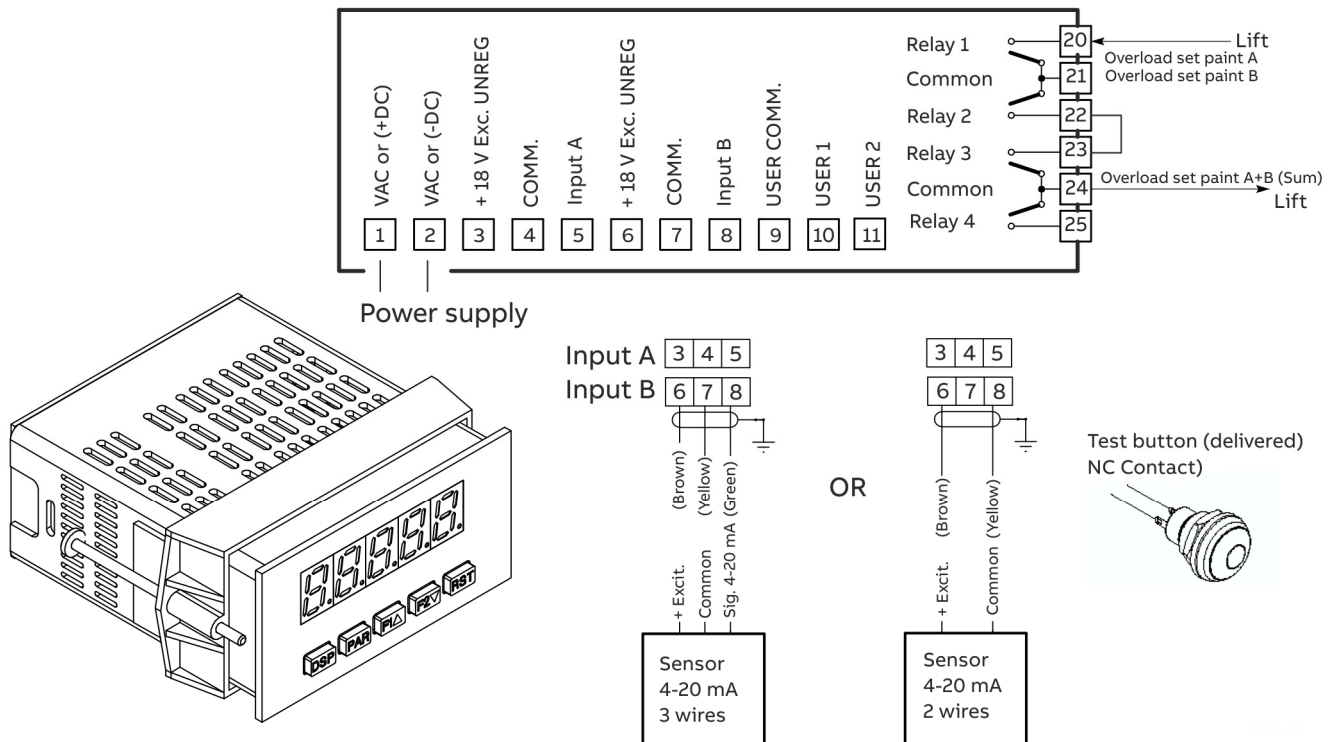


Figure 2: Other view / Terminals

CRANE-BOYDP

All dimensions in mm (in)

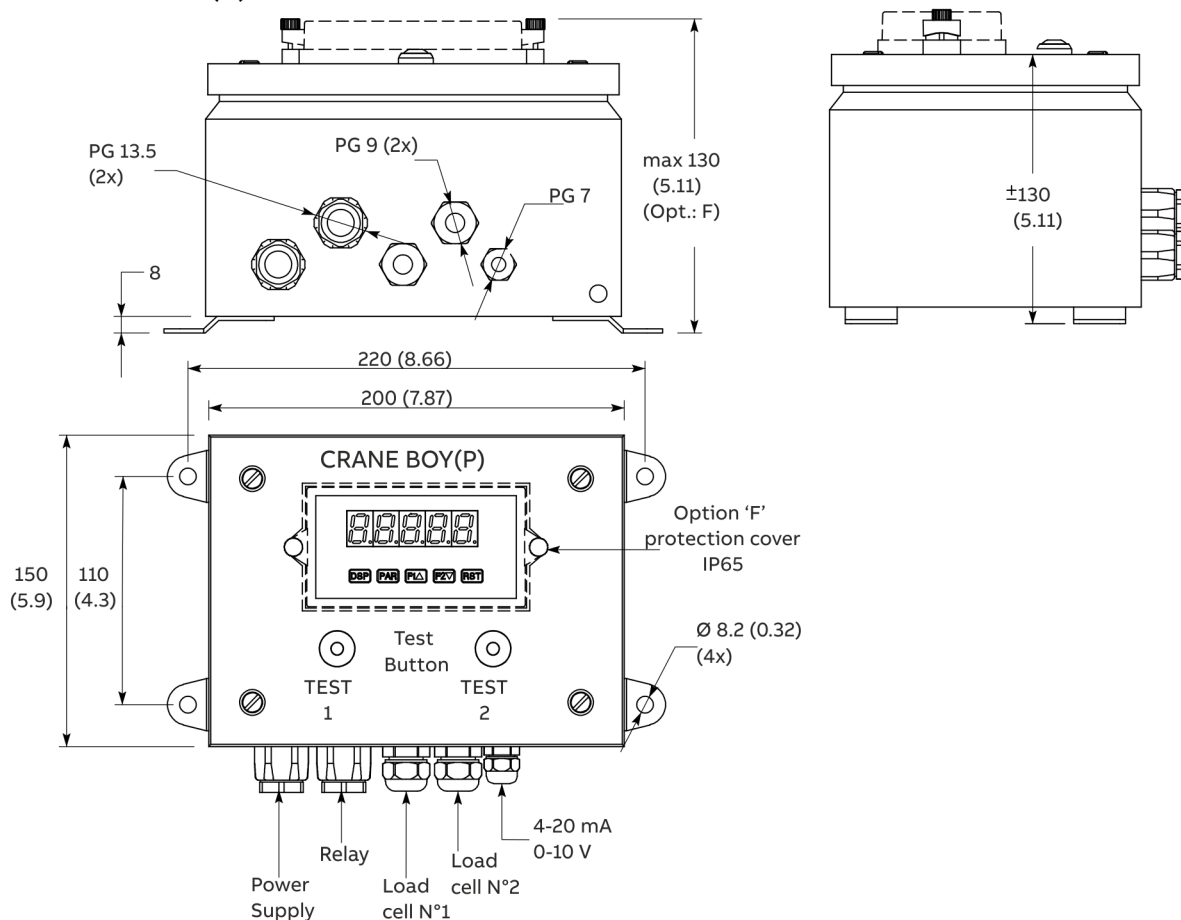


Figure 3: Standard dimensions

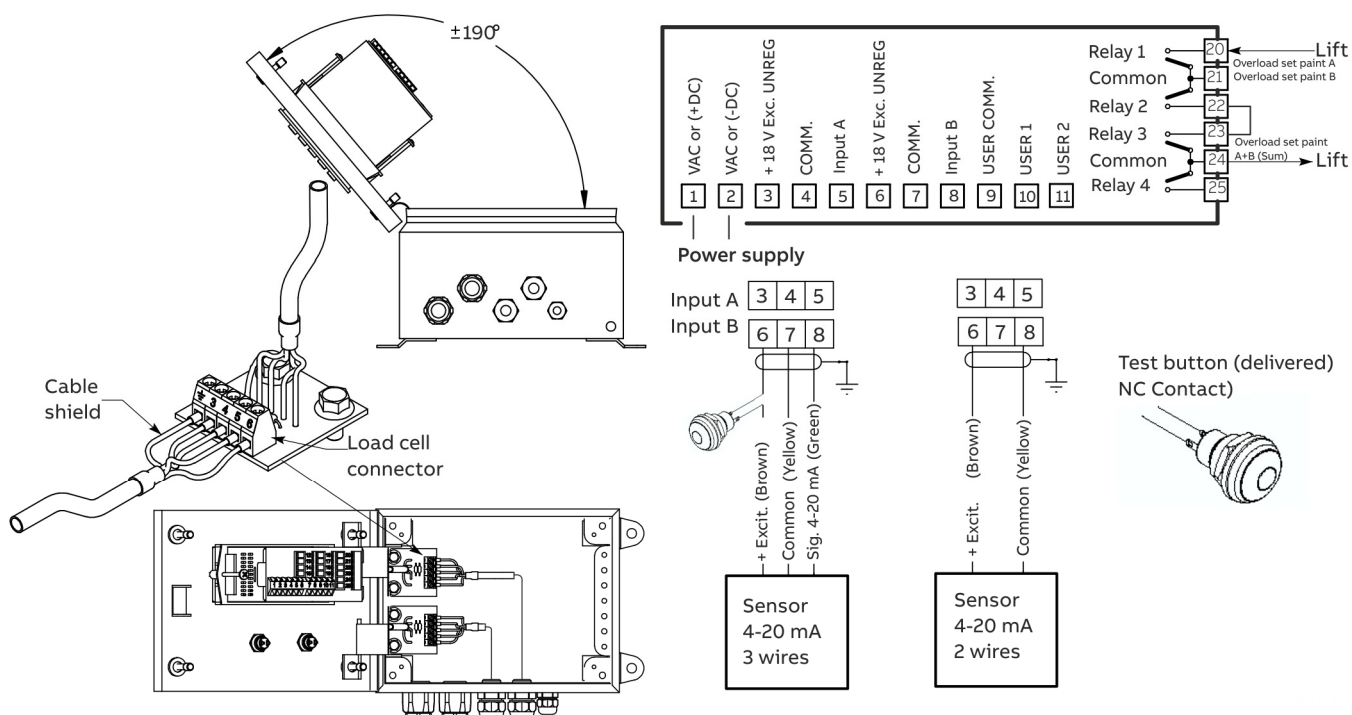


Figure 4: Other view / Terminals

Option cards

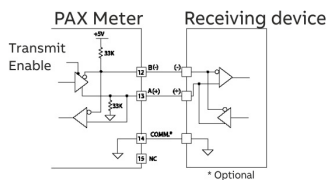
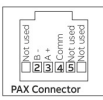
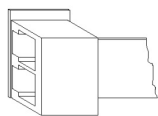
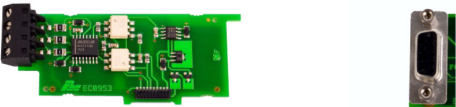
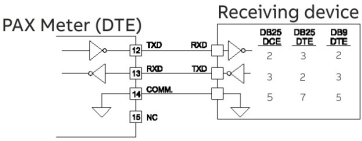
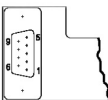
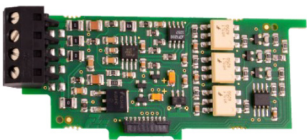
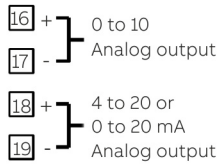
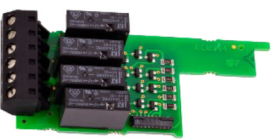
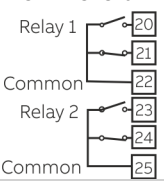
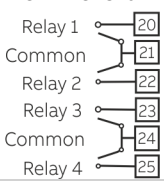
Communication cards (max. 1 choice)		Description
CARD-CDC10	CARD-CDC1C	   
RS-485 field bus communication interface. Available with crew terminals or DB9 connector		
CARD-CDC20	CARD-CDC2C	   Female PIN 2 TXD PIN 3 RXD PIN 5 COMMON
RS-232C half-duplex communication interface. Available with crew terminals or DB9 connector		
CARD-CDC30	CARD-CDC40	CARD-CDC50 / CARD-CDC50-CRANE
- DeviceNet communication interface - Modbus communication - Profibus DP (EN 50170) communication interface		
Analog output card		Discription
CARD-CDL10	 	
Analog output signal : 0 to 20 mA, 4 to 20 mA or 0 to 10 VDC		
Relay cards (max. 1 choice)		
CARD-CDS10 & CARD-CDS20	CARD-CDS10	CARD-CDS20
		
Cards already included		
- Analog output card: CARD-CDL10 - Relay cards: CARD-CDS20 (4 setpoints)		
- Models: CABIN-2×B1SUMD ; CABIN-4×B1SUMD - Models: INDI-BOY DISP-BOYP, CRANE-BOY CRANE-BOYP, DISP-BOYDP, CRANE-BOYDP, CRANE-SUMD DISP-SUMD, CRANE-BOY-Exd, CABIN-2×B1SUMD, CABIN-4×B1SUMD		

ABB Automation GmbH
Measurement & Analytics

Force Measurement
Oberhausener Str. 33
40472 Ratingen
Germany
Tel: +49 2102 12-2520
Fax: +49 2102 12-1414
Mail: ForceMeasurement@de.abb.com

abb.com/measurement

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