ABB MEASUREMENT & ANALYTICS | DATA SHEET

INDI-BOY DSP

Load limitation electronics



Measurement made easy

Load limitation with 3 set points and display to be installed on a front panel

Easy and intuitive calibration

Display of hoisted load and input signal

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

Available options

- 4(0) to 20 mA or 0 to 10 V analog output
- RS232, RS485, USB or fieldbus capabilities
- NEMA 4X / IP 65
- Rail DIN adaptor
- Power supply: 48 V AC (only for 85 to 230 V AC version)
- Also available with industrial metallic housing, see CRANE-BOY and CRANE-SUMD products

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 persons.
- Intelligent filter with quick reaction to quick overload while not reacting on transitory non-significant overload.
- Maximum and minimum memories

Specification

	INDI-BOY	INDI-BOY-24	DISP-BOYP	DISP-BOYP-24
Type	Load limiter for single load cell	Load limiter for single load cell	Load limiter for single load cell	Load limiter for single load cell
Input range	±24 mV DC / ±240 mV DC	±24 mV DC / ±240 mV DC	20 mA (−2 to 26 mA)	20 mA (−2 to 26 mA)
Sensor excitation	10 V DC @125 mA max*	10 V DC @125 mA max*	24 V DC ±5 % @50 mA max.	24 V DC ±5 % @50 mA max.
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 bit	16 bit	16 bit	16 bit
Converter rate	Up to 20 readings/s	Up to 20 readings/s	Up to 20 readings/s	Up to 20 readings/s
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)
Power supply	85 to 250 V AC, 50/60 Hz (15 VA)	11 to 36 V DC (11 W), 24 V AC (15 VA)	85 to 250 V AC, 50/60 Hz (15 VA)	11 to 36 V DC (11 W), 24 V AC (15 VA)
IP rating	IP 54**	IP 54**	IP 54**	IP 54**
Quantity of relays	3	3	3	3
Relay type	Form A-free potential	Form A-free potential	Form A-free potential	Form A-free potential
Breaking capacity relay	3 A @250 V AC or 30 V DC (resistive load)	3 A @250 V AC or 30 V DC (resistive load)	3 A @250 V AC or 30 V DC (resistive load)	3 A @250 V AC or 30 V DC (resistive load)

F.S.: Full scale

* 5 V DC @65 mA max (jumper selectable)

** IP rating for front panel only

Dimensions

Model INDI-BOY

All dimensions in mm (in)

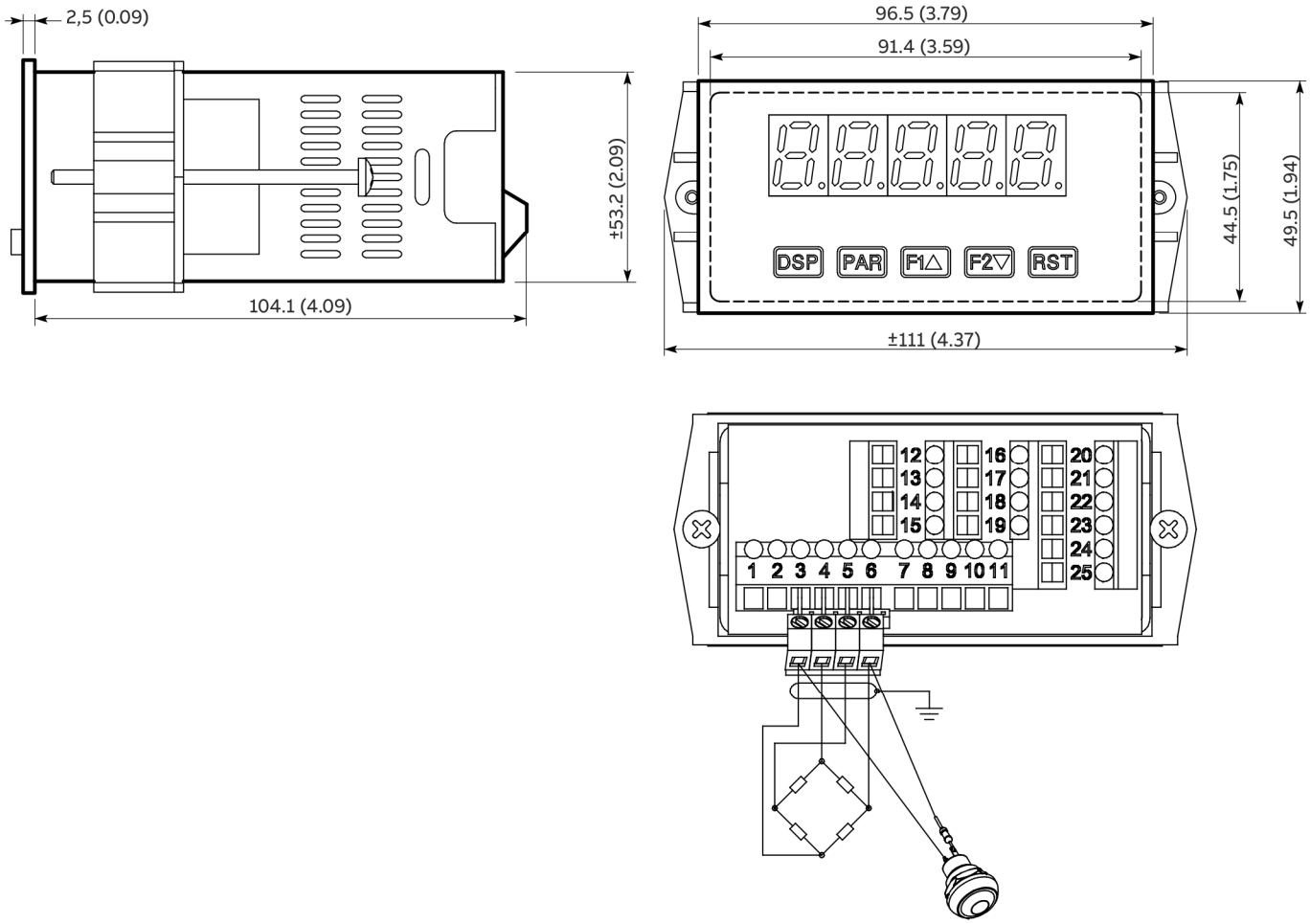
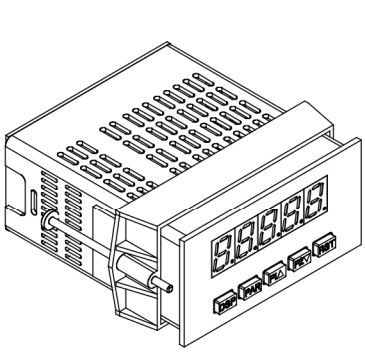


Figure 1: Dimensions model INDI-BOY



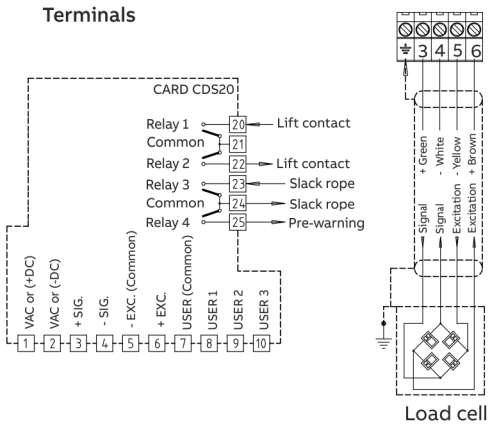


Figure 2: Other view

Note

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

Model DISP-BOYP

All dimensions in mm (in)

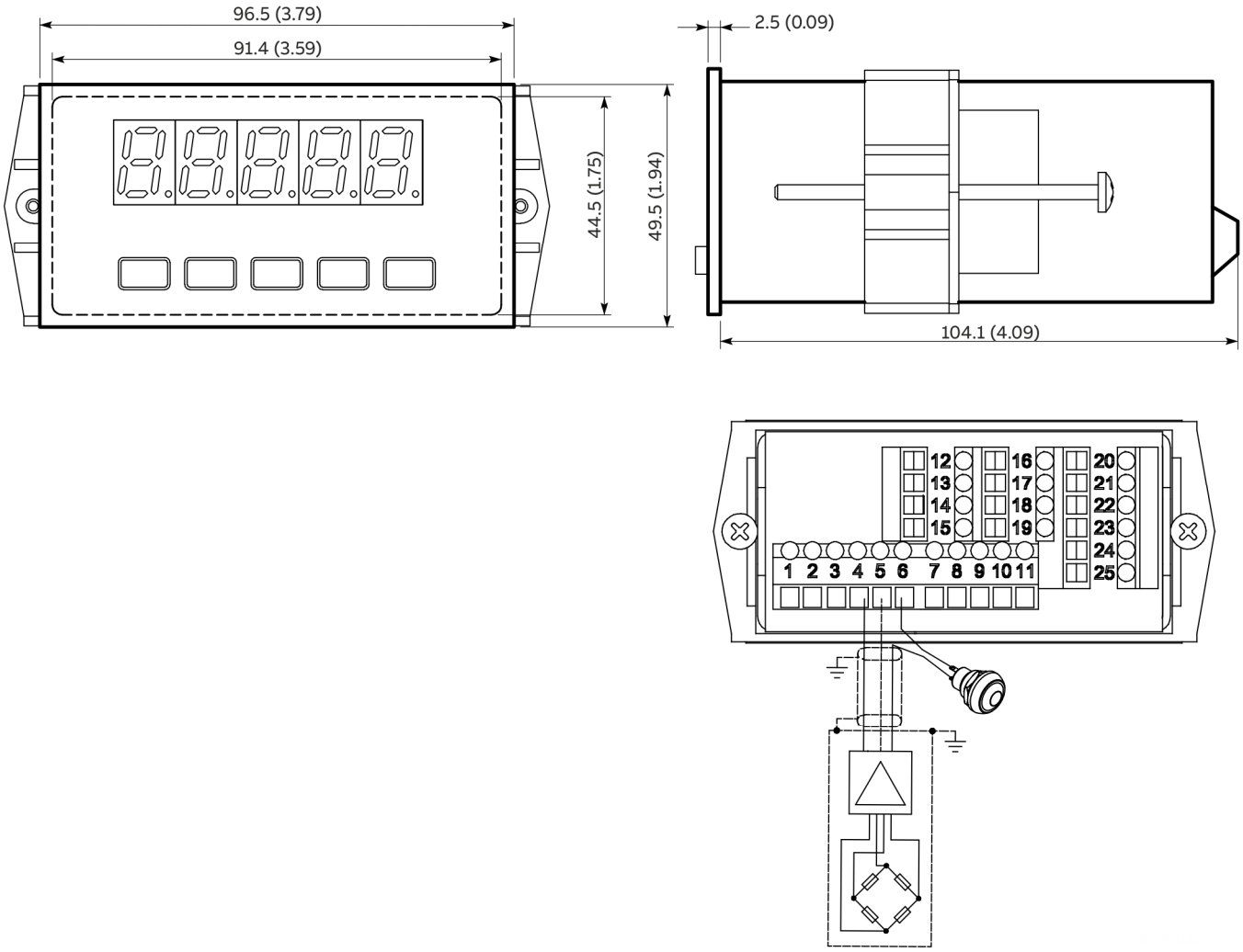


Figure 3: Dimensions model DISP-BOYP

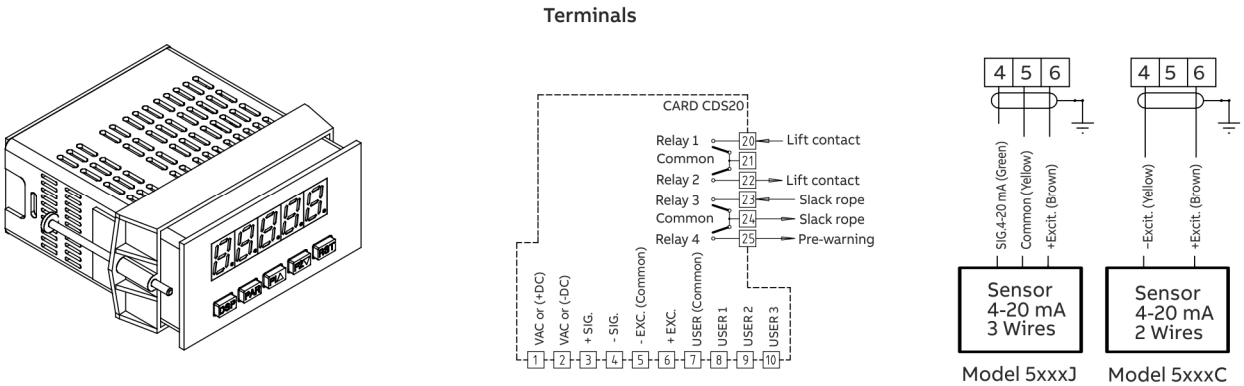
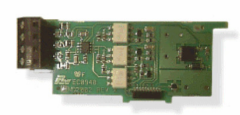
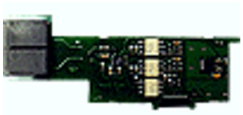
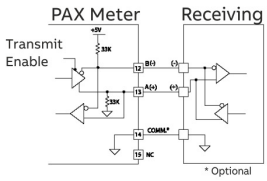
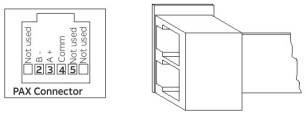


Figure 4: Other view

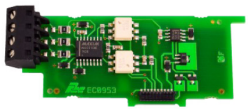
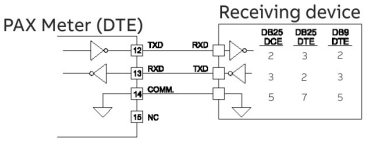
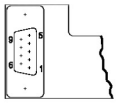
Note

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

Option cards

Communication cards (max. 1 choice)		Description	
CARD-CDC10	CARD-CDC1C	CARD-CDC10	CARD-CDC1C
			

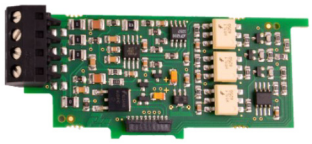
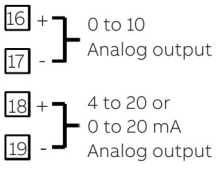
- RS-485 field bus communication interface.
  Available with crew terminals or DB9 connector

CARD-CDC20	CARD-CDC2C	CARD-CDC20	CARD-CDC2C
			

- RS-232C half-duplex communication interface.
  Available with crew terminals or DB9 connector

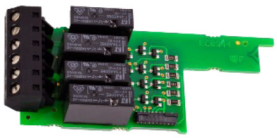
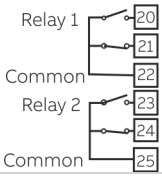
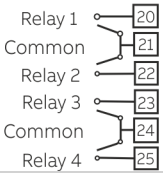
CARD-CDC30	CARD-CDC40	CARD-CDC50 / CARD-CDC50-CRANE*
		
• DeviceNet communication interface	• Modbus communication	• Profibus DP (EN 50170) communication interface

* As the CARD-CDC50 is too long for the housing of the CRANE-BOY, the CARD-CDC50-CRANE is supplied with a spacer to be inserted between the front of the electronics and the housing.

Analog output card	Discription
CARD-CDL10	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
		

- 2 or 4 set-points activating each an independent relay

Cards already included

• Analog output card: CARD-CDL10	• Models: CABIN-2×B1SUMD ; CABIN-4×B1SUMD
• Relay cards: CARD-CDS20 (4 setpoints)	• 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

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