

ABB MEASUREMENT & ANALYTICS | DATA SHEET

CRANE-BOY / CRANE-BOYP

Load limitation electronics



Measurement made easy

Load limitation with 3 set points and display

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)

TEST button on front cover

Full communications

- 4(0) to 20 mA or 0 to 10 V analog output
- RS232, RS485, USB or fieldbus capabilities
- NEMA 4X / IP 65
- Power supply: 48 V AC (only for 85 to 230 V AC version)

**Also available without industrial metallic housing
(see INDI-BOY, DISP-BOYP and DISP-SUMD)**

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, smart filter.
- Totalization of several measurements, protection code.

Specification

	CRANE-BOY	CRANE-BOY-24	CRANE-BOYP	CRANE-BOYP-24
Type	Load limiter for single load cell	Load limiter for single load cell	Load limiter for single 4 to 20 mA load cell	Load limiter for single 4 to 20 mA 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
Contact rating	3 A @250 V AC or 30 V DC	3 A @250 V AC or 30 V DC	3 A @250 V AC or 30 V DC	3 A @250 V AC or 30 V DC

F.S.: Full scale

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

Dimensions

Load limiter model CRANE-BOY

All dimensions in mm (in)

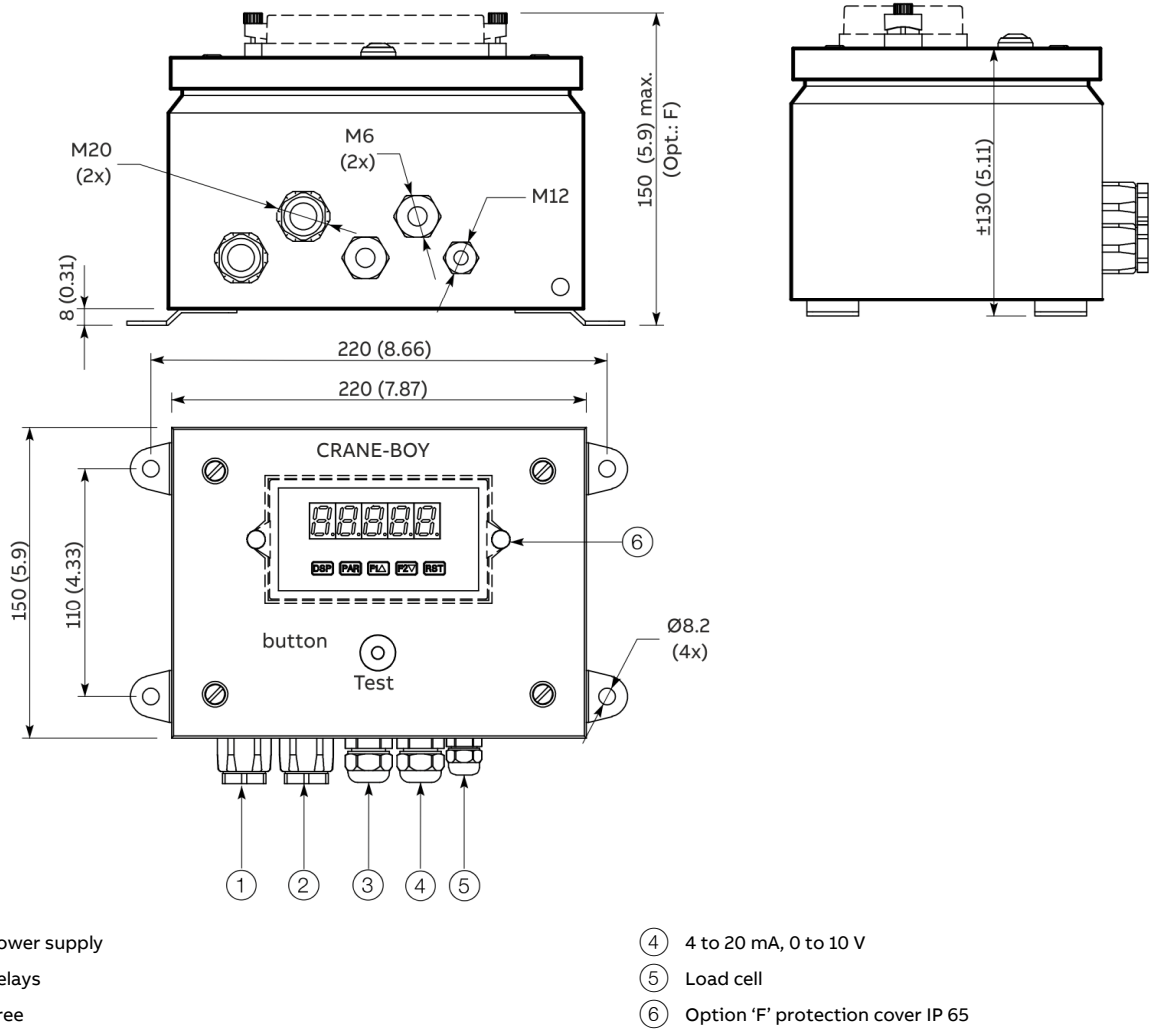


Figure 1: Dimensions load limiter, model CRANE-BOY

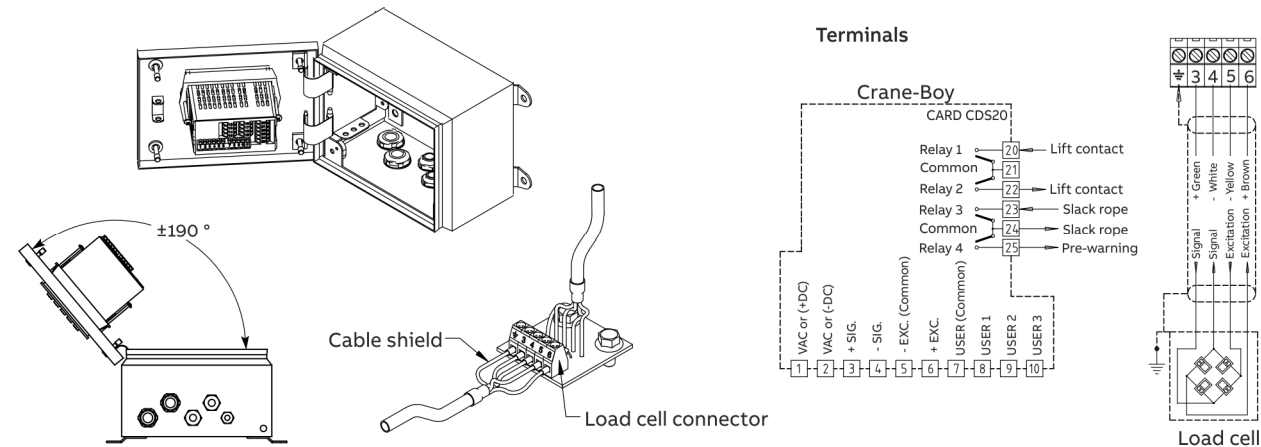


Figure 2: Other views

Load limiter model CRANE-BOYP

All dimensions in mm (in)

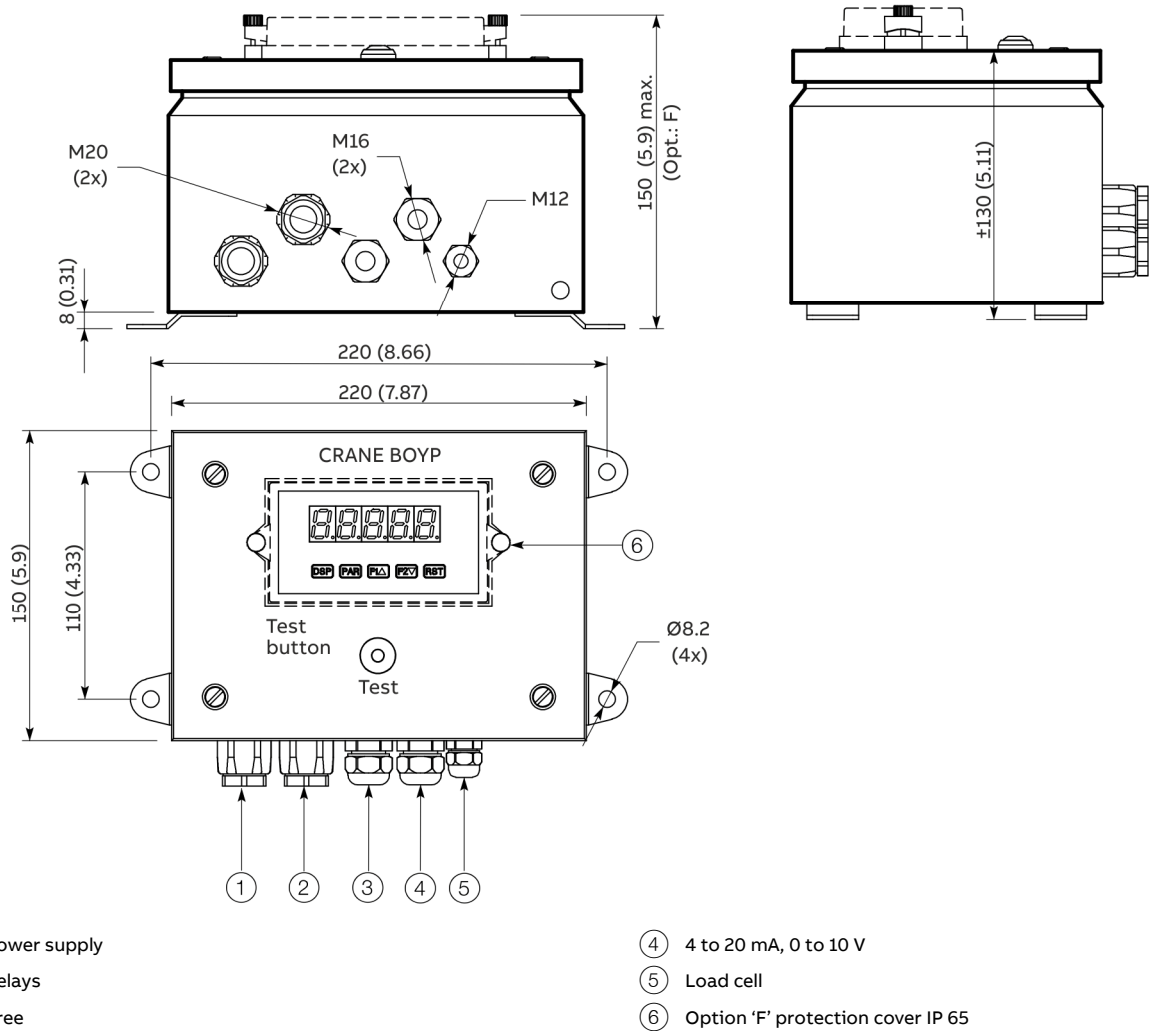


Figure 3: Dimensions load limiter, model CRANE-BOYP

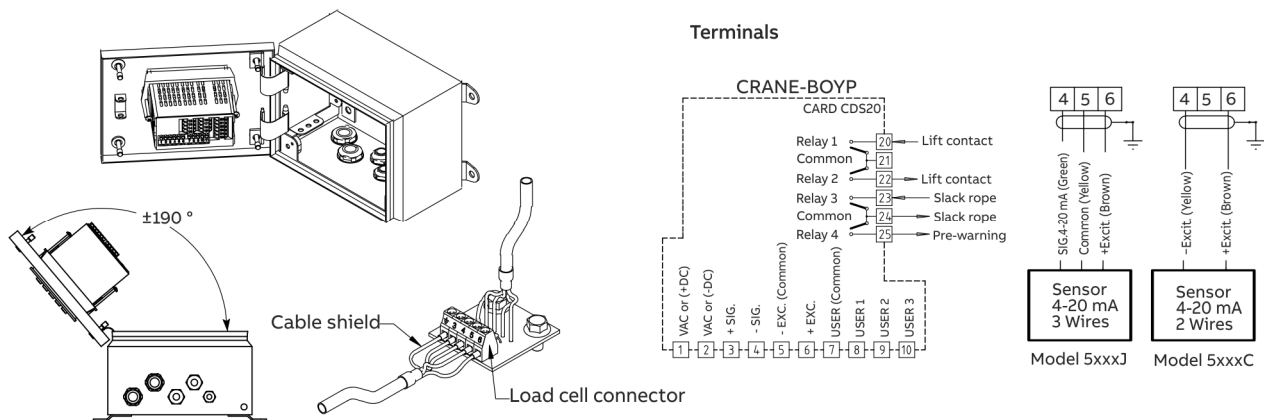


Figure 4: Other views

Option cards

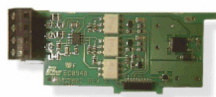
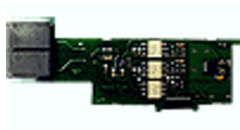
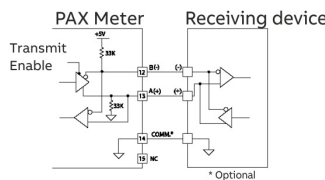
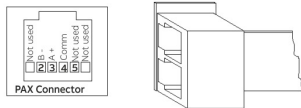
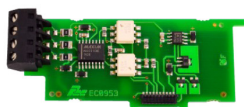
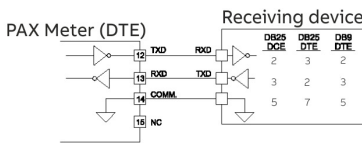
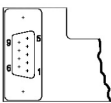
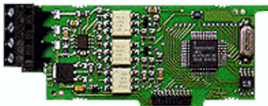
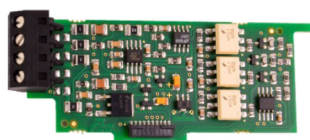
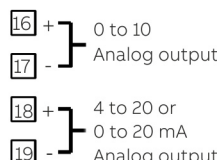
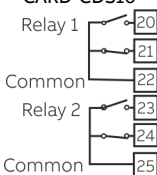
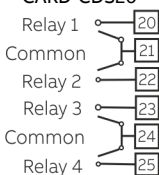
Communication cards (max. 1 choice)		Description	
CARD-CDC10	CARD-CDC1C	CARD-CDC10	CARD-CDC1C
			
RS-485 field bus communication interface. Available with crew terminals or DB9 connector			
CARD-CDC20	CARD-CDC2C	CARD-CDC20	CARD-CDC2C
			 Female PIN 2 TXD PIN 3 RXD PIN 5 COMMON
RS-232C half-duplex communication 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 * 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	
			
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			

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