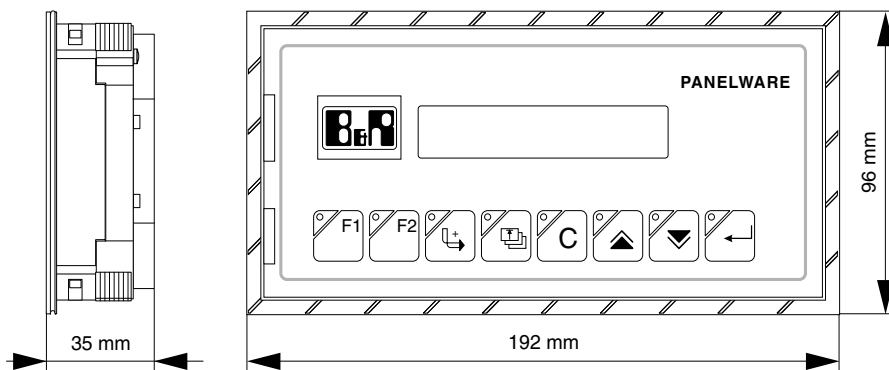
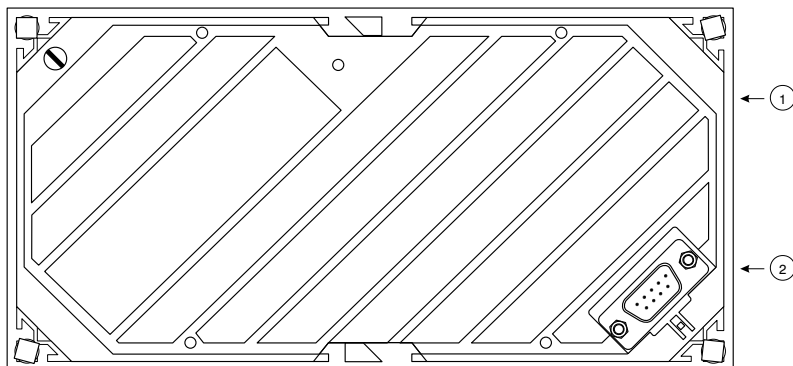


2 P120 / P121 Compact HMI



Technical Data		
HMI	P120	P121
Interface	RS232 (not electrically isolated)	
Control	Pictures created with PANELWARE Configuration Software (V1.71 and higher), application stored in Compact HMI (32 kBytes EEPROM, max. 250 pictures)	Controlled using ESC sequences (no memory in the P121)
Supply	5.2 VDC (min. 5.0 VDC, max. 5.5 VDC)	
Display	2 x 20 LCD (background lighting)	
Keypad	8 keys with key LEDs, legend strips	
Temperature Operating Storage	0 to 50 °C (32 to 122 °F) -20 to 60 °C (-4 to 140 °F)	
Relative Humidity Operating Storage	10 to 90 % (non-condensing) 10 to 90 % (non-condensing)	
Shock	Conforms to IEC 60068-2-27 15g equivalent, 150 m/sec ² , 11 msec, 3 axes (pos and neg)	
Vibration	Conforms to IEC 60068-2-6 1g equivalent, 10-58 Hz; 0.075 mm 58-150 Hz; 9.8m/sec ² 20 Cycles per axis	
Current Requirements	200 mA at 5.2 VDC	

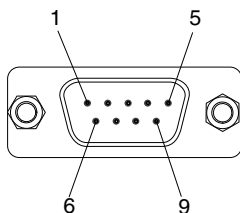
2.1 Overview of Connections and Operational Elements



- 1 Operation Mode Switch
- 2 RS232 Interface

2.1.1 RS232 Interface

A 9 pin D-type male connector can be found on the back of the COMPACT MMI:



Pin	Description	
1	NC	Not used
2	RxD	Receive Data
3	TxD	Transmit Data
4	+5 V	Power supply for HMI
5	GND	Reference potential (ground)
6	+5 V	Power supply for HMI
7	NC	Not used
8	NC	Not used
9	+5 V	Power supply for HMI

Attention: The panel is not electrically isolated. All interface signals refer to ground!

2.1.2 Supply Voltage

The panel is supplied through pins 4 and 5 (or 6 or 9) of the 9 pin D-type (M) connector. The power supply must match the following specifications:

Voltage:	typ. 5.2 V (min. 5 V, max. 5.5 V)
Current:	200 mA
Temperature Coefficient:	max. 1 mV/°C
Ripple:	max. 50 mV

2.1.3 Operating Mode Switch (only P120)

This switch is only found on the COMPACT MMI P120 and not on the P121. Switching between "Teach Mode" and "Run Mode" is done with this switch.

☐ **Teach Mode (Position 2)**

In this mode of operation, a project created with the PANELWARE Configuration Software can be transferred from a PC to the P120. If the P120 is switched on in this mode of operation, the text "TEACH-MODE WAITING FOR DATA" is displayed on the display.

☐ **Run Mode (Position 1)**

If the P120 is switched on in this mode of operation, the project which has been downloaded to the panel is started.

