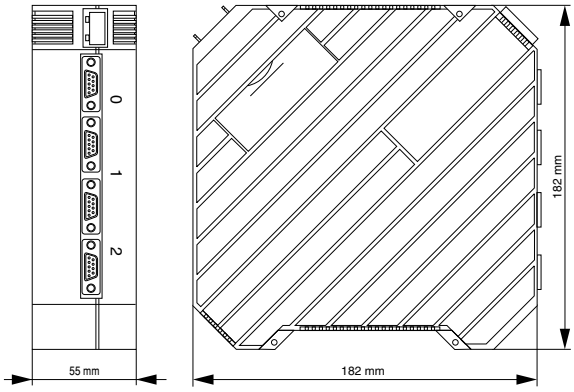
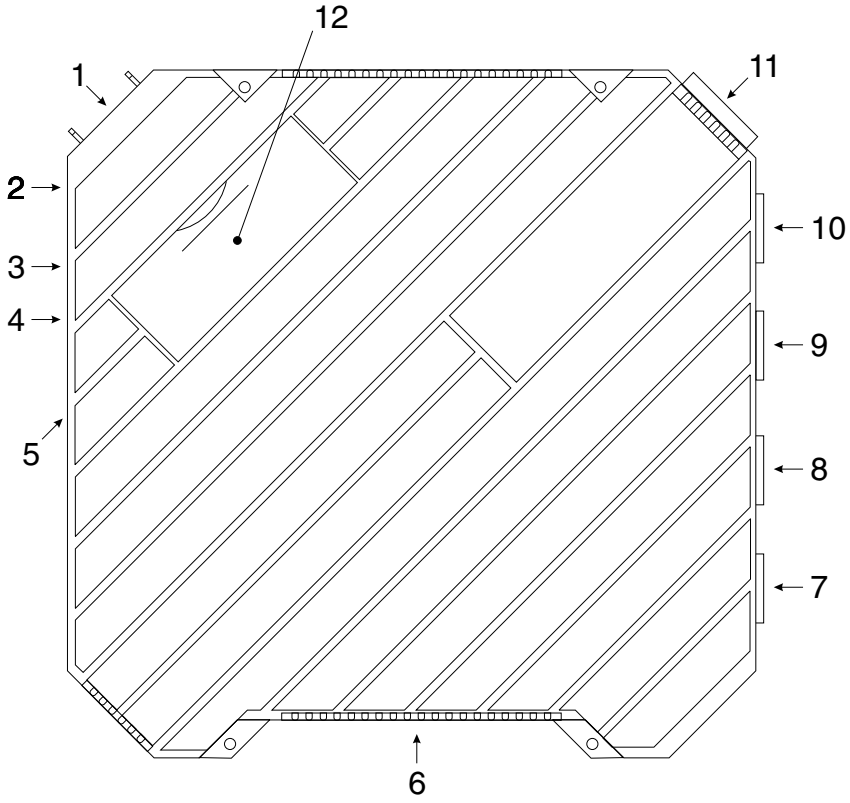
6 Panel Slave Controller C220/C221



Technical Data		
Controller	**C220**	**C221**
Interfaces	IF0:RS232 (not electrically isolated) IF1:RS232 (not electrically isolated) IF2:RS422/RS485 (electrically isolated) IF3:CAN (electrically isolated)	
Programming	PG2000 (PL2000); PANELWARE software	
Power Supply	24 VDC (min. 18 VDC, max. 30 VDC)	
Real Time Clock	YES (non-volatile)	
Connection of .... **Display Modules** **Keypad Modules**	 1 max. 7	
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 95 % (non-condensing) 10 to 95 % (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	
Memory **User RAM** **System ROM** **User ROM**	 256 KBytes 256 Kbytes 256 KBytes	 1 Mbytes 512 Kbytes 512 Kbytes
Current Requirements	130 mA at 24 VDC	

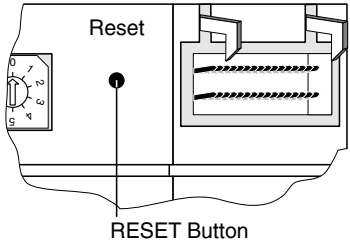
6.1 Overview of Connections and Operational Elements



1 Display Module
2 RESET Button
3 Number Switch - Operating Mode
4 Number Switch - CAN Station
5 Keypad Module Connection
6 LEDs
7 IF3: CAN
8 IF2: RS422/RS485
9 IF1: RS232
10 IF0: RS232 (to PC)
11 Supply Voltage Connection (24 VDC)
12 Cover for Lithium Battery

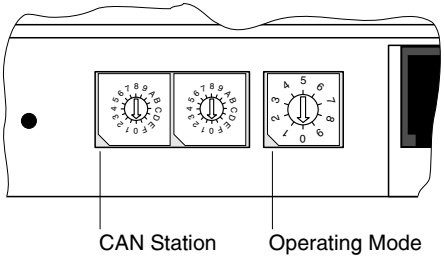
6.1.1 RESET Button

A hardware reset can be executed with this key. Depending on the number switch settings and the boot selection switch setting, different functions can be executed. These functions are all explained in the description of the connections and operational elements (see *General Information about* C200/C300).



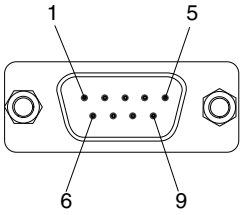
6.1.2 Number Dials - Operation Mode/ CAN Station

The mode of operation for the panel controller is set with number switch four (see *General Information about* C2xx/C300).
The CAN node number can be set using the CAN Station dials. The actual node number in the CAN network is to be set.



6.1.3 IF0 - RS232

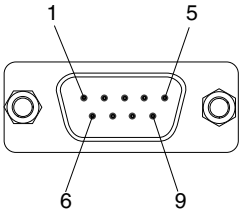
9 Pin D-Type Connector (M)



Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	+ 5 V	Power Supply (200 mA)
5	GND	Ground
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

6.1.4 IF1 - RS232

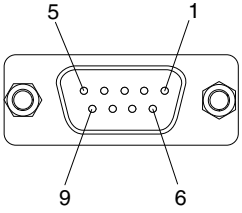
9 Pin D-Type Connector (M)



Pin	Description	
1	NC	
2	RxD	Receive Data
3	TxD	Transmit Data
4	12 V	Power Supply for external converter (200 mA)
5	GND	
6	NC	
7	RTS	Request To Send
8	CTS	Clear To Send
9	NC	

6.1.5 IF2 - RS422 / RS485

9 Pin D-Type Connector (F)

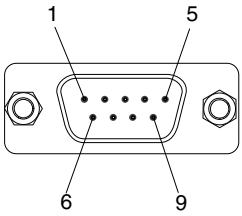


	Description	
Pin	RS422	RS485
1	Shield	
2	TxD	NC
3	RxD	DATA
4	NC	NC
5	GND	
6	+5V$_{DC}$ (200 mA) Galvanic isolation	
7	$\overline{\text{TxD}}$	NC
8	$\overline{\text{RxD}}$	$\overline{\text{DATA}}$
9	NC	NC

Interfaces IF1 and IF2 are basically only one interface. Because of the triple assignment with different interface types, they are however routed through one male and one female connector. This means that only one of the interfaces can be used at any given time. The active interface is indicated with an LED.

6.1.6 IF3 - CAN

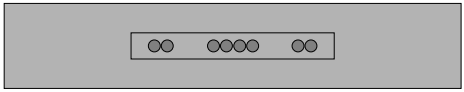
9 Pin D-Type Connector (M)



Pin	Description	
1	NC	Not used
2	CAN_L	CAN low
3	CAN_GND	CAN ground
4	NC	Not used
5	NC	Not used
6	CAN_GND	CAN ground
7	CAN_H	CAN high
8	NC	Not used
9	NC	Not used

6.1.7 Interface LEDs

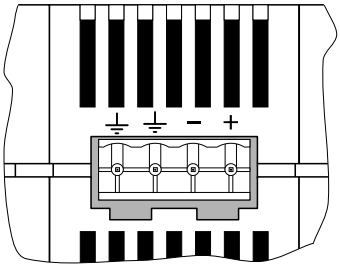
C22x panel controllers are equipped with several status LEDS.



Back side of control panel

Left Side:	RX and TX interface IF0
Middle / Left Side:	Interface IF1 used
Middle:	RX and TX interface IF2
Middle / Right Side:	Interface IF2 used
Right Side:	RX and TX interface IF3

6.1.8 Supply Voltage (24 VDC)



Pin		Description
1	+	+24 VDC
2	-	GND
3	⏚	Ground
4	⏚	Ground

All components must be properly grounded. (If in a rack, the ground cable length must not exceed 15 cm.). This is particularly important for the reasons listed below.

- A low resistance path from all parts of a system to earth minimizes exposure to shock in the event of short circuits or equipment malfunction.
- PANELWARE operator panels require proper grounding for correct operation.

The importance of a properly grounded system cannot be over emphasized.

6.1.9 Lithium Battery

The lithium battery is held in its own compartment and is covered for protection and for safety reasons.

Attention
Lithium batteries fall into the category of harmful waste. Please consider the legal provision regarding disposal in your area.