

## Expansion Card Installation Instructions

The EMX3 can be fitted with hardware expansion cards, to extend the soft starter's functionality. These allow the EMX3 to meet specialist requirements for particular applications.

Each EMX3 can support a maximum of one expansion card at a time.

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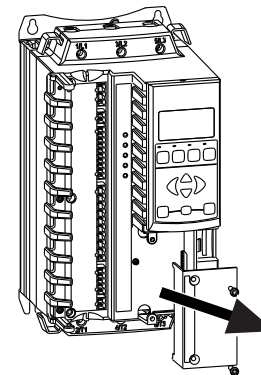
### CAUTION:

Disconnect the soft starter from all power sources before installing or servicing. Always take appropriate precautions to avoid damage from electrostatic discharge.

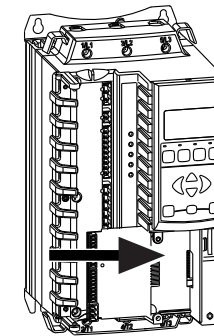
### Installation

To install a hardware expansion card:

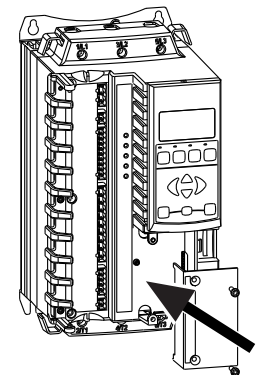
1. Remove the two screws holding the expansion card cover in place, then remove the cover.
2. Push the card carefully into the expansion slot, then press firmly into the internal connector.
3. Replace the cover and screw firmly in place.
4. Apply the expansion card label (included in kit) to the top of the cover.



Remove cover



Insert expansion card

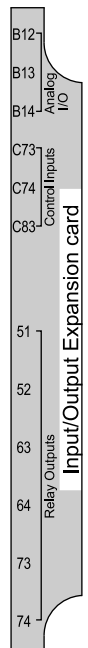


Replace cover

710-05120-00A

## 995-04803-00 Input/Output Expansion Card

The Input/Output Expansion Card provides two digital inputs, three relay outputs, one analog input and one analog output.



No additional wiring is required to install the Input/Output Expansion Card. The EMX3 will recognise the additional inputs and outputs when control power is next applied.

Configure the additional inputs using the following parameters:  
 Input C and D function: parameters 6-K and 6-L  
 Analog input: parameters 6-N ~ 6-P

Configure the additional outputs using the following parameters:  
 Output D, E and F function: parameters 7-J ~ 7-L  
 Analog output B: parameters 7-T ~ 7-W

### Specifications

#### Inputs

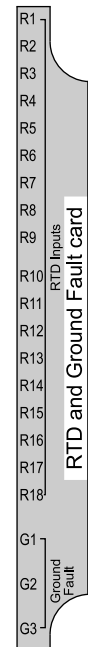
Input C (C73, C74) ..... Normally open  
 Input D (C83, C74) ..... Normally open  
 Analog Input (B14[+], B13[Com]) ..... Normally open

#### Outputs

Relay D (51, 52) ..... Normally closed  
 Relay E (63, 64) ..... Normally open  
 Relay F (73, 74) ..... Normally open  
 Analog Output B (B12[+], B13[Com]) ..... 4-20 mA

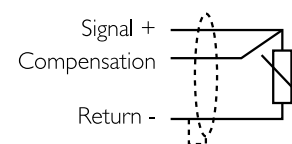
## 995-04804-00 RTD and Ground Fault Protection Card

The RTD and Ground Fault Protection Card provides one ground fault input and six RTD inputs for use with PT100 temperature sensors.



### RTD Input Connection

RTD input connection for 3-wire is shown below. For 2-wire and 4-wire, please refer to the User Manual.



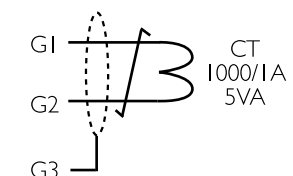
Input	A*	B	C	D	E	F	G
Signal +	B6	R1	R4	R7	R10	R13	R16
Compensation	B7	R2	R5	R8	R11	R14	R17
Return -	B8	R3	R6	R9	R12	R15	R18

\* RTD input A is located on the EMX3's main terminal block.

Configure the RTD inputs using the following parameters:  
 RTD trip temperatures: parameters 11-A ~ 11-G  
 RTD overtemperature protection action: parameters 16-O ~ 16-U

### Ground Fault Connection

To use ground fault protection, a current transformer must also be installed around all three phases. For maximum protection, the CT should be installed on the input side of the soft starter.



For the protection to operate correctly, use a 1000:1 CT with rating of 5 VA. The CT should be connected directly to the ground fault terminals (G1, G2, G3).

Configure ground fault protection using the following parameters:  
 Ground fault trip level and delay: parameters 4-O and 4-P  
 Ground fault protection action: parameter 16-N

### Specifications

#### RTD Accuracy

- 20 °C to 0 °C ..... ±2 °C  
 0 °C to + 100 °C ..... ±0.5 °C  
 + 100 °C to + 150 °C ..... ±2 °C