Basic Guide to the Installation and Operation of the Gold Card

Soft Starters and Energy Optimising Soft Starters

Guide to contents - applicable to the GOLD Replacement Control Card

4MC Software V4

1 Features.

The Gold Card is designed to replace existing 3MC and 4MC cards as fitted to many older soft starters thus offering the user additional functionality.

2 PCB Layout for replacing 4MC Cards.

Referring to the **Terminal Layout** install the control card electrical connections and Gate lead connections (Referring to page 4)

3 PCB Layout for replacing 3MC cards.

Referring to the **Terminal Layout** install the control card electrical connections and Gate lead connections (Referring to page 4)

4 Gate Connections.

Diagram showing gate lead connections

1 Features

Independent start and stop times.
Extended ramp times as standard.
Bypass contactor / thyristor protection selectable by link.
460V operation as standard.

Supply

Mains Supply	230 - 460V 3 Phase	+10% / -15%
Mains frequency	50 or 60Hz	+/- 2Hz
Control Supply	9 - 12V AC (15VA)	+/- 10%
Control Inputs	Volt free contact	
Control Frequency	50 or 60Hz	+/- 2Hz

Outputs

Three relays N/O rated at 8A 250V AC1
1 Green LED indicating power to the PCB
1 Yellow LED indicating state of relay 1 Default: Run Relay
1 Yellow LED indicating state of relay 2 Default: Ramp complete
1 Yellow LED indicating state of relay 3 Default: Alarm(4MC) Run (3MC)
1 Yellow LED indicating state of Stop / Soft Stop Input
1 Red LED indicating a Current limit is active* (4MC)
**(This does not indicate state of user current limit input)*

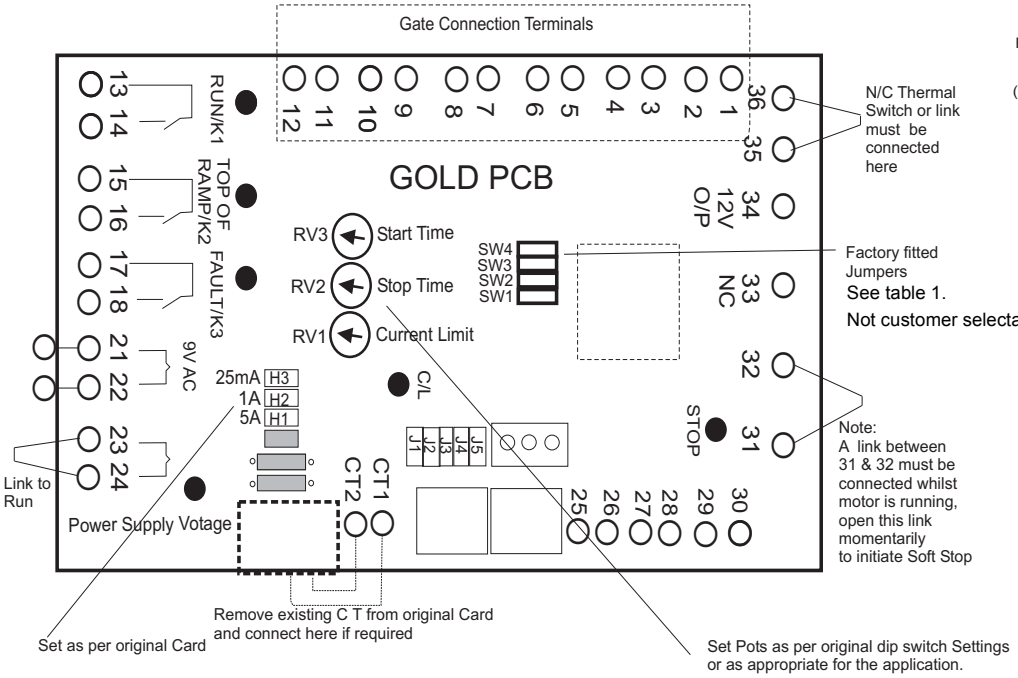
3 off User input Potentiometers

RV1 Current limit level 0.5-5.5 FLC (4MC)
RV2 Stop time 0-240 seconds
RV3 Start time 0-240 Seconds

Control Terminals

Terminal	***I/O***		***Function and Features***
1 to 4			Connections to Phase 3 output thyristor
5 to 8			Connections to Phase 2 output thyristor
9 to 12			Connections to Phase 1 output thyristor
21,22	I	———	9VAC power input to PCB
23,24	I	RUN	Contact maintained closed to RUN
25-30	I	STOP	Logic signal, active LOW
26-30	I	OVERRIDE	Logic signal, active LOW
27-30	O	ALARM	Logic signal, active LOW
28	I	CURRENT LIMIT	Logic signal, active LOW
29	O		5V 100mA DC
30	-		0V common
31	-		0V common
32	I	SOFT STOP	Logic Signal, active HIGH
33		Logic TOR signal	
34		12V 250mA O/P	
35 ,36		N/C Input for Thermal Switch	
CT1,CT2	I	Inputs from Current transformer	
Relays			
13,14		Run Relay	
15,16		Top of Ramp	
17,18		Alarm (4MC) Run (3MC)	

2 PCB Terminal Layout Replacing 4MC Card



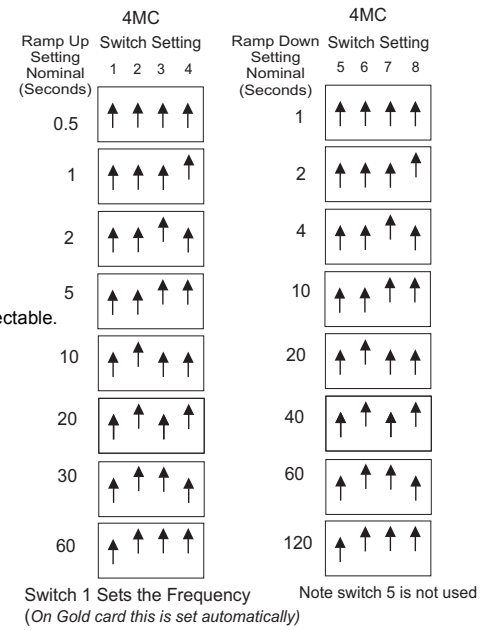


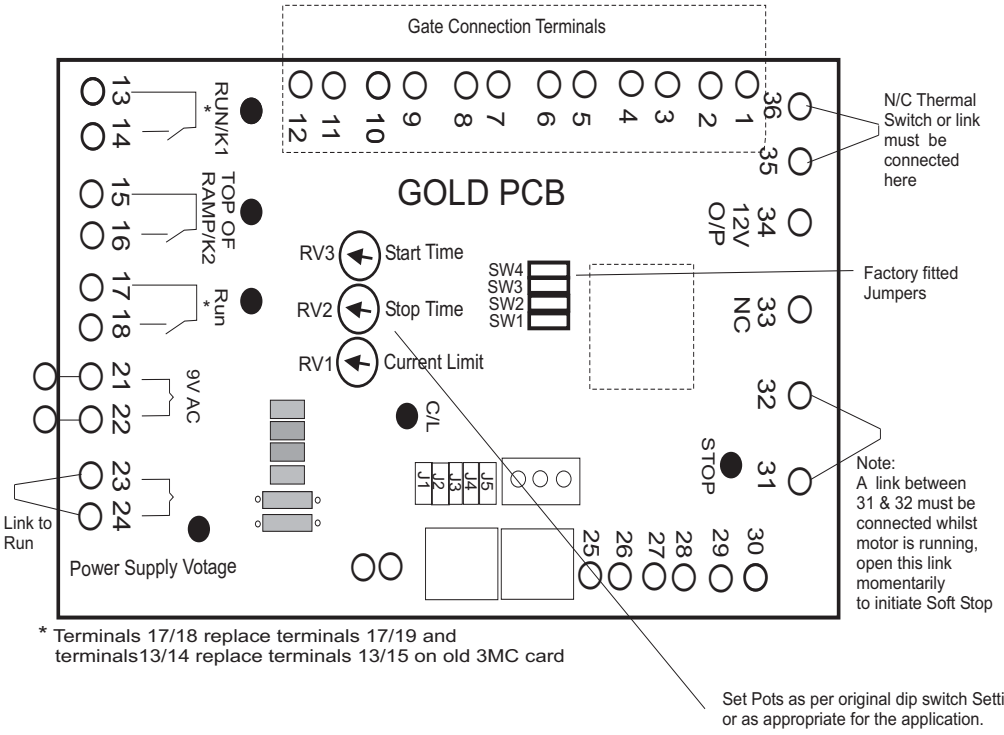
Table 1	SW2	SW3
AP6200G - 3R 3MC Replacement	OFF	OFF
AP6200G - 3U 3MC Upgrade	OFF	ON
AP6200G - 4R 4MC Replacement	ON	OFF
AP6200G - 4U 4MC Upgrade	ON	ON

SW4 must be open

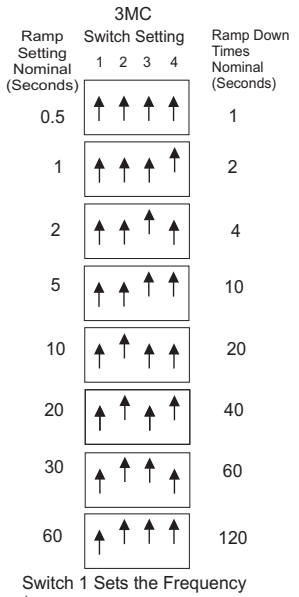
SW1 open - 4MC style soft stop

SW1 closed 5MC start / stop

3 PCB Terminal Layout Replacing 3MC Card

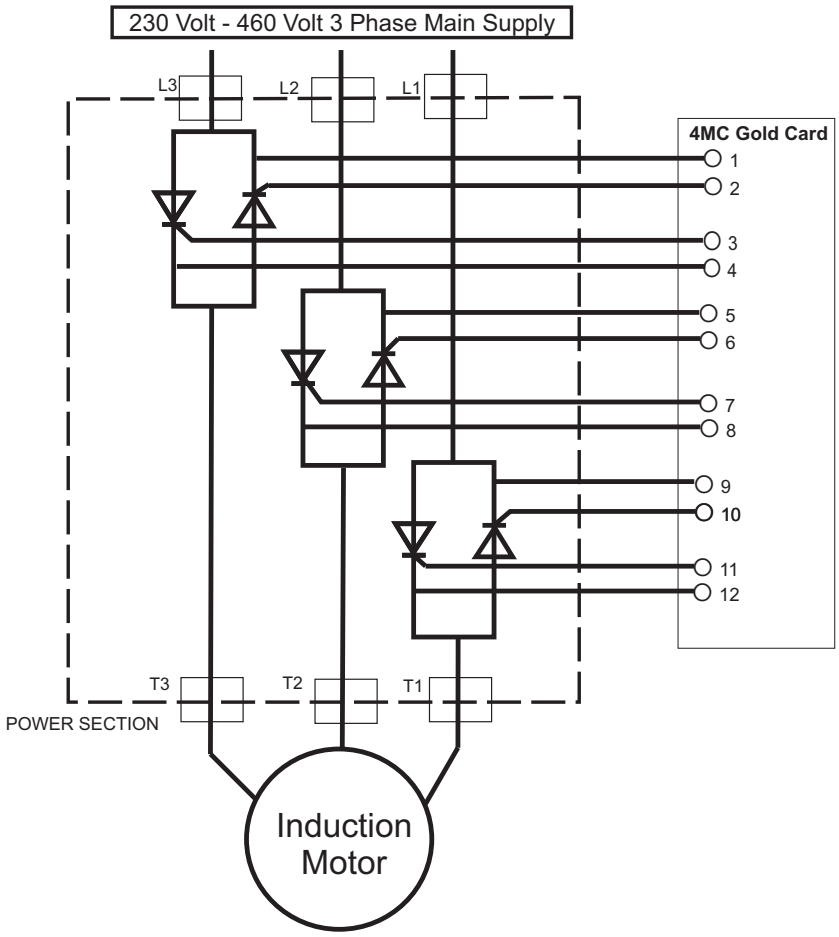


* Terminals 17/18 replace terminals 17/19 and terminals13/14 replace terminals 13/15 on old 3MC card



3 Gate Connections

Fig 1: *Gate Connections*



Gate Connections

1 to 4	Connected to Phase 3 thyristor
5 to 8	Connected to Phase 2 thyristor
9 to 12	Connected to Phase 1 thyristor

NB. This connection scheme applies to most Fairford produced starters.
Soft Starters produced by 3rd parties may differ.

WARNING

The owner, installer and user is responsible for the correct installation and use of the Unit and must ensure that only qualified personnel install the Unit and that the installation, operation and maintenance of the unit complies with the relevant Codes of Practice, Regulations and Statutory Requirements. The Manufacturer or his agent do not assume any liability, expressed or implied, for any consequence resulting from inappropriate, negligent or incorrect installation, application, use or adjustment of the product or circuit design, or from the mismatch of the unit to a motor. To prevent an electrical shock hazard the Unit must be connected to a safety earth.

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