

Integral Mounting Option
RS-232C/485 Interface Card
Model No. CM085

Before installing this option, a **TECHNICALLY QUALIFIED INDIVIDUAL**, who is familiar with this type of equipment and hazards involved, should **READ** this **ENTIRE INSTRUCTION SHEET**.

DESCRIPTION

The RS-232C/485 Interface Card CM085 (Figure 1) is mounted on the Control Board of the GPD 515 to input/output various signals from external devices by means of RS-485 serial communication.

RECEIVING

All equipment is tested against defect at the factory. Report any damages or shortages evident when the equipment is received to the commercial carrier who transported the equipment.

INSTALLATION AND WIRING

WARNING

Hazardous voltage can cause severe injury or death. Lock all power sources feeding Drive in "OFF" position.

1. Disconnect all electrical power to Drive.
2. Remove Drive front cover. Check that "CHARGE" indicator lamp inside Drive is off.
3. Verify voltage has been disconnected by using a voltmeter to check for voltage at incoming power terminals (L1, L2, L3).

CAUTION

The option card uses CMOS IC chips. If proper electrostatic discharge (ESD) protective procedure is not used when handling the card, the ICs may be damaged, resulting in erratic performance of the drive.

4. Refer to Figure 2. Plug the 2CN connector on the back of the option card into the 2CN connector (60 pins) on the Control Board of the Drive. Gently press the card into place until its two mounting holes click into place on the two spacers at the right side of the Control Board.

NOTE: If this option is being installed on a GPD 515 with speed feedback, the speed feedback card needs to be temporarily un-installed to allow access to the connector 2CN on the Drive's Control Board and TC1 & TC2 on the CM085 option card.

CHANGE RECORD			

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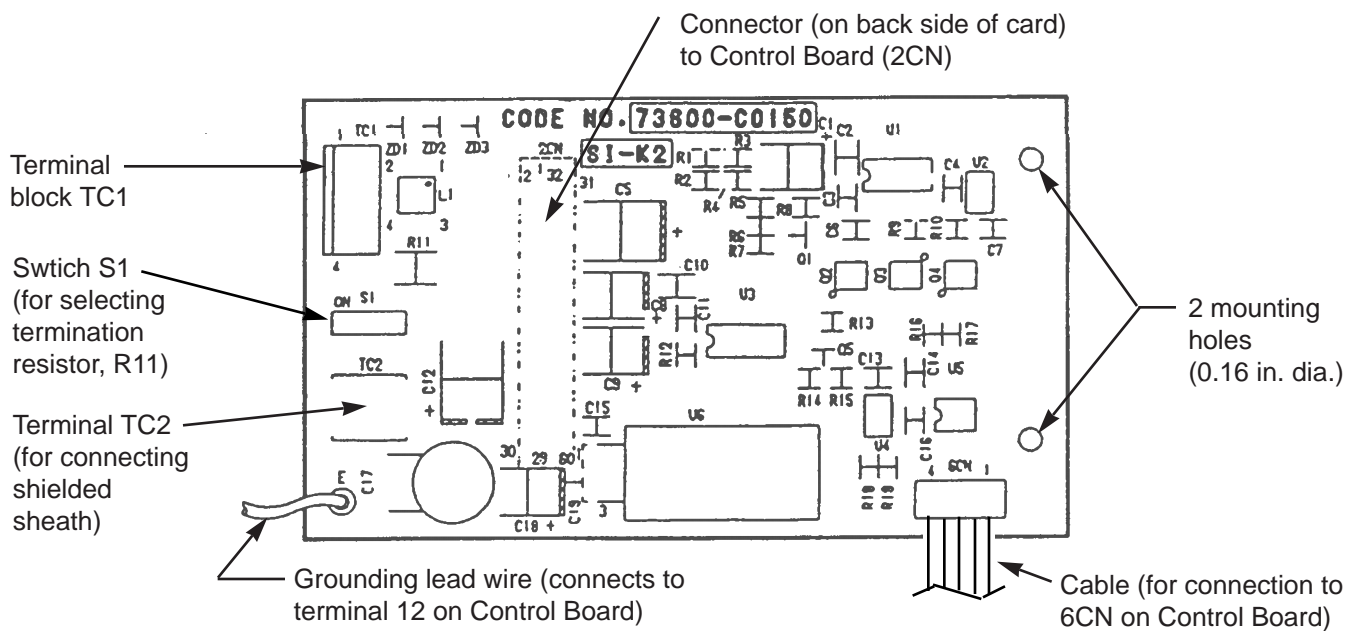


Figure 1. RS-232C/485 Interface Card CM085

Table 1. Terminal Functions of CM085

Terminal Block Symbol	Pin No.	Functions		
TC1	1	S/R (+)	RS-485 input/output (+)	Output to host device or to series-connected GPD 515
	2	S/R (-)	RS-485 input/output (-)	
	3	S/R (+)	RS-485 input/output (+)	For input from series-connected GPD 515
	4	S/R (-)	RS-485 input/output (-)	
TC2	Shielded sheath connection terminal			

Table 2. Applicable Wire Sizes For TC1

Wire Type	mm ²	AWG	Current (Amps)	VAC
Thin twisted wire	1	16	12	125
Solid wire	1.5	16	12	125
UL	—	22-16	10	300
CSA	—	28-16	10	300
CSA	—	28-16	10	150

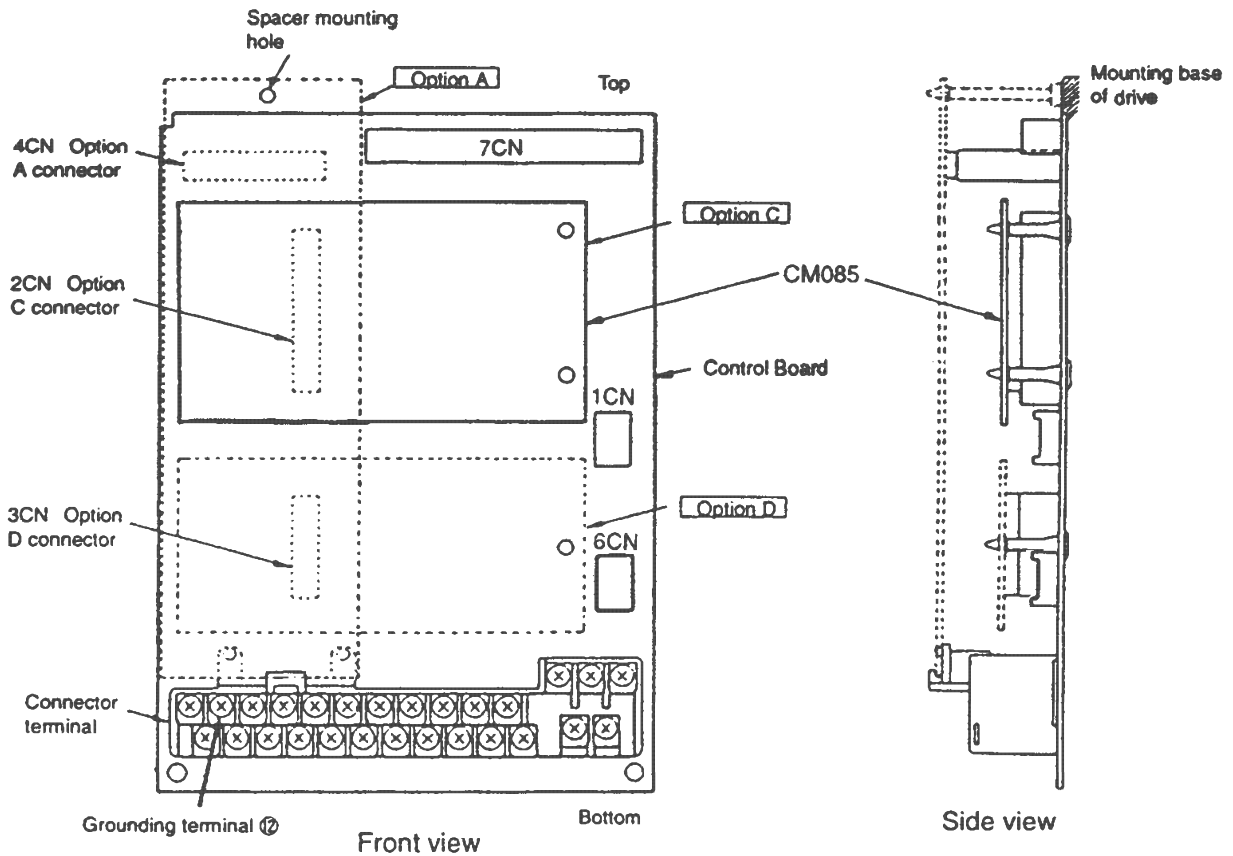


Figure 2. Installation of the RS-232C/RS-485 Interface Card CM085

5. Plug the 6CN cable from the option card into connector 6CN of the Control Board.
6. Connect the grounding lead wire from the CM085 card to terminal 12 on the Control Board.
7. **Wiring.** Refer to Figure 3 and Tables 1 & 2. Make wire connections between the CM085 card and the external (host) device with which the Drive will be communicating, using shielded twisted pair wire. If multiple Drives (with RS-485 Interface cards) are to be connected to the same external device, they must be connected in series – the second, third, etc. through the final Drive are all “daisy-chained” to the first Drive. Observe the following while wiring:

CAUTION

Keep CM085 (i.e. serial communication) wiring separate from main circuit input/output wiring.

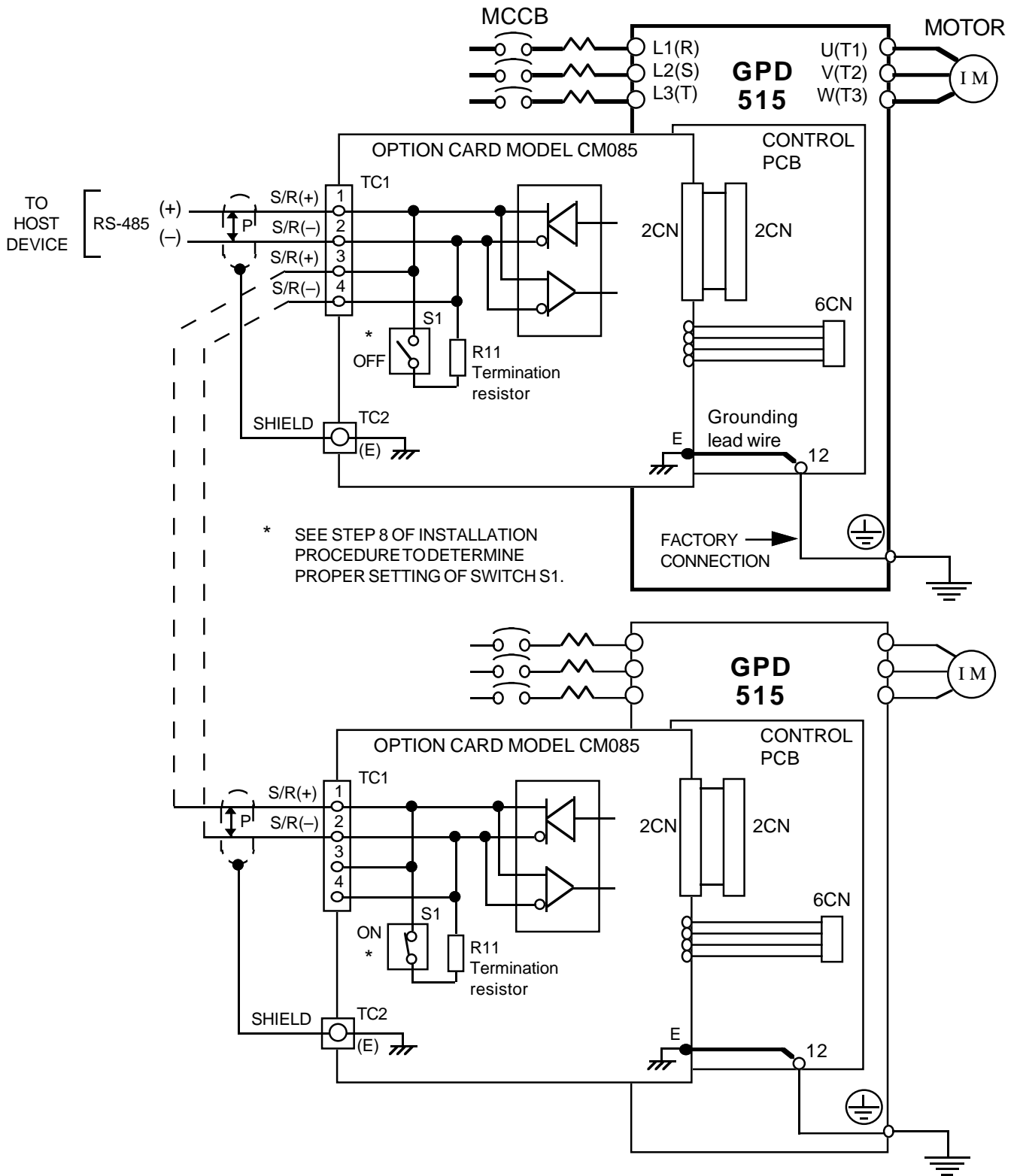


Figure 3. CM085 Interconnection Diagram

Refer to Sheet 1 for latest change.

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- Refer to "Electrical Installation" in the GPD 515 technical manual for further information on use of shielded cable. The shielded sheath connection point on the CM085 card is terminal TC2.
- Strip back insulation for a distance of 0.22 in. on wire leads to connected to side-entry terminals of TC1.

8. **Adjustments.** If only one Drive is connected to the external device, switch S1 on the CM085 card in the Drive should be set to the "ON" position to insert termination resistor R11 on the card between the RS-485 (+) and (-) lines. If multiple Drives are connected to the same external device, S1 must be set to the "OFF" position in all but the LAST Drive in the daisy-chain, in that drive only, S1 should be set to "ON".

IMPORTANT

If more than one Drive in a daisy-chain have S1 set to "ON", the overall impedance may be too low for the RS-485 port of the host device, and serial communication errors may occur.

9. Reinstall and secure Drive cover.

10. **Programming.** Ensure that the appropriate parameters are programmed to meet the requirements of your application:

PARAMETER NUMBER	FUNCTION NAME	DESCRIPTION	INCREMENT	SETTING RANGE	FACTORY SETTING
H5-01	Serial Comm. Station Address		1	0 - 1F	1F
H5-02	Serial Comm. Baud Rate	0 : 1200 baud 1 : 2400 baud 2 : 4800 baud 3 : 9600 baud	1	0 - 3	3
H5-03	Serial Comm. Parity Select	0 : No parity 1 : Even parity 2 : Odd parity	1	0 - 2	0
H5-04	Stopping Method After Serial Comm. Error	0 : Ramp to stop 1 : Coast to stop 2 : Fast-stop 3 : Alarm only	1	0 - 3	3

NOTE: Access Level (parameter **A1-01**) needs to be set to "Advanced" in order to view or change these parameters

See section 5.20 in the GPD 515 technical manual for a further explanation of serial communications.

11. Place this instruction sheet with your drive technical manual.

THIS COMPLETES INSTALLATION OF THIS OPTION.