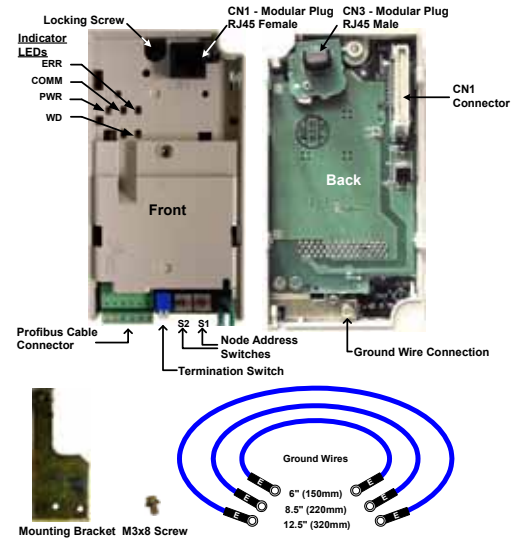


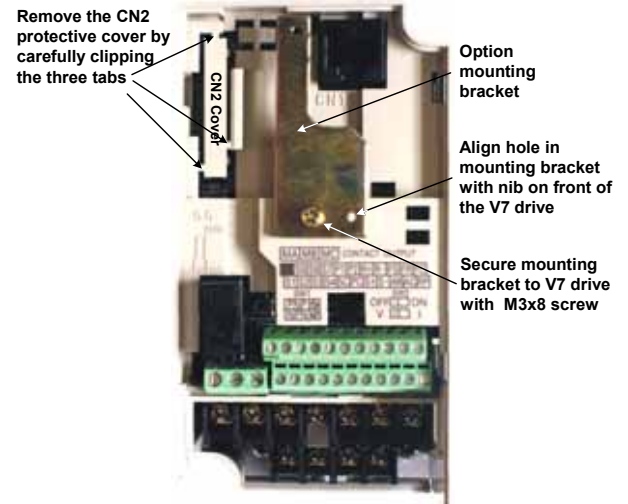
- Unpack the V7 PROFIBUS-DP Option and verify that all components are present and undamaged.

Part	Qty.
V7 PROFIBUS-DP Option Card Ring Kit	1
Mounting Bracket	1
M3x8 Screw	1
6" Ground Wire (150mm)	1
8.5" Ground Wire (220mm)	1
12.5" Ground Wire (320mm)	1
Installation Guide (IG.V7.12)	1

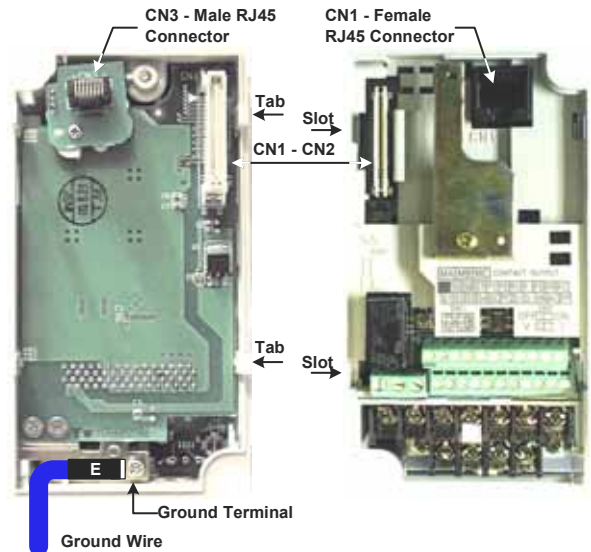
- Connect power to the drive and verify that the drive functions correctly. This includes running the drive from the operator keypad. Refer to the **V7 Technical Manual, TM.V7.01**, for information on connecting and operating the drive.
- Remove power from the drive and wait for the charge lamp to be completely extinguished. Wait at least five additional minutes for the drive to be completely discharged. Measure the DC BUS voltage and verify that it is at a safe level.



- Prepare the drive for the V7 PROFIBUS-DP Option.
 - Remove the V7 operator keypad and terminal cover.
 - Remove the plastic protective cover from over the CN2 connector and install the option mounting bracket provided on to the drive.

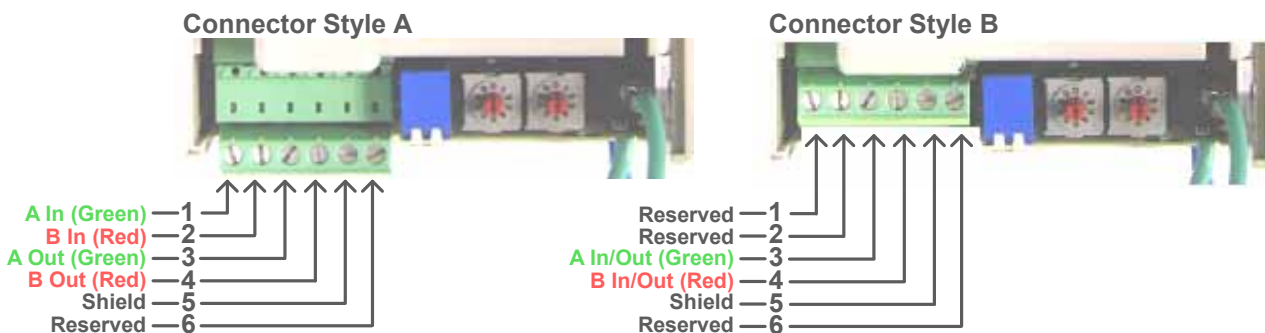


- Connect the ground wire provided to the ground connector on the back of the V7 PROFIBUS-DP Option.
- Mount the V7 PROFIBUS-DP Option onto the drive
 - Align the CN1 connector on the back of the option with its mating CN2 connector on the front of the drive.
 - Simultaneously align the CN3 connector, the male RJ45 connector, on the back of the option with the CN1 connector, the female RJ45 connector, on the front of the drive.
 - Align the tabs on the option with their corresponding slots on the front of the drive.
 - Press the option and the drive together until the tabs lock into their associated slots.
 - Secure the option to the V7 drive by tightening the locking screw at the top-center of the option.
 - Connect the ground wire from the V7 PROFIBUS-DP Option to ground terminal on the V7 drive.
 - Reinstall the operator keypad and all drive covers.



- Connect the V7 to the PROFIBUS-DP communication network.

Determine the type of connector on the V7 PROFIBUS-DP Option. Connector Style A is a modified Phoenix pluggable connector. The modification can be seen on the back of the connector as a small circuit board. Connector Style B is a standard, unmodified Phoenix pluggable connector.



- Set the node address

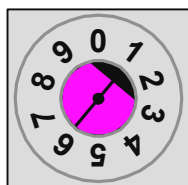
Set the node address for the drive setting the 10's digit with S2 and the 1's digit with S1. All devices on the network must have unique node addresses. Check the network layout to verify that the node address selected is unique and falls between 3 – 99. Node addresses 0 and 1 are typically reserved for master controllers. Node address 2 is typically reserved for diagnostic equipment.

$$\text{Address} = (\text{Switch 2} \times 10) + (\text{Switch 1} \times 1)$$

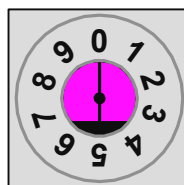
Example: Set node address to 15

Set address switch 2 to "1"

Set address switch 1 to "5"



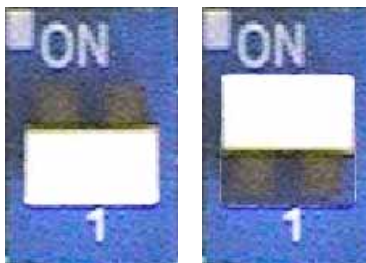
S2



S1

- Set network termination

If this drive is either the first or the last device on the network, including any PLC and/or PROFIBUS-DP Master, and active termination is not used, set the termination resistor switch to ON. If this device is not the first or last device on the network or active termination is used, set the termination resistor switch to OFF. Active termination is the recommended termination method and is required for networks operating above 1.5Mbps. Active termination will eliminate the possibility of network failure due to the removal of a device with termination set to ON. The Siemens PROFIBUS Terminator part number is 6ES7 972-0DA00-0AA0.



OFF

ON

- Secure the V7 PROFIBUS-DP Option to the drive by tightening the recessed screw located at the top center of the option.
- Configure the PROFIBUS network for the drive. Refer to the documentation included with the PROFIBUS configuration utility supplied with the PROFIBUS-DP Master controller.
- Apply power to the drive and verify that the diagnostic LED's on the front of the V7 PROFIBUS-DP Option are in their correct state.

LED Display				Content	Cause
PWR	COM	ERR	WD		
Solid Green	Solid Green	OFF	Flashing Green	Normal	Normal communication possible.

- Remove power from the drive and wait for the charge lamp to be completely extinguished. Wait at least five additional minutes for the drive to be completely discharged. Measure the DC BUS voltage and verify that it is at a safe level.
- Reinstall the operator keypad and terminal cover.
- Set parameters n003, n004 and n035 to their appropriate values

Addr	Param	Function	Data	+/- Limits - Description	Default
103h	n003	Operation Method Selection	0	Operator keypad	1
			1	Terminal	
			2	Serial Communication	
			3	Option Card (PROFIBUS-DP Option)	
104h	n004	Reference Selection	0	Operator keypad Pot	2
			1	Operator keypad	
			2	Voltage Reference (0-10v)	
			3	Current Reference (4-20 Ma)	
			4	Current Reference (0-20 Ma)	
			5	Pulse Train Reference	
			6	Serial Communication	
			7	Multi-Function Analog Input (0-10vdc)	
			8	Multi-Function Analog Input(4-20ma)	
			9	Option Card (PROFIBUS-DP Option)	
123h	n035	Frequency Reference Unit Selection	0	0.01 Hz (< 100hz), 0.1hz (100 Hz >=100hz)	0
			1	0.1%	
			2-39	Rpm	
			40-3999	User Setting	

LED Status Indicators and Diagnostics

LED Display				Content	Cause	Counter measures
PWR	COM	ERR	WD			
OFF	OFF	OFF	OFF	Power OFF	<ul style="list-style-type: none"> Power is not being fed from the drive. Power is not being provided to the option unit due to poor option unit connection. 	<ul style="list-style-type: none"> • Check the main circuit wiring on the drive. • Cycle drive power. • Turn of the drive power. • Check the option unit connection to the drive. • Cycle drive power.
Solid Green	OFF	Solid Red	Solid Red	CPU Error	Option unit CPU error.	<ul style="list-style-type: none"> • Cycle drive power. • Replace option unit if fault persists.
Solid Green	OFF	Solid Red	Flashing Red	Drive Error	Error in Drive unit.	<ul style="list-style-type: none"> • Cycle drive power. • Replace drive if fault persists.
Solid Green	OFF	Flashing Red	Solid Green	Com Error	A fault has occurred rendering communication impossible.	<ul style="list-style-type: none"> • Check whether the address set in the PROFIBUS-DP Master differs from the address of the option unit. • Check that the master is functioning properly. • Check that the termination resistor is correctly connected to the communication line. • Check whether the communication line is correctly connected (disconnected or poor connection). • Check that the communication line is separated from the main power line.
Solid Green	Solid Green	Flashing Red	Solid Green	Com Error	A fault has occurred rendering communication impossible.	<ul style="list-style-type: none"> • Check whether the address is duplicated with any other devices within the PROFIBUS-DP network.
Solid Green	Solid Green	OFF	Solid Green	CPU Init	Option unit under initialization	<ul style="list-style-type: none"> • Wait for WD LED to start flashing.
Solid Green	Solid Green	OFF	Flashing Green	Normal	Normal communication possible.	

Copies of this Installation Guide along with all technical manuals in pdf format and support files may be obtained from either the CD supplied with the drive or from www.drives.com. Printed copies of any Yaskawa manuals may be obtained by contacting the nearest Yaskawa office. Information on PROFIBUS and PROFIBUS-DP may be obtained from either the PROFIBUS Organization or at www.profibus.com.

Reference documents:

- V7 Technical Manual – TM.V7.01**
- V7 MODBUS[®] Technical Manual – TM.V7.11**
- V7 PROFIBUS-DP[®] Option Technical Manual – TM.V7.12**
- V7 PROFIBUS-DP[®] Option Installation Guide – IG.V7.12**

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