



Weed
Instrument

Temperature, Pressure, and Fiber Optic Technology

ODYSSEY Series In-Rack Fiber Optic Modem for Allen-Bradley PLC

- In-Rack Design
- Low Cost
- Converts DH+ directly to fiber
- Powered from PLC-5 Backplane
- Compatible with 6000 Series modems
- Self-Healing Ring (optional)
- Single Mode/Multi-mode Converter Versions (optional)



The Weed Instrument **ODYSSEY** Series modems offer the most versatile fiber optic solution for any PLC-5 system using DH+ or Remote I/O. There are four basic configurations of the **ODYSSEY** available. They are: **ODYSSEY-P**, Point-to-Point module with one optical port; **ODYSSEY-D**, daisy chain module, and **ODYSSEY-M** and **ODYSSEY-S** versions with Self-Healing Ring capabilities.

The **ODYSSEY** Series modems are also 100% compatible with the Weed Instrument EOTec Series 6000 fiber optic modems, including the 6C30/6C31 Self-Healing Ring. This compatibility allows the **ODYSSEY** Series to integrate fully into existing Series 6000 networks, including those with star topologies.

The **ODYSSEY** Series modem has three different optical PCBs available. They are the 850 nm multi-mode, the 1300 nm multi-mode, and the 1300 nm single mode PCBs. Any of the basic **ODYSSEY** modem configurations can be populated with any combination of optical PCBs. The type of optical PCB that is installed will be indicated on the front panel.

The features of the **ODYSSEY** Series include: the ability to switch each optical card from high power to low power, the ability to switch between 3 different data rates with a single switch, and the ability to insert or remove the DH+ termination resistor with a single switch.

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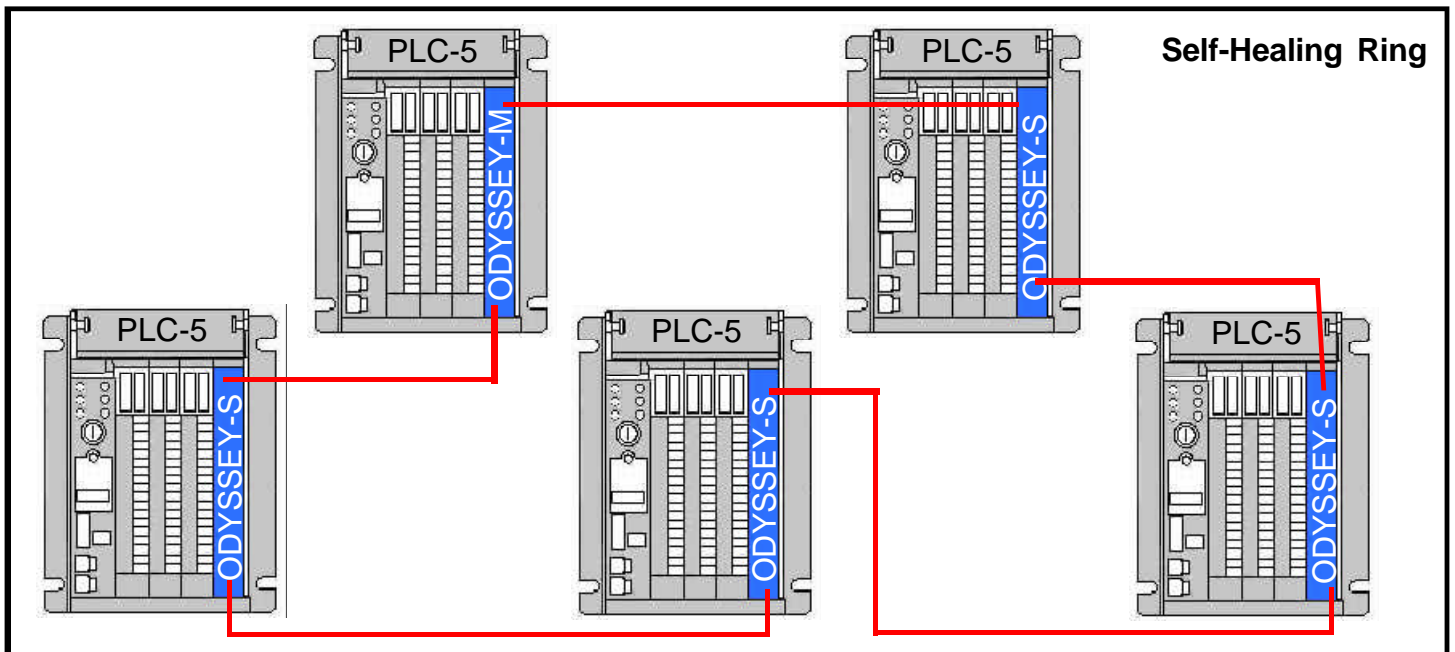
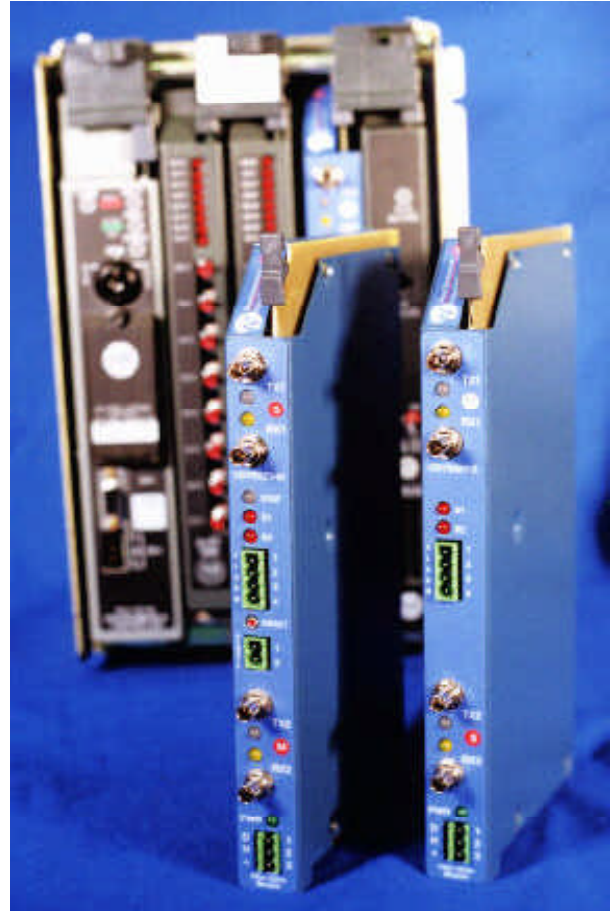
E-Mail: fiberop@weedinstrument.com, Home Page: <http://www.weedinstrument.com>



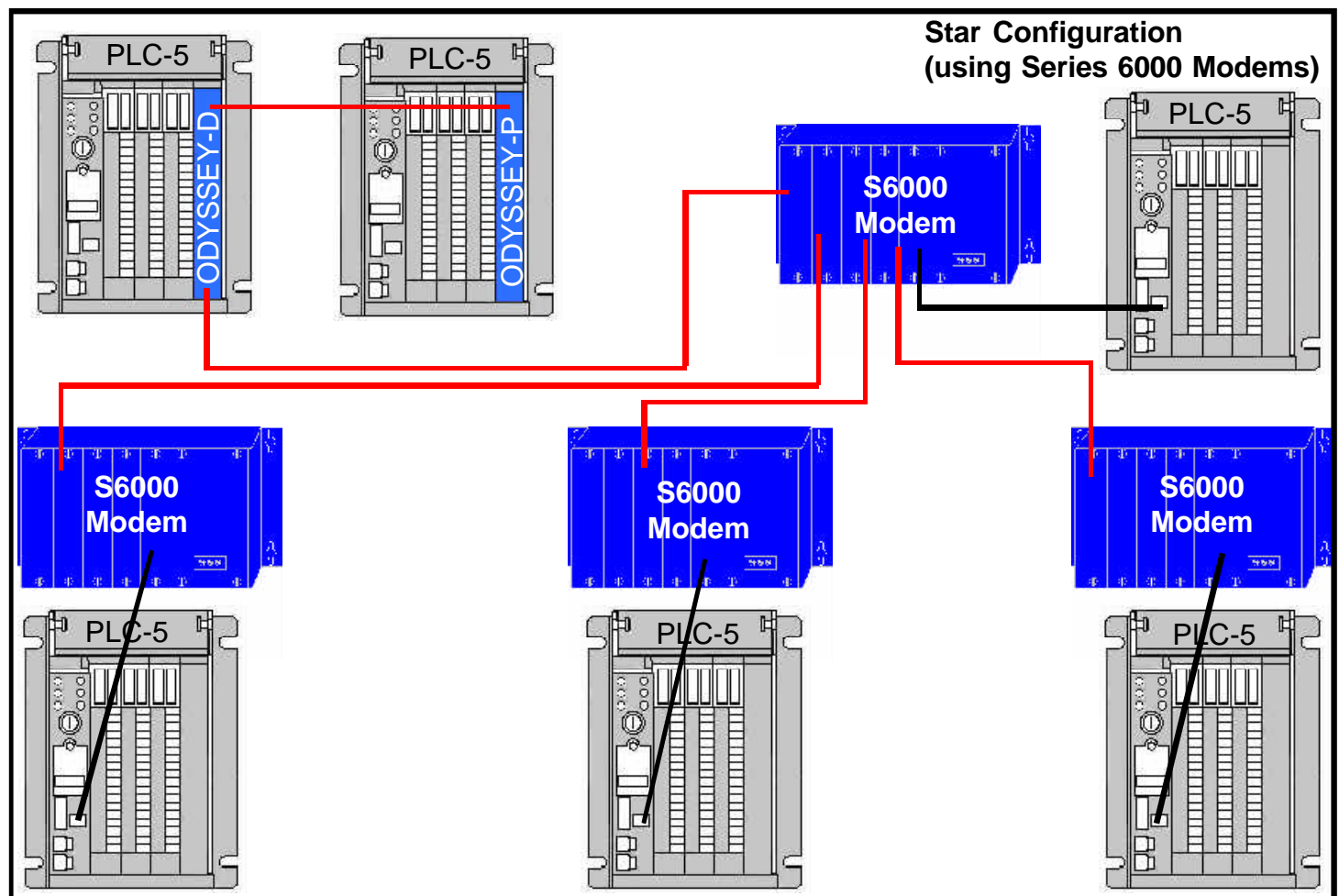
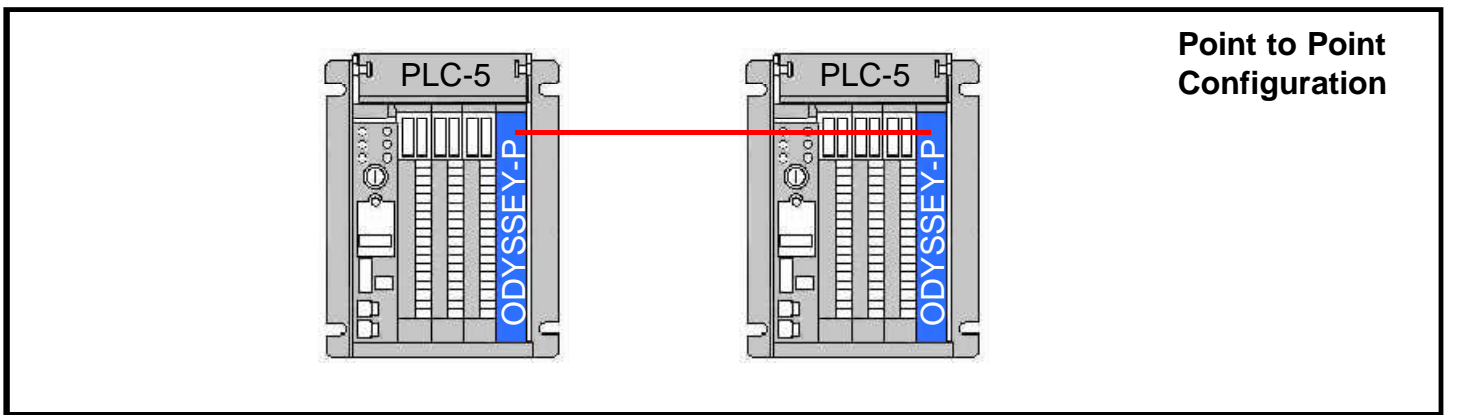
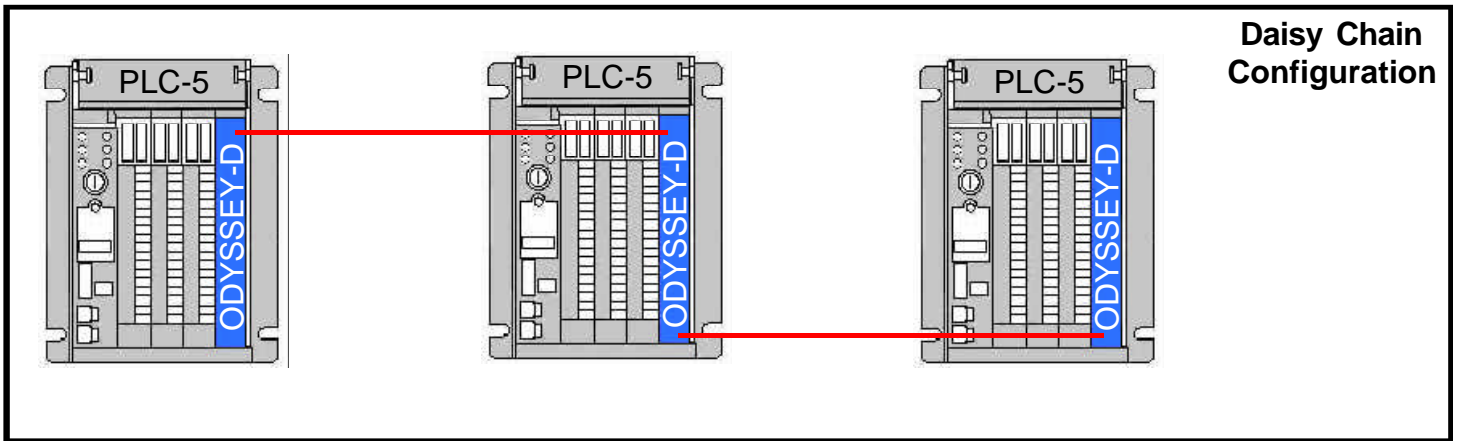
Self-Healing Ring Network Option

The Self-Healing Ring option consists of one master module and as many slave modules as PLC drops. The master module can be installed in any PLC-5 rack in the system and it creates an intentional break in the fiber ring at its location. It then monitors the communications from both directions and determines if a break occurs anywhere in the ring.

Upon a fault in the ring, the master module will close the break that it has been maintaining, and thus restore communications to the rest of the network. The master module may be set for automatic or manual reset. There is also a remote reset input on the front of the master module that can be actuated by either an analog or digital signal. Both the slave and the master modules have alarm contacts which can be monitored through the PLC network, providing a means for immediately locating a break in the fiber ring.



Sample Network Configurations



Ordering Information:

Model #	O	P	EM	00
O = ODYSSEY Modem	P = Point-to-Point	EM = 850 nm multi-mode	EM = 850 nm multi-mode	EM = 850 nm multi-mode
	D = Daisy Chain	TM = 1300 nm multi-mode	TM = 1300 nm multi-mode	TM = 1300 nm multi-mode
	M = SHR Master	TS = 1300 nm single mode	TS = 1300 nm single mode	TS = 1300 nm single mode
	S = SHR Slave			00 = No module
	(SHR = Self-Healing Ring)			(ODYSSEY-P only)

Specifications:

Size:	Occupies a single slot in the PLC-5 chassis
Operational Temperature Range:	0°C to 70°C (32°F to 158°F)
Storage Temperature Range:	-40°C to 80°C (-40°F to 176°F)
Optical Power Budget:	10dB on Low - into 62.5µm fiber 16dB on High - into 62.5µm fiber
Indicator Lights:	
Power:	Green LED
RX:	Amber LED - 1 per optical module
TX:	Bi Color LED - 1 per optical module
	Red = High power setting Green = Low power setting
STAT:	Bi Color LED (only on ODYSSEY-M)
	Red = Fault condition in ring Green = Healthy ring status
S1, S2:	Red LED indicates communications failure on Optical 1 or Optical 2 respectively (Only on ODYSSEY-S or -M)
Inputs:	
Data Hiway Plus input:	Provides Blue Hose connection point for DH+ communication from CPU module
Remote Reset:	Allows Reset function to be controlled by a remote contact closure or digital signal
Outputs:	
Alarm:	One set of contacts are provided to monitor health of communications at each module (ODYSSEY-M and -S only)
Controls:	
Baud Rate Switch:	Changes communications setting between 57 Kbaud, 115 Kbaud, and 230 Kbaud
Optical Power Switch:	Changes optical power from Hi to Low
Termination Switch:	Connects internal 120Ω termination resistor to DH+ port.