



Installation/Operation Instructions

PT/PR-140/145 Series Fiber Optic Video Transmission System

Part Number:

PT-140/145M-x; PT-140/145R-x
(Single channel Video Transmitter)

PR-140/145R-x
(Single channel Video Receiver)

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1.0 Product Description

The PT/PR-140/145 series fiber optic product is a single-channel video fiber optic FM video transmission system capable of transmitting one (1) composite video signal over one multimode or singlemode optical fiber using FM transmission technologies. The PT-140/145M/R & PR-140/145R series are compatible with NTSC, PAL and SECAM video signals.

The transmitter unit (PT) is available in either a standard 1-wide rack unit (PT-140/145R) or as a small shelf mount module (PT-140/145M). The receiver unit (PR) is available in only a standard 1-wide plug-in rack unit and is compatible with the following Meridian chassis: SR-500/S, SR-1000/S, SR-1200/S, SR-1500/S, and SR-2001 & SR-2000 series 19" equipment chassis.

The difference between the PT/PR-140 and PT/PR-145 series is the video bandwidth. The PT/PR-140 series has a nominal video bandwidth of 7MHz while the PT/PR-145 series has a nominal video bandwidth of 30MHz.

2.0 Product Specifications & Part Numbers

The tables below identify the key specifications for the video signals that these modems transmit/receive.

Video Specifications		
	PR/PR-140 series	PT/PR-145 series
Format	NTSC, PAL, SECAM	NTSC, PAL, SECAM
Voltage/Impedance	1Vp-p, 75 Ω , 1.5Vp-p (max)	1Vp-p, 75 Ω , 1.5Vp-p (max)
Differential Gain	<1%	<1%
Frequency Response	5Hz to 6.8MHz	5Hz to 30Mhz
Differential Phase	<0.7°	<0.7°
SNR	>60dB (weighted)	>60dB (weighted)
Return Loss	>30dB	>30dB
Field Tilt	<0.5%	<0.5%

Connectors	
Video	75 Ω BNC w/gold center pin
Optical	Singlemode – ST or FC Multimode - ST
Power (PT-140/145M only)	2-pin screw terminal connector (non IDC type)

Optical Specifications						
Fiber Type/Size (um)	Optical Output (dBm)	Rx Sensitivity (dBm)	Optical Budget (dB)	Wavelength (nm)	Optical connector	Optical Dynamic Range (dB)
Multimode (FP Laser) 62.5/125	-3	-22	19	850	ST	22
Multimode (FP Laser) 62.5/125	-3	22	19	1300	ST	22
Singlemode 9/125	-3	22	19	1310	ST, FC	22

Product Part Numbers		
Transmitter	Description	Receiver
PT-140M-0 & PT-145M-0	FM video Transmitter, 850nm, multimode, shelf mount	PR-140R-0 & PR-145R-0
PT-140R-0 & PT-145R-0	FM video Transmitter, 850nm, multimode, rack mount	
PT-140M-1 & PT-145M-1	FM video Transmitter, 1300nm, multimode, shelf mount	PR-140R-1 & PR-145R-1
PT-140R-1 & PT-145R-1	FM video Transmitter, 1300nm, multimode, rack mount	
PT-140M-2 & PT-145M-2	FM video Transmitter, 1310nm, singlemode, shelf mount	PR-140R-2 & PR-145R-2
PT-140R-2 & PT-145R-2	FM video Transmitter, 1310nm, singlemode, rack mount	

3.0 Installation

Series PT-140/145R & PR-140/145R series products are one-slot wide cards and, as such, occupy only one slot in Meridian's standard chassis (SR-500/S, SR-1000/S, SR-1200/S, SR-1500/S, and SR-2001 & SR-2000 series 19" equipment chassis). To install in the chassis, orient the card with the Meridian logo at the top of the module and slide onto the top and bottom card guides in the chassis. Press securely on the top and bottom of the module to ensure that it is fully seated in the chassis so that the electrical connector mates with the chassis-mounted motherboard. Once installed, manually tighten the two thumbscrews located at the top and bottom of the card. Do not use tools to secure these and do not over tighten.

The PR-140/145M-x transmitter is a shelf mount module and can be mounted in either a horizontal or vertical configuration. A 2-pin plug-in connector is located on the side of the PT-140/145M modules for power. A standard 24VAC wall transformer is required to operate the PT-140/145M series products. Meridian recommends the WP-24A transformer for proper operation of this module.

Note: A fully loaded subrack should have forced-air cooling to avoid excessive heat generation inside the chassis. A fan assembly tray (P/N FA-2000) with three (3) fans is available and should be installed under the 19" SR-2000/2001 chassis whenever possible.

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4.0 Front Panel Layout

The figures below show the video input/output connector and Power LED indicator locations for the PT-140/145M & PR-140/145R modules.

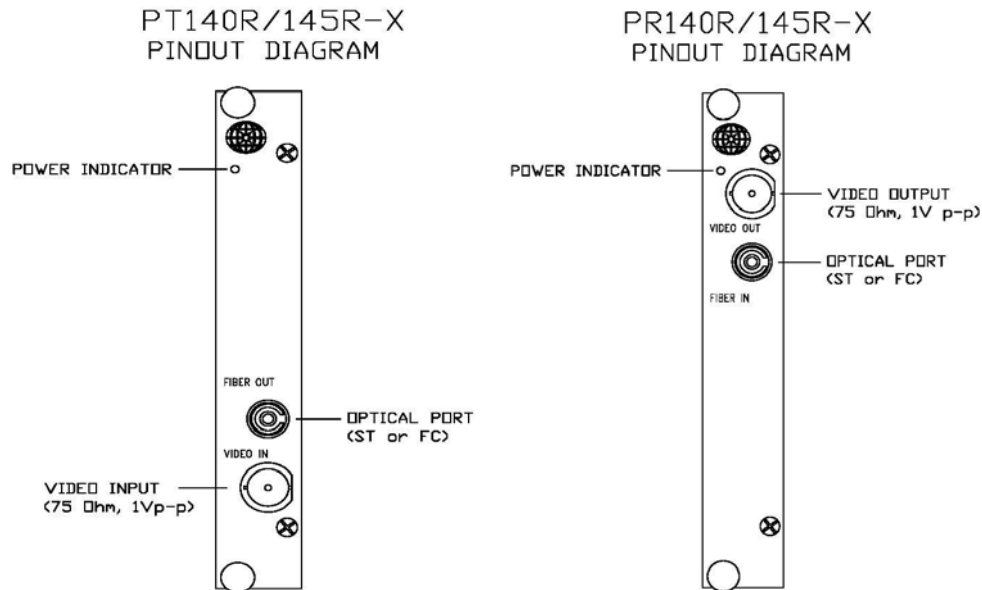


Figure 4.1

PT/PR-140/145R Front Panel Layout Diagrams

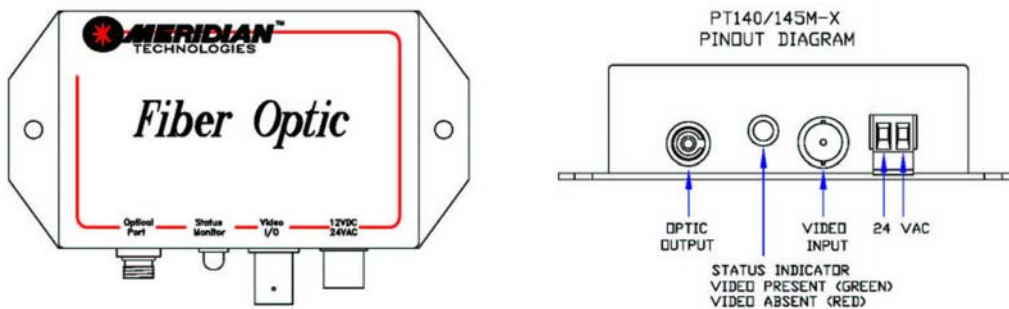


Figure 4.2

PT/PR-140/145M Front Panel Layout Diagrams

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5.0 Troubleshooting

Below is a listing of several problems that may arise during the installation & operation of the modules. If you are having difficulty installing or operating the modules please refer to this list below.

- Problem:** *Module does not fit in chassis slots*
Action: Check module orientation. Meridian “Globe” must be oriented on the top left hand side of the module
Make sure the card guides in the chassis are aligned with the extrusion on the module
- Problem:** *Card power LED does not light when power to the module/subrack is applied or power indicator turns on and off*
Action: Check power supply to ensure that it is plugged in and turned on. If flashing continues, move module to another chassis or location in the same chassis, if available.
- Problem:** *No video at output of module*
Action: Check to ensure that the video coax cables are attached to the appropriate channels on both the transmitter and receiver modules. If no video is still present, check to ensure that the monitor is ON and the video cable is connected to the correct video port on the Rx module.

If the problem still exists after reviewing the above items, please contact Meridian technical support (516-285-1000).