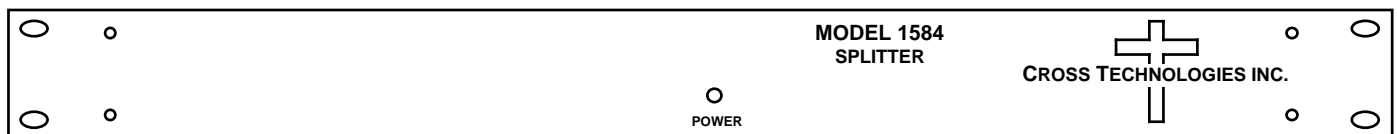


Instruction Manual

Model 1584-116S 16-Way Splitter

December 2010, Rev.C



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INSTRUCTION MANUAL

MODEL 1584-116S, 16-Way Splitter

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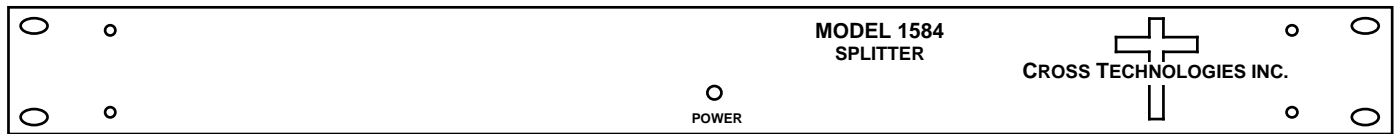
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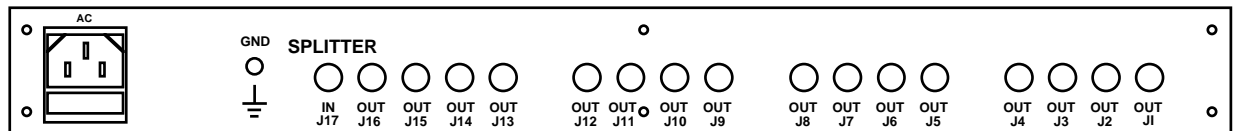
1.0 General

1.1 Equipment Description

The Model 1584-116S is one sixteen-way, 0.95 - 2.05 GHz, 0 dB gain splitter in a 1RU rack mount chassis with a single 100-240 \pm 10% VAC power supply. The splitter provides surge protection on the RF input, and provides excellent RF characteristics. The splitter has sixteen outputs on the back panel. A 100-240 \pm 10% VAC input power supply provides power to the unit. A surge suppressor on the splitter input protects against high voltage transients. On the front panel, a green LED's indicates power on.



FRONT PANEL



REAR PANEL

FIGURE 1.1 MODEL 1584-116S FRONT AND REAR PANELS

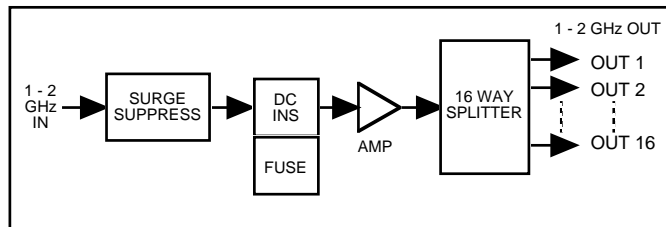


FIGURE 1.2 MODEL 1584-116S BLOCK DIAGRAM

1.2 Technical Characteristics

TABLE 1.0 1584-116S Specifications

Characteristics	Specifications**
Input Characteristics	
Input Impedance	75Ω (50Ω, option -D)
Return Loss	12 dB min.; 14 dB typical
Input Level	-20 dBm total maximum
Output Characteristics	
Impedance	75Ω (50Ω, option -D)
Return Loss	12 dB min.; 14 dB typical
In-Band Characteristics	
Gain	+0 dB ± 1.0 dB
Frequency Response	± 1.0 dB; 0.95 to 2.05 GHz ± 0.5 dB, any 20 MHz increment
Port to Port Isolation	> 18 dB, min., 20 dB typical
Coupler to Coupler	> 35 dB, min., 40 dB typical
Indicators	
AC Power	Green LED indicates power on.
Other	
LNB DC Voltage	22 ±2 VDC
Output LNB Current	300 ma, maximum
Surge Suppressor	SiDACTOR
RF Connectors	Type-F, female (BNC, female - options -B and -D).
AC Power	Redundant switching power supplies, 100-240 ± 10% VAC, 47- 63 Hz, 30 watts maximum. *NOTE: Model 1584-116S has a single non-redundant, switching power supply, and <u>does NOT provide the LNB Power Insertion feature.</u>
Mechanical	19 inch standard chassis 1.75”high X 12” deep.
Options	
B	BNC, 75Ω RF connectors
D	BNC, 50Ω RF connectors
W9	10MHz pass through (J17 to J16)

*+10°C to +40°C; Specifications subject to change without notice.

2.0 Installation

2.1 Mechanical - The 1584-116S consists of one RF printed circuit board (PCB) housed in a 1 RU (1 3/4 inch high by 12 inch deep) chassis. A switching, +24 VDC power supply provides power. Connectors are type F, female for the RF connections (BNC, female option -B or -D). The 1584-116S can be secured to a rack using the 4 holes on the front panel. Figure 2.0 shows how the 1584-116S is assembled. J30 connects the DC voltage from the power supplies to the PCB as shown.

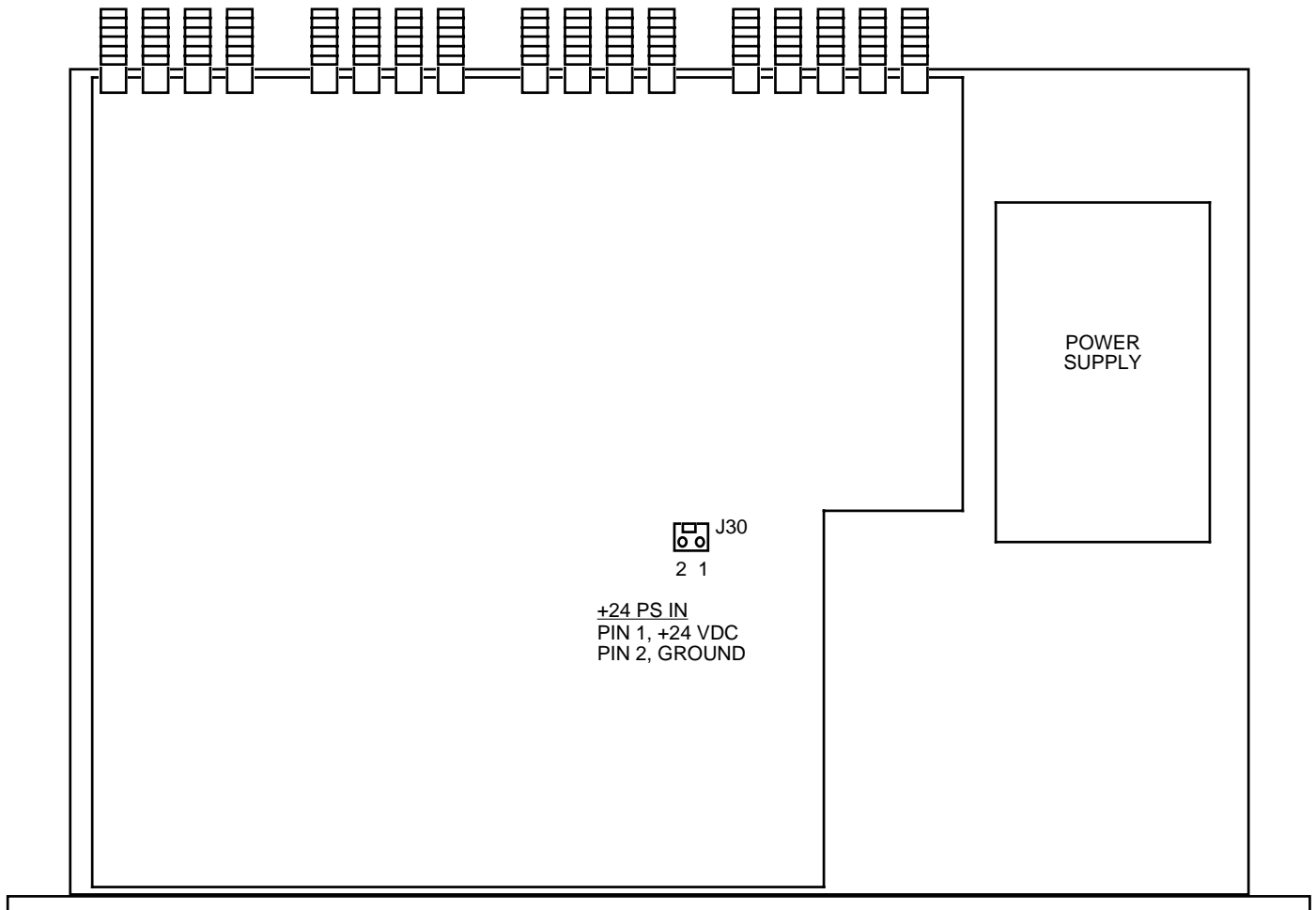


FIGURE 2.0 1584-116S MECHANICAL ASSEMBLY

2.2 Rear Panel Input/Output Connectors

The input and output connectors on the rear panel are shown in Figure 2.1.

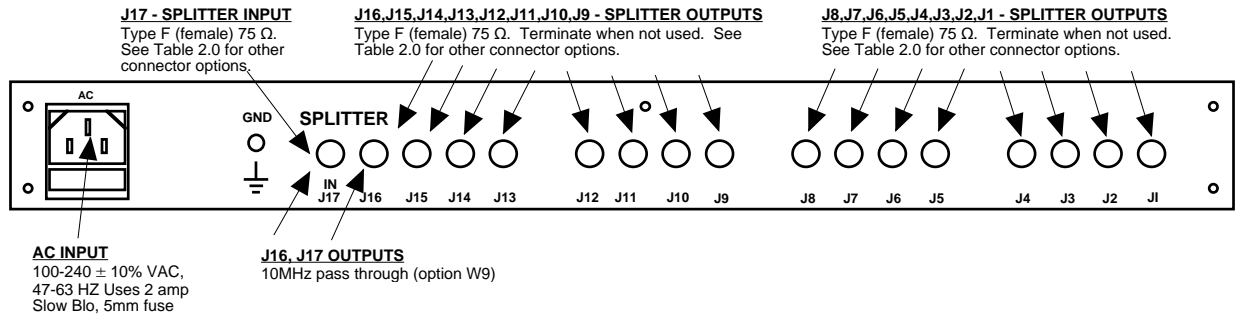


FIGURE 2.1 1584-116S REAR PANEL

TABLE 2.0 RF Connector Options	
Option	RF Connectors
STD	Type F, 75Ω
-B	BNC, 75Ω
-D	BNC, 50Ω
-W9	10MHz pass thru -J17 to J16

2.3 Front Panel Monitors and Indicators

Figure 2.2 shows the front panel monitors and indicators.

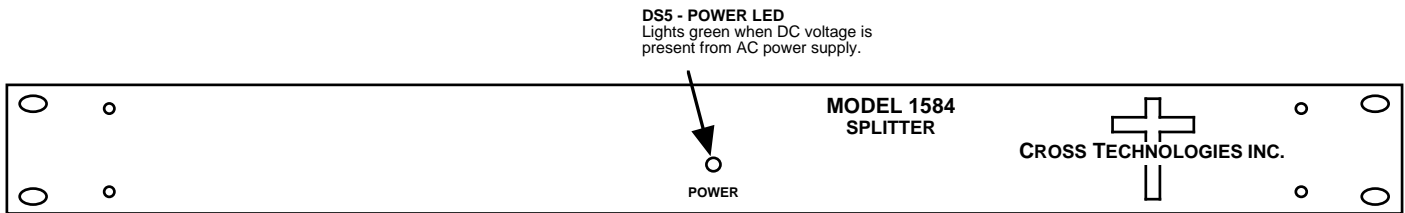


FIGURE 2.2 1584-116S FRONT PANEL

2.4 Operation

1. Connect RF cables to the 1584-116S (See Section 2.2).
2. Connect 100-240 \pm 10% VAC, 47- 63 Hz to AC on the back panel and observe front panel LED is lit.

NOTE: FOR OPTIMUM PERFORMANCE, THE SPLITTER PORTS SHOULD BE TERMINATED WITH 75 OHM TYPE F TERMINATIONS WHEN NOT USED.

AC Fuse - The fuse is a 5mm, 2 amp slow blo and is inserted in the far slot in the drawer below the AC input as shown in Figure 2.6. There is a spare fuse in the near slot. If a fuse continues to open, the power supply is most likely defective. Note that each power supply module within the chassis also has a fuse but failure of this fuse indicates the power supply may be defective.

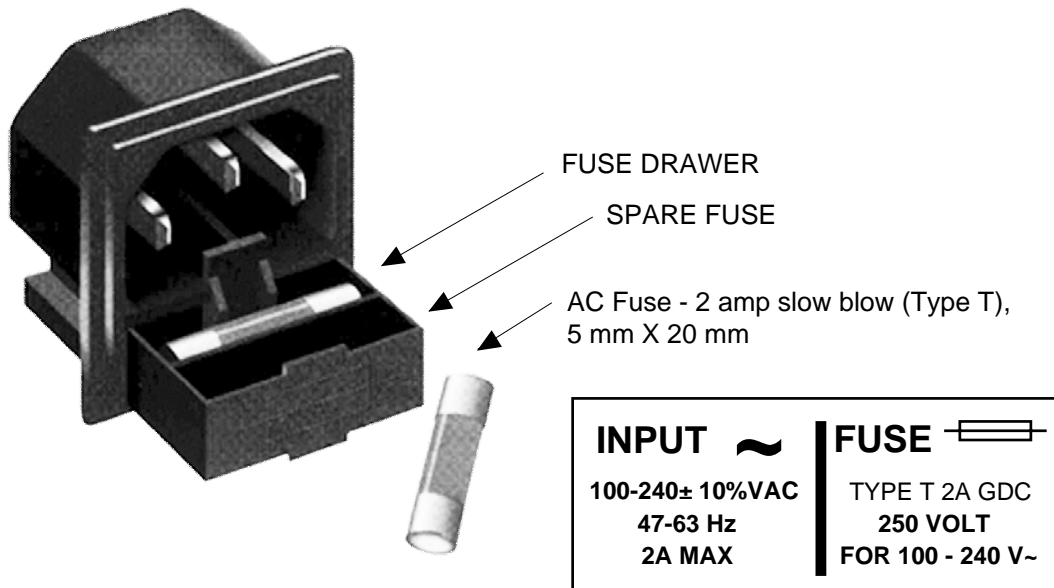


FIGURE 2.6 FUSE LOCATION AND SPARE FUSE

2.5 Environmental Use Information

- A. Rack-Mounting** - To mount this equipment in a rack, please refer to the installation instructions located in the user manual furnished by the manufacturer of your equipment rack.
- B. Mechanical Loading** - Mounting of equipment in a rack should be such that a hazardous condition does not exist due to uneven weight distribution.
- C. Elevated Operating Ambient Temperature** - If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack may be greater than room ambient temperature. Therefore, consideration should be given to T_{mra} .
- D. Reduced Air Flow** - Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised. Additional space between units may be required.
- E. Circuit Overloading** - Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of circuits could have on over current protection and supply wiring. Appropriate consideration of equipment name plate rating should be used when addressing this concern.
- F. Reliable Earthing** - Reliable earthing of rack-mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connection to the Branch (use of power strips).
- G. Top Cover** - There are no serviceable parts inside the product so, the Top Cover should not be removed. If the Top Cover is removed the ground strap and associated screw **MUST BE REINSTALLED** prior to Top Cover screw replacement. **FAILURE TO DO** this may cause **INGRESS** and/or **EGRESS** emission problems.



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