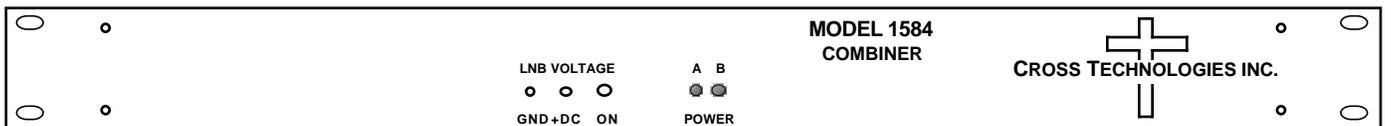


Instruction Manual

Model 1584-29/29S RF Splitter

March 2013, Rev. 0



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6170 Shiloh Road
Alpharetta, Georgia 30005

(770) 886-8005
FAX (770) 886-7964
Toll Free 888-900-5588

WEB www.crosstechnologies.com
E-MAIL info@crosstechnologies.com

INSTRUCTION MANUAL
MODEL 1584-29/29S, RF Splitter

<u>TABLE OF CONTENTS</u>	<u>PAGE</u>
Warranty	2
1.0 General	3
1.1 Equipment Description	3
1.2 Technical Characteristics	4
2.0 Installation	5
2.1 Mechanical	5
2.2 Rear Panel Input/Output Connectors	6
2.3 Front Panel Monitors and Indicators	6
2.4 Operation	7
3.0 Environmental Use Information	8

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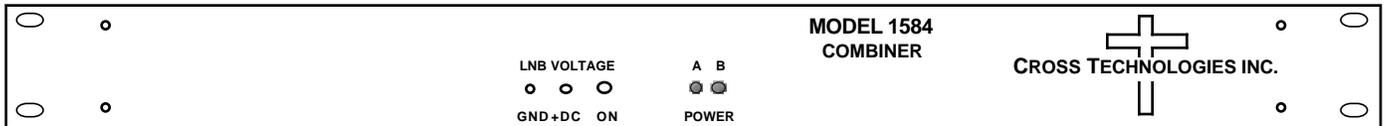
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MODEL 1584-29/29S RF Splitter

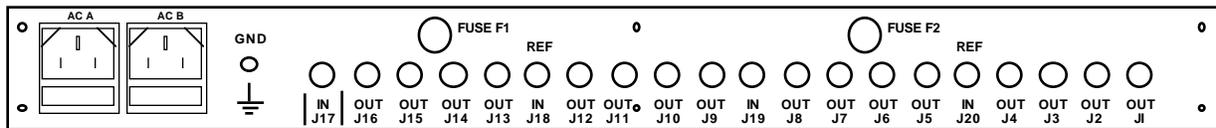
1.0 General

1.1 Equipment Description

The Model 1584-29/29S* has two eight-way, 0.95 - 2.05 GHz, 0 dB gain splitter in a 1RU rack mount chassis with redundant 100-240 ± 10% VAC power supplies. Each splitter provides surge protection on the RF input, and provides excellent RF characteristics. Each splitter has eight outputs on the back panel, and fused LNB power can be inserted on each input. Two individual 100-240 ± 10% VAC input power supplies provide diode OR'd redundant power to the unit*. A surge suppressor on each splitter input protects against high voltage transients. On the front panel, two green LED's indicate the presence of DC voltage from each of the two power supplies, and another green LED indicates LNB power insertion. Two test points are also provided on the front panel to monitor the LNB voltage. *LNB Power Insertion feature NOT available on 1584-29S model. Option -E allows an external 10 MHz signal to be inserted on each RF input.



FRONT PANEL



1584-29/29S REAR PANEL(-29 Shown with Option -E)

FIGURE 1.1 MODEL 1584-29/29SS Front and Rear Panels

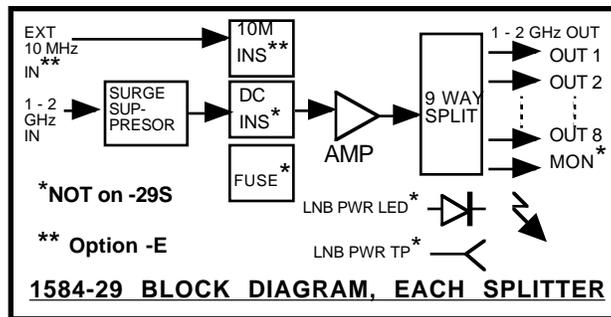


FIGURE 1.2 MODEL 1584-29/29S Block Diagram

1.2 Technical Characteristics

TABLE 1.0 1584-29/29S RF Splitter Equipment 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, .95 - 2.05 GHz; ± 0.5 dB, any 20 MHz increment
Port to Port Isolation	> 18 dB, 20 dB typical
Indicators	
Power	Green LED indicates DC Voltage prior to diode OR
LNB DC Voltage	Green LED indicates LNB Power Insertion on splitter input (J-17)
Other	
LNB DC Voltage	22 ± 2 VDC
Output LNB Current	300 ma, maximum
Surge Suppressor	SiDACTOR
AC Power	Redundant Switching Power Supplies, 100-240 ±10% VAC, 47 - 63 Hz, 30 watts maximum. NOTE: Model 1584-29S has a single non-redundant, switching power supply and does not provide the LNB Power Insertion Feature.
Mechanical	19 inch Standard Chassis, 1.75" High x 12" Deep
Options	
-B	75Ω, BNC RF Connectors
-D	50Ω, BNC RF Connectors
-W9	10 MHz Pass Through (J17 to J16) and (J19 to J8)
-E	External 10 MHz insertion (J18 and J20), 1 dB maximum insertion loss; 75Ω (works with 50Ω).
*10°C to 40°C; Specifications subject to change without notice	
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Installation

2.1 Mechanical

The 1584-29/29S consists of one RF printed circuit board (PCB) housed in a 1 RU (1 3/4 inch high) by 12 inch deep chassis. One +24 VDC power supply provides power for the internal amplifiers and LED. Connectors are type F, female for the RF connections. The 1584-29/29S can be secured to a rack using the 4 holes on the front panel. Figure 2.1.shows how the 1584-29/29S is assembled. J29 connects the DC voltage from the power supply to the PCB as shown.

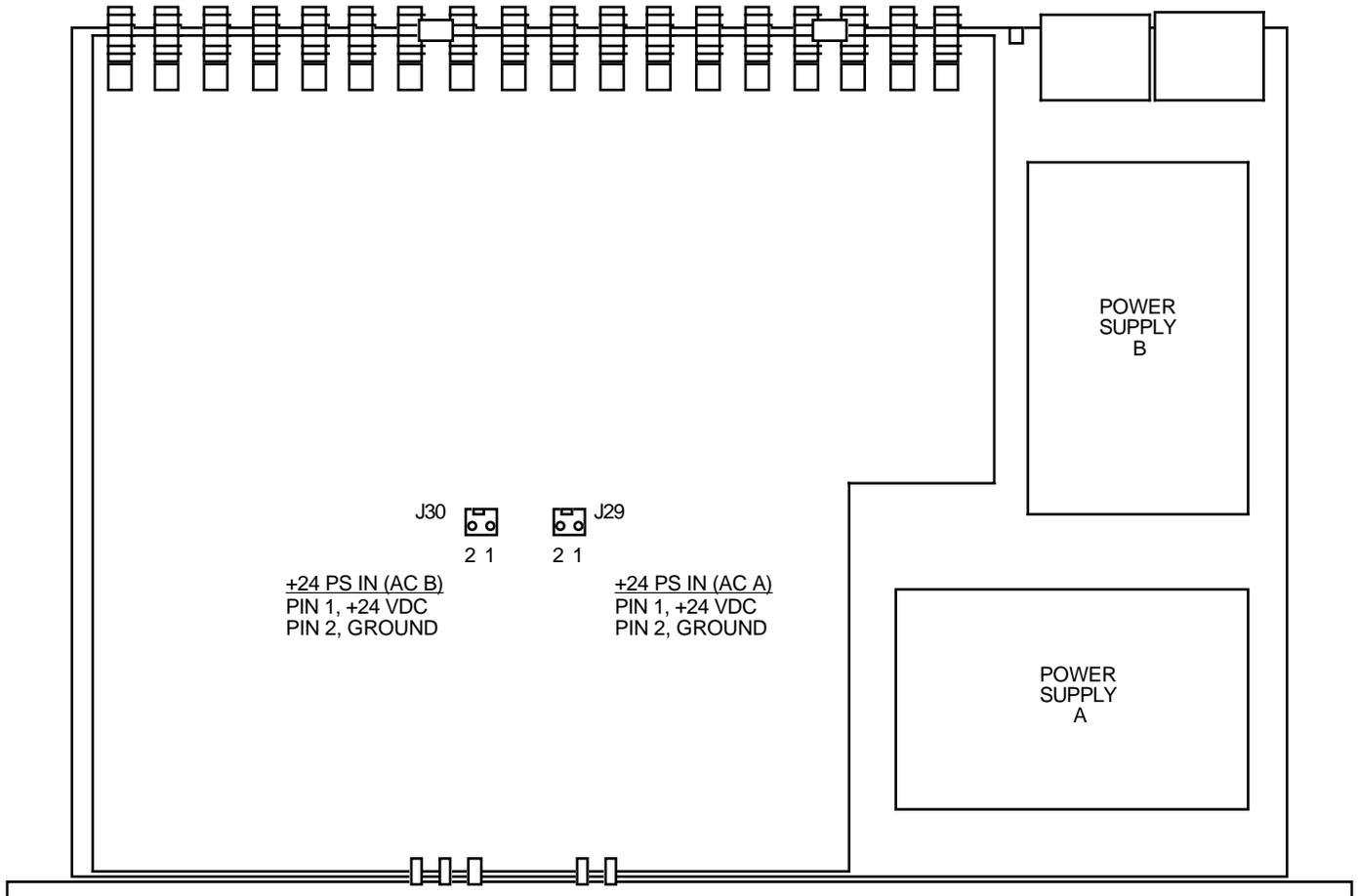
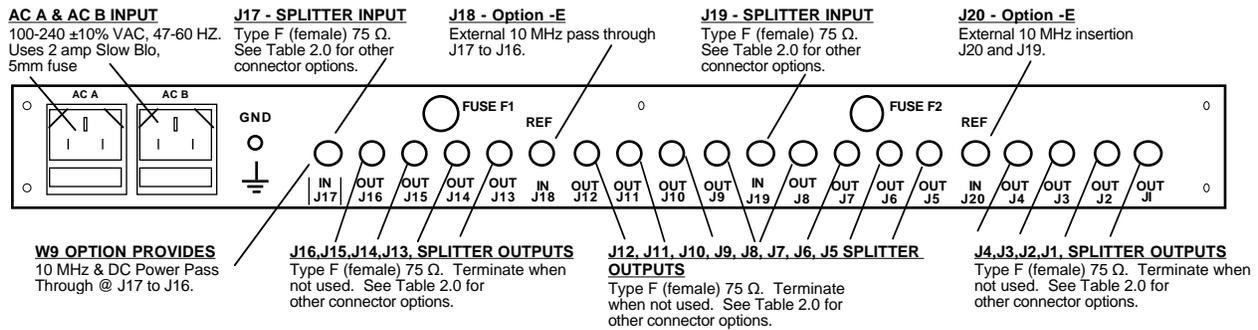


FIGURE 2.0 1584-29/29S Mechanical Assembly

2.2 Rear Panel Input/Output Connectors

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



1584-29/29S REAR PANEL(-29 Shown with Option -E)

FIGURE 2.1 1584-29/29S Rear Panel

TABLE 2.0 RF Connector Options	
Option	RF Connectors
-B	BNC, 75Ω Connectors
-D	BNC, 50Ω Connectors
-E	External 10 MHz insertion (J18 & J17); (J20 & J19) 1dB maximum insertion loss; 75Ω (works with 50Ω)
-W9	10 MHz Pass Through (J17 to J16)

2.3 Front Panel Monitors and Indicators

Figure 2.2 shows the front panel monitors and indicators.

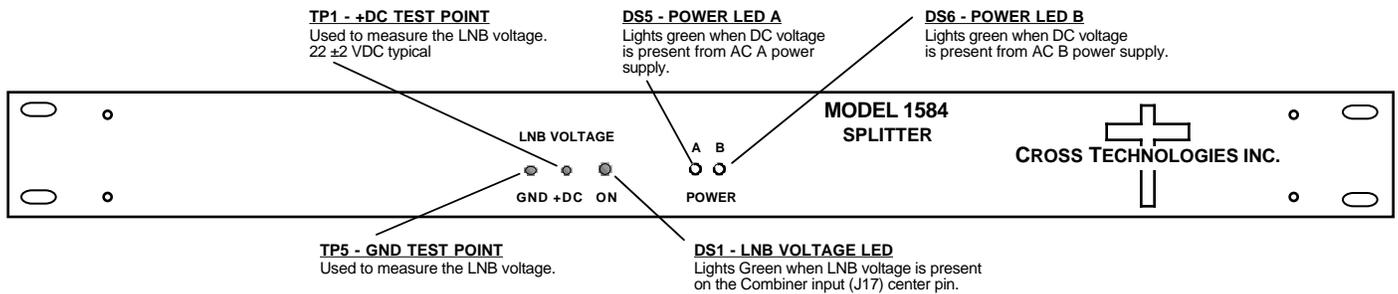


FIGURE 2.2 1584-29/29S Front Panel

2.4 Operation

1. Connect RF cables to the 1584-29/29S (Figure 2.1).
2. Connect 100-240 \pm 10% VAC, 47 - 63 Hz to AC on the back panel and observe that the AC POWER LED is lit on the front panel (Figure 2.2).
3. AC Fuse - The fuse is a 5mm, 2 amp fast 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 the power supply module within the chassis also has a fuse but failure of this fuse indicates the power supply may be defective.

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

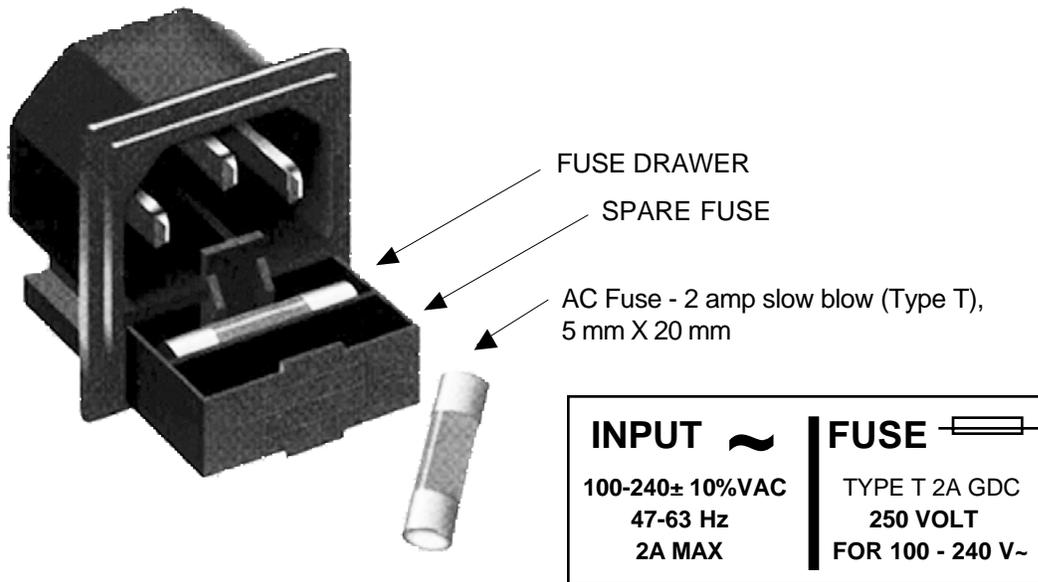


FIGURE 2.6 Fuse and Spare Fuse Locations

3.0 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 Tmra.
- 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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