

Active L-Band Combiners



Products:

DEV 2208/50 -	8:1	Active L-Band Combiner, 50 Ohm
DEV 2208/75 -	8:1	Active L-Band Combiner, 75 Ohm
DEV 2208/50-75 -	8:1	Active L-Band Combiner, 50 Ohm Inputs, 75 Ohm Output
DEV 2208/75-50 -	8:1	Active L-Band Combiner, 75 Ohm Inputs, 50 Ohm Output
DEV 2216/50 -	16:1	Active L-Band Combiner, 50 Ohm
DEV 2216/75 -	16:1	Active L-Band Combiner, 75 Ohm
DEV 2216/50-75 -	16:1	Active L-Band Combiner, 50 Ohm Inputs, 75 Ohm Output
DEV 2216/75-50 -	16:1	Active L-Band Combiner, 75 Ohm Inputs, 50 Ohm Output

Features:

- Series of Active L-Band Combiners
- Versions in 50 Ohm with SMA Connectors and in 75 Ohm with Precision F Connectors
- Mixed Impedances are available
- Monitoring Port at the Front Panel
- DC blocked Inputs
- Dual Redundant Power Supplies with Status Alarm Output

Application Areas:

- Satellite Ground Stations
- Large Cable Head End Stations

*Front DEV 2216**Rear DEV 2216/50*

The Situation

In satellite ground stations and cable head end stations a number of signals need to be combined to build the total transmission stream to the customer (subscriber). In addition, parts of the transmission stream are to be combined before they leave the subsystem e.g. QAM modulators.

Introducing the DEV Solution

DEV Systemtechnik has developed a series of active 8:1 or 16:1 L-Band combiners to provide high performance subsystem combiners for premium quality transmission.

The Technical Concept

The instruments of this series are active L-Band combiners with 8 inputs (DEV 2208) or 16 inputs (DEV 2216) which are passively combined before the signal is amplified and routed to the output.

To meet all possible customer requirements in terms of impedance, all combinations of 50 Ohm with SMA connectors and 75 Ohm with precision F connectors at the inputs and at the output can be ordered. I.e. there are available four different models of the DEV 2208 and of the DEV 2216.

All inputs are DC blocked and a monitoring port carries the output signal at a reduced level.

The instrument is delivered in a rack mountable 1 RU housing with dual redundant AC power supplies.

Technical Data

DEV 2208/zz 8:1 Active L-Band Combiner DEV 2216/zz 16:1 Active L-Band Combiner

In the following table “DEV 22xx” stands either for DEV 2208 or for DEV 2216; and “zz” is used for the impedance configuration, i.e. “50”, “75”, “50-75” or “75-50”.

RF Specifications

Frequency range	950...2150 MHz	
Number of inputs	8	(DEV 2208/zz)
	16	(DEV 2216/zz)
Number of outputs	1	
Impedance inputs, connectors	50 Ohm, SMA (f)	(DEV 22xx/50, DEV 22xx/50-75)
	75 Ohm, Precision F (f)	(DEV 22xx/75, DEV 22xx/75-50)
Impedance output, connector	50 Ohm, SMA (f)	(DEV 22xx/50, DEV 22xx/75-50)
	75 Ohm, Precision F (f)	(DEV 22xx/75, DEV 22xx/50-75)
Damage level	+10 dBm	
Nominal input level	-10 dBm	
Return loss	>14 dB	
Insertion loss	0±3 dB	
Isolation between input ports	>20 dB	
Intermodulation distortion	<-40 dBc @ -10 dBm	
Group delay	<5 ns	(within any 36 MHz interval)

Monitoring Port

Impedance, connector	50 Ohm, SMA (f)
Return loss	>14 dB
Frequency response	= output level – 20 dB ±1.0 dB

Redundant Power Supply

Redundant power supplies	100...240 V AC supplied by two different lines
Power consumption	<100 VA

Potential Free Contacts

Two stage alarm signalization for power line failure	Potential free contacts
Alarm connector	Sub-D-9 (m)
Contact rating	60 V; 300 mA

Two Stage Alarm Signalization for Power Line Failure:

B-Alarm	One power supply unit does not deliver any secondary power.
A-Alarm	All power supply units do not deliver any secondary power.

General Specifications

Housing	19" (483 mm), 1 RU (44 mm), 260 mm depth
Weight	~5 kg
Environmental conditions	ETS 300019 Part 1-3 Class 3.1

Order Information

DEV 2208/50	8:1	Active L-Band Combiner, 50 Ohm Inputs, 50 Ohm Output
DEV 2208/75	8:1	Active L-Band Combiner, 75 Ohm Inputs, 75 Ohm Output
DEV 2208/50-75	8:1	Active L-Band Combiner, 50 Ohm Inputs, 75 Ohm Output
DEV 2208/75-50	8:1	Active L-Band Combiner, 75 Ohm Inputs, 50 Ohm Output
DEV 2216/50	16:1	Active L-Band Combiner, 50 Ohm Inputs, 50 Ohm Output
DEV 2216/75	16:1	Active L-Band Combiner, 75 Ohm Inputs, 75 Ohm Output
DEV 2216/50-75	16:1	Active L-Band Combiner, 50 Ohm Inputs, 75 Ohm Output
DEV 2216/75-50	16:1	Active L-Band Combiner, 75 Ohm Inputs, 50 Ohm Output

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