

Active 16:1 L-Band Combiners



Products:

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

Features:

- Series of Active 16:1 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
- Inputs are DC blocked
- Dual Redundant Power Supplies with Status Alarm Output

Application Areas:

- Satellite Ground Stations
- Large Cable Head End Stations

DEV 2216**Front DEV 2216****Rear DEV 2216****The Situation**

In satellite ground stations and cable head end stations a lot 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.

DEV worked out a Solution

DEV Systemtechnik has developed a series of active 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 16 inputs which are passively combined before the signal is amplified and routed to the output.

To meet all possible customer requirements in terms of impedance, four different models of the DEV 2216 are available. 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.

All inputs are DC blocked and a monitoring port carries the output signal at a 20 dB reduced level.

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

Technical Data

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

RF Specifications

Frequency range	950...2150 MHz
Number of inputs	16
Number of outputs	1
Inputs impedance (zz), connectors	50 Ohm, SMA (f) (DEV 2216/50, DEV 2216/50-75) 75 Ohm, Precision F (f) (DEV 2216/75, DEV 2216/75-50)
Output impedance (zz), connector	50 Ohm, SMA (f) (DEV 2216/50, DEV 2216/75-50) 75 Ohm, Precision F (f) (DEV 2216/75, DEV 2216/50-75)
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

Alarms

Two stage alarm signalisation for power line failure	Potential free contacts
Alarm connector	Sub-D-9 (m)
Contact load	60 V; 0,3 A
B-Alarm	One power supply unit does not deliver any secondary power.
A-Alarm	Both power supply units do not deliver any secondary power.

Redundant Power Supply

Redundant power supplies	100...260 V AC supplied by two different lines
Power consumption	~10 VA

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

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

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