

Multiplexers & Demultiplexers



Products:

DEV 101xx/zz - xx:1 (De-) Multiplexer CATV-Band zz Ohm

DEV 121xx/zz - xx:1 (De-) Multiplexer L-Band zz Ohm

Features:

- Series of Multiplexers/Demultiplexers with **xx**: 24, 32, 48 or 64 ports for the CATV-Band or the L-Band in **zz**: 50 or 75 Ohm
- Amplifier for L-Band Versions available
- Dual Redundant Power Supplies
- Control via Web Interface
- Remote Control Protocol Support

Application Areas:

- Satellite Ground Stations
- Cable Head End Stations

DEV 101xx / DEV 121xx



Front DEV 12164/zz



Rear DEV 12164/75 with Option 38

The Situation

Ground stations or head end stations usually require measurement equipment for monitoring purposes. A lot of different signals need to be monitored. A multiplexer can be used to switch between several input sources to one output and a demultiplexer is used to route an input signal to different destinations.

DEV worked out a Solution

For a large number of signals DEV developed this series of passive CATV-Band and L-Band switches which can be operated as xx:1 multiplexer or as 1:xx demultiplexer. Optional, an amplifier is available for the L-Band models to almost compensate the insertion loss. It is evident, that in this configuration the signal direction of the instrument is to be specified, and therefore two options are offered.

The Technical Concept

If operated as a multiplexer, the instrument connects the common output port with one of the input ports. All ports are located at the rear side of the instrument.

The control of the instrument is either performed via a Web Interface or via Sandar Prosan remote control protocol.

There is no question that the models of this series are equipped with DEV standards like redundant field replaceable power supply modules and with a dry contact alarm connector.

The height of the chassis of this series is 3 RU. For 16 or less ports, DEV offers a series of 1 RU (de-) multiplexers (DEV 1018, DEV 10116, DEV 1218, DEV 12116, DEV 1258, and DEV 12516), and for multiple L-Band (de-) multiplexers within one 3 RU chassis a series of devices is available as well (DEV 1248, DEV 12416, and DEV 12232), please refer to the corresponding data sheets.

Technical Data

DEV 101xx/zz / DEV 121xx/zz (De-) Multiplexer

RF Specifications

Frequency range	47...862 MHz	(DEV 101xx/zz)
	950...2150 MHz	(DEV 121xx/zz)
Number of input ports (xx)	24	(DEV 10124/zz, DEV 12124/zz)
	32	(DEV 10132/zz, DEV 12132/zz)
	48	(DEV 10148/zz, DEV 12148/zz)
	64	(DEV 10164/zz, DEV 12164/zz)
Number of output ports	1	
Impedance (zz), connectors	50 Ohm, SMA (f)	(DEV 101xx/50, DEV 121xx/50)
	75 Ohm, Precision F (f)	(DEV 101xx/75, DEV 121xx/75)
Damage level	+15 dBm	
Nominal input level	<0 dBm	
Return loss selected path	>16 dB	(DEV 101xx/50, DEV 121xx/50)
	>14 dB	(DEV 101xx/75, DEV 121xx/75)
Return loss not selected path	>16 dB	(DEV 101xx/50, DEV 121xx/50)
	>14 dB	(DEV 101xx/75, DEV 121xx/75)
Return loss output port	>18 dB	
Insertion loss	<8 dB	
	<-2±3 dB	(DEV 121xx/zz with Option 38 or 39)
Amplitude frequency response	±2 dB	(950...2150 MHz)
	±0,25 dB	(within any 36 MHz segment)
Relay type	Semiconductor	

Remote Communication

Interfaces, connectors	Ethernet, RJ-45; serial interface RS 232 (optional RS 422/RS 485), Sub-D-9 (f).
Remote control & surveillance, interface	-via Web Interface, Ethernet; -via Sandar Prosan protocol, serial interface.

Alarms

Two stage alarm signalisation for power line failure	Potential free contacts
Alarm connector	Sub-D-9 (m)
B-Alarm	One power supply unit does not deliver any secondary power.
A-Alarm	All/Both power supply units do not deliver any secondary power.
Summary alarm	Via remote control interfaces & potential free SPDT contact

Redundant Power Supply

Redundant power supplies	100...240 V AC supplied by two different lines
Power consumption	20 VA, max 80 VA

General Specifications

Housing	19" (483 mm max.), 3 RU (135 mm), 490 mm depth
Weight	~12 kg
Environmental conditions	ETS 300019 Part 1-3 Class 3.1

Order Information

DEV 10124/50	24:1 (De-) Multiplexer CATV-Band 50 Ohm
DEV 10124/75	24:1 (De-) Multiplexer CATV-Band 75 Ohm
DEV 10132/50	32:1 (De-) Multiplexer CATV-Band 50 Ohm
DEV 10132/75	32:1 (De-) Multiplexer CATV-Band 75 Ohm
DEV 10148/50	48:1 (De-) Multiplexer CATV-Band 50 Ohm
DEV 10148/75	48:1 (De-) Multiplexer CATV-Band 75 Ohm
DEV 10164/50	64:1 (De-) Multiplexer CATV-Band 50 Ohm
DEV 10164/75	64:1 (De-) Multiplexer CATV-Band 75 Ohm
DEV 12124/50	24:1 (De-) Multiplexer L-Band 50 Ohm
DEV 12124/75	24:1 (De-) Multiplexer L-Band 75 Ohm
DEV 12132/50	32:1 (De-) Multiplexer L-Band 50 Ohm
DEV 12132/75	32:1 (De-) Multiplexer L-Band 75 Ohm
DEV 12148/50	48:1 (De-) Multiplexer L-Band 50 Ohm
DEV 12148/75	48:1 (De-) Multiplexer L-Band 75 Ohm
DEV 12164/50	64:1 (De-) Multiplexer L-Band 50 Ohm
DEV 12164/75	64:1 (De-) Multiplexer L-Band 75 Ohm
Option 38	Multiplexer Amplifier Option (for DEV 121xx/zz only)
Option 39	Demultiplexer Amplifier Option (for DEV 121xx/zz only)
Option 52	RS 422 instead of RS 232
Option 53	RS 485 instead of RS 232

Contact

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