

Multi-Channel Multiplexer & Demultiplexer



Products:

- DEV 1248/zz** - 4 * 8:1 (De-) Multiplexer L-Band zz Ohm
- DEV 12416/zz** - 4 * 16:1 (De-) Multiplexer L-Band zz Ohm
- DEV 12232/zz** - 2 * 32:1 (De-) Multiplexer L-Band zz Ohm

Features:

- Series of multiple Multiplexers/Demultiplexers for the L-Band in **zz**: 50 or 75 Ohm
- Configuration, Surveillance and Control via comfortable Web Interface
- Remote Control Protocol Support, e.g. SNMP
- Dual Redundant Power Supplies

Application Areas:

- Satellite Ground Stations
- Cable Head End Stations



Front DEV 12416/zz



Rear DEV 12416/75

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 larger number of signals DEV developed passive L-Band switches which can be operated as xx:1 multiplexer or as 1:xx demultiplexer.

This series of instruments integrate two or four multiplexers/demultiplexers within a compact 3 RU chassis.

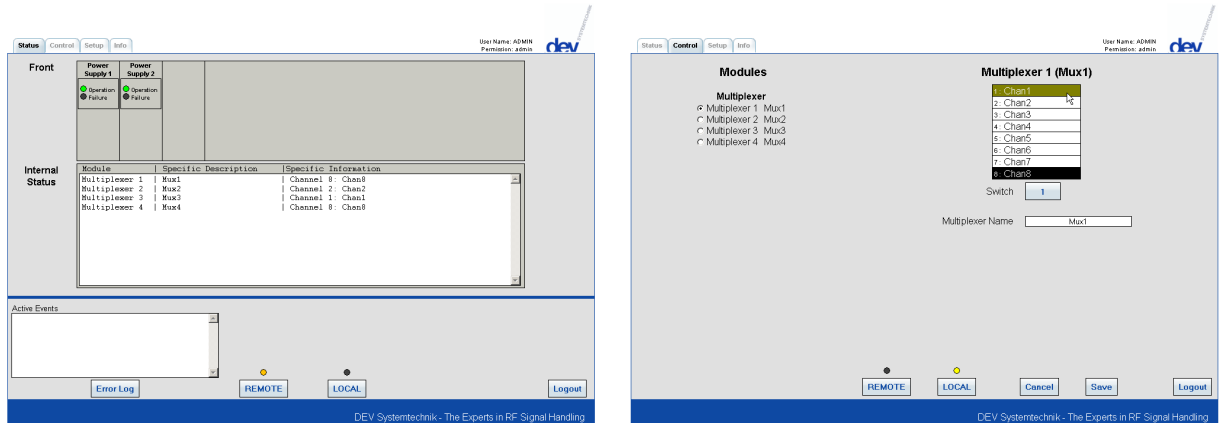
The Technical Concept

If operated as a multiplexer, the instrument connects one of the common output ports with one of the corresponding input ports. All ports are located at the rear side of the instrument. The control of the instrument is either performed via a comfortable Web Interface or via one of the implemented remote control protocols, e.g. SNMP.

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. Even the switch modules of the instrument can be exchanged by the customer in case of a failure.

The height of the chassis of this series is 3 RU. If a single (de-) multiplexer is required only, DEV offers a series of 1 RU (de-) multiplexers (DEV 1018, DEV 10116, DEV 1218, DEV 12116, DEV 1258, and DEV 12516) with 16 or less ports. A series of (de-) multiplexers with 24, 32, 48, or 64 ports in a 3 RU chassis is available as well (DEV 101xx and DEV 121xx), please refer to the corresponding data sheets.

The Web Interface



The figures above show two screen shots of the Web Interface of a DEV 1248.

The Status Tab

The upper part of the Status Tab provides a symbolic view of the instrument from its front side which is done to represent the physical indicators on the instrument.

In the middle, the “Internal Status” table is displayed, providing information on each multiplexer unit, like the present switching status.

In the lower part of the Status Tab new errors and pending errors are shown in a small Active Events window. To obtain more details on all errors, the **Error Log** button has to be operated.

The **REMOTE** button and the **LOCAL** button are installed to define whether the control of the instrument is performed via a remote M&C system (e.g. using SNMP protocol) or locally via the Web Interface. The current operation mode is indicated via the corresponding indicator.

The Control Tab

The Control Tab of the Web Interface provides means to access the switching functionality of the instrument.

After clicking one of the radio buttons on the left side, the switching panel of the corresponding multiplexer unit appears on the right side of the Control Tab.

The figure above shows a snapshot of the process of switching the first multiplexer unit from port 8 to port 2.

The labels of each multiplexer unit and each port of each multiplexer unit can be renamed for better identification.

Technical Data

DEV 1248/zz / DEV 12416/zz / DEV 12232/zz (De-) Multiplexer

RF Specifications

Frequency range	950...2150 MHz	
Number of input ports	4 * 8	(DEV 1248/zz)
	4 * 16	(DEV 12416/zz)
	2 * 32	(DEV 12232/zz)
Number of output ports	4 * 1	(DEV 1248/zz, DEV 12416/zz)
	2 * 1	(DEV 12232/zz)
Impedance (zz), connectors	50 Ohm, SMA (f)	(DEV 12xy(y)/50)
	75 Ohm, Precision F (f)	(DEV 12xy(y)/75)
Damage level	+15 dBm	
Nominal input level	<0 dBm	
Return loss	>16 dB	(DEV 12xy(y)/50)
	>14 dB	(DEV 12xy(y)/75)
Insertion loss	<7 dB	(DEV 12xy(y)/50)
	<8 dB	(DEV 12xy(y)/75)
Amplitude frequency response	±1 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 (surveillance only), Ethernet; -via SNMP protocol, Ethernet; -via Sandar Prosan protocol, serial interface; -via Leitch protocol, Ethernet/Telnet (up to 7 sessions) and optional via serial interface.

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	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	~30 VA, absolute max. 100 VA

General Specifications

Housing	19" (483 mm max.), 3 RU (135 mm), 495 mm depth
Weight	~9 kg
Environmental conditions	ETS 300019 Part 1-3 Class 3.1

Order Information

DEV 1248/50	4 * 8:1	(De-) Multiplexer L-Band 50 Ohm SMA (f)
DEV 1248/75	4 * 8:1	(De-) Multiplexer L-Band 75 Ohm Precision F (f)
DEV 12416/50	4 * 16:1	(De-) Multiplexer L-Band 50 Ohm SMA (f)
DEV 12416/75	4 * 16:1	(De-) Multiplexer L-Band 75 Ohm Precision F (f)
DEV 12232/50	2 * 32:1	(De-) Multiplexer L-Band 50 Ohm SMA (f)
DEV 12232/75	2 * 32:1	(De-) Multiplexer L-Band 75 Ohm Precision F (f)
Option 52	RS 422 instead of RS 232	
Option 53	RS 485 instead of RS 232	
Option 76	Leitch protocol is available via serial interface (instead of Sandar Prosan protocol)	

Contact

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Rev. 16-JUN-2009