

## L-Band Distributing Matrix 8to4ty



*The final product may vary from the above image depending on the options selected.*

### Products:

<b>DEV 1984/8x20</b>	8x20 Distributing Matrix 8to40ty; 950...2150 MHz; 75 Ohm, F (f)
<b>DEV 1984/8x40U</b>	8x20 Distributing Matrix 8to40ty; 950...2150 MHz; 75 Ohm, F (f); Field upgradeable up to 8x40

### Features:

- 8x40 in 2 RU
- Various Input and Output Modules
  - 75 Ohm, F (f) or BNC (f), or 50 Ohm, SMA (f)
  - Optical Inputs
- Variable Gain (MGC or AGC)
- Variable Slope
- RF Sensing
- Extra switchable Output Port for Monitoring
- LNB Powering, switchable 13/18 V and 22 kHz Tone
- Graphical Local User Interface
- Integrated Spectrum Analyzer
- Input Channel Redundancy
- Power Supply Redundancy
- Secure Lock Operation
- SNMP Support
- Easy to use DEV Web Interface
- Signal Recording and Data Backup Feature

## Technical Data

### DEV 1984 Distributing Matrix 8to4ty

#### Capacity

Number of Inputs x Outputs	DEV 1984/8x20:	8x20
	DEV 1984/8x40U:	8x20 (up to 8x40)

#### RF Specifications

Frequency Range	950...2150 MHz
Impedance, Connectors	75 Ohm, precision F (f)
Damage Level	+25 dBm
Operational Input Level	<-5 dBm
Return Loss	>14 dB
Variable Gain	35 dB
Flatness	±3.0 dB (over entire Band) ±1.0 dB (in any 36 MHz Interval)
Isolation	Input/Input, Output/Output: typ. 60 dB Input/Output (Crosstalk): typ. 60 dB Off: typ. 80 dB
Intermodulation Distortion	<-40 dBc (two Tones @ -8 dBm)
Group Delay Distortion	<7 ns
Noise Figure	<17 dB
OP1dB	0 dBm
Relay Type	Semiconductor

#### Local Operation

Display	2.2" Full Color (18 Bits)
Controls	Rotary Switch

#### Remote Communication

Interface (Connector)	Ethernet (RJ-45)
Remote Control & Surveillance (Interface)	<ul style="list-style-type: none"> <li>• via Web Interface (Ethernet)</li> <li>• via SNMP (Ethernet)</li> </ul>

#### Redundant Power Supply

Supply Voltage	100...240 V AC supplied by two different Lines
Power Consumption	Max. 60 VA (standard) or max. 100 VA (with Option 34)

#### General Specifications

Size	19" (483 mm) Width, 2 RU (89 mm) Height, ~300 mm Depth
Weight	~10 kg
Environmental Conditions	ETS 300019 Part 1-3 Class 3.1E

#### Option 20I Change 4 Input Channels to 50 Ohm, SMA (f)

#### Option 20O Change 4 Output Channels to 50 Ohm, SMA (f)

Per Option 20, one module with four channels is equipped with 50 Ohm, SMA (f) connectors instead of 75 Ohm, F (f) connectors.

#### Option 21I Change 4 Input Channels to 75 Ohm, BNC (f)

#### Option 21O Change 4 Output Channels to 75 Ohm, BNC (f)

Per Option 21, one module with four channels is equipped with 75 Ohm, BNC (f) connectors instead of 75 Ohm, F (f) connectors.

## Technical Data (cont.)

### Option 22I Change 4 Input Channels to Optical providing LC/APC

Per Option 22I, one module with four input channels is equipped with LC/APC optical connectors instead of 75 Ohm, F (f) RF connectors.

#### Optical Specifications

Fiber Type	Single Mode 9/125 $\mu\text{m}$
Connector Type	LC/APC
Wavelength	1100...1650 nm
Min. optical Input Level	
(optical Sensitivity)	-22 dBm
Damage optical Input Level	+10 dBm

### Option 25 Variable Slope (all Channels)

With Option 25, the device provides slope control for all paths.

Variable Slope	0...5 dB
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### Option 29 Monitoring Port

With Option 29, the device provides an extra switchable output port for monitoring.

#### Monitoring Port

Impedance, Connector	50 Ohm, SMA (f)
Return Loss	>14 dB

### Option 34 LNB Powering (all Channels)

With Option 34 each RF input port of the matrix is capable to deliver LNB power and to select the polarity (vertical (13 V) or horizontal (18 V)) and the band (low band (0 Hz) or high band (22 kHz)) of the LNB. As Option 34 is per chassis, a mix of RF Input Modules with and without LNB Powering is not allowed. A mix of an Optical Input Module with an RF Input Module with LNB Powering is allowed.

#### LNB Power & Current Monitoring

LNB Power	Max 350 mA per Input
Voltage and Tone Control	13 V, 18 V and 0 Hz, 22 kHz
Adjustable Level Setting:	
• Upper Alarm Level	• max. 330 mA
• Lower Alarm Level	• min. 50 mA

### Option 36 Integrated Spectrum Analyzer

With Option 36, the matrix is delivered with integrated spectrum analyzer functionality to be operated via Web Interface. The matrix chassis provides a dedicated external 50 Ohm, SMA (f) spectrum analyzer input port for connecting any signal to be probed.

For the technical data of the spectrum analyzer, please refer to the separate spec sheet.

### Option 38 Secure Lock Operation

With Option 38, the matrix provides the ability of Secure Lock Operation for multiple user operation. While each user can be configured to operate dedicated inputs and outputs, Secure Lock Operation allows user X to lock a switched path while user Y cannot unlock this path to prevent unwanted service interruptions. Admin user is able to overwrite any path locked by normal users.

### Option 48 Input Channel Redundancy

With Option 48, the matrix software provides the ability to configure redundant input channel configurations. Triggered via the integrated RF Sensing functionality an assigned redundancy channel can take over autonomously the signal transport of a main channel. The switching back to the main channel can be performed either manually or automatically.

## Technical Data (cont.)

<b>Option 85</b>	<b>4 Input Channels less</b>
<b>Option 86</b>	<b>4 Output Channels less</b>

With Option 85 or Option 86, the device is delivered with four input channels or with four output channels less. Thus, the standard configuration can be equipped with less input or output channels. This provides the flexibility to configure the device for the current requirements and to keep the option to upgrade the device to an application specific maximum size. The field upgrade can be performed by the customer by ordering the corresponding input or output module.

## Order Information

### Products

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### Options

Option 201	Change 4 Input Channels to 50 Ohm, SMA (f)
Option 200	Change 4 Output Channels to 50 Ohm, SMA (f)
Option 211	Change 4 Input Channels to 75 Ohm, BNC (f)
Option 210	Change 4 Output Channels to 75 Ohm, BNC (f)
Option 221	Change 4 Input Channels to Optical providing LC/APC
Option 25	Variable Slope (all Channels)
Option 29	Monitoring Port
Option 34	LNB Powering (all Channels)
Option 36	Integrated Spectrum Analyzer
Option 38	Secure Lock Operation
Option 48	Input Channel Redundancy
Option 73	Additional Web License
Option 85	4 Input Channels less
Option 86	4 Output Channels less

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*Technical specifications are subject to change*