L-Band Distributing Matrix 8^2

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

THE ART OF ENGINEERING

Product

DEV 1982 8x8 Distributing Matrix 8^2; 950…2150 MHz; 75 Ohm, F (f)

Features

- 8x8 in 1 RU
- Various Input and Output Modules
  - 75 Ohm, F (f) or BNC (f), or 50 Ohm, SMA (f) or BNC (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
- 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 1982 Distributing Matrix 8²

Capacity	
Number of Inputs x Outputs	8x8
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	-20…+30 dB
Flatness	±3.0 dB (over entire Band) ±0.4 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	<2 ns (in any 36 MHz Interval)
Noise Figure	<14 dB
OP1dB	0 dBm
Relay Type	Semiconductor
Monitoring Port	
Impedance, Connector	50 Ohm, SMA (f)
Return Loss	>14 dB
Local Operation	
Display	2.2" Full Color (18 Bits)
Controls	Rotary Switch
Remote Communication	
Interface (Connector)	Ethernet (RJ-45)
Remote Control & Surveillance (Interface)	• via Web Interface (Ethernet) • via SNMP (Ethernet)
Redundant Power Supply	
Supply Voltage	100…240 V AC supplied by two different Lines
Power Consumption	Max. 100 VA
General Specifications	
Size	19" (483 mm) Width, 1 RU (44 mm) Height, ~300 mm Depth
Weight	~6 kg
Environmental Conditions	ETS 300019 Part 1-3 Class 3.1E

Option 20I **Change 4 Input Channels to 50 Ohm, SMA (f)**
Option 20B **Change 4 Input Channels to 50 Ohm, SMA (f) with LNB Powering**
Option 20O **Change 4 Output Channels to 50 Ohm, SMA (f)**

Per Option 20I (Option 20O), one input (output) module with four channels is equipped with 50 Ohm, SMA (f) connectors instead of 75 Ohm, F (f) connectors.
With Option 20B the four input channels are capable to deliver LNB power in addition:

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

Technical Data (cont.)

Option 21I **Change 4 Input Channels to 75 Ohm, BNC (f)**
Option 21B **Change 4 Input Channels to 75 Ohm, BNC (f) with LNB Powering**
Option 21O **Change 4 Output Channels to 75 Ohm, BNC (f)**

Per Option 21I (Option 21O), one input (output) module with four channels is equipped with 75 Ohm, BNC (f) connectors instead of 75 Ohm, F (f) connectors.
With Option 21B the four input channels are capable to deliver LNB power, in addition:

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 22I **Change 4 Input Channels to Optical providing LC/APC**
Option 22IHP **Change 4 Input Channels to Optical providing LC/APC (High Input Power)**
Option 24I **Change 4 Input Channels to Optical providing SC/APC**
Option 24IHP **Change 4 Input Channels to Optical providing SC/APC (High Input Power)**

Per Option 22I (24I), one input module with four channels is equipped with optical LC/APC (SC/APC) connectors instead of 75 Ohm, F (f) RF connectors.
Furthermore, optical input modules are available that are capable to handle higher optical input levels, as provided by some optical LNBs. These high power optical input modules are to be ordered via Option 22IHP (with optical LC/APC connectors) and via Option 24IHP (with optical SC/APC connectors)

Optical Specifications

Fiber Type	Single Mode 9/125 µm	
Connector Type	Option 22I, Option 22IHP:	LC/APC
	Option 24I, Option 24IHP:	SC/APC
Wavelength	1100…1650 nm	
Optical Input Level	Option 22I, Option 24I:	-22…0 dBm
	Option 22IHP, Option 24IHP:	-22…3 dBm
Damage optical Input Level	+10 dBm	

Option 23B **Change 4 Input Channels to 75 Ohm, F (f) with LNB Powering**

With Option 23B, the four input channels (with 75 Ohm, F (f) connectors) are capable to deliver LNB power:

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 25 **Variable Slope (all Channels)**

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

Variable Slope	0…8 dB

Technical Data (cont.)

Option 26I **Change 4 Input Channels to 50 Ohm, BNC (f)**
Option 26B **Change 4 Input Channels to 50 Ohm, BNC (f) with LNB Powering**
Option 26O **Change 4 Output Channels to 50 Ohm, BNC (f)**

Per Option 26I (Option 26O), one input (output) module with four channels is equipped with 50 Ohm, BNC (f) connectors instead of 75 Ohm, F (f) connectors.
With Option 26B the four input channels are capable to deliver LNB power, in addition:

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 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.

Option 85 **4 Input Channels less**
Option 86 **4 Output Channels less**

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 appropriate input module or output module.

Order Information

Product	
DEV 1982	8x8 Distributing Matrix 8²; 950...2150 MHz; 75 Ohm, F (f)

Options	
Option 20I	Change 4 Input Channels to 50 Ohm, SMA (f)
Option 20B	Change 4 Input Channels to 50 Ohm, SMA (f) with LNB Powering
Option 20O	Change 4 Output Channels to 50 Ohm, SMA (f)
Option 21I	Change 4 Input Channels to 75 Ohm, BNC (f)
Option 21B	Change 4 Input Channels to 75 Ohm, BNC (f) with LNB Powering
Option 21O	Change 4 Output Channels to 75 Ohm, BNC (f)
Option 22I	Change 4 Input Channels to Optical providing LC/APC
Option 22IHP	Change 4 Input Channels to Optical providing LC/APC (High Input Power)
Option 23B	Change 4 Input Channels to 75 Ohm, F (f) with LNB Powering
Option 24I	Change 4 Input Channels to Optical providing SC/APC
Option 24IHP	Change 4 Input Channels to Optical providing SC/APC (High Input Power)
Option 25	Variable Slope (all Channels)
Option 26I	Change 4 Input Channels to 50 Ohm, BNC (f)
Option 26B	Change 4 Input Channels to 50 Ohm, BNC (f) with LNB Powering
Option 26O	Change 4 Output Channels to 50 Ohm, BNC (f)
Option 38	Secure Lock Operation
Option 48	Input Channel Redundancy
Option 85	4 Input Channels less
Option 86	4 Output Channels less

Modules	(Input Modules and Output Modules for Upgrade or as Spare Part)
DEV 13-0408	Input Module, 4 Paths; 850...2450 MHz; 50 Ohm, BNC (f)
DEV 13-0409	Input Module incl. LNB Powering, 4 Paths; 850...2450 MHz; 50 Ohm, BNC (f)
DEV 13-0411	Output Module, 4 Paths; 850...2450 MHz; 50 Ohm, BNC (f)
DEV 13-0270	Input Module, 4 Paths; 950..2150 MHz; 50 Ohm, SMA (f)
DEV 13-0354	Input Module incl. LNB Powering, 4 Paths; 850...2450 MHz; 50 Ohm, SMA (f)
DEV 13-0355	Output Module, 4 Paths; 850...2450 MHz; 50 Ohm, SMA (f)
DEV 13-0350	Input Module, 4 Paths; 850...2450 MHz; 75 Ohm, BNC (f)
DEV 13-0351	Input Module incl. LNB Powering, 4 Paths; 850...2450 MHz; 75 Ohm, BNC (f)
DEV 13-0352	Output Module, 4 Paths; 850...2450 MHz; 75 Ohm, BNC (f)
DEV 13-0276	Input Module, 4 Paths; 950..2150 MHz; 75 Ohm, F (f)
DEV 13-0348	Input Module incl. LNB Powering, 4 Paths; 850...2450 MHz; 75 Ohm, F (f)
DEV 13-0293	Output Module, 4 Paths; 950..2150 MHz; 75 Ohm, F (f)
DEV 13-0253	Optical Input Module, 4 Paths; LC/APC
DEV 13-0397	Optical Input Module, 4 Paths; High Input Power; LC/APC
DEV 13-0384	Optical Input Module, 4 Paths; SC/APC
DEV 13-0398	Optical Input Module, 4 Paths; High Input Power; SC/APC

Contact

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Rev. 14-Oct-2020