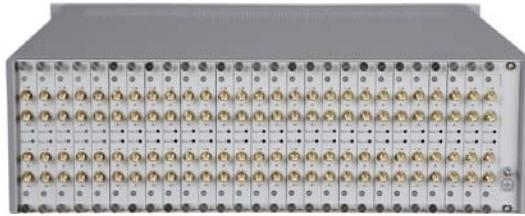


## Managed LNB Powering System



### Product:

**DEV 8120 -** Managed LNB Powering System

### Features:

- Bias Tee for up to 54 Channels integrated in a 3 RU Chassis
- Available Dual Channel Bias Tee Modules:
  - 50 Ohm with SMA Connectors or
  - 75 Ohm with precision F Connectors or
  - 50 Ohm Inputs (SMA) and 75 Ohm Outputs (precision F)
- Dual Monitoring Output at the Front Side for Monitoring of each Channel
- Bias Current Monitoring
- Remote Control and Surveillance (Web Interface, SNMP)
- Redundant Power Supplies

### Application Areas:

- Larger Satellite Ground Stations
- Cable Head End Stations
- Broadcasting Institutions



Front DEV 8120



Rear DEV 8120 (equipped with 27 \* Option 2/50)

### The Situation

In modern satellite ground stations the bias current for LNBS has to be provided by special power supplies. Frequently, these power supplies are required to monitor the current supplied to the LNBS. And usually, almost no space is left for these power supplies in the racks on site.

### Introducing the DEV Solution

DEV Systemtechnik has developed a series of L-Band multi channel bias tees for the professional use which cover all these requirements.

There are available 1 RU devices (DEV 8122 & DEV 8123, both products are available with two or with four channels, please refer to the corresponding data sheet) and the DEV 8120 as a 3 RU device. The DEV 8120 is intended for larger applications and provides convenient channel monitoring and bias current monitoring capabilities.

### The Technical Concept

The 3 RU chassis can be equipped with 1...27 (optional: 1...16) dual channel bias tee modules, which are available in different impedances.

Each of the two bias units of a module is capable to deliver a bias current of up to 500 mA. The current is measured and compared with adjustable upper and lower threshold values. If the current exceeds a limit, this is indicated via an LED at the module and in parallel via Web Interface and via SNMP. Two monitoring ports at the front side of the instrument which are carrying the same signal are permitting the surveillance of each of the channels. The channel which is to be monitored can be selected via Web Interface and via SNMP.

## Technical Data

### DEV 8120 - Managed LNB Powering System

#### Capacity

Rear side 27 (with Option 85: 16) slots for dual channel bias tee modules, i.e. up to 54 (with Option 85: up to 32) bias channels

#### Bias & Bias Current Monitoring

Bias 15+3/-0 V; max. 500 mA per channel, short-circuit-proof  
(If all 54 channels are required to deliver bias current in parallel, the average current per channel must not exceed 320 mA to keep up power supply redundancy.)

Impulse current <2 A, 1 ms

Current measurement 10...500 mA per channel

Adjustable level setting:

- Upper alarm level max. 500 mA (DEV factory setting: 350 mA)
- Lower alarm level min. 10 mA (DEV factory setting: 100 mA)

Bias status & alarm indication Via LED & via remote communication

#### Monitoring Port

Number of monitoring ports 2 (selection of channel to be monitored via Web Interface/SNMP)

Impedance, connector 50 Ohm, SMA (f)

Return loss >18 dB typ.

Frequency response = input signal level  $\pm 1.0$  dB

#### Remote Communication

Interfaces (connectors)

- Ethernet (RJ-45);
- serial interface RS 232 (Sub-D-9 (f))

Remote control & surveillance (interface)

- via Web Interface (Ethernet);
- via SNMP (Ethernet)

#### Redundant Power Supply

Redundant power supplies 100...240 V AC supplied by two different lines or with Option 14:  
-40...-56 V DC supplied by two different lines

Power consumption <600 VA

#### General Specifications

Housing 19" (483 mm), 3 RU (133 mm), ~470 mm depth

Weight ~9 kg (empty chassis)

Environmental conditions ETS 300019 Part 1-3 Class 3.1

## Technical Data

**Option 2/50:** Dual Channel Bias Tee Module, 50 Ohm, SMA  
**Option 2/50-75:** Dual Channel Bias Tee Module, Inputs 50 Ohm, SMA, Outputs 75 Ohm, prec. F  
**Option 2/75:** Dual Channel Bias Tee Module, 75 Ohm, precision F

### RF Specifications

|                                |                         |                               |
|--------------------------------|-------------------------|-------------------------------|
| Frequency range                | 700...2300 MHz          |                               |
| Channels per module            | 2                       |                               |
| Number of outputs per channel  | 1 (DC blocked)          |                               |
| Impedance, connectors          | 50 Ohm, SMA (f)         | (for 50 Ohm inputs/outputs)   |
|                                | 75 Ohm, precision F (f) | (for 75 Ohm inputs/outputs)   |
| Damage level                   | +20 dBm                 |                               |
| Return loss                    | >14 dB, typ. 16 dB      | (Option 2/75, Option 2/50-75) |
|                                | >16 dB, typ. 18 dB      | (Option 2/50)                 |
| Insertion loss                 | <4,5 dB                 |                               |
| Frequency response             | ±1,0 dB                 | (700...2300 MHz)              |
|                                | ±0.7 dB                 | (950...2150 MHz)              |
|                                | ±0.2 dB                 | (within any 36 MHz segment)   |
| Isolation between output ports | >50 dB                  |                               |

### General Specifications

|                          |   |
|--------------------------|---|
| Housing                  | 3 RU (133 mm), 3 HP (15 mm), 100 mm depth |
| Weight                   | ~0.2 kg                                   |
| Environmental conditions | ETS 300019 Part 1-3 Class 3.1             |

## Order Information

|           |   |
|-----------|---|
| DEV 8120  | Managed LNB Powering System                           |
| Option 14 | -40...-56 V DC Supply Voltage                         |
| Option 85 | Chassis prepared for 16 modules instead of 27 modules |

In addition to the order of the chassis, please select the type and number of required dual channel bias modules. The chassis can be equipped with up to 27 modules, or, if ordered with Option 85, up to 16 modules. It is possible to mix modules with different impedances within a chassis.

|                |  |
|----------------|--|
| Option 2/50    | Dual Channel Bias Tee Module, 50 Ohm, SMA  |
| Option 2/50-75 | Dual Channel Bias Tee Module,<br>Inputs 50 Ohm, SMA, Outputs 75 Ohm, precision F |
| Option 2/75    | Dual Channel Bias Tee Module, 75 Ohm, precision F                                |

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