



Fiber Optic Relay

Optical Reception and Retransmission

DF-FOR-7200

Features

- Chassis providing 2 Slots for Optical Modules
- Versions for CATV-Band and L-Band
- 50 Ohm or 75 Ohm Impedance
- Dual Redundant Power Supplies



RF Specs

- Frequency range: 950 - 2150 MHz (default, Option 42)
- Input impedance: 50 Ohm
- Input connectors: SMA (F) (default)
- Return loss: >16 dB (default)



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Technical Specifications

DF-FOR-7200

Link Specifications

- Link gain with no optical cable: +3-+15 dB \pm 3 dB (10-40 km)
- Frequency response 700-2300 MHz: \pm 1 dB @ 6 dB link gain
- Frequency response @ 36 MHz interval: \pm 0.25 dB
- Maximum optical distance: 50 km
- Noise figure for link: 22 dB @ 1 dB loss, 27 dB @ 5 dB loss
- Intermodulation distortion, two tones, separation 10 MHz at -13 dBm: > 40 dBc
- Fiber: Single mode 9/125, Corning SMF28 or equivalent

Optical Transmitter

- Input:
 - Frequency range: 700 - 2300 MHz
 - Damage level: +10 dBm
 - Maximum input level: -10 dBm
- Output:
 - Laser type: DFB
 - Laser class: Class 1M (low risk to eyes, no risk to skin, as per IEC 60 825-1)
 - Wavelength: 1310 \pm 20 nm
 - Optical power: < 7 dBm
 - Connector: SC/APC
- Monitoring Port:
 - Amplitude frequency response: < \pm 1 dB w/respect to input signal
 - Return loss: > 16 dB
 - Connector: SMT (f)
- Bias & Bias Current Alarm:
 - Bias: max 0.5 A; 15 V + 3V per module
 - Adjustable level alarm setting: 50 mA min, 400 mA max
 - Alarm indication: Via LED and microcontroller
- RF Sensing:
 - Adjustable threshold level (THL) for RF sensing: -10 dBm > THL > -55 dBm
 - DEV factory setting: -30 dBm
 - Alarm indication: Via LED and microcontroller
- Low Laser Radiation Alarm:
 - Alarm indication: Via LED and microcontroller
- General Specifications:
 - Power consumption: 16 V, 0.15 A
 - Housing: 3RU (129 mm), 5 HP (25 mm)
 - Weight: ~0.5 kg
 - Environmental conditions: ETS 300019 Part 1-3 Class 3.1

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Optical Receiver

- Output:
 - Frequency range: 700 - 2300 MHz
 - Maximum output level: -6 dBm
- Manual/Automatic Gain Control:
 - Manual gain control / set point control: Via front panel buttons or microcontroller
 - Selection of AGC or MGC: Via microcontroller
- Input:
 - Wavelength: 1150 - 1600 nm
 - Optical sensitivity: <-17 dBm with 36 dB (S+N)/N
 - Connector: SC/APC
- Monitoring Port:
 - Amplitude frequency response: < ± 1 dB w/respect to output signal
 - Return loss: > 18 dB
 - Connector: SMT (f)
- RF Sensing:
 - Adjustable threshold level (THL) for RF sensing: -10 dBm > THL > -55 dBm
 - DEV factory setting: -30 dBm
 - Alarm indication: Via LED and microcontroller
- Low Laser Radiation Alarm:
 - Alarm indication: Via LED and microcontroller
- General Specifications:
 - Power consumption: 16 V, 0.25 A
 - Housing: 3RU (129 mm), 5 HP (25 mm)
 - Weight: ~0.5 kg
 - Environmental conditions: ETS 300019 Part 1-3 Class 3.1

Chassis

- Capacity: 2 slots
- Bias: Max 0.5 A per transmitter module
- Input power: Dual 100 - 260 V AC inputs (two phase compatible)
- Redundant power: Dual redundant power supplies
- Power consumption: 20 VA
- Housing: 19", 1 RU, 340 mm depth
- Weight: ~5 kg
- Environmental conditions: ETS 300019 Part 1-3 Class 3.1

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