BRTF26-E
400 MHz TETRA Redundant Optical Macro Slave Repeater

MAIN FEATURES

- Extended TETRA bandwidth (6,5 MHz)
- High sensitivity
- High dynamic range
- Wavelength division multiplex technique
- Redundant optical connections
- Internal alarm log with real time clock
- SNMP support

DESCRIPTION

This repeater is intended to be used for TETRA optical fibre systems. It is a compact and reliable unit, and it is especially advantageous to use it in areas where off-air transmission is not preferable. The base station side optical master unit can control and monitor the slave unit on the remote repeater side through the optical fibre. In order to provide redundancy, the slave has two independent optical connectors, and it can automatically switch between optical links, if it senses that one link is better than the other, based on user-defined conditions. This very economical solution can be installed easily, and the repeater can be monitored and controlled using the provided remote-control software.

SPECIFICATIONS

ELECTRICAL PARAMETERS	
Frequency band	Downlink: 390.0 – 396.5 MHz
	Uplink: 380.0 – 386.5 MHz
Operating frequency bandwidth	6.5 MHz
Mode of operation	Band selective duplex
Linear output power	Downlink: +33 dBm or 2 x +30 dBm (2 carriers), meets ETSI regulation
ICP3	Downlink: +63 dBm minimum @ 2 x 30 dBm
ACPR	60 dB @ linear output power
Nominal gain	65 dB
Gain setting range	65 to 40 dB adjustable in 1 dB steps
Gain ripple	<±1.5 dB typical
Gain stability	<±1.5 dB (within operating temperature range)
Uplink input noise figure	<6 dB @ maximum gain
Harmonics	According to the ETSI regulation
Spurious radiation	According to the ETSI regulation
EVM	<1% typical (ETSI regulation <10%)
Optical module maximum RF input power	+5 dBm
Power supply voltage	40 – 56 VDC
Power consumption	<90 W

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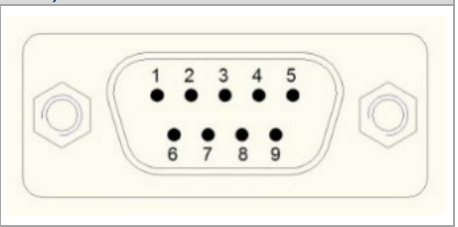
MECHANICAL PARAMETERS	
Type of power supply connector	NC3MD–LX, Neutrik, XLR, 3 pole
Type of optical connectors	SC/APC
Type of RF connector	N – female
Weight	<24 kg
Dimensions	400 x 420 x 186 mm (see outline dimensions)
ENVIRONMENTAL PARAMETERS	
Operating temperature range	0 °C ... + 55 °C
Storage temperature range	-30 °C ... + 70 °C
Relative humidity	<75%, non-condensing
Cooling	Convection
Degree of protection	IP40 Indoor
SOFTWARE PARAMETERS	
Wired control	Ethernet (SNMPv2c)
Alarm I/O	4 external alarm inputs, user configurable sum alarm output (dry contact), SNMP notifications, status LED, internal error log with real-time clock
Remote control	Through optical fibre via master unit

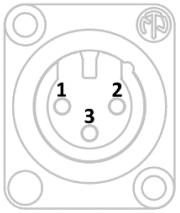
EXTERNAL ALARM AND SUM ALARM CONNECTOR PINOUT (D-SUB MALE) (1)

Pin no.	Function	Pin no.	Function
1	Ext. Alarm IN 1	6	Ext. Alarm COMMON
2	Ext. Alarm IN 2	7	Dry Contact
3	N.C.	8	Ext. Alarm IN 3
4	Dry Contact	9	Ext. Alarm IN 4
5	Ext. Alarm COMMON	-	-



POWER SUPPLY CONNECTOR PINOUT (NEUTRIK, NC3MD-LX)

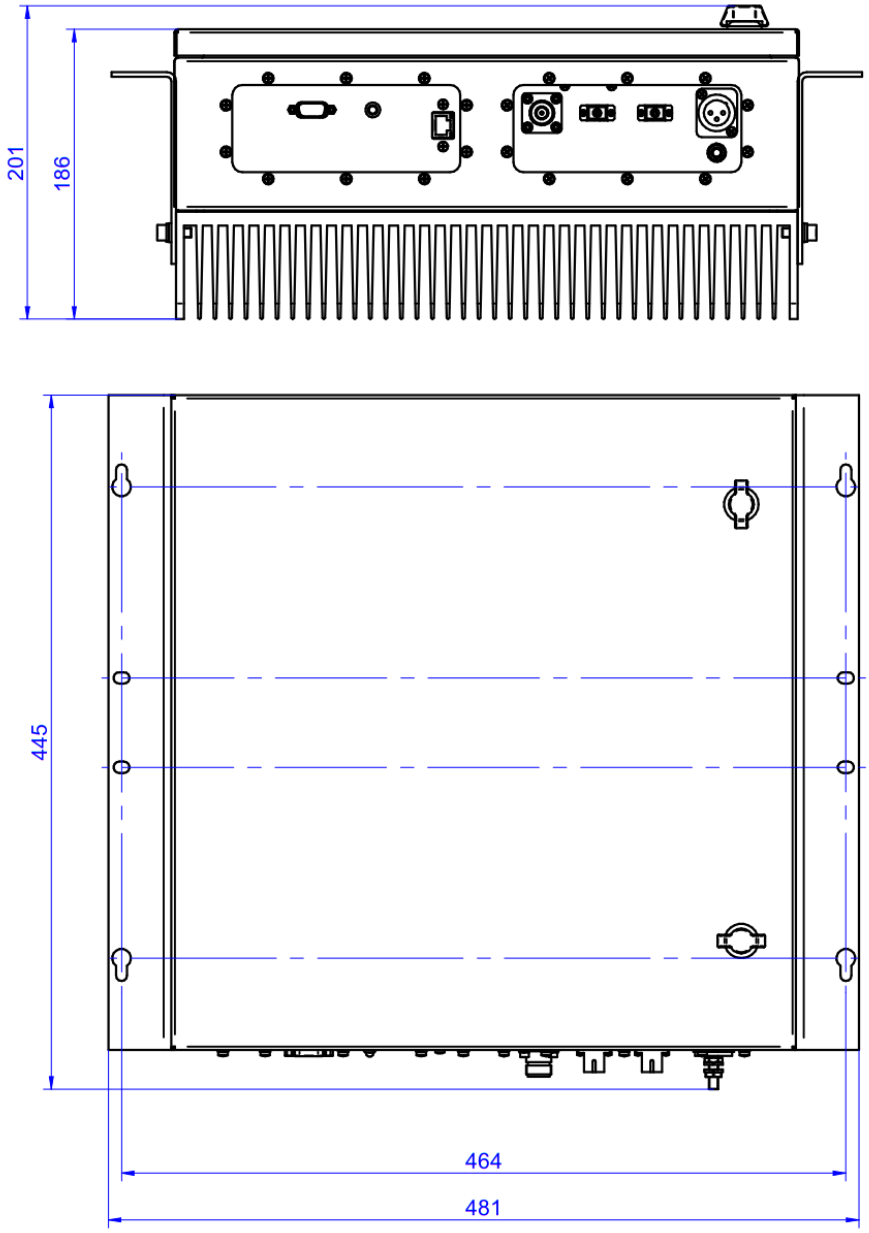
Pin no.	Function
1	GND
2	+48 VDC (+)
3	0 VDC (-)



Specifications are subject to change without notice.

(1) In POWERED OFF state the relay will be open. The operation of the Dry Contact relay is configurable by the user.

OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	OPTICAL WAVELENGTHS	OUTPUT POWER
BRTF26K11447	1510 nm – 1530 nm	33 dBm
BRTF26K11545	1550 nm – 1570 nm	33 dBm
BRTF26K11605	1510 nm – 1530 nm	36 dBm

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BRTF26-E	V03	2024-09-19

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