BRMF57-E
400 MHz TETRA Optical Master Repeater

MAIN FEATURES

- Extended TETRA bandwidth (6,5 MHz)
- Star or daisy chain configuration
- Supports up to 8 slaves with external optical splitters
- 5-Wave WDM technology
- Automatic optical power control
- Remote supervision of slave units
- Supports both mini and macro slaves
- SNMP support
- Supports master redundant configuration

DESCRIPTION

This TETRA master repeater is intended to be used to convert signals from RF to optical (and vice versa) and supply the remote optical slave repeaters. Typical applications are long tunnel sections, in-building systems, large area outdoor coverage and long-distance feed areas where the cost of the traditional RF cable is more expensive than the economical optical fiber solutions.

Using WDM (Wavelength Division Multiplexing) technology the uplink and downlink signals are transmitted on the same optical cable. The same optical cable is used for remote supervision and control, providing a reliable communication link. The master unit can be monitored and controlled via its Ethernet connector using SNMP protocol or via the optional 2G/4G modem. All connected slave units can be remotely supervised through the optical connection.

SPECIFICATIONS

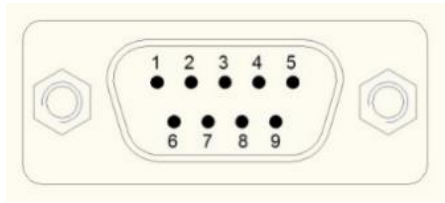
ELECTRICAL PARAMETERS	
Frequency band	Downlink: 390 – 396.5 MHz
	Uplink: 380 – 386.5 MHz
Operating frequency bandwidth	6.5 MHz
Mode of operation	Band selective duplex
Nominal gain	-10 dB
Gain setting range	-10 to -40 dB adjustable in 1 dB steps
Gain ripple	<±1.5 dB typical
Gain stability	<±1.5 dB (within operating temperature range)
Maximum RF input power	+10 dBm
Harmonics	According to ETSI regulation
Spurious radiation	According to ETSI regulation
Optical module maximum RF input power	+5 dBm
Maximum optical loss between master and slave	15 dBo
Power supply voltage	40 – 57 VDC
Power consumption	<30 W

BHE
BONN HUNGARY
ELECTRONICS LTD.
IPARI PARK STR. 10. BUDAPEST, H-1044
P.O. BOX 164. BUDAPEST, H-1325
TEL: +36 1 233 2138
FAX: +36 1 233 2506
EMAIL: SALES@BHE-MW.EU
WEB: WWW.BHE-MW.EU

MECHANICAL PARAMETERS	
Type of power supply connector	NC3MD–LX, Neutrik, XLR, 3 pole
Type of optical connectors	SC/APC
Type of RF connectors	N – female
Number of RF connectors	2, Separated DOWNLINK IN, UPLINK OUT port
Number of RF to optical converters	2 pcs, non-extendable on site
Weight	<7 kg
Dimensions	19” 1U (see outline dimensions)
ENVIRONMENTAL PARAMETERS	
Operating temperature range	0 °C … +45 °C
Storage temperature range	-30 °C … +70 °C
Relative humidity	<75%, non-condensing
Degree of protection	IP40 Indoor
SOFTWARE PARAMETERS	
Wired control	Ethernet (SNMP v1 / v2c)
Alarm I/O	4 external alarm inputs, user configurable sum alarm output (dry contact), SNMP notifications, status LED, error log with real-time clock
Wireless control	Not installed

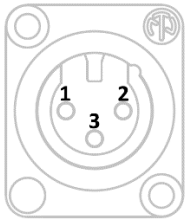
EXTERNAL ALARM AND SUM ALARM CONNECTOR PINOUT (D-SUB MALE) (1)

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.

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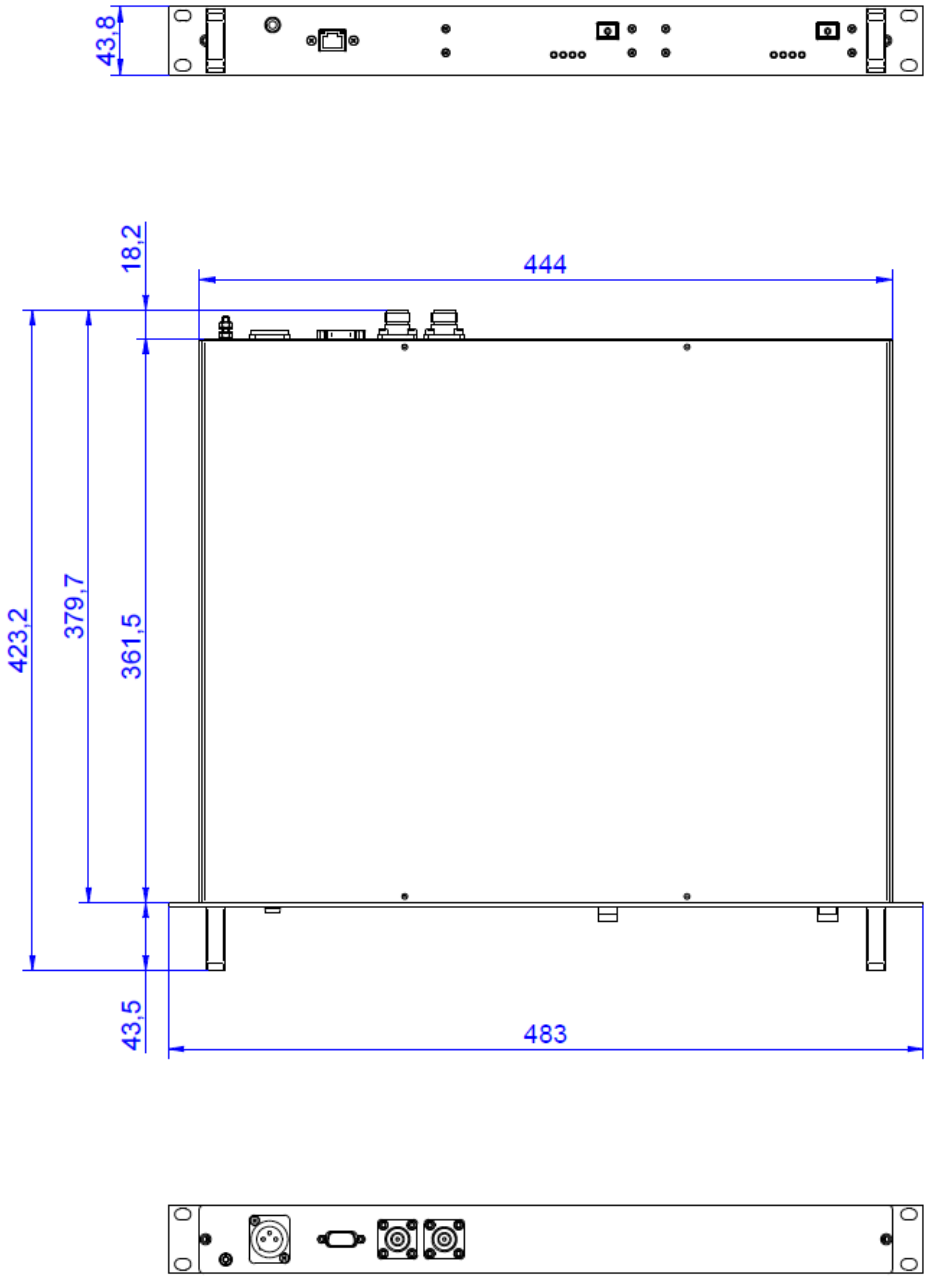
OUTLINE DRAWING (mm)



ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BRMF57K10934	BRMF57-E, 2 CH, 5-WDM, 380-386,5 MHz / 390-396,5 MHz, 48 VDC, SC/APC, 19" 1U rack, SNMP, separated donor port

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BRMF57-LM-K10934	V04	2024-01-03