BRTF49
400 MHz TETRA Optical Macro Slave Repeater

MAIN FEATURES

- High sensitivity
- High dynamic range
- Wavelength division multiplexing technique
- Compact size
- SNMP support



DESCRIPTION

This repeater is intended to be used for TETRA outdoor 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. This very economical solution can be installed easily, and the repeater can be monitored and controlled using the provided remote-control software.

SPECIFICATIONS

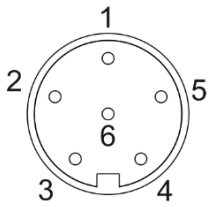
ELECTRICAL PARAMETERS	
Frequency band	Downlink: 390 – 395 MHz
	Uplink: 380 – 385 MHz
Operating frequency bandwidth	5 MHz
Mode of operation	Band selective duplex
Linear output power	Downlink: +36 dBm or 2 x +33 dBm (2 carriers), meets ETSI regulation
ICP3	Downlink: +68 dBm minimum @ 2 x +33 dBm
ACPR	60 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 ETSI regulation
Spurious radiation	According to ETSI regulation
EVM	<1% typical (ETSI regulation <10%)
Optical module maximum RF input power	+5 dBm
Power supply voltage	230 VAC, 50 – 60 Hz
Power consumption	<90 W
MECHANICAL PARAMETERS	
Type of power supply plug	Type F plug
Type of optical connector	LC/UPC (in waterproof housing)
Type of RF connector	N – female
Weight	<24 kg
Dimensions	400 x 420 x 233 mm (see outline dimensions)

BHE
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ENVIRONMENTAL PARAMETERS	
Operating temperature range	0 °C ... +45 °C
Storage temperature range	-30 °C ... +70 °C
Cooling	Convection
Degree of protection	IP65 Outdoor
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
Remote control	Through optical fibre via master unit

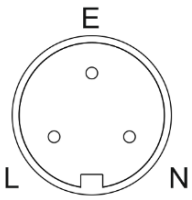
EXTERNAL ALARM CONNECTOR PINOUT (BULGIN PX0412/06S)

Pin no.	Function
1	External Alarm IN 2
2	External Alarm IN 3
3	External Alarm IN 4
4	N.C.
5	External Alarm IN 1
6	External Alarm COMMON



SUMALARM CONNECTOR PINOUT (BULGIN PX0412/03S)[1]

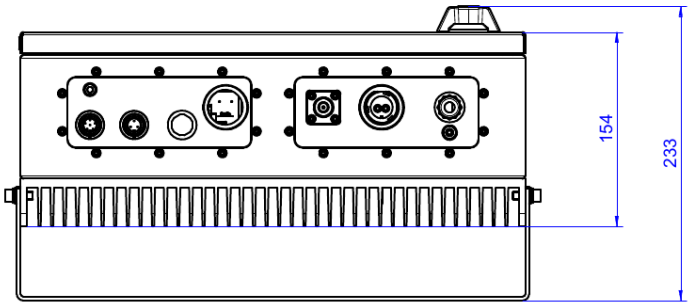
Pin no.	Function
E	N.C.
L	DRY CONTACT
N	DRY CONTACT

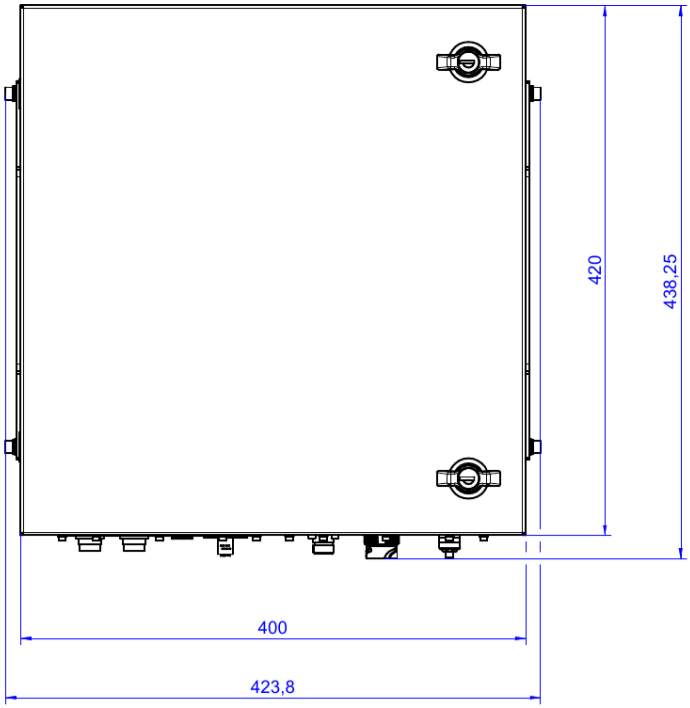


Specifications are subject to change without notice.

(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	DESCRIPTION
BRTF49K11766	BRTF49, 36dBm, 5-WDM, S1, 380-385 MHz / 390-395 MHz, G 65dB, 230 VAC, N-female, LC/UPC, SNMPv2c, IP65, HS 40 mm

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BRTF49-LM-K11766	V01	2026-06-23