MAIN FEATURES

❖ Digital filter technology (SDR)
❖ Flexible filter selection
❖ Frequency shift function
❖ High sensitivity
❖ High dynamic range
❖ SNMP support
❖ Low power consumption

DESCRIPTION

This repeater is intended for use in 400 MHz indoor or outdoor TETRA systems. Based on the latest digital filter technology this model offers freedom for the users to select the best possible filter characteristics for the actual application type. It has perfect EVM parameters of <1% and low power consumption figures.

Supplied in a compact box, the BRTL42 is an ideal choice to be used in areas where flexible filter selection is essential for smooth operation and/or network design. The unit can be monitored and controlled by local and remote control software.

SPECIFICATIONS

RF PARAMETERS	
Frequency band	Downlink: 390 – 395 MHz
	Uplink: 380 – 385 MHz
Operating frequency bandwidth	5 MHz
Mode of operation	Channel (up to 8) or band selective duplex (with different band filters)
Linear output power	Downlink: +36 dBm or 2 x 33 dBm (2 carriers) @ meets with ETSI
	Uplink: +24 dBm or 2 x 21 dBm (2 carriers) @ meets with ETSI
ICP3	Downlink: +68 dBm min. @ 2 x 33 dBm
	Uplink: +51 dBm min. @ 2 x 21 dBm
ACPR	60 dB @ linear output power
Nominal gain	90 dB
Gain setting range	60 – 90 dB in 1 dB steps
Gain ripple	$<\pm1.5$ dB typical
Gain stability	$<\pm1.5$ dB (within operating temp. range)
Uplink input noise figure	<6 dB @ max. gain
Harmonics	According to the ETSI regulation
Spurious radiation	According to the ETSI regulation
Local leakage	According to the ETSI regulation
EVM	<1% typ. (ETSI regulation <10%)
MECHANICAL PARAMETERS	
Type of RF connectors	N – female
Number of RF connectors	2, MOBIL & DONOR
Power supply voltage	230 VAC, 50 – 60 Hz
Power supply plug	Type F plug
Power consumption	<110 W
Weight	<24 kg
Dimension	400 x 420 x 158 mm (see outline dimensions)

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 reporting	4 external alarm inputs, user configurable sum alarm (dry contact), SNMP error messages, (optional SMS messages), status LED
Wireless control (optional)	2G/4G modem

LOCAL CONTROL AND SUM ALARM CONNECTOR PIN OUT (D-SUB MALE) [1]

Pin no.	Function	Pin no.	Function	
1	N.C.	6	N.C.	
2	RX Data	7	Dry Contact	
3	TX Data	8	N.C.	
4	Dry Contact	9	N.C.	
5	GND	-	-	

EXTERNAL ALARM CONNECTOR PIN OUT (BULGIN PX0412/06S)

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

FAN CONNECTOR PIN OUT (BULGIN PX0412/03S)

Pin no.	Function	
E	N.C.	
L	+27 VDC (+)	
N	0 VDC (-)	

Specifications are subject to change without notice.
(1) In SWITCH OFF case the relay will be open. The operation of the Dry Contact relay configurable by the user.
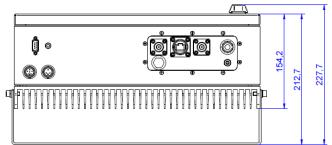
BHE
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OUTLINE DRAWING (mm)

ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BRTL42K11173	BRTL42, 36 dBm, 380-385 MHz / 390-395 MHz, G 90 dB, 230 VAC, 4CH, Independent Channel Gain, SNMPv2, 2G/4G modem, 2x 4.3-10-female Combined ports, wall mount, IP40, HS 40 mm
BRTL42K11181	BRTL42, 36 dBm, 380-385 MHz / 390-395 MHz, G 90 dB, 230 VAC, 8CH + UniBand, Ethernet, SNMPv2c, 2G/4G modem, wall mount, 2x N-female Combined port, HS 40 mm
BRTL42K11229	BRTL42, 36 dBm, 410-415 MHz, DL 420-425 MHz, G 90dB, 48 VDC, 8CH Uniband, RS-232 & SNMPv2c, Combined port, IP65, HS40, Ind. Ch. Gain, Int. alarm log, Spectrum analyzer

DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BRTL42-DS-01	V01	08/03/2022