

## MAIN FEATURES

- ❖ High sensitivity
- ❖ High dynamic range
- ❖ Wavelength division multiplex technique
- ❖ 4W composite RF output power per band
- ❖ Optional Uplink muting

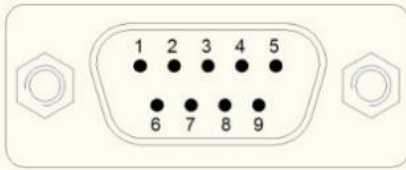
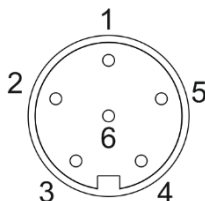
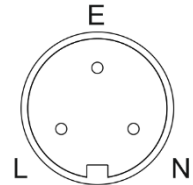
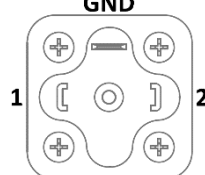


## DESCRIPTION

This repeater is intended to be used for TETRA and DMR dual band 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:	390.0 - 395.0 MHz
		465.0 – 470.0 MHz
	Uplink:	380.0 - 385.0 MHz
		455.0 – 460.0 MHz
Operating frequency bandwidth per band	5 MHz	
Mode of operation	Band selective duplex	
Linear output power per band	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	<± 2.0 dB typical	
Gain stability	<± 1.5 dB (within operating temp. range)	
Uplink input noise figure	<6 dB typical @ 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	48 VDC	
Power consumption	<120 W	
MECHANICAL PARAMETERS		
Type of power supply connector	GSA2000; HIRSCHMANN	
Type of power supply mating connector	GDM2009; HIRSCHMANN	
Type of optical connector	LC/UPC (in a waterproof housing)	
Type of RF connector	N – female	
Number of RF connector	1, Combined MOBILE Antenna port	
Weight	<35 kg	

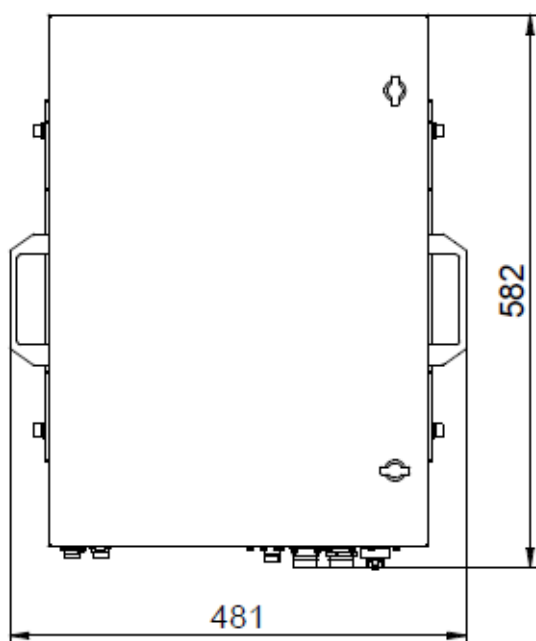
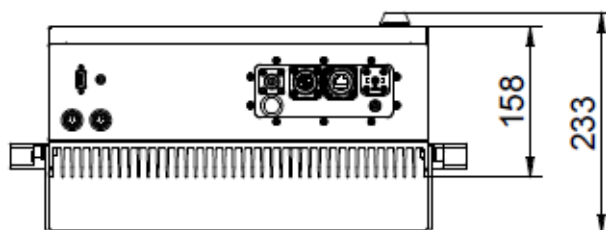
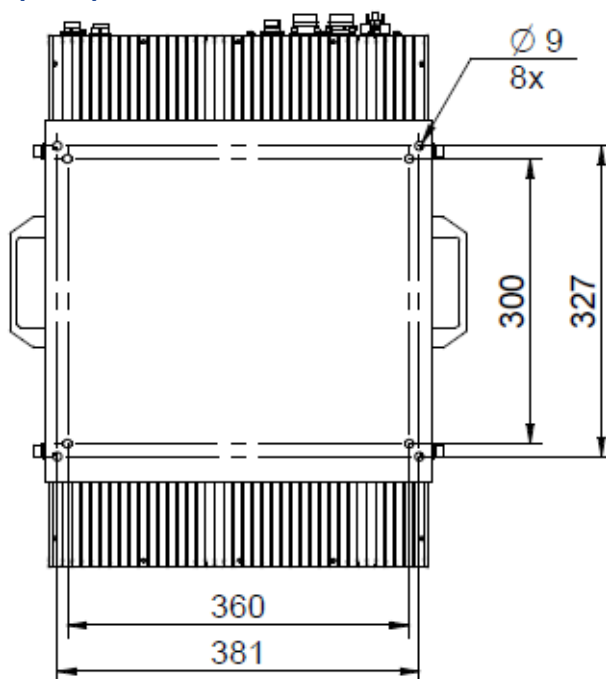
Dimension	400 x 560 x 158 mm (see outline dimensions)			
ENVIRONMENTAL PARAMETERS				
Operating temperature range	0 °C ... +45 °C			
Storage temperature range	-30 °C ... +70 °C			
Cooling	Convection			
Degree of protection	IP65 Outdoor			
SOFTWARE PARAMETERS				
Wired control	Ethernet (SNMP v1 / v2c)			
Alarm I/O	4 external alarm inputs, user configurable sum alarm output (dry contact), SNMP notifications, status LED, internal error log with real-time clock			
Remote control	Through optical fibre with master unit			
SUM ALARM CONNECTOR PINOUT (D-SUB MALE) <sup>(1)</sup>				
Pin no.	Function	Pin no.	Function	
1	N.C.	6	N.C.	
2	N.C.	7	Dry Contact	
3	N.C.	8	N.C.	
4	Dry Contact	9	N.C.	
5	N.C.	-	-	
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			
FAN CONNECTOR PINOUT (BULGIN PX0412/03S)				
Pin no.	Function			
E	N.C.			
L	+27 VDC (+)			
N	0 VDC (-)			
3 PIN POWER SUPPLY CONNECTOR PIN OUT (HIRSCHMANN GSA2000) <sup>(2)</sup>				
Pin no.	Function			
1	0 VDC (-)			
2	+48 VDC (+)			
GND	GND			

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.

(2) DC power supply input isolated from GND.

## OUTLINE DRAWING (mm)



**BRDF29****400 MHz Dual band TETRA / DMR Optical Macro Slave Repeater**

## ORDERING INFORMATION

MODEL NUMBER	DESCRIPTION
BRDF29K11360	BRDF29, 2x36 dBm, S1, 380-385 & 455-460 MHz / 390.0-395.0 & 465.0-470.0 MHz, G65, 1x N female combined RF port, LC/UPC, 48 VDC, SNMPv2c, Error log, RTC, IP65, HS40mm

## DOCUMENT REVISION

DOCUMENT NAME	REVISION	DATE
BRDF29-LM-K11360	V01	2023-10-03