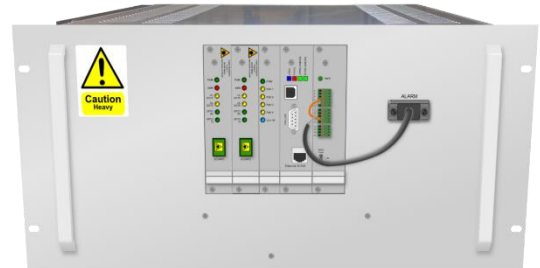


BSF 2502 RM-2F-D

VHF, Band Selective, Fibre Optic Repeater

Key features

- Fitted with dual fibre optic transceiver modules for redundant fibre applications.
- Remote supervision and alarm handling is realised through the fibre connection via the OMU or via Ethernet.
- The unique combination of high output power and highly linear power amplifiers ensures large coverage with uniformly excellent signal quality.
- 19" rack mount case



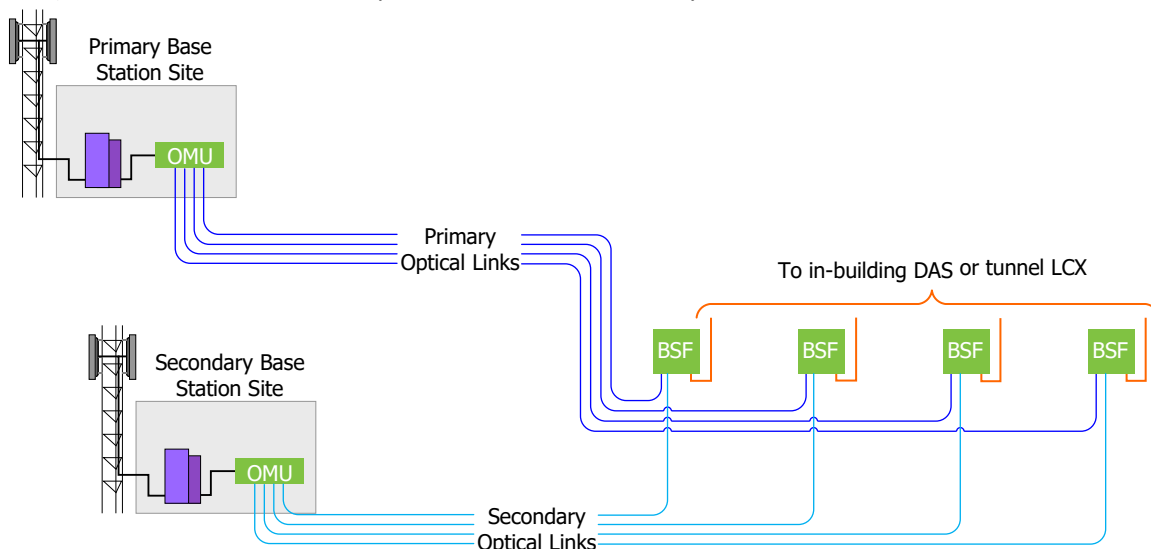
The BSF 2502 RM-2F-D is a fibre optic fed VHF repeater. The repeater is part of a system that is fed from a PBE Axell Optical Master Unit (OMU). RF signals are coupled off from a nearby base station by the OMU which modulates the RF to optical signals which are distributed via fibre optic cables to one or several remote BSF repeaters. The maximum optical loss allowed for is 10 dBo of fibre between the OMU and the most distant last remote unit that the OMU supports.

These remote BSF repeaters can be installed up to 20 km from the base station site, offering great flexibility when providing RF coverage in areas where off air reception is not a preferable or possible solution. The remote BSF repeaters demodulate the optical signal to RF and feed it to a Distributed Antenna System (DAS) or Leaky Feeder array to distribute the RF signal throughout the area to be covered. The high output power of the remote BSF repeaters results in a need to deploy fewer remote units, which lowers the capital expenditures for the deployment.

The fibre optic system is easily remotely monitored and controlled by PBE Axell's supervision and control software tool, Active Element Manager.

Automatic optical gain setting

The gain is adjusted in the downlink chain by measuring the level of the pilot carrier sent from the Optical Master Unit (OMU). The level of the received pilot carrier is continuously monitored.



Technical specification

RF specification DL/UL	Downlink (DL)	Uplink (UL)
Frequency range	172.0 MHz to 174.0 MHz	167.5 MHz to 169.5 MHz
Channel bandwidth	2 MHz	
Passband ripple	± 1 dB typ.	
Downlink power amplifier	20 W Class A, linear	
Downlink output power	+25 dBm max. Total output +22 dBm/Carrier @ 2 Carrier Frequencies @ IM<-36 dBm (all values at the common TX/RX port)	
Gain	Max. 60 dB	
Gain attenuation	0 dB to 30 dB in 1 dB steps via software (local)	
VSWR	1.5:1	
Impedance	50 Ω	
Squelch Threshold Range Adjustable	-70 dBm to -130 dBm	
ALC setting (composite)	26 dBm	0 dBm
Output 3rd Order Intercept Point	> +50 dBm	> +30 dBm
Power requirements		
Power supply	-48 VDC	
Power consumption	< 150 W typ.	
Power connections (on rear of case)	-48 VDC: XLR socket	
RF connections		
TX/RX port	Qty. 1, N female, mounted on rear panel	
Optical Specification		
Maximum optical output power	+3 dBm ±2 dB	
Maximum optical input power	+2 dBm	
Optical Ports (2)	SC/APC female	
Management		
Monitoring and control	Via fibre link to OMU or via web browser (local), a summary alarm of the device is presented as a volts-free contact pair, position: front panel	
Monitoring interface	RJ45 Ethernet Port, USB, RS232	
Environmental and Mechanical Specification		
Operating temperature range	+5°C to +45 °C	
Storage temperature range	-30°C to +70 °C	
Environmental protection	IP20 - for indoor use	
Cooling	Convection ^(*)	
Case size	5U, 19" rack mount 450mm depth	
Case material	Aluminium alloy	
(*) A space of 1U must be left above and below the unit to ensure adequate air circulation for cooling		

Product part number: 60-307201