



URDM100USM UHF IS DIAGNOSTIC AMPLIFIER

- Large Channel Capacity with Simultaneous Voice and Data Transfers
- Freedom from Inter-Modulation Distortion
- Reliable and 'Mean-Time-Between-Failure' Channels

FEATURES

Becker Mining Systems smartcom® UHF Remote Diagnostic Bi-Directional Amplifier (URDM) compensates for Leaky Feeder Cable longitudinal losses. The BDA is typically used within Mining, Shipping, Tunneling, Motorway and In-Building radiating cable systems, amplifying the UHF signal in both directions simultaneously and serves to maintain the strength of the RF signal levels along the Leaky Feeder coaxial cable.

The Remote Diagnostic Bi-Directional Amplifier is unique in that it offers the lowest possible noise contribution to an already weak RF carrier when operating in collocation with a strong carrier. The connectors of the inline amplifiers have been designed for ease of connection making installation and repair as convenient as possible. The Power Source required from the Leaky Feeder cable ranges from 9 Vdc to 17 Vdc.

PERFORMANCE SPECIFICATIONS	
Frequency range Voice/ Data	Base to Handheld 460 MHz to 470 MHz (Downlink) Handheld to Base 435 MHz to 445 MHz (Uplink)
Channel Capacity	80 Channels (Up and Down)
Up and Down Link Open Loop Gain	22 dB (min)
Gain Response Ripple	1.6 dB (max)
Uplink and Downlink Nominal Output Set-point	0 dBm
Typical AGC LED Threshold	-18 dBm
Operating Voltage	8 Vdc to 17 Vdc
Current Requirement @ 12VDC	250 mA (max)
Through current capacity	3.0 A (max)
CLC 0 dB - 15 dB Attenuated Gain (Up & Down)	0.5 dB steps

TECHNICAL DATA

ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-20 °C to +40 °C
Storage Temperature	-40 °C to +65 °C
Operating Altitude	Up to 5500 m ASL
Operating Humidity	10% to 85% (Non Condensing)
Protection Class	IP66 according to EN60529 Impact
Impact Resistance	7 Nm - Body Only - Not indicator lights
Flammability	UL94 V-0
Toxicity	Halogen and Cadmium Free
Electromagnetic Interference (EMI)	FCC Emissions Class A (Industrial) CE Emissions Class A (Industrial)

MECHANICAL SPECIFICATIONS	
Dimensions (L x W x H)	230 x 75 x 61 mm (9.1 x 3 x 2.4 in)
Weight (nominal)	1.24 kg
Principal Materials	Enclosure: Glass Reinforced Polyester (GRP) Connectors: Electroplated Brass Thermoplastic polymer glass fiber
Enclosure	Kestrel 'KE' glass reinforced polyester type
Finish	Black
Gasket	Silicon rubber
Mounting Options	4 holes M6 directly

APPROVALS	
Approved Explosion Protection Rating (ia)	Ex GI ia
Inspection Authority Certificate (ia)	23-A080003-0

Technical data are limit values.

If the product is integrated into systems or operated in combination with other devices, its permissible operating values can deviate from these limit values. Subject to technical modifications without prior notice.

Rev. D

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