



# RIS-AMP VHF IS DIAGNOSTIC LINE AMPLIFIER

- Intrinsically Safe MSHA Certified
- Widest Bandwidth Amplifier Available
- Highest RF Gain Amplifier Available
- Local and Remote Diagnostics
- Supply Voltage Range, 5.5 - 36Vdc
- Facilitates Ethernet Connectivity
- 16 Simultaneous Noise-Free Radio Channels

## FEATURES

Becker Mining Systems' smartcom® 150IS Diagnostic Line Amplifiers compensate for Leaky Feeder cable and splitting losses while providing 16 simultaneous noise-free voice radio channels (no third order intermodulation products) and Ethernet connectivity using standard cable modems. smartcom® 150IS line amplifiers provide up to 500 m spacing.

Local/Remote Diagnostics, Ethernet, video and accurate Automatic Gain Control (AGC) without Return Pilot noise buildup are built-in to every amplifier.

The layout rules for smartcom® 150IS systems can be found in the latest version of drawing MSHA-IS-01.

2 Year component & workmanship warranty.

### MECHANICAL DATA

Dimensions (L x H x W)	323 x 121 x 250 mm (12.7 x 4.8 x 9.8 in)
Weight (nominal)	3.20 kg (7.05 lbs)
LF Connectors	Two 3 Terminal Lug Connectors, PG21 cable grips

### ENVIRONMENTAL DATA

Temperature Range	-20 to +60° C (-4 to +140° F)
Protection Class	NEMA 4x (IP66)

### APPROVALS

MSHA	#23-A050001-0
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## TECHNICAL DATA

PERFORMANCE SPECIFICATIONS	
Input Impedance	75 Ω
Input Voltage	5.5-12.5 Vdc
Current Consumption	128 mA @ 12 Vdc
DC Blocking	Jumper Selection on Board Input/Output
Amplifier Spacing	250-500m
Downstream	
Gain	10-25 dB
Gain Adjust Range	15 dB (1 dB steps)
Gain Control	MGC, AGC
Bandwidth	15 MHz
3 dB Bandpass	145-160 MHz
3 <sup>rd</sup> Order Intermod free Channel Capacity	16 Voice/Data, 8 Video (2 per main branch)
Ethernet Bandpass	6.0 MHz
DOCSIS 2.0 data rate	30.34 Mbps (64 QAM)
Third Order Intercept (3IP)	+31 dBm
Upstream	
Gain	13-28 dB
Gain Adjust Range	15 dB (1 dB steps)
Gain Control	MGC, AGC
Bandwidth	15 MHz
3 dB Bandpass	170-185 MHz
Ethernet Bandpass	6.4 MHz (max)
DOCSIS 2.0 data rate	20.48 Mbps (16 QAM)
Third Order Intercept (3IP)	+29 dBm

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. H