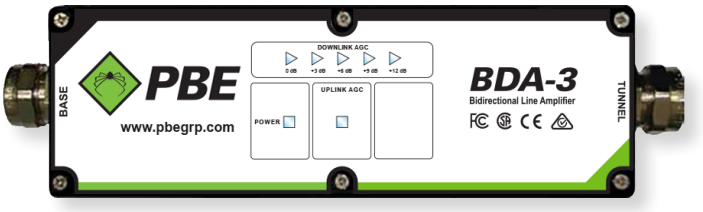
BDA-3

Bidirectional Line Amplifiers

PBE SAFETY & PRODUCTIVITY SOLUTIONS

PBE's BDA-3 Amplifier Maintains Signal Levels to Provide Dependable Communication



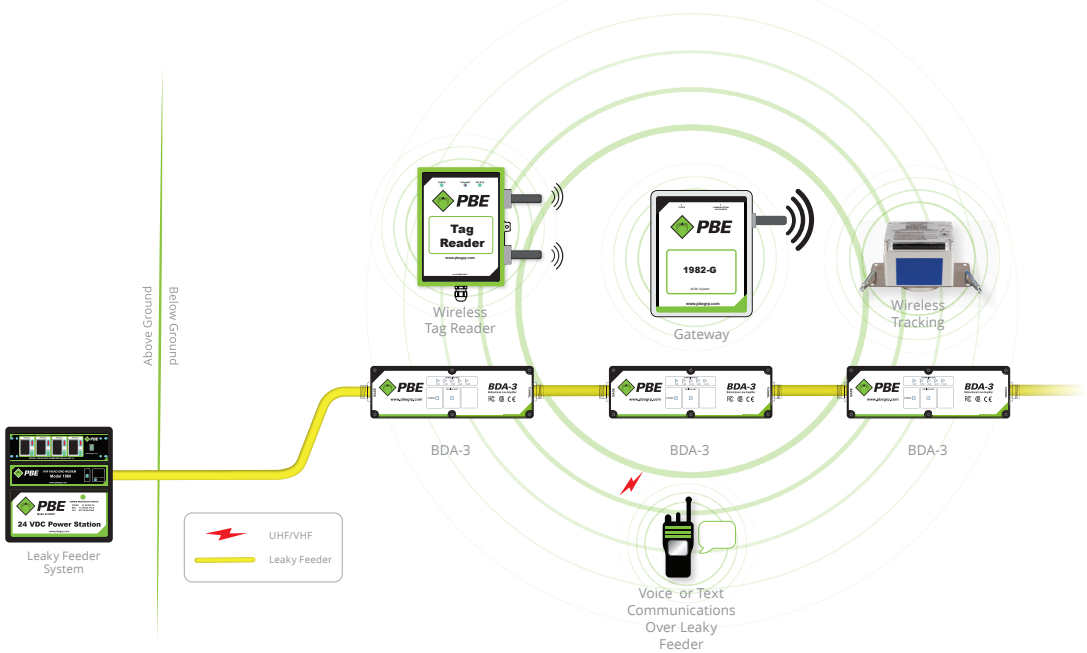
FEATURES OVERVIEW

- Compatible with Voice and Data communications
- Local Diagnostics
- Saddle and Clamp connections
- IP55/NEMA 4X rated enclosure
- VHF and UHF

THE BIDIRECTIONAL LINE AMPLIFIER (BDA-3)

- Provides local diagnostics to indicate the current state of the amplifier for ease of maintenance
- Supports voice and data transmission
- Powered from the radiating cable line
- Connected via saddle and clamp connections
- Amplifier tuning via rotary switches
- High level of sideband immunity and excellent noise rejection
- Housed in a minimum IP55 rated heavy duty enclosure

The Bidirectional Line Amplifier (BDA-3) is part PBE's leaky feeder system which provides a reliable, simple to use underground data aquisition and communication system.



ENG/TS-0008-002/BDA-3 Amplifier Tech Sheet/A4/12.03.15

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OPERATION

The display on the front panel of the BDA-3 Bidirectional Line Amplifier provides local diagnostics. If there is power to the amplifier the Power LED will indicate. The Downlink AGC LEDs represent how far into AGC the amplifier is. The Uplink AGC LED indicates if it is active.

The Uplink AGC LED is primarily used for tuning and testing purposes. Rotary switches can be used to tune the amplifier to suit the Leaky Feeder system topology. The uplink and downlink attenuation can be adjusted independently. The S1 switch adjusts downlink attenuation and the S2 switch adjusts uplink attenuation. See the Leaky Feeder Manual (004-0359-001) for calibration procedures. The amount of attenuation for each switch position is as follows:

Switch Position	0	1	2	3	4	5	6	7	8	9
Attenuation (dB)	0	1	2	3	4	5	7	9	11	13

AVAILABLE BDA-3 MODELS (CHECK WITH PBE WHEN CHOOSING FREQUENCY)

Model Number	Downlink (MHz)	Uplink (MHz)	Termination	Impedance	Approvals
02-00149	151-157.5	170-174.5	Saddle and Clamp	75 ohm	FCC, CE, CSA, RCM
02-00156	145.5-147.5	160.5-162.5	Saddle and Clamp	75 ohm	FCC, CE, CSA, RCM
03-00041	480-490	450-460	Saddle and Clamp	75 ohm	FCC, CE, CSA, RCM

SPECIFICATIONS

Operating Voltage:	12-48 VDC
Operating Temperature:	-20°C to 50°C
Downlink Frequency:	VHF (02-00149): 151 – 157.5 MHz VHF (02-00156): 145.5 – 147.5 MHz UHF (03-00041): 480 – 490 MHz
Uplink Frequency:	VHF (02-00149): 170 – 174.5 MHz VHF (02-00156): 160.5 – 162.5 MHz UHF (03-00041): 450 – 460 MHz
Bandwidth:	VHF (02-00149): 4.5 MHz Uplink, 6.5 MHz Downlink VHF (02-00156): 2 MHz Uplink, 2 MHz Downlink UHF (03-00041): 10 MHz Uplink, 10 MHz Downlink
Input / Output Impedance:	75 ohms
Maximum Gain:	VHF (02-00149): 28 dB VHF (02-00156): 28 dB UHF (03-00041): 32 dB
Connections:	Saddle and clamp
Through Current Capacity:	1.5 A max
Current Drain:	~90 mA @ 12 VDC ~50 mA @ 24 VDC ~30 mA @ 48 VDC

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