

## BI-DIRECTIONAL AMPLIFIER (BDA)

764-941 MHz

## BDA-40-SERIES

Designed and engineered to meet the fire protection codes (NFPA and IFC standards), our Bi-Directional Amplifier (BDA) features advanced Alarm, Monitoring & Control capabilities ensuring continuous availability of mission-critical services. Certified: FCC and IC.

- Available in 700, 800 and 900 MHz Public Safety bands
- Ideal for indoor applications in commercial and government buildings, parking garages, mining facilities, subway stations and tunnels
- Rack mounted or in NEMA 4/4x waterproof, stainless steel enclosures
- Low noise figure, wide dynamic range
- Visual alarms and remote failure monitoring with Graphical User Interface



Electrical Specifications	BDA 764806	BDA 806870	BDA 896941
Frequency Range, MHz	DL: 764-776 UL: 794-806	DL: 851-869 UL: 806-824	DL: 935-941 UL: 896-901
Passband Ripple, dB	+/- 1.5	+/- 1.5	+/- 1.5
Automatic Gain Control (AGC), dB	30	30	30
Maximum Gain, dB	+80	+80	+80
Manual Gain Control (MGC), dB	0-31 in 1 dB Steps	0-31 in 1 dB Steps	0-31 in 1 dB Steps
Noise Figure, dB	2.5 Typical	2.5 Typical	2.5 Typical
Delay, Max., $\mu$ s	1	1	1
Max. Output Power, dBm	DL: +31.5 UL: +31.5	DL: +31.5 UL: +31.5	DL: +31.5 UL: +31.5
VSWR	1.5:1	1.5:1	1.5:1
Input Voltage, Volts	AC: 115-220 DC: 24-27	AC: 115-220 DC: 24-27	AC: 115-220 DC: 24-27
Temperature Range, $^{\circ}$ C	-30 to +60	-30 to +60	-30 to +60
Humidity, %	95	95	95
Connectors	N Female	N Female	N Female
LNA bypass Function Implementation, dBm	-20 @ Input Power	-20 @ Input Power	-20 @ Input Power
Alarms	AGC, S/D, Power	AGC, S/D, Power	AGC, S/D, Power

Mechanical Specifications	BDA 764806	BDA 806870	BDA 896941
Enclosure	NEMA 4 Painted Steel	NEMA 4 Painted Steel	NEMA 4 Painted Steel
Dimensions, in. H, W, D	17.5 x 11 x 9	17.5 x 11 x 9	17.5 x 11 x 9
Weight, lbs	33.5	33.5	33.5

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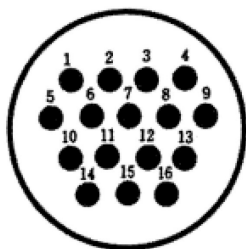
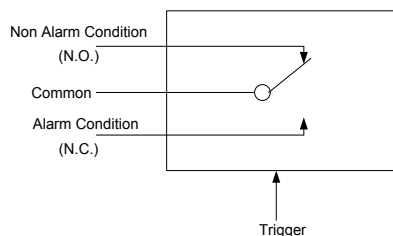
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## Four Dry Contact Alarms:

Donor Antenna Alarm	AC Current Alarm	DC Current Alarm	RF System Alarm
<ul style="list-style-type: none"> <li>- Antenna disconnected</li> <li>- Antenna open circuit</li> </ul>	<ul style="list-style-type: none"> <li>- AC Power failure (Can run on DC source)</li> </ul>	<ul style="list-style-type: none"> <li>- DC Power failure</li> </ul>	<ul style="list-style-type: none"> <li>- Shutdown of RF System: <ul style="list-style-type: none"> <li>- Overheating</li> <li>- Power over limit</li> <li>- VGA malfunction</li> <li>- Other failures</li> </ul> </li> </ul>

Relay Shown in Non-Alarm Condition.

A kit of the connector with labeled wires is supplied with the unit.



Pin	Description	Pin	Description
1	NC DC Relay	9	NO RF System Failure Relay
2	COM DC Relay	10	NC AC Relay
3	NO DC Relay	11	COM AC Relay
4		12	NO AC Relay
5		13	
6		14	NC Antenna Relay
7	NC RF System Failure Relay	15	COM Antenna Relay
8	COM RF System Failure Relay	16	NO Antenna Relay

## Monitoring and Control via Built-in via RS-232 Connector (USB Optional)

Monitor	Alarm	Control
<ul style="list-style-type: none"> <li>- TX/RX System Gain</li> <li>- TX/RX Attenuation</li> <li>- TX Input Power</li> <li>- TX/RX Output Power</li> <li>- DC Voltage/Current</li> <li>- System Temperature</li> </ul>	<ul style="list-style-type: none"> <li>- TX Input Over Power</li> <li>- TX/RX Output Over Power</li> <li>- AGC Range Alarm</li> <li>- TX/RX Shutdown</li> <li>- PSU Alarm</li> <li>- Over Temperature</li> </ul>	<ul style="list-style-type: none"> <li>- HPA On/Off</li> <li>- Gain</li> <li>- AGC On/Off</li> <li>- Shutdown On/Off</li> <li>- MCU Reset</li> <li>- Alarm Limit</li> </ul>



Visual Alarms and Remote Failure Monitoring with Graphical User Interface