

# 1.8 GHz Extreme Bandwidth Hardline Passives (DCs/Splitters/Power Inserters)

## LBEx1G8 1.8 GHz Series

Lindsay Broadband's extreme bandwidth line passives deliver reliable DOCSIS® 4.0 supported frequencies to 1.8 GHz. MSOs benefit from low insertion losses and superior electrical and mechanical performances increasing network reliability and service quality to their demanding customers.

The LBEx1G8 series line passives are available in configurations including directional couplers, balanced and unbalanced splitters, and power inserters. These 2-way, AC power passing, outdoor-hardened devices are 6 kV surge protected and 15 PSI pressure tested. The enclosure is a polyurethane coated, aluminum alloy housing complete with stainless steel hardware. They are standards-compliant line passives with high current power coils and shorting bars for power grid configurations to block or pass power.



LBEx1G8-8  
(front view)

### FEATURES

- Supports standard spectrum DOCSIS® (FDD) & extended spectrum DOCSIS (ESD) compliant systems
- 5-1800 MHz bandwidth
- 15 A current capacity
- Connector: 5/8" - 24 NEF-female for in/out with screwless auto-seizure mechanism
- Aluminum alloy housing for corrosion resistance
- Double polyurethane powder coating for greater weather protection
- Waterproof Rating: 15 PSI, IP67
- Operating Temperature: -40°C to +60°C (-40°F to +140°F)
- ANSI/SCTE 01-2015 fully compliant F connectors
- Epoxy-sealed & nickel plated brass F-ports
- Aerial or pedestal installation
- Surge Withstand: IEEE C62.41-1991 Category B3/6 kV Combination Wave, 3000 A, all ports
- Intermodulation: ≥ 115 dBc for demagnetized & after 10x25 VDC pulses per port, ≥ 105 dBc after 1 kV pulse per port

### SPECIFICATIONS

Parameter	Specification							
	8 dB Directional Coupler	12 dB Directional Coupler	16 dB Directional Coupler	2-Way Splitter	3-Way Splitter	3-Way Unbalanced Splitter		Power Inserter
						Low	High	
<b>Insertion Loss (dB) (Max.)</b>								
10-15 MHz	2.2	1.8	1.4	4.3	6.5	4.1	8.0	0.8
15-65 MHz	2.2	1.4	1.2	4.1	6.3	4.1	7.4	0.8
65-300 MHz	2.0	1.7	1.2	4.3	6.3	4.3	7.5	1.1
300-550 MHz	2.5	1.9	1.4	4.5	6.5	4.5	7.6	1.2
550-750 MHz	2.7	2.1	1.6	4.6	7.0	4.6	7.7	1.3
750-860 MHz	2.9	2.3	1.9	4.8	7.2	4.9	8.0	1.3
860-1000 MHz	3.1	2.5	2.0	4.8	7.3	5.0	8.0	1.3
1000-1218 MHz	3.3	2.7	2.5	5.0	8.0	5.3	8.5	1.5
1218-1500 MHz	3.5	3.2	3.0	5.5	8.5	5.9	9.3	1.9
1500-1700 MHz	3.8	3.2	3.0	5.8	8.5	6.0	9.8	2.0
1700-1800 MHz	4.5	3.5	3.0	6.5	8.5	6.5	10.8	2.2
<b>Tap Value (dB) Tolerance 5-860 MHz ± 1.0 dB / 860-1800 MHz ± 1.5 dB</b>								
10-65 MHz	8.0	12.0	16.0	--	--	--	--	--
65-300 MHz	8.0	12.0	16.0	--	--	--	--	--
300-550 MHz	8.0	12.0	16.0	--	--	--	--	--
550-750 MHz	8.0	12.0	16.0	--	--	--	--	--
750-860 MHz	8.0	12.0	16.0	--	--	--	--	--
860-1000 MHz	8.0	12.0	16.0	--	--	--	--	--
1000-1218 MHz	8.0	12.0	16.0	--	--	--	--	--
1218-1500 MHz	8.0	12.0	16.0	--	--	--	--	--



## SPECIFICATIONS CONT'D.

Parameter	Specification							
	8 dB Directional Coupler	12 dB Directional Coupler	16 dB Directional Coupler	2-Way Splitter	3-Way Splitter	3-Way Unbalanced Splitter		Power Inserter
						Low	High	
<b>Tap Value (dB) Tolerance 5-860 MHz <math>\pm</math> 1.0 dB / 860-1800 MHz <math>\pm</math> 1.5 dB Cont'd.</b>								
1500-1700 MHz	8.0	12.0	16.0	--	--	--	--	--
1700-1800 MHz	8.5	12.0	16.0	--	--	--	--	--
<b>Isolation (Tap-Tap) (dB Min.)</b>								
10-65 MHz	22.0	27.0	28.0	22.0	22.0	22.0		60.0
65-860 MHz	24.0	25.0	28.0	24.0	24.0	24.0		60.0
860-1218 MHz	22.0	22.0	26.0	22.0	22.0	22.0		52.0
1218-1500 MHz	20.0	20.0	20.0	20.0	20.0	20.0		52.0
1500-1700 MHz	20.0	20.0	20.0	20.0	20.0	20.0		52.0
1700-1800 MHz	20.0	20.0	20.0	20.0	20.0	20.0		52.0
<b>Return Loss (dB Min.)</b>								
10-15 MHz	15.0	15.0	15.0	12.0	15.0	15.0		12.0
15-65 MHz	17.0	17.0	17.0	17.0	17.0	17.0		17.0
65-300 MHz	17.0	17.0	17.0	17.0	17.0	17.0		17.0
300-550 MHz	18.0	18.0	18.0	18.0	18.0	18.0		18.0
550-750 MHz	18.0	18.0	18.0	18.0	18.0	18.0		18.0
750-860 MHz	18.0	18.0	18.0	18.0	18.0	18.0		18.0
860-1000 MHz	18.0	18.0	18.0	18.0	18.0	18.0		18.0
1000-1218 MHz	17.0	17.0	17.0	17.0	17.0	17.0		17.0
1218-1500 MHz	14.0	14.0	14.0	14.0	14.0	14.0		14.0
1500-1700 MHz	14.0	14.0	14.0	14.0	14.0	14.0		14.0
1700-1800 MHz	14.0	14.0	14.0	14.0	14.0	14.0		14.0
<b>Hum Modulation (dB) @ 15 Amps</b>								
10-1200 MHz	$\geq$ 60	$\geq$ 60	$\geq$ 60	$\geq$ 60	$\geq$ 60	$\geq$ 60		$\geq$ 60
1200-1600 MHz	$\geq$ 55	$\geq$ 55	$\geq$ 55	$\geq$ 55	$\geq$ 55	$\geq$ 55		$\geq$ 55
1600-1800 MHz	$\geq$ 50	$\geq$ 50	$\geq$ 50	$\geq$ 50	$\geq$ 50	$\geq$ 50		$\geq$ 50
<b>Environmental &amp; Physical</b>								
RFI	-100 dBc min.							
Current Passing Capacity	15 A, 60/90 VAC for splitters & directional couplers; 20 A, 60/90 VAC for power inserter							
Impedance	75 $\Omega$							
Surge Withstand Capability	IEEE 587 C62.41-1991-Cat B3, Combination Wave, 6 kV, 3 kA							
Waterproof Condition	15 PSI							
Center Conductor Seizure	15-20 in-lb (1.7-3.2 Nm)							
Housing Closure Screws	50-60 in-lb (5.6-6.8 Nm)							
Operating Temperature	-40°C to +60°C (-40°F to +140°F)							
Dimensions (H x W x D)	4.4"H x 5.5"W x 2.8"D (11.2H x 14.0W x 7.1D cm)							
Weight	1.5 lb (0.7 kg)							

## ORDERING INFORMATION

Part #	Description
LBEx1G8-2	Hardline 2-way splitter, 1.8 GHz
LBEx1G8-3	Hardline 3-way splitter, 1.8 GHz
LBEx1G8-3B	Hardline balanced 3-way splitter, 1.8 GHz
LBEx1G8-8	Hardline 8 dB directional coupler, 1.8 GHz
LBEx1G8-12	Hardline 12 dB directional coupler, 1.8 GHz
LBEx1G8-16	Hardline 16 dB directional coupler, 1.8 GHz
LBEx1G8-PI	Hardline power inserter, 1.8 GHz

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