



AL Series *AL2, AL4, AL6, and AL8 Models*

Low Power UHF Television Antenna



Features

- Single module, end fed antenna
- 2, 4, 6, and 8 gain models
- Omnioid pattern standard (directional patterns also available)
- Structural survival rating of 125 mph (201 km/h) plus 1/4" (6.4 mm) radial ice
- Hardware furnished for pipe or flush mounting
- Slot cover radome for environmental protection
- Lightweight, cost effective shipping container. Wood crate export packing available.
- Null Fill Standard

Low Power UHF Antenna Systems

The ERI AL Series Television Transmit Antenna will Give the Clear Picture

The ERI Low Power AL Series (CCIR Band IV/V) television transmitting antenna designed for UHF translator and low power applications offers a combination of quality, reliability, performance and economy.

Our engineering staff uses a state-of-the-art manufacturing and testing facility for the development of antenna designs and the production of broadcast antennas. Every ERI antenna has been individually designed and engineered to meet or exceed customer specifications.

Characteristics

Frequency Range	470 - 862 MHz
Operating Frequency	Specify by channel or bandwidth
Feed Configuration	End
Input Impedance	50 ohms
Input Type	7/8" EIA (Low Power) 1-5/8" EIA (Medium Power)
Power Rating, Peak	3 kW (Low Power) 6 kW (Medium Power)
Power Rating, Average	2 kW (Low Power) 4 kW (Medium Power)
Polarization*	Horizontal Circular Elliptical

*AL2 models are only available with horizontal polarization





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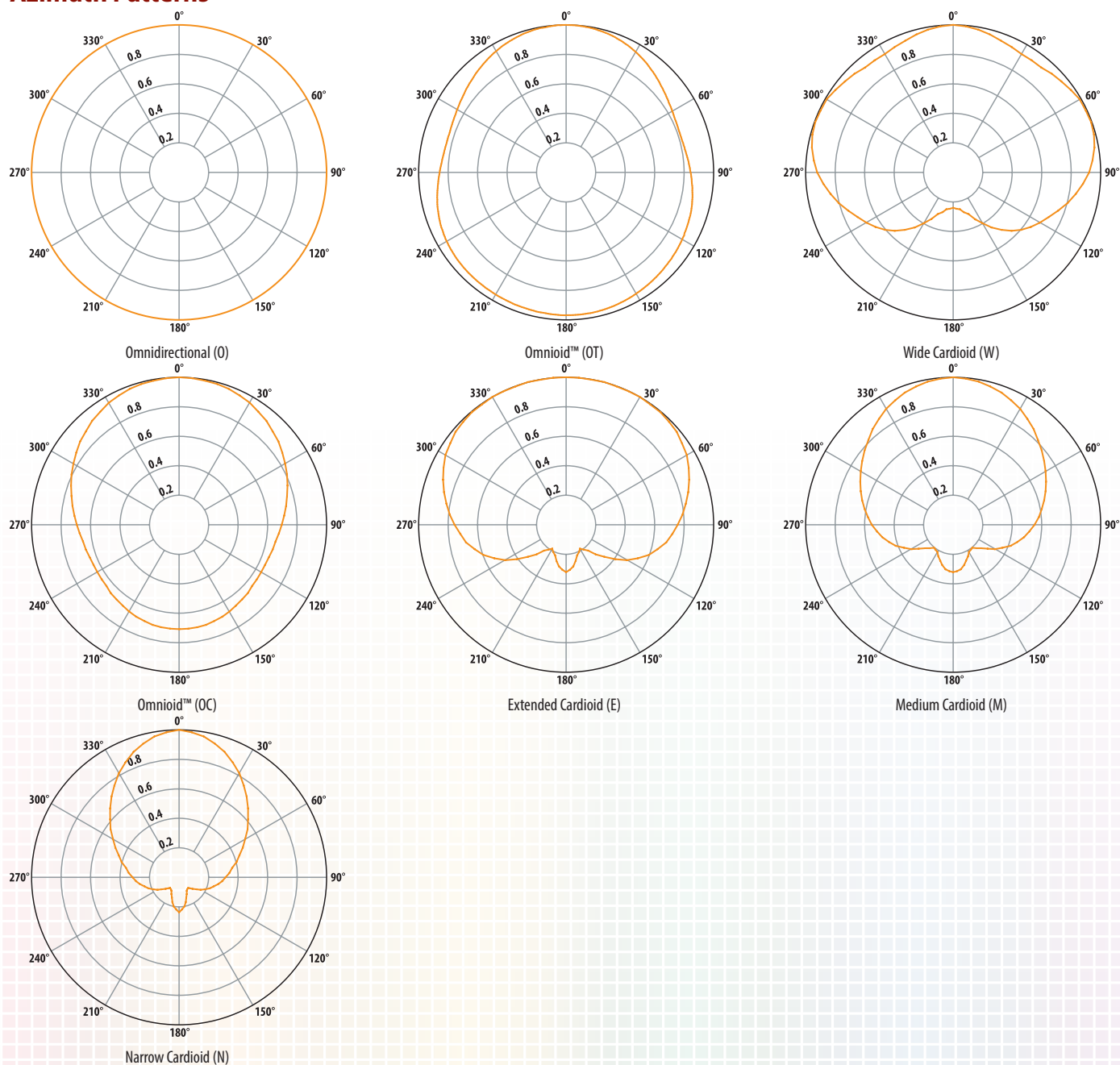
Low Power UHF Television Antenna

Electrical Specifications

Peak Gain

		O		OT		W		OC		E		M		N	
		numeric	dBd	numeric	dBd	numeric	dBd	numeric	dBd	numeric	dBd	numeric	dBd	numeric	dBd
H-Pol	AL2	2.67	4.27	3.17	5.01	4.19	6.22	4.33	6.36	4.89	6.89	6.81	8.33	10.09	10.04
	AL4	4.10	6.13	4.87	6.88	6.44	8.09	6.64	8.22	7.50	8.75	10.46	10.19	15.50	11.90
	AL6	6.51	8.14	7.73	8.88	10.22	10.09	10.55	10.23	11.91	10.76	16.60	12.20	24.61	13.91
	AL8	8.68	9.39	10.31	10.13	13.63	11.34	14.06	11.48	15.88	12.01	22.13	13.45	32.81	15.16
C-Pol	AL4	2.05	3.12	2.44	3.87	3.22	5.08	3.32	5.21	NA	NA	NA	NA	NA	NA
	AL6	3.26	5.13	3.87	5.87	5.11	7.08	5.27	7.22	NA	NA	NA	NA	NA	NA
	AL8	4.34	6.37	5.16	7.12	6.81	8.33	7.03	8.47	7.94	9.00	11.07	10.44	16.41	12.15

Azimuth Patterns





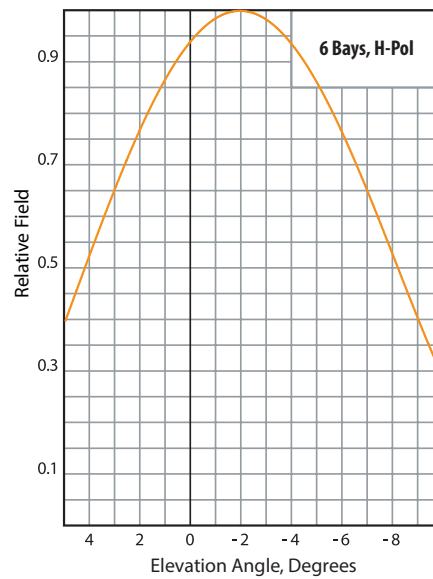
AL Series *AL2, AL4, AL6, and AL8 Models*

Low Power UHF Television Antenna

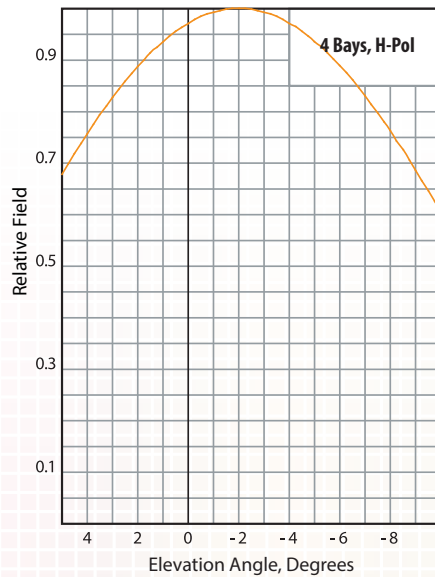
Elevation Patterns



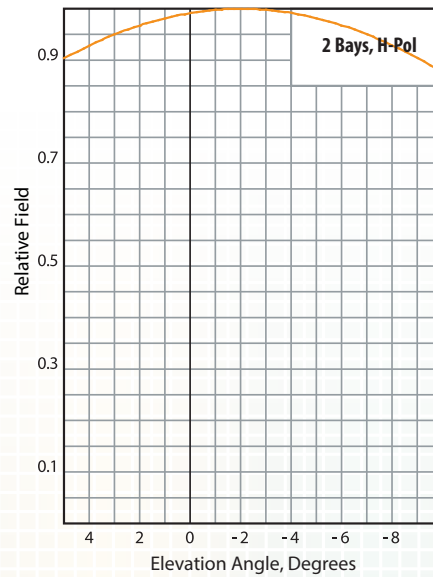
Type:	AL8	
Directivity:	Numeric	dBd
Main Lobe:	8.68	9.39
Horizontal:	7.31	8.64
Beam Tilt:	1.75 Degrees	
Polarization:	Horizontal	



Type:	AL6	
Directivity:	Numeric	dBd
Main Lobe:	6.51	8.14
Horizontal:	5.74	7.59
Beam Tilt:	2.00 Degrees	
Polarization:	Horizontal	



Type:	AL4	
Directivity:	Numeric	dBd
Main Lobe:	4.10	6.13
Horizontal:	3.87	5.88
Beam Tilt:	2.00 Degrees	
Polarization:	Horizontal	



Type:	AL2	
Directivity:	Numeric	dBd
Main Lobe:	2.67	4.27
Horizontal:	2.63	4.20
Beam Tilt:	2.00 Degrees	
Polarization:	Horizontal	



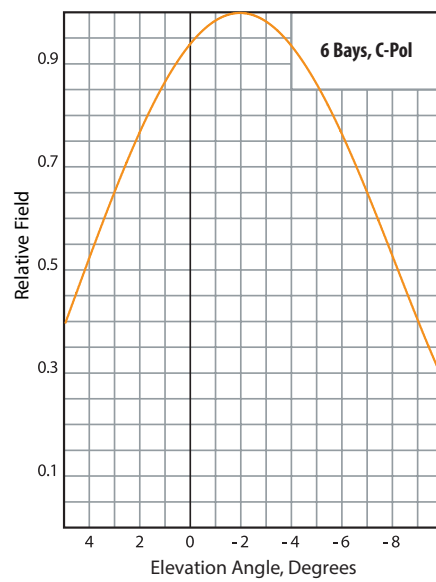
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Low Power UHF Television Antenna

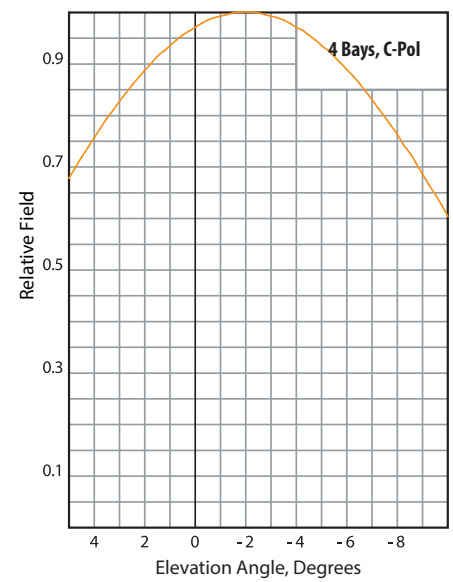
Elevation Patterns



Type:	AL8	
Directivity:	Numeric	dBd
Main Lobe:	8.68	9.39
Horizontal:	7.31	8.64
Beam Tilt:	1.75 Degrees	
Polarization:	Horizontal and Vertical	



Type:	AL6	
Directivity:	Numeric	dBd
Main Lobe:	6.51	8.14
Horizontal:	5.74	7.59
Beam Tilt:	2.00 Degrees	
Polarization:	Horizontal and Vertical	



Type:	AL4	
Directivity:	Numeric	dBd
Main Lobe:	4.10	6.13
Horizontal:	3.87	5.88
Beam Tilt:	2.00 Degrees	
Polarization:	Horizontal and Vertical	



AL Series *AL2, AL4, AL6, and AL8 Models*

Low Power UHF Television Antenna

Mechanical Specifications

Azimuth Pattern(s)	Length		Weight				C _A Normal Exposure				C _A Normal Exposure			
			Antenna Only		Antenna with ½ inch Of Ice		Antenna Only		Antenna with ½ Inch Of Ice		Antenna Only		Antenna with ½ Inch Of Ice	
	ft	m	lbm	kg	lbm	kg	ft²	m²	ft²	m²	ft²	m²	ft²	m²

AL2 Series: H-Pol

O, OC	8.30	2.53	46.00	20.87	74.00	33.57	2.88	0.27	3.71	0.34	3.92	0.36	4.74	0.44
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AL4 Series: H-Pol

OT	11.50	3.51	100.00	45.36	153.00	69.40	4.39	0.41	5.54	0.51	7.09	0.66	8.44	0.78
O, OC	11.50	3.51	64.00	29.03	103.00	46.72	3.99	0.37	5.14	0.48	5.43	0.50	6.57	0.61
W	11.50	3.51	76.00	34.47	127.00	57.61	9.82	0.91	11.48	1.07	7.30	0.68	8.70	0.81

AL4 Series: C-Pol/E-Pol

OT	11.50	3.51	120.00	54.43	185.00	83.91	4.39	0.41	5.54	0.51	10.91	1.01	13.72	1.27
O, OC	11.50	3.51	74.00	33.57	114.00	51.71	3.99	0.37	5.14	0.48	8.36	0.78	10.77	1.00
W	11.50	3.51	86.00	39.01	133.00	60.33	9.82	0.91	11.48	1.07	10.83	1.01	12.67	1.18

AL6 Series: H-Pol

OT	15.30	4.66	122.00	55.34	187.00	84.82	5.91	0.55	7.44	0.69	9.28	0.86	11.01	1.02
O, OC	15.30	4.66	85.00	38.56	137.00	62.14	5.31	0.49	6.84	0.64	7.22	0.67	8.74	0.81
W	15.30	4.66	101.00	45.81	169.00	76.66	13.06	1.21	15.27	1.42	9.71	0.90	11.58	1.08

AL6 Series: C-Pol/E-Pol

OT	15.30	4.66	152.00	68.95	234.00	106.14	5.91	0.55	7.44	0.69	15.32	1.42	19.27	1.79
OC	15.30	4.66	105.00	47.63	162.00	73.48	5.31	0.49	6.84	0.64	11.95	1.11	15.40	1.43
W	15.30	4.66	121.00	54.88	187.00	84.82	13.06	1.21	15.27	1.42	14.44	1.34	16.89	1.57

AL8 Series: H-Pol

OT	20.00	6.10	147.00	66.68	228.00	103.42	7.74	0.72	9.73	0.90	11.89	1.10	14.09	1.31
O, OC	20.00	6.10	110.00	49.90	178.00	80.74	6.94	0.64	8.93	0.83	9.43	0.88	11.42	1.06
E, M, N	20.00	6.10	131.00	59.42	213.00	96.62	15.48	1.44	18.38	1.71	11.93	1.11	14.37	1.34
W	20.00	6.10	131.00	59.42	220.00	99.79	17.07	1.59	19.96	1.85	12.69	1.18	15.13	1.41

AL8 Series: C-Pol/E-Pol

OT	20.00	6.10	187.00	84.82	288.00	130.63	7.74	0.72	9.73	0.90	19.67	1.83	24.74	2.30
O, OC	20.00	6.10	140.00	63.50	216.00	97.98	6.94	0.64	8.93	0.83	15.42	1.43	19.92	1.85
E, M, N	20.00	6.10	161.00	73.03	248.00	112.49	15.48	1.44	18.38	1.71	17.92	1.66	21.26	1.98
W	20.00	6.10	161.00	73.03	248.00	112.49	17.07	1.59	19.96	1.85	18.58	1.73	21.85	2.03

Notes: (1) Please note, the listed weights and effective wind areas are based upon standard designs. Actual values may vary on a project by project basis. Please contact ERI if more accurate values are required. (2) Loads calculated in accordance with the ANSI/TIA-222 standard. (3) Loading includes standard design for all aperture components including radiating module, and mount brackets. Loading does NOT include support mast.



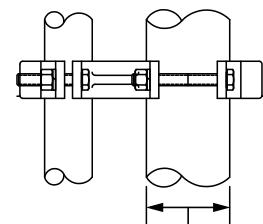
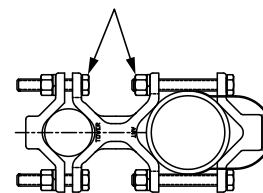
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Low Power UHF Television Antenna

Standard Mounting Brackets

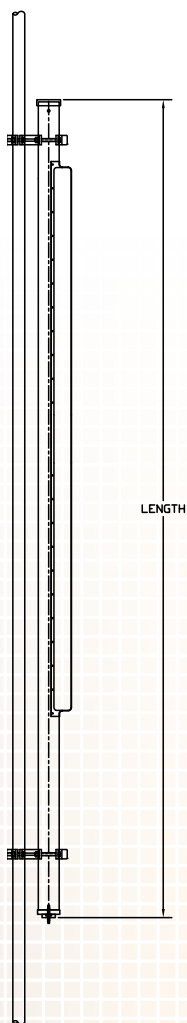
NOTE: All AL Series UHF television antennas, EXCEPT OT Pattern, are shipped with two clamp-on brackets for mounting on poles or tower legs from 1.315" (3.34 cm) to 3.500" (8.89 cm) OD or to flush mount to flat surfaces from 0.500" (1.27 cm) to 1.75" (4.45 cm). Stand off support pipes, face mount brackets, and mounts for larger diameter poles are available from ERI as optional items. Please contact ERI for a proposal for these requirements.

Hardware 1/2"

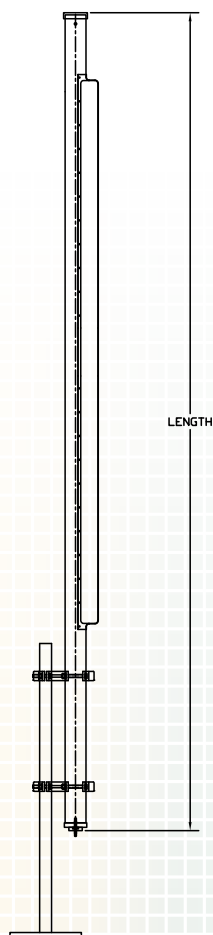


Antenna
3.50" (8,89 cm)

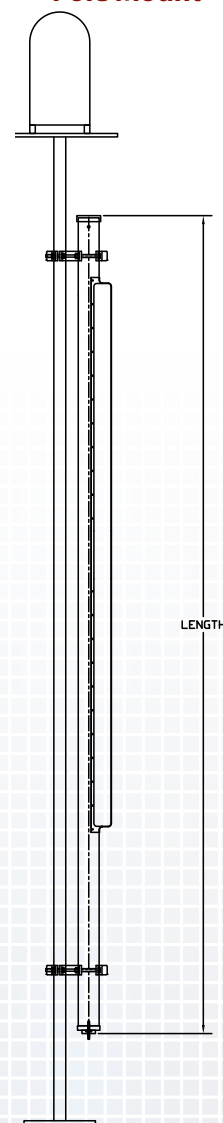
Side Mount



Contilever Mount



Pole Mount



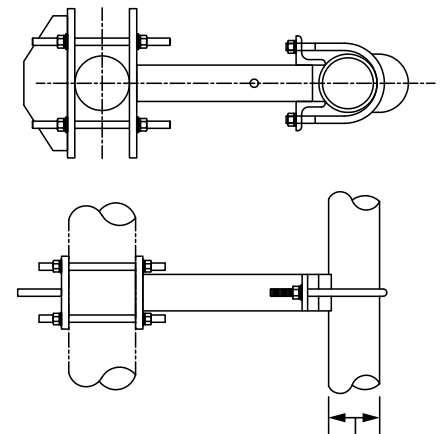


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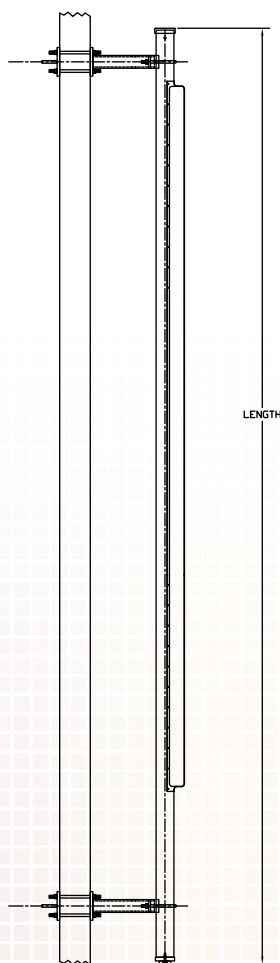
Standard Mounting Brackets for OT Patterns

Note: All AL Series OT Pattern UHF television antennas are shipped with 15" (38.10 cm) stand off brackets for mounting on poles or tower legs from 1.5" (3.81 cm) to 7.5" (19.05 cm) OD. Stand off support pipes, face mount brackets, and mounts for larger diameter poles are available from ERI as optional items. Please contact ERI for a proposal for these requirements.

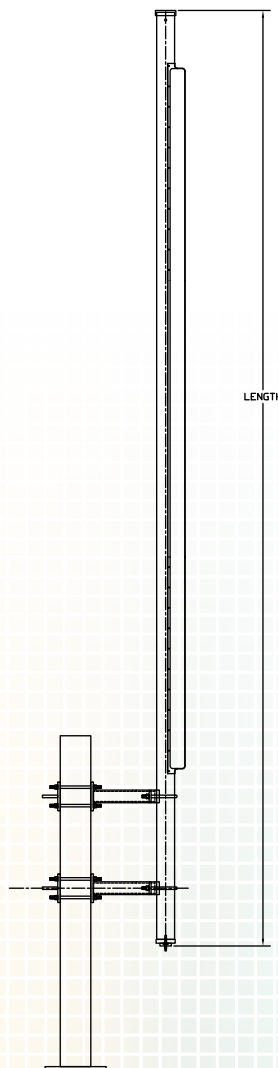


Antenna
3.50" (8,89 cm)

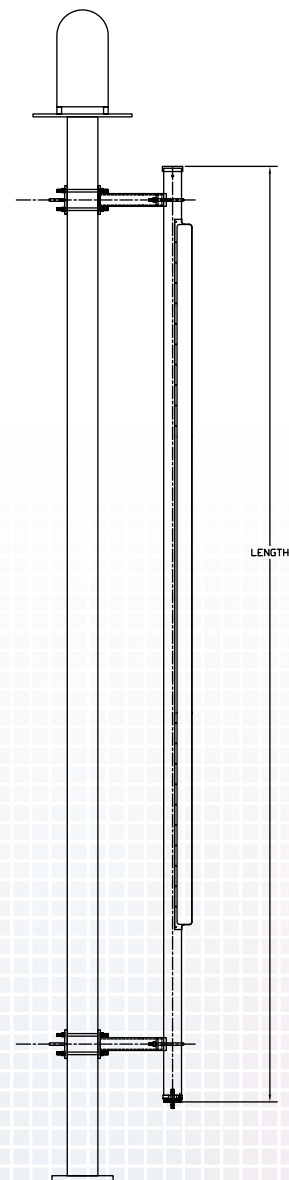
Side Mount



Cantilever Mount



Pole Mount



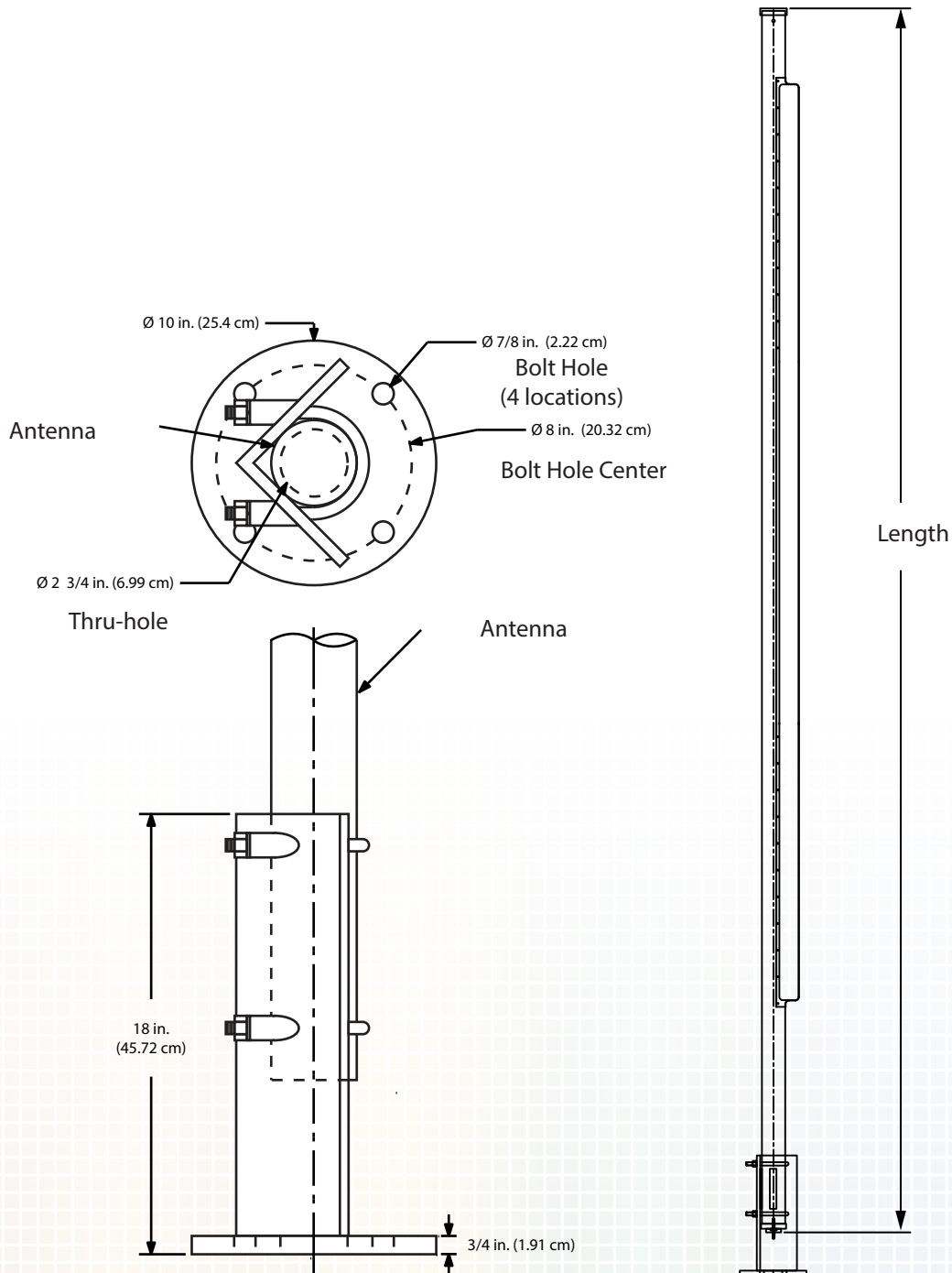


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Acessories

Type Number	Description
ALMNT	Top Mount Bracket for AL Series UHF television antennas.

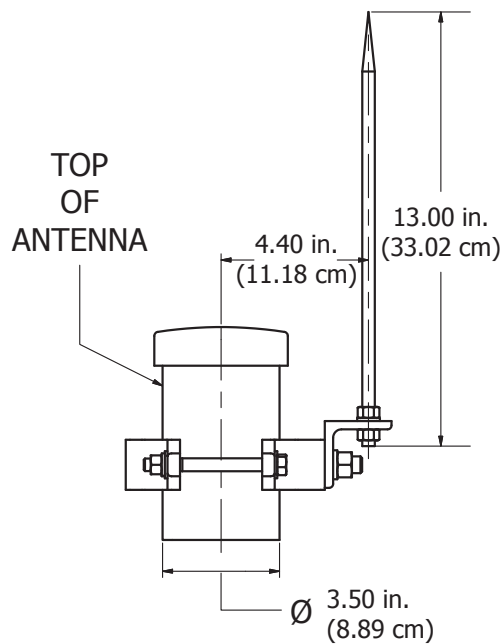
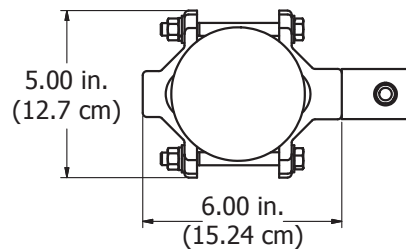
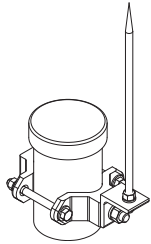




AL Series *AL2, AL4, AL6, and AL8 Models*

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Type Number	Description
AL-LRK-1	AL Series Lightning Rod Kit. Includes 13.00-inch (330 mm) lightning rod, attachment hardware, and mounting clamp. For top mount or cantilever applications only.



Ordering Information

Part Number Definition for AL Series UHF Television Antennas

AL a b - c - d e f		
a =	Number of Bays	2, 4, 6, or 8
b =	Azimuth pattern	Blank = Omnioid (OC pattern) O = Omnidirectional OT = Omnioid W = Wide Cardioid E = Extended Cardioid M = Medium Cardioid N = Narrow Cardioid
c =	Channel Number	US Channels = 14 to 69 European Channels = 14E to 69E Australian Channels = 14A to 69A
d =	Bandwidth	Blank = Single channel 3 = 18 MHz bandwidth (AL8 Only)
e =	Power Handling	Blank = Low Power = 4 kW Peak (2 kW Average) Power M = Medium Power = 6 kW Peak (3 kW Average) Power
f =	Polarization	Blank = Horizontal E = Elliptical (Not Available for AL2 models) C = Circular (Not Available for AL2 models)

Installation Notes:

1. CAUTION: Lightning rod is very sharp! Take care to avoid injury when unpacking and installing this accessory.
2. Install at top of AL Series UHF Television antenna.
3. Position top of mounting bracket approximately 1.5-inches (38 mm) below the top of the antenna.
4. Tighten the mounting evenly to a minimum recommended torque of 40 ft-lbm (54 N).



Around the World, Across the Spectrum, Your Single Source For Broadcast Solutions



Antennas



Transmission Line



Towers



Filters/Combiners



Broadcast Services

About Electronics Research, Inc.

Founded in 1943, Electronics Research, Inc. delivers high quality, innovative, integrated solutions to broadcasters across the U.S. and around the world. Our dedicated staff of engineers, designers, fabricators, and project managers take pride in contributing to your success by providing AM, FM, VHF, UHF, BRS-EBS, and Mobile Media broadcast systems including the industry's best antenna, transmission line, filter/combiner, and tower and structural support systems. In addition to manufacturing the full range of broadcast system components and installation accessories, ERI offers a suite of engineering and field services needed to plan, install, optimize, and maintain your broadcast facility. We are your single source for broadcast solutions.

Broadcast Antenna Systems

- ROTOTILLER® FM Antenna
- LYNX™ Dual Input Antenna for FM-IBOC
- 1105 Circularly Polarized FM Antenna
- 100A Series Low Power Circularly Polarized FM Antenna
- FM Low Power Horizontally Polarized Educational FM Antenna
- P300/P350 Series Vertically Polarized FM Antenna
- 1180 and 1090 Series Broadband Panel FM Radio Antenna
- SLIMWING™ Batwing VHF Television Antenna
- CRUCIS™ Crossed Dipole VHF Television Antenna
- STINGRAY™ Broadband Television Panel Antenna
- TRASAR® High Power Traveling Wave Television Antenna
- AGW Quick-Deploy Emergency UHF Television Antenna
- ALP Low and Medium Power UHF Television Antenna
- AL PLUS Low and Medium Power UHF Television Antenna
- AL Series Low Power UHF Television Antenna
- HMD BRS-EBS Antenna
- SHADOWMASTER® Shadow-Filling BRS-EBS Antenna

Transmission Line Systems

- MACXLine® Rigid Transmission Line with Bellows
- HELIAX® Air- and Foam-dielectric Coaxial Cable
- HELIAX® Standard Elliptical Waveguide
- GUIDELINE® Circular Waveguide
- Standard Rectangular Waveguide
- Dehydrators and Pressurization Equipment

Filter and Combining Systems

- FM Radio Filter and Combining Systems
- UHF and VHF Television Filter and Combining Systems
- DAB Filter and Combining Systems
- Mobile Media Filter and Combining Systems
- RF Components
- System Monitoring and Protection Components

Structural Support Systems

- Guyed Towers
- Self-Supporting Towers
- Roof-top Antenna Support Structures
- Specialty Structures and Custom Antenna Supports

RF and Structural System Services

- RF Field and Engineering Services
- Installation and Structural Engineering Services

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