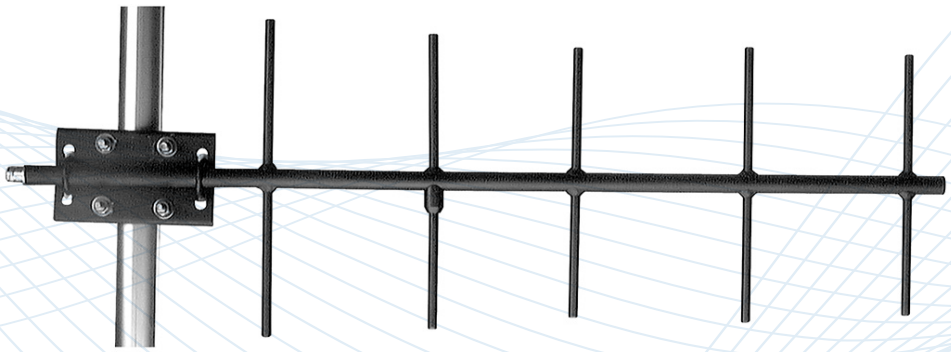
DATASHEET

ISM / LORA / LPWAN ANTENNAS

Black, Optimized Welded Yagi Antennas, No Tune

ISM/LoRa/LPWAN Antennas – Yagi

BMOY Series



Description

Optimal performance and durability across all 400/900 MHz and UHF frequency bands

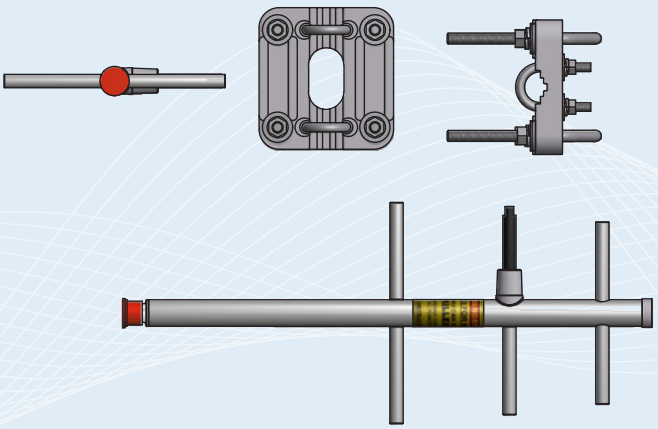
Technologies

- VFH
- UHF

Features

- Covers all 800/900 MHz frequencies with no tuning required
- 360° welds at element and boom interface protect against moisture
- Heavy-duty, robust materials
- Horizontal or vertical polarization
- DC grounded

BWC1001 Mount



BMOY8903

BWC1001 Mount

Black, Optimized Welded Yagi Antennas, No Tune

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PCTEL's BMOY yagis have been optimized using a genetic algorithm to achieve superior performance over the entire 800/900 MHz and UHF frequency bands. These antennas feature solid 3/8" elements attached to a seamless aluminum boom with 360° welds, and are finished with a black polyester powder coating. Each antenna has a type N termination located at the end of the boom, with a fully sealed driven element for complete protection against humidity, acid rain, or salt spray. A solid aluminum mounting bracket allows for either vertical or horizontal polarization. The BMOY's sturdy construction and advanced engineering design provides outstanding durability and superior performance in all weather conditions.

Features

- Broadband performance covering all 800/900 MHz frequencies and no tuning required. Provides optimal performance, minimizes inventory requirements, and reduces installation time.
- 360° welds at element and boom interface provide complete protection of the antenna's internal mechanism against moisture.
- Solid aluminum mounting clamps with stainless steel hardware. Ensures a robust installation and allows the antenna to be mounted for horizontal or vertical polarization.
- End-fed type N connector. Makes connector accessible for easier installations and protects the electrical connection from moisture and other extreme weather influences.
- Fully enclosed low loss feed system. No exposed gamma match to corrode or deteriorate. Black polyester powder-coated finish povides an added layer of protection, maximizing performance and durability under the toughest weather conditions.
- DC grounded

Certifications

RoHS COMPLIANT

SPECIFICATIONS

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PCTEL an Amphenol company

ISM/LoRa/LPWAN Antennas – Yagi

Standard Configuration

Model	Cables	Connector	Elements	Mount
BMOY4066	Mating cable assembly sold separately (all models)	N Female	6	BWC1001 Clamp bracket for 1/2"-7/8" diameter yagis. Mounts to masts 1.25"-2.4" OD (included with all models)
BMOY4405			5	
BMOY4705			5	
BMOY8903			5	
BMOY8905			3	
BMOY9006			6	

Electrical Specifications - RF Antenna

Model	Frequency Range	Gain	Bandwidth @ 1.5:1 VSWR	Azimuth Half Power Beamwidth	Elevation Half Power Beamwidth	Front to Back Ratio	Maximum Power	Nominal Impedance
BMOY4066	406-430 MHz	10.0 dBd	24 MHz	50°	45°	> 12 dB	150 watts	50 ohms
BMOY4405	440-480 MHz	9.0 dBd	40 MHz	52°	45°	> 15 dB		
BMOY4705	470-512 MHz	9.0 dBd	42 MHz	52°	45°	> 15 dB		
BMOY8903	890-960 MHz	6.4 dBd	70 MHz	52°	45°	> 15 dB		
BMOY8905	890-960 MHz	6.4 dBd	70 MHz	100°	54°	> 20 dB		
BMOY9006	890-960 MHz	10.0 dBd	70 MHz	50°	45°	> 15 dB		

Mechanical Specifications

Model	Boom Dimensions Length	Diameter	Weight	Radiator Material	Bending Moment @ 125 mph Wind	Lateral Thrust @ 125 mph Wind	Equivalent Flat Plate Area
BMOY4066	40"	.75"	2.2 lbs (1.0 kg)	3/8" solid 6061-T6 aluminum	45.6 ft-lbs	24.2 lbs	.37 sq ft
BMOY4405	34"	.75"	2 lbs (0.91 kg)		32.4 ft-lbs	24.2 lbs	.31 sq ft
BMOY4705	34"	.75"	2 lbs (0.91 kg)		9.5 ft-lbs	12.6 lbs	.16 sq ft
BMOY8903	14"	.75"	0.7 lbs (0.32 kg)		3.9 ft-lbs	7.9 lbs	.10 sq ft
BMOY8905	20.5"	.75"	0.9 lbs (0.41 kg)		9.5 ft-lbs	12.6 lbs	.16 sq ft
BMOY9006	23.6"	.75"	1.1 lbs (0.5 kg)		9.5 ft-lbs	12.6 lbs	.16 sq ft

Environmental Specifications

Model	Wind Load Rating	ESD Protection
BMOY4066	Wind survival: 200 mph with no ice. It will survive up to 110 mph with 0.5" radial ice build-up.	DC grounded
BMOY4405		
BMOY4705		
BMOY8903		
BMOY8905		
BMOY9006		

CONTACT US

For more information about this product contact your sales representative or visit

> pctel.com/antenna-products

Solving Complex Wireless Challenges

PCTEL, an Amphenol company, is a leading global provider of wireless technology solutions, including purpose-built antenna systems and test and measurement products. Trusted by our customers for decades, we solve complex wireless challenges to help organizations stay connected, transform, and grow.

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