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# MODEL PSIFMT

## FM DIRECTIONAL TRANSLATOR ANTENNA

### General Specifications

**Input Connector:** Type 'N' | 7/8" EIA

**Polarization:** Circular

**Physical Characteristics:** Copper and Brass

**Input Power:** 500 watts to 2000 watts

**Multi-Element Arrays:** 1, 2, 3 or 4 bay

**Custom Bay Spacing:** 1/2 | 5/8 | 3/4 | Full Wave

**Two Standard Patterns:** 3 dB | 6 dB Reduction

**Frequency Range:** 88-108 MHz

**VSWR:** < 1.15:1 ±200 kHz

**Impedance:** 50 ohms

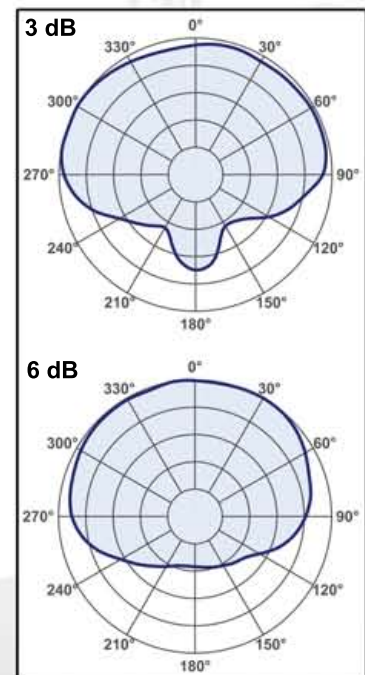
**Wind Survival Rating:** 124 mph (200 km/h)



PSIFMT antenna model is a directional, circularly polarized antenna, intended specifically for FM translators. Its rugged copper and brass construction make it suitable for any environment. The standard directional pattern makes it a perfect low cost choice for translators. Two standard directional patterns with either a 3 dB or 6 dB reduction in the horizontal plane pattern are offered. The reduction is based on mounting to a vertical support mast.

The antenna is available in a single bay or in arrays of up to 4 bays. Bay spacing is also available for 1/2, 5/8, 3/4 and full wave. A single bay model comes standard with a type 'N' female input connector. Multi-element arrays are supplied with LMR400 coaxial cable and include a matching power divider with a 7/8" EIA input. All antenna systems include parasitic elements, connector weatherproofing kits and mounting hardware for up to a 4.0" diameter customer supplied support mast.

The non-pressurized design eliminates the need for costly dehydrators or other pressurization equipment. Each antenna is fully assembled and the return loss is optimized prior to shipping.



FM BROADCAST ANTENNAS



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**Impedance:** 50 ohms

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**Polarization:** Circular

### Electrical Specifications

Model	Bays	Power Rating	Input	Power Gain	Gain dBd
PSIFMT-1A-3DB	1	500 W	N Female	0.54	-2.65
PSIFMT-2A-3DB	2	1000 W	7/8" EIA	1.18	0.72
PSIFMT-3A-3DB	3	1500 W	7/8" EIA	1.77	2.48
PSIFMT-4A-3DB	4	2000 W	7/8" EIA	2.48	3.94
PSIFMT-1A-6DB	1	500 W	N Female	0.82	-0.87
PSIFMT-2A-6DB	2	1000 W	7/8" EIA	1.78	2.50
PSIFMT-3A-6DB	3	1500 W	7/8" EIA	2.67	4.27
PSIFMT-4A-6DB	4	2000 W	7/8" EIA	3.74	5.73

### Mechanical Specifications

Model	Bays	Aperture		Weight		Wind Area	
		ft	m	lbs	kg	sq ft	sq m
PSIFMT-1A-3DB	1	2.3	0.70	26	12	2.9	0.27
PSIFMT-2A-3DB	2	10.0	3.06	59	27	6.8	0.63
PSIFMT-3A-3DB	3	20.1	6.12	85	38	10.3	0.95
PSIFMT-4A-3DB	4	30.1	9.18	111	50	14.1	1.31
PSIFMT-1A-6DB	1	2.3	0.70	33	15	3.9	0.36
PSIFMT-2A-6DB	2	10.0	3.06	71	32	8.8	0.82
PSIFMT-3A-6DB	3	20.1	6.12	104	47	13.3	1.23
PSIFMT-4A-6DB	4	30.1	9.18	136	62	18.1	1.68

**NOTES:** Antenna specifications are based on full-wave spacing. Please contact the factory for specifications on additional spacing options. Aperture, weight and windload are calculated at 98 MHz. Windarea  $C_A A_C$  is calculated in accordance with the ANSI/TIA/EIA 222-F standard. PSI reserves the right to modify the indicated technical specifications at any time without notice.