

Antenna/Line Monitor



ACM Series

ACM Series, Antenna and Cable Monitors are the solution for monitoring your transmission antenna systems. Service providers and self-maintained end users can rely on this monitor and alarm to keep their critical sites up and running. Designed to detect antenna and cable faults that transmitter-internal VSWR monitors may not detect, it also provides accurate in-line power measurement functionality.

- Models available from 136 - 225 MHz, 225 - 520 MHz, 470 - 960 MHz, 960 - 2400 MHz accurately monitors your antenna and cable system VSWR levels.
- Integral coupler with high directivity optimizes measurement accuracy. Measures small changes in antenna VSWR with high feeder and interface losses.
- Provides alarms if an antenna or cable failure should occur.
- Available with Ethernet or serial interface.
- Monitors transmitter output power and includes low or high power alarms.
- Measures true average power of signals with high peak-to-average characteristics - works with any modulation!
- Included as standard Push-To-Talk (PTT) input to avoid false alarm triggering when the transmitter (radio) is not keyed.

Applications

Includes 3G, AMPS., Broadcast, CHAM, CHAM 2000, DSC, EDGE, Government, GRIS, GUM, iden, Industrial, NYSSA, Microwave, Military, Paging, Public Safety, Rail, SMUR, TEMA, Tetrapolar, Trunking, UHF, Utilities, VHF, W-CHAM and WLL .

Part No.	Description
962-003-1123	136 - 225 MHz, 2.5 to 100 watt, N Type
962-003-1223	225 - 520 MHz, 2.5 to 100 watt, N Type
962-003-1323	470 - 960 MHz, 2.5 to 100 watt, N Type
962-003-1423	960 - 2400 MHz, 2.5 to 100 watt, N Type
962-003-5123	136 - 225 MHz, 12.5 to 500 watt, N Type
962-003-5223	225 - 520 MHz, 12.5 to 500 watt, N Type
962-003-5323	470 - 960 MHz, 12.5 to 500 watt, N Type
Accessories	
Part No.	Description
420-005-0100	VSWR Rack Shelf (up to 2 monitors)

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Product Specifications		
Item No. and Name	ACM Series	ACM Series, Antenna and Cable Monitors
Frequency Range	136 - 225 MHz 225 - 520 MHz;	470 - 960 MHz 960 - 2400 MHz
Measurement Range	ACM: 0.25 W to 100 W ACM 500: 12.5 W to 500 W	ACMI: 0.25 to 100 W ACMI500: 12.5 to 500 W
Power Accuracy	136-225 MHz, $\pm 10\%$ 225-520 MHz, $\pm 8\%$	470-960 MHz, $\pm 5\%$ 960-2400 MHz, $\pm 5\%$
Insertion Loss	0.1 dB (136 - 960 MHz)	0.15 dB (960 - 2400 MHz)
VSWR	1.07 (136 to 960 MHz) 1.1 (960 to 2400 MHz, N Connectors)	1.1 (960 to 2000 MHz, 7/16 Connectors) 1.2 (2000 to 2400 MHz, 7/16 Connectors)
Reflected Directivity	30 dB (136 to 960 MHz)	26 dB (960 to 2400 MHz)
Alarm Characteristics VSWR	Alarm Set Point: 1.3, 1.4, 1.5, 1.6, 1.7, 1.8, 1.9, 2.0, 2.1, 2.2, 2.3, 2.4, 2.5 to 1 Relay Contact Type: Dry, Form C, relay contacts, common, normally open, normally closed Contact Rating: 100 VDC @ 0.5A Visual Alarm: Red LED will illuminate to indicate alarm Stimulus: VSWR set point exceeded, response time proportional to overload Reset: Local Mechanical reset switch Remote input (Reset if VDC is 0 to +0.8 volts) Push to Talk: +5/+24 VDC to activate	
Monitor Ports	Connectors: Female N, TNC or BNC Coupling: -63 dB approx., Subject to changes in full-scale power	
Interface Specifications	ACM: RS-232 9600 baud, no parity, 8 data bits Serial Port 1 stop bit, no handshake ACMI: Ethernet Port Network Interface 10/100-BASE-T (auto-sensing) Compatibility Ethernet Version 2.0 / IEEE 802.3 Protocols ARP, UDP/IP, DHCP, BOOTP, Auto IP, HTTP, and SNMP Left LED Amber: 10 Mbps. Green: 100 Mbps Right LED Amber: Half-duplex. Green: Full-duplex Security: 128-bit encryption	
General	ThruLine® sensor for direct insertion in 50-ohm line	
RF Connectors	N or 7/16 DIN, see chart above	
Maximum Line Section Power	Dependent on frequency and connector	
Alarm Power Connector	15-pin Female "D" connector	
Temperature	Operating: 0 to 50°C	Storage: -20 to +80°C
Humidity	0 to 95% (non-condensing) max.	
Altitude	Up to 3,000 meters above sea level	
Passive Intermodulation Products	Less than -130 dBc	
Power Requirements	ACM: +11 to +26 VDC or ± 36 to ± 72 VDC	ACMI: ± 9 to 18 VDC or ± 18 to 36 VDC or ± 36 to 72 VDC
Dimensions	4.8" (121 mm) wide by 7.6" (192 mm) with connectors	7.2" (183 mm) high by 1.06" (27 mm) deep
Weight	Less than 2 lbs. (0.9 kg)	
EMC	European Standard EN 61326-1:1997 + Addendums A1: 1998 and A2:2001 - Electrical equip. for measurement	
Safety	European Standard EN 61010-1:2001 - Safety Requirements - Electrical equip. for measurement, control and laboratory use - ECM Requirements.	

Accessories



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