

Antenna System Monitor

Performance Monitoring of Tx FWD and RFL power, Receive RSSI and System Isolation measurements

132-174MHz

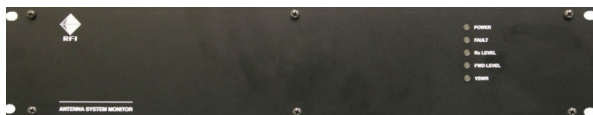
ASM1317



The Antenna System Monitor (ASM) provides channel specific forward and reflected transmitted power monitoring, a Tx to Rx antenna isolation measurement and Rx RSSI levels for up to 80 channels, and Tx-Rx Antenna Isolation, Rx System Gain and Tx Carrier Rejection measurements. Four paired power measurement inputs facilitate monitoring via high power in-line couplers. The low loss Antenna Line Coupler is inserted after the Tx combiner on the antenna feeder cable. All frequencies, channel bandwidths and level thresholds are software definable. A DB15 rear mounted connector provides alarm reporting outputs that can be hardwired into most alarm reporting facilities. The LED's on the front panel of the APM allow visual confirmation of the hardwired alarm outputs. Configuration, diagnostics and communication management is facilitated through the use of an on-board webserver GUI.

Features:

- Individual channel monitoring of Tx forward and reflected power in multi-channel, digital and analog systems.
- Non-intrusive measurement of per channel forward power and VSWR.
- Capable of monitoring up to 80 channels.
- System testing of Tx-Rx Antenna Isolation, Rx System Gain and Tx Carrier Rejection.
- 4 separate paired FWD and REF inputs to accommodate single or combined transmitter inputs.
- Alarm conditions configurable and mappable to ASM and or SAM alarm relay outputs.
- Configuration and alarm threshold level setting via RJ45 Ethernet port.
- Supplied with one Antenna Line Coupler, additional couplers ordered separately.



FRONT VIEW



REAR VIEW

ASM Model Number	ASM1317
Frequency Range (Tx power and Rx level monitoring)	132-174MHz
Maximum number of monitored channels	80
Available Tx forward power monitoring port inputs	4
Available Rx RSSI level monitoring ports	1
Rx monitoring port input range	-110dBm to -50dBm
Frequency channel step size (Tx & Rx)	1.25kHz
Channel measurement bandwidths	12.5kHz and 25kHz
Max spurious or IM products	-30dBm
Accuracy - per channel power change (Δ dBm)	+/-0.2dBm
Conducted emissions	Complies with FCC Part 15 (15.207)
Radiated emissions	Complies with FCC Part 15 (15.209)
RF Termination connectors	N (F)
Communication interface ports	2 x rear mounted TCP/IP Ethernet ports (RJ45)
Internal alarm relay contacts output connector	Rear mounted DB15 (M)
Visual alarm notification	Front panel mounted LED's
Configurable alarms	Summary Fault/ Tx FWD power / VSWR / RSSI (Ant Isolation)
Power supply options	11-36VDC, 36-60VDC or 100-240VAC (note #1 & 2)
DC power connector	Polarised 2-pin Phoenix connector
Mounting	2RU 19" rack mounting
Dimensions	483x50x89mm / 19x2x3.5" (incl connectors)
Weight	< 2kgs / 4.4lbs
Operational temperature range	-30° C to +60° C / -22° F to 140° F

NOTE:

- #1: The ASM AC option is a 9-36VDC unit, provided with an external AC-DC plug pack.
- #2: Nominate required operating voltage range with order.
- #3: Coaxial interconnect cables between ALC and the APM are not provided as these lengths may vary depending on the mounting positions within the rack.
- #4: Supplied with one Antenna Line Coupler, additional couplers ordered separately.
- #5: A mounting bracket for the AC-DC plug pack is available as an option.

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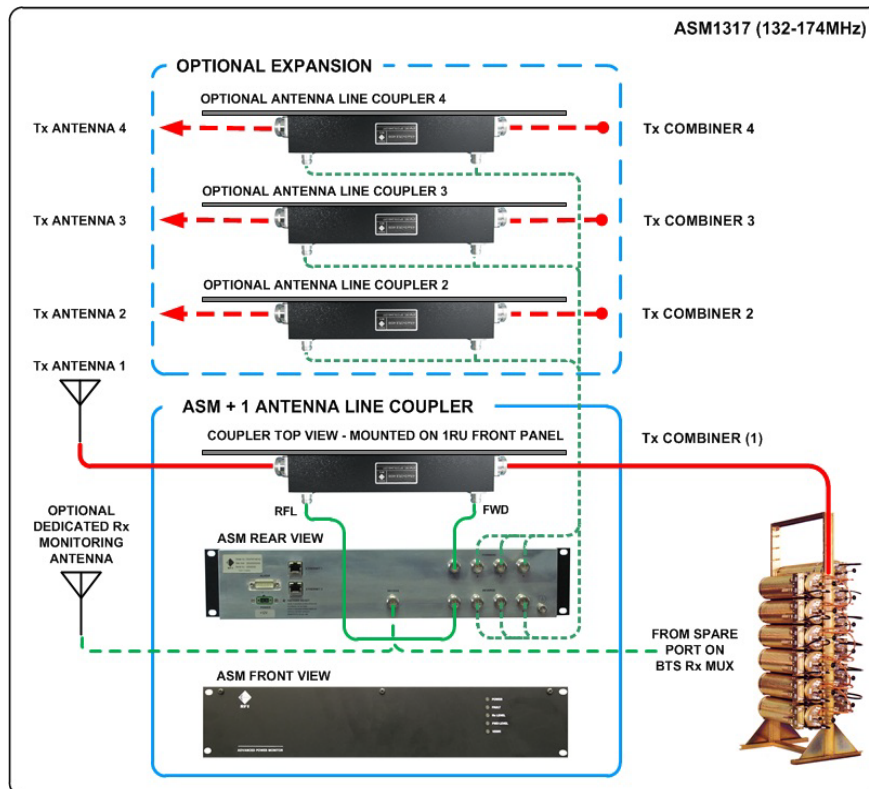
Antenna Line Coupler Model Number	SP1318-2440-DFF1RU
Frequency Range	130-180MHz
Insertion Loss	< 0.2dB
Input and Output Return Loss	> 20dB
Coupling Loss	40dB (+/- 0.7dB)
Maximum Input Power	750W
Maximum PIP	16kW (+72dBm)
PIM 3rd OIP (2x 43dBm carriers)	> 150dBc
Termination Connectors - " To Antenna" / "From Combiner"	7/16DIN (F)
Termination Connectors - FWD and RFL coupling ports	N (F)
Mounting	1RU 19" rack mounting
Dimensions	W 483 x H 45 x D 77mm / W 19 x H 1.75 x D 3" (incl connectors)
Weight	< 1.6kg / 3.52lbs
Operational temperature range	-30° C to +60° C / -22° F to 140° F
Altitude (max)	5,000m / 15,000ft

Ordering Information	Description
ASM1317	Antenna System Monitor 132-174MHz 80 Ch - 4 Tx Frd / 4 Tx Refl / 1 Rx Port 11-36V DC (incl 1 ALC)
ASM1317-48	Antenna System Monitor 132-174MHz 80 Ch - 4 Tx Frd / 4 Tx Refl / 1 Rx Port 36-60V DC (incl 1 ALC)
ASM1317-AC	Antenna System Monitor 132-174MHz 80 Ch - 4 Tx Frd / 4 Tx Refl / 1 Rx Port 100-240VAC (incl 1 ALC)

Additional Couplers	Description
SP1318-2440-DFF1RU	Antenna Line Coupler 130-180MHz 40dB 4-Port Input /Output Ports DIN (F) Coupling Ports N (F) 750W 1RU

Optional AC-DC PSU Power Pack Mounting Bracket	Description
HW0000-2030-11	Rear facing AC-DC PSU Power Pack mounting bracket kit

APPLICATION DIAGRAM



Australian Patent Application No 20112218778, US Patent Application No 13/227,643