

Coupler Model SPxxxx4440DFF

Model Number - xxxx	3855	7496
Frequency range	380-550 MHz	746-960 MHz

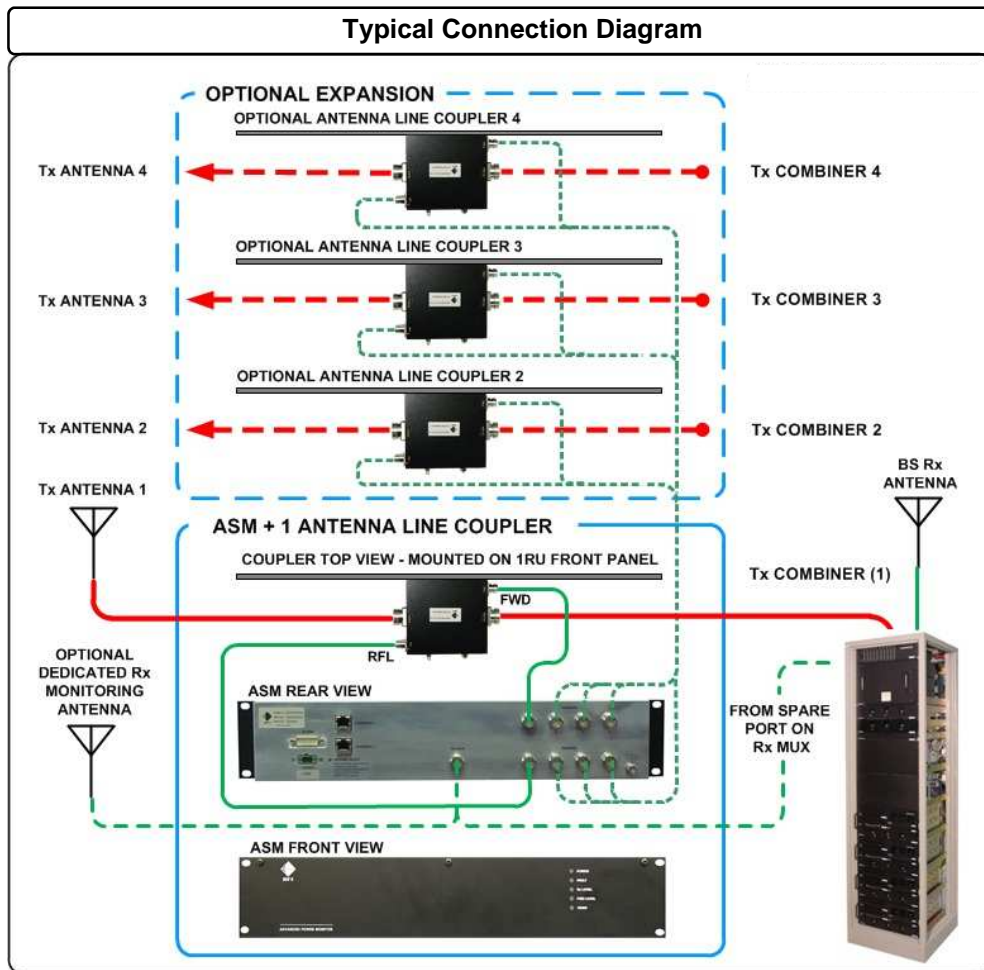
Insertion Loss	<0.2 dB
Input and Output Port Return Loss	>20 dB
Coupling Loss	40 dB (± 0.7 dB)
Maximum input power	750 W
Mounting	1RU 19" rack mounting
Operational temperature range	-22°F to 140°F / -3 °C to +60°C

User's Manual

For more detailed information on the hardware installation and software commands see the User Manual contained on the USB memory stick or CD accompanying this product.

Help

For help on using this product contact your nearest RFI Sales Office.



ANTENNA SYSTEM MONITOR - ASMxxxx SERIES

Quick Start Guide

INTRODUCTION

The RF Industries Antenna System Monitor (ASM) provides channel specific forward and reflected Transmitted Power Monitoring, a transmit to receive Antenna Isolation Measurement and Receive RSSI levels for up to 80 channels. Four paired forward and reflected power measurement inputs facilitate monitoring via high power Antenna Line Couplers. The low loss 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, alternatively it can be used to serial connect optional CAM (Channel Alarm Modules) modules when required. The LED's on the front panel of the ASM allow visual confirmation of the hardwired alarm outputs. Configuration, diagnostics and communication management is facilitated through the use of an on board webserver GUI.

ASM INSTALLATION

Mounting

The ASM is to be mounted indoors only. It is designed to fit in a 2RU rack space and should be mounted clear of any equipment that generates excess heat. Do not mount the unit inside small unventilated enclosures. Continuous operation above the specified maximum temperature may lead to premature failure of the ASM.

DC Power

Power the unit from any convenient external supply that can provide the appropriate voltage and current (see serial number label on product). The DC power input is reverse polarity protected.

AC Power

The optional AC plug pack is supplied with a two way Phoenix plug. The plug pack should be mounted safely in a convenient location and clear of any equipment or obstructions which may cause it to overheat.

Alarm Connector

A 15 way sub-miniature D connector is provided to connect the four alarm relays to an external alarm system. Refer to the User's Manual for details of the pin connections and alarm functions provided.

Earthing



Compliance with international electrical safety standards requires that the external Protective Earthing point on this equipment, as indicated by this symbol, be permanently hardwired to the premises protective earth system using 1.5 mm² (14 AWG) minimum cross-sectional area conductor. This connection provides protection from hazardous and transient voltages.

FORWARD RF Inputs 1 to 4

Connect these to the Coupler's FWD outputs via user supplied N (M) to N (M) coaxial cables. Used to measure forward RF power from the transmit combiner to the antenna.

REVERSE RF Inputs 1 to 4

Connect these to the Coupler's RFL outputs via user supplied N (M) to N (M) coaxial cables. Used to measure RF power reflected back from the antenna.

RECEIVE RF Input

Connect this to an independent Rx antenna or to an existing Rx Multicoupler. Used to measure channel specific Rx RSSI levels and Tx to Rx antenna isolation.

Ethernet Connectors

Two Ethernet ports are provided on the ASM. They are paralleled, therefore either port can be used for alarm and configuration access utilizing the on board web server which provides web browser access to the GUI. The other is used to connect to the optional bolt on cellular modem.

COUPLER INSTALLATION

Mounting

The Coupler is to be mounted indoors only. It is designed to fit in a 1RU rack space. Up to four Couplers may be connected to each ASM and they should be mounted in a position that allows for the required cables to be installed simply and with minimal cable stress.

FROM COMBINER Input

This port on the Coupler should be connected to the transmit combiner system via an appropriate user supplied coaxial cable terminated with a 7/16 DIN (M) connector.

TO ANTENNA Output

This port on the Coupler should be connected to the antenna system via an appropriate user supplied coaxial cable terminated with a 7/16 DIN (M) connector.

FWD Output

This port on the Coupler should be connected to one of the ASM's FORWARD RF Inputs via user supplied N (M) to N (M) coaxial cables.

RFL Output

This port on the Coupler should be connected to the ASM's REVERSE RF Input corresponding to the FORWARD RF Input used above, again via user supplied N (M) to N (M) coaxial cables.

OPERATION

Green Power LED

This LED is illuminated when external power DC is present. If the green LED is not on then either there is no DC voltage present or the polarity is incorrect.

Red Fault LED

This LED is a summary alarm LED indicator and is illuminated when the internal VCO is unlocked or any other fault occurs.

Rx Level LED

This LED is illuminated when any receive RF level or isolation measurement is outside the programmed limits.

FWD Level LED

This LED is illuminated when the forward RF transmit level measurement is outside the programmed limits.

VSWR LED

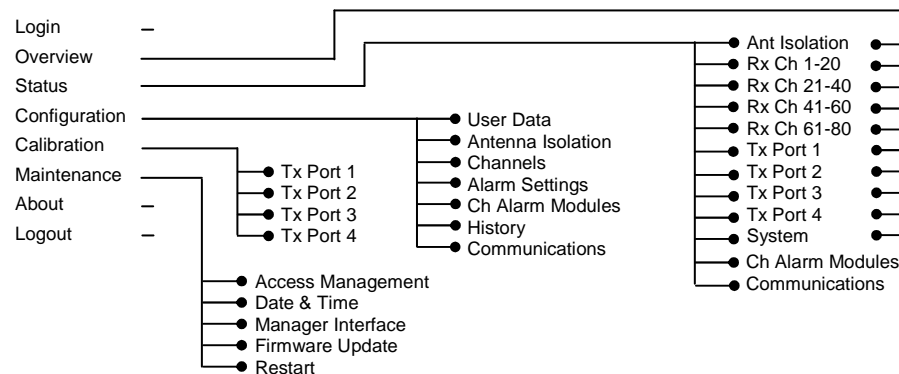
This LED is illuminated when any VSWR measurement is outside the programmed limits.

Ethernet Connection Set-up

Access to the ASM GUI interface via the on board web server requires an Ethernet connection to a laptop/PC running a web browser. The GUI can be accessed directly via a short Ethernet cable to a local PC or remotely via a TCP/IP network. To begin a session, start your web browser and type the ASM factory default IP address (<http://192.168.1.200>) into the address field of your browser. A successful connection is indicated by the display of the ASM log in screen. If the IP address is not known, the ASM will need to be reset to factory default settings using the rear panel reset button.

Graphical User Interface (GUI)

Prior to use, the ASM must be configured to suit the installation. The GUI interface provides access to both status monitoring and settings screens. The GUI menu tree is shown below.



Transmitter channels need to be configured for frequency, bandwidth and forward / reverse power alarm thresholds. The isolation measurement channel and receiver channels requiring RSSI monitoring are also configured and alarmed via the GUI. A number of other ASM parameters may also need to be set depending upon your installation. For full details on GUI and ASM programming, please refer to the User's Manual included on the USB memory stick or CD provided with the ASM.

Operating Precautions

- There is no On/Off switch on the unit - it becomes active as soon as DC power is connected or the AC plug pack is switched on at the AC outlet.
- Do not operate the unit outside the specified operating temperature range.
- Do not open the unit as there are no user serviceable parts inside. All faulty equipment should be returned to the supplier for repair.

SPECIFICATIONS

ASM Model ASMxxxx

Model Number - xxxx	3852	7487
Frequency range	380-520 MHz	746-870 MHz

Maximum number of monitored channels	80
Maximum number of Tx antennas	4
Available Rx RSSI Level monitoring ports	1
Rx monitoring port input range	-110 to -50 dBm
Frequency channel step size (Tx & Rx)	6.25 kHz
Channel measurement bandwidths	10 and 16 kHz
Accuracy - per channel power change (Δ Bm)	\pm 0.2 dBm
Power supply options	9-36VDC, 36-60VDC or 90-264VAC
Mounting	2RU 19" rack mounting
Operational temperature range	-22 °F to 140 °F / -30 °C to +60 °C