

The **Marconi Technologies Inc. SMART Coupler** combines a specially developed broadband, 130 – 960 MHz, passive coupler with active, diagnostic technology for system monitoring with failure detection and malfunction location capabilities.

The **SMART** (System Monitor Alarm Report Technology) Passives system is made up of a **SMART Gateway** at the head-end and **SMART Couplers** deployed in the DAS. Each coupler reports the Voltage Standing Wave Ratio (VSWR) at each port based on a calibrated CW tone generated by the gateway. By storing and comparing the VSWR at each port over time the **SMART** system can report failures such as an open or short circuit. The gateway then communicates the alarm via e-mail, SMS, or SNMP and pinpoints the location where the failure occurred.

The real-time monitoring capabilities that the **SMART Passives** system provides will ensure that Public Safety DAS system integrators, Authorities Having Jurisdiction (AHJ), and building owners can depend on the operation of their critical communication systems.

Features

- Monitors DAS infrastructure health; including antennas, coaxial cables, and other passive components
- Designed for public safety VHF, UHF, TETRA, 700, 800, 900 MHz bands
- FirstNet Band 14 Ready
- Diagnostics, power, and communications provided over RF coaxial cable by the SMART Gateway
- Alarms communicated via e-mail, SMS, and SNMP
- SMART Gateway dashboard web server compatible with all modern browsers



Preliminary specifications. Pending FCC approval.

RF Specifications

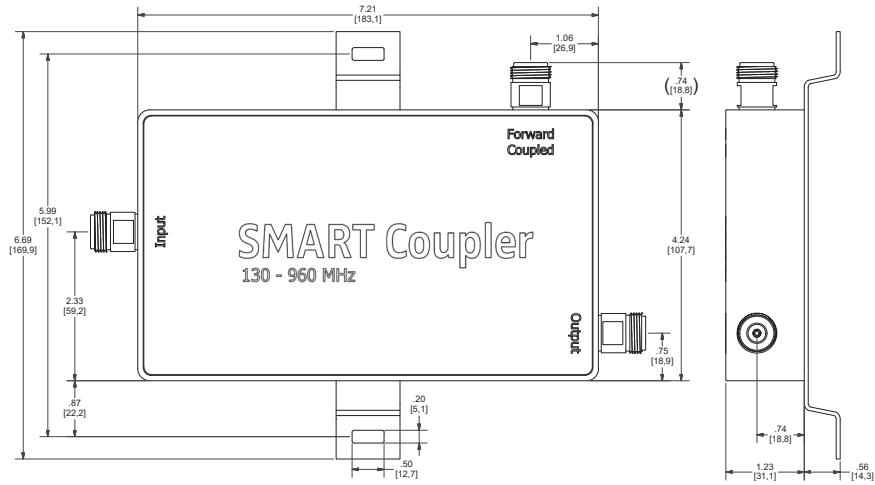
Frequency:	130 to 960 MHz
VSWR, all ports:	1.25:1 max.
Power Rating:	50 W avg.
Directivity:	>18 dB
Impedance:	50Ω nominal
Freq. Sensitivity:	+/- 1.7dB 130-180 MHz +/- 1.2dB 180-960 MHz
Environment:	-20°C to +50°C, IP67
Housing Finish:	Red Painted
Connectors:	N (f), Triplate
Weight:	3.1 lbs.

Part Number	Coupling	Dissipative	Coupled
N Type	Nominal	Loss, dB	Loss, dB
ST-06N	6 dB	<1.0	1.26
ST-10N	10 dB	<1.0	0.45
ST-15N	15 dB	<1.0	0.14
ST-20N	20 dB	<1.0	0.04

Parameter	Test Conditions	Minimum	Typical	Maximum
Frequency		130MHz		960MHz
Input Power Detector Range		-33 dBm	-	37 dBm
Input Power Detector Accuracy			+/- 3dB	
Monitor Frequency			928MHz	
DC Power*	+24 VDC @ +25deg C		0.3W	
DC Current*	+24 VDC @ +25deg C		0.01A	

* DC power is supplied from the gateway at the system's main RF source

Mechanical Outline with Bracket



Dimensions (L,W,H) (without bracket) – 7.21in (183.1mm), 4.24in (107.7mm), 1.23in (31.1mm)

SMART Coupler Passive and Active Architecture

