Stealth Microwave
INCORPORATED

SR3 Series

Stealth Microwave's 19 inch rack mount housings are designed to fit any of Stealth's current models. The SR3 Series adds many benefits over our standard module format. LEDs on the front panel monitor normal operation, thermal or power cautions, and alarms for thermal shutdown, amplifier, VSWR, and fan failures. The SR series comes standard with a USER PORT (DB15) which provides TTL signals to monitor the amplifier's status. The User Port provides analog voltages to indicate the forward and reflected power levels at the output of the unit and also provides amplifier status and alarm conditions. An RS-232 interface that performs the functions of the USER PORT is also available.

Features
- LED amplifier status and alarm display
- Built in AC or DC power supplies
- Forced air cooling with hot swappable fans
- On/off control via a BNC connector
- DB15 Monitoring/control connection standard

Options
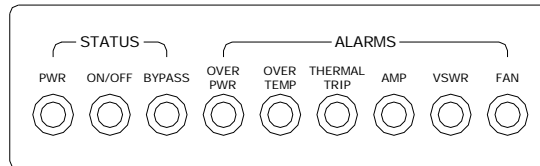- RS-232 interface
- Gain Control

Environmental Characteristics
Operating Temperature (Ambient): 0º C to 40º C
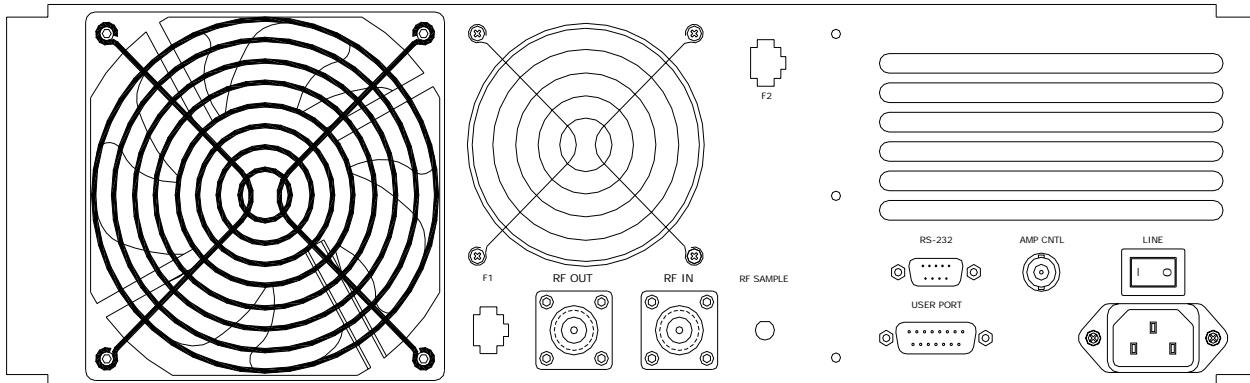Humidity: 95% relative without condensation
Altitude: 30,000 ft.

Physical Characteristics
Size: 19.0" W x 16" L x 5.25" H
RF Connectors: N-Type Female
Weight: 23 lbs.

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FRONT PANEL DETAIL

Front Panel LED Description

PWR	Line power switched on
ON/OFF	Amplifier is turned on. If amplifier has shut off due to OVER TEMP condition, LED will remain off until module reaches safe temperature
OVER TEMP	Amplifier's temperature exceeds + 65 °C
THERMAL TRIP	Amplifier's temperature exceeds + 75 °C. The unit is shut off and will not turn back on until its temperature drops below + 65 °C
AMP	Amp failure.
VSWR	Excessive output VSWR. Possible antenna problem.
FAN	Fan failure. The fan is either locked or not connected to power.

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REAR PANEL DETAIL

Label	Function
RF OUT	50Ω RF output. Refer to attached module data sheet for max output value
RF IN	50Ω RF input. Refer to attached module data sheet for max input value
RF SAMPLE	When equipped, a sample output. Refer to module data sheet for dBr value
F1	Fan 1 power connector (12VDC)
F2	Fan 2 power connector (12VDC)
RS-232	9 Pin D-Sub for RS232 monitoring / control (optional). Details below
USER PORT	15 Pin D-Sub for analog monitoring / control. Details below
AMP CNTL	BNC Connector for TTL on/off control of rack
LINE	Main on/off

USER PORT Pin definitions (DB15 connector on back panel)

Pin	Name	Description
1	AMP STATUS	H – Amplifier is off L – Amplifier is on
2	OVRPWR	H – Normal operation L – Amplifier is operating over + 49.5 dBm CW
3	OVRTEMP	H – Normal operation L – Amplifier temperature is over + 60-65 °C
4	THERMAL	H – Normal operation L – Amplifier has shut down due to excessive temperature (> + 70-75 °C)
5	AMP	H – Normal operation L – Amplifier failure
6	VSWR	H – Normal operation L – Excessive output VSWR. Possible antenna problem.
7	FAN	H – Normal operation L – Fan failure. The fan is either locked or not connected to power.
8	SUMMARY	H – No alarms L – One or more alarms present
9	GND	
10	FWD DET	Forward power detector voltage
11	REV DET	Feature not available on this amp
12	GND	
13	UNUSED	Factory use only – make no connection to this pin
14	UNUSED	Factory use only – make no connection to this pin
15	UNUSED	Factory use only – make no connection to this pin

OPTIONAL RS232 PORT (DB9 connector on back panel)

Transmission Parameters

Setting	Values
Baud rate	9600
Data bits	8
Start bit	1
Stop bit	1
Parity bit	None

Commands
Note: All commands are terminated with a carriage return or a semi-colon.

Command	Parameters	Description
AMPF	---	Returns status of amplifier alarm bit. "On" indicates an over or under amplifier current condition. Mode0: "ON" – amplifier failure, "OFF" – normal condition Mode1: 1 byte, 1 – amplifier failure, 0 – normal condition
AMP	ON | OFF	Turns amplifier on/off.
AMP?	---	Returns amplifiers on/off status. Mode0: "ON" – amplifier on, "OFF" – amplifier off Mode1: 1 byte, 1 – amplifier on, 0 – amplifier off
ECHO	ON | OFF	When turned on, transmitted characters are echoed back to the terminal. No characters are echoed when turned off.
ECHO?	---	Returns echo state Mode0: "ON" – echo on, "OFF" – echo off Mode1: 1 byte, 1 – echo on, 0 – amplifier off
FANF	---	Returns status of the fan alarm bit Mode0: "ON" – fan failure, "OFF" – normal condition Mode1: 1 byte, 1 – fan failure, 0 – normal condition
FWD	---	Returns forward transmitted power (Not available in all amplifiers). Mode0: "0" – "1023" relative to the forward transmitted power Mode1: 2 bytes LSB first, 0 - 1023
M0	---	Data mode 0. Return values sent as text (Default).
M1	---	Data mode 1. Return values sent in binary form.
OVRP	---	Returns status of over power alarm bit. Mode0: "ON" – Amp over rated output power, "OFF" – normal condition Mode1: 1 byte, 1 – Amp over rated output power, 0 – normal condition

OVRT	---	Returns status of over temperature alarm bit. Mode0: "ON" – Amp's temperature over 60° C, "OFF" – normal condition Mode1: 1 byte, 1 – Amp's temperature over 60° C, 0 – normal condition
REV	---	Returns reverse power (Not available in all amplifiers). Mode0: "0" – "1023" relative to the reverse power Mode1: 2 bytes LSB first, 0 - 1023
STATUS	---	Returns amplifier alarm status byte. Mode0: Hexadecimal "00" – "FF" Mode1: 1 byte, 0-255 See below for status byte description.
SUMERR	---	Returns status of summary error alarm bit. Mode0: "ON" – Alarm condition exists, "OFF" – normal condition Mode1: 1 byte, 1 – Alarm condition exists, 0 – normal condition
SYSRESET	---	Resets the controller.
TEMP	---	Returns amplifier base plate temperature in degrees Celsius. Mode0: "xx C" Mode1: 2 bytes, LSB first
THRML	---	Returns status of thermal alarm bit. Occurs when amplifier exceeds 75° C Mode0: "ON" – Amp in thermal shutdown, "OFF" – normal condition Mode1: 1 byte, 1 – Amp in thermal shutdown, 0 – normal condition
VER	---	Displays the controller software version.
VSWR	---	Returns status of VSWR alarm bit (Not available in all amplifiers) Mode0: "ON" – High VSWR condition exists, "OFF" – normal condition Mode1: 1 byte, 1 – High VSWR condition exists, 0 – normal

Status Byte

bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
Fan	VSWR	Current Alarm	Thermal Shutdown	High Temperature	Over Power	Amplifier On/Off	Summary Error