

## RF Monitoring Products

### CATS\* 74000 SERIES

# VSWR POWER MONITOR FOR MULTIPLE Tx AND Rx ANTENNAS

## ERICSSON BASE STATION COMPATIBLE

\*Communication Antenna Testing System

The CATS Series 74000 provides the same complete cell site antenna monitoring and transmit power measurement capabilities as the CATS Series 72000. However, it is designed specifically for Ericsson Base Station applications as well as any site employing an omni antenna configuration. Each CATS Series 74000 is configured to provide monitoring for up to two Tx and two Rx antennas. A total of three Series 74000 units can be cascaded for sectorized sites.

The CATS Series 74000 is identical in functionality and operation to the Series 72000. It utilizes the same components and assemblies to accomplish its tasks of providing state of the art in-line continuous power and VSWR monitoring of all Tx and Rx antennas.

Narda CELLPRO Plus software is provided with the Series 74000 and provides for all the capabilities as described for the Series 72000.

### The CATS Series 74000

The Narda Series 74000 is specifically designed for direct installation into the B Cabinet of Ericsson base stations. Multiple units are used for sectorized sites. The series 74000 is also designed for applications such as omni or non-sectorized cell sites.

The Series 74000 unit contains the Receive Antenna Sensors, Computer Interface, and Alarms for both the transmit and receive antenna. The transmit monitor is optional. If required, a CellGuard Series Model 8455 is utilized. Up to three Series 8455 transmit monitors can be mounted at any convenient location in the transmit chain after the combiner network. The Series 8455 transmit monitors are then connected to the Series 74000 through a cable provided with the unit.



An RS232 interface is provided for either direct connection to a local computer or to a modem for remote communications. All communication to the receive monitors and optional transmit monitors are accomplished through the single RS232 interface.

Alarms are provided for Transmit and Receive antennas utilizing Form-C Relays. Alarm outputs are provided through a specified interface on the Series 74000. A complete description of the alarms can be found in the Series 72000 section of this catalog.

LED's are provided to indicate Power On (green), Tx Alarm (red), and Rx Alarm (red).

### OMNI SITE APPLICATIONS

Configured as described above, the Series 74000 is ideal for omni-site applications. An optional mounting plate can be specified for mounting the Series 74000 in a 19 or 23 in. rack. The Series 74000 is also designed for expandability if and when a site is sectorized in the future. Additional Series 74000, and associated 8455's can be installed in the site with their communication link routed to the originally installed Series 74000. This allows for a single RS232 interface for communication with up to three Series 74000 modules and six Series 8455 transmit monitors.

### ERICSSON BASE STATION APPLICATIONS

Specific attention has been taken to allow for direct installation of the 74000 into the B Cabinet of an Ericsson single sector frame. The unit is directly installed in the vacant receiver multicoupler (RMC) cavity of the B cabinet. The receive antenna feed cables are removed from their original

## RF Monitoring Products

connection to the RMC and connected to the Series 74000 antenna ports. A short RF jumper cable is then connected from the Series 74000 receiver ports to the original RMC connectors. DC power is provided utilizing an Ericsson compatible DC connector and cable supplied with the unit.

As described above, up to two auxiliary Series 74000 units and up to six Series 8455 transmit monitors can be utilized for multi-sector applications. Once again, all communication to all monitors is accomplished through a single RS232 interface on the primary unit.

### AUTONOMOUS OPERATION

As described in the Series 72000 section of this catalog, the Series 74000 is offered with an option for autonomous operation. This option provides an onboard computer in the primary sector Series 74000 unit. This allows specific programmed operation of the entire Series 74000 monitors at a sectorized site without any local or remote computers.

## SPECIFICATIONS

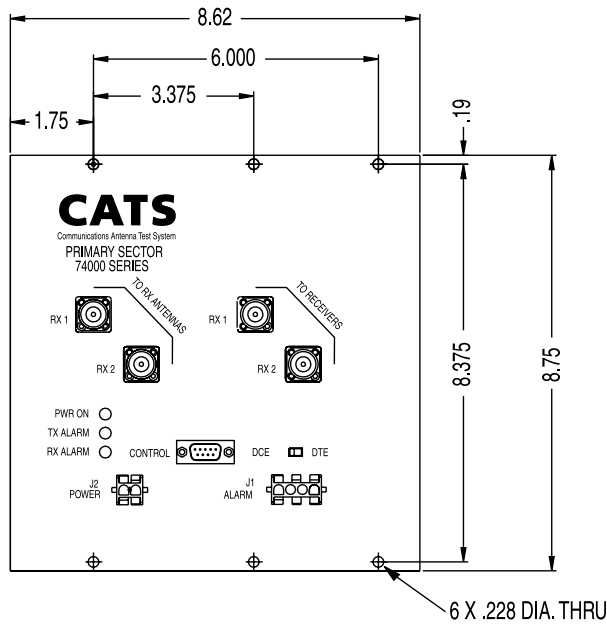
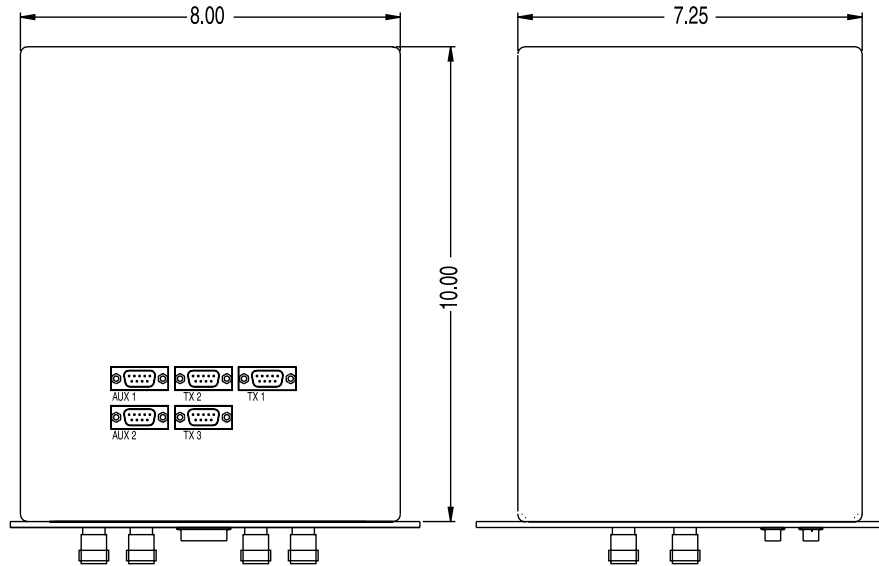
MODEL	74000												
FREQUENCY RANGE <sup>1</sup>	824 TO 915 MHz												
INSERTION LOSS	.2 dB MAX .15 DB TYP.												
MAIN LINE VSWR	≤1.10:1												
TEST SIGNAL POWER LEVEL	-20 dBm MAX												
VSWR MEASUREMENT RANGE	1.07 TO 10:1												
VSWR ACCURACY	<table border="1"> <thead> <tr> <th>ACTUAL VSWR</th> <th>UNCERTAINTY LIMITS*</th> </tr> </thead> <tbody> <tr> <td>1.20:1</td> <td>+0.10, -0.08</td> </tr> <tr> <td>1.50:1</td> <td>+0.15, -0.10</td> </tr> <tr> <td>2.00:1</td> <td>+0.30, -0.20</td> </tr> <tr> <td>2.50:1</td> <td>+0.40, -0.50</td> </tr> <tr> <td>3.00:1</td> <td>+0.50, -0.50</td> </tr> </tbody> </table> *ASSUMING WELL MATCHED RECEIVER INPUT	ACTUAL VSWR	UNCERTAINTY LIMITS*	1.20:1	+0.10, -0.08	1.50:1	+0.15, -0.10	2.00:1	+0.30, -0.20	2.50:1	+0.40, -0.50	3.00:1	+0.50, -0.50
ACTUAL VSWR	UNCERTAINTY LIMITS*												
1.20:1	+0.10, -0.08												
1.50:1	+0.15, -0.10												
2.00:1	+0.30, -0.20												
2.50:1	+0.40, -0.50												
3.00:1	+0.50, -0.50												
COMPUTER INTERFACE	RS232												
DATA RATE <sup>2</sup>	500 TO 9600 BAND												
ERROR DETECTION	CHECK SUM												
ALARMS	TX AND RX LED INDICATOR FORM-C RELAY CONTACTS												
INPUT POWER <sup>3</sup>	+20 TO +28 VDC @ .4A TYP.												
OPERATING TEMPERATURE	0 TO 50°C												
HUMIDITY	0 TO 95% RELATIVE, NON-CONDENSING												

### NOTES

- <sup>1</sup> Unit is calibrated for a specified 25 MHz band within this frequency range.
- <sup>2</sup> Factory default is 1200 band.
- <sup>3</sup> If auxiliary Tx modules are used, current draw will increase by a maximum of 90 mA per module. If on board computer option is used, current draw will increase by a maximum of 900 mA.

# RF Monitoring Products

## OUTLINE DRAWINGS



TOL: XX = ±.02  
XXX = ±.010