Broadcast Devices, Inc.

RMD-100 and up to RMD-100-4 Remote Meter Display for Use with DPS-100D Series True RMS Power Meters

Technical Reference Manual

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Rev C. 9/25

Table of Contents

i. Introduction

The RMD-100 Remote Meter Display is designed as an accessory for the DPS-100D True RMS Power Meter series from Broadcast Devices, Inc. The RMD-100 is a single rack unit, back lit, LCD display of forward and reflected power, temperature and line pressure via a single CAT 5 cable connection between the DPS-100D and the RMD-100. The RMD-100 has facility to indicate VSWR fault and provides relay closures for interlock and alarm status. Remote reset of VSWR alarm/trip can be performed from the RMD-100 as well. The RMD-100 is supplied with a 12 VDC power supply suitable for powering not only the RMD-100 panel but the DPS-100D True RMS Power meter as well.

ii. Installation and setup

Choose a suitable location in any standard EIA 19” rack enclosure. It is usually a good idea to put the unit high enough to be at eye level for proper viewing of the LCD display. Once the equipment is mounted apply power the RMD-100 by plugging in the 12 VDC coaxial connector from the power pack into the rear panel 12 VDC coaxial receptacle. The unit will power up and indicate:

Fig. 1 RMD-100 Display showing DPS-100D Power Meter is disconnected

Next connect the supplied CAT 5 cable to the RMD-100 rear panel and connect the other end of this cable to the DPS-100D power meter. After making connection to the DPS-100D the RMD-100 Remote Meter Display should show this indication:

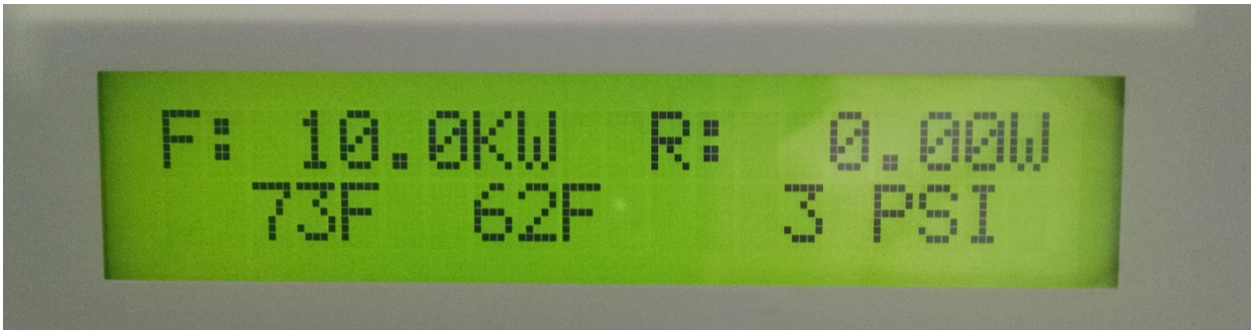

Fig. 2 RMD-100 Display showing normal indications from connected DPS-100D Power Meter
Note that once you have made the connection between the DPS-100D and the RMD-100 you can disconnect the local power supply from the DPS-100D if one is previously connected. If this is a new installation the local power pack for the DPS-100D is not used.

This completes the installation except for optional connection to the Alarm/Status DB-25 connector. Connections are shown below. Note that the Interlock relay is shown in the power off NC condition. When the interlock condition from the DPS-100D is valid whereby the internal DPS-100D Interlock relay is closed the remote Interlock relay will mimic the DPS-100D Interlock relay position. If a reflected power fault is detected the REF PWR Fault relay will energize and remain that way until the fault is cleared either from the RMD-100 front panel or by the DPS-100D web interface.

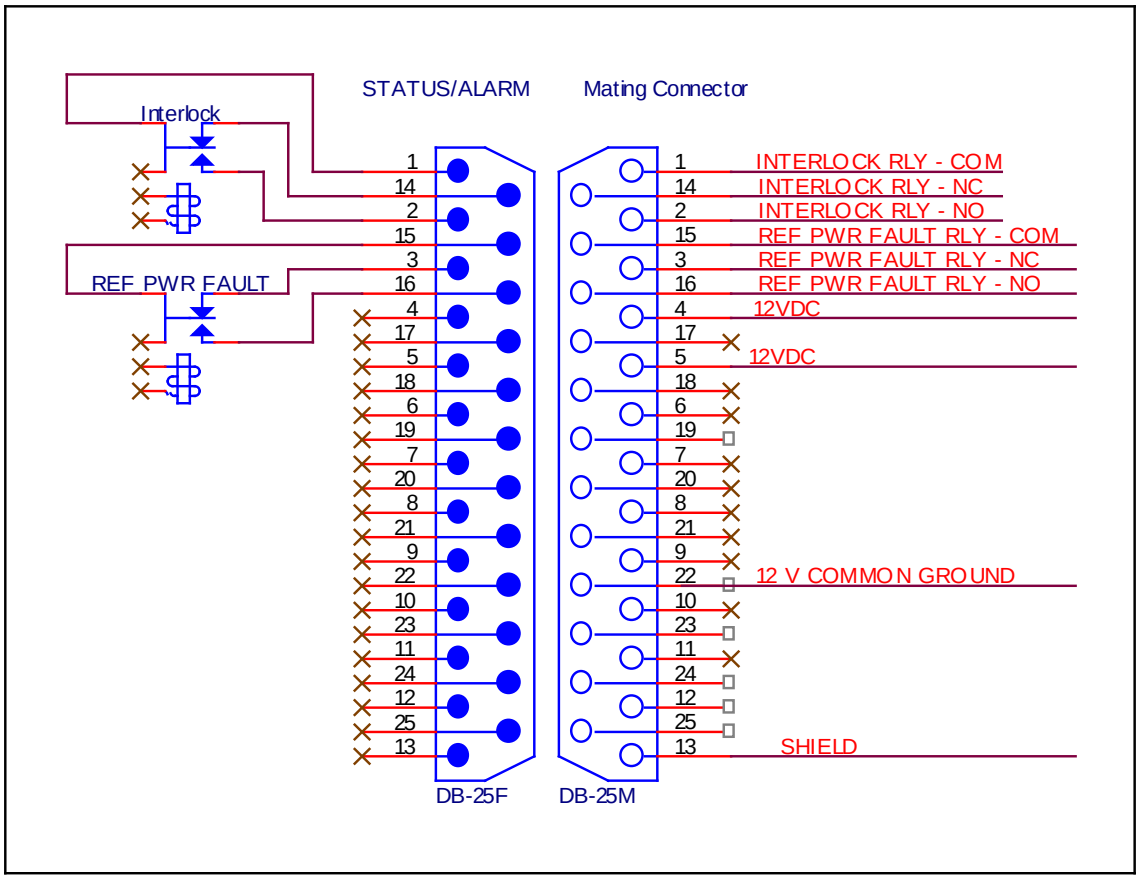

Fig. 3 Status/Alarm Remote Connector Pin Designations122 VDC and common are available for auxiliary use as shown on the connector. You must limit the 12 VDC load to 100 mA.

RELAY CH	B	A
1	OFF	OFF
2	OFF	ON
3	ON	OFF
4	ON	ON

CH ENABLED	D	C
1	OFF	OFF
2	OFF	ON
3	ON	OFF
4	ON	ON

Figure 4. Interlock Relay Assignment and Channel Enable Chart

A four position DIP switch on the main PCB is provided to assign the interlock relay to any one of the DPS-100D power meters connected. Default from the factory is channel 1 DPS-100D unit. The other half of the DIP switch is used to enable channels. Units are typically set up at the factory according to the way the unit was ordered. If additional DPS-100D units are added in the future enabling them in the field is accomplished by assigning the channels according to Fig. 4.

iii. Operation

The RMD-100 will indicate the same indications for forward and reflected power, internal line temperature, external temperature and transmission line pressure as indicated on the DPS-100D power meter. If a reflected power fault is indicated pressing the RED X key on the button cluster will clear the fault. If the fault persists then the RF system should be checked.

Indication of a reflected power fault will indicate as shown:

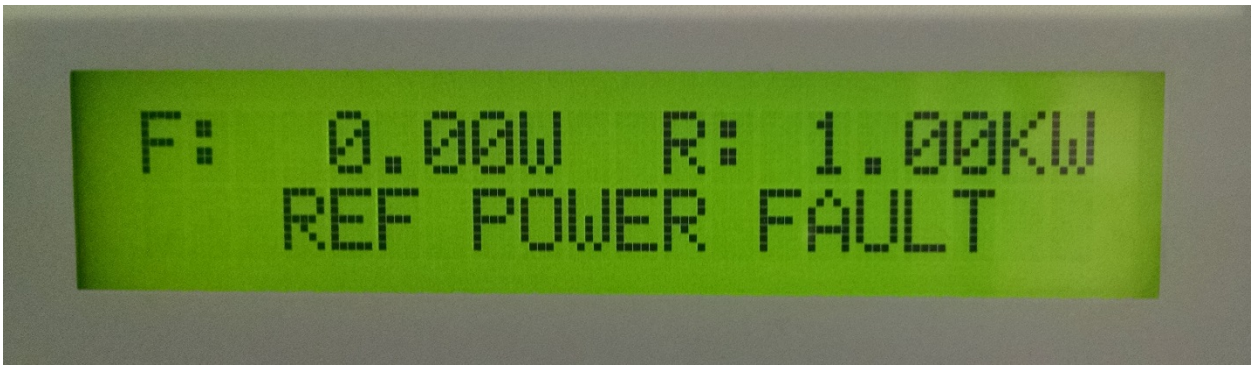

Fig. 4 Reflected Power Fault Indication

Function button operation is as follows:

F1 – White -Displays VSWR on lower line of the display

F2 – White -Displays Reflected Power/Low Limit on the display

F3 - Green - Displays Internal DPS-100D temperature and line pressure if line pressure sensor is installed.

F4 – Red - Is the VSWR/Reflected Power fault reset.

For RMD-100-2,4 multi-channel units it is possible to put the unit into a scan mode where each DPS-100D meter connected will be scanned for 3 seconds each. To put the unit in the scan mode press the right arrow key in the button cluster. A plus sign will appear next to the channel number when in the scan mode. To stop the can mode press the left arrow key. A manual scan of the unit can be performed with the up/down arrows in the button cluster.

IV. Warranty

Broadcast Devices, Inc. products are warranted against failure due to faulty materials or workmanship for a period of one year from the date of shipment from Broadcast Devices, Inc. dock. The warranty covers repair or replacement of defective parts at the factory, provided the unit has been returned prepaid by the user. All shipments to the factory shall have affixed to the outside of the container a return authorization number obtained from the factory. The above warranty is void if the unit has been modified by the user outside of any recommendations from the factory or if the unit has been abused or operated outside of its electrical or environmental specifications. If customer conducted field tests suggest that the unit may be faulty, whether or not the unit is in warranty, a full report of the difficulty should be sent to Broadcast Devices, Inc. factory. The factory may suggest further tests or authorize return for factory evaluation. Please email: customer.service@broadcast-devices.com

Units sent to the factory should be well packed and shipped to Broadcast Devices, Inc. – Check www.broadcast-devices.com for current shipping address. Remember to affix the R.A. number to the outside of the carton. Any packages received without such R.A. number will be refused. Note: freight collect shipments will also be refused. When the unit has been received, inspected and tested, the customer will receive a report of the findings along with a quotation for recommended repairs, which are found falling outside of the standard warranty. Units returned for in-warranty repairs, which are found not to be defective will be subject to an evaluation and handling charge. In-warranty units will be repaired at no charge and returned via prepaid freight.

Out-of-warranty units needing repair require a purchase order and will be invoiced for parts, labor, and shipping charges.

When ordering replacement part, always specify A) Part Description, and Quantity; B) Date of Purchase, Where Purchased; C) Any Special Shipping Instructions. Always specify a street address, as shipping companies cannot deliver to a postal box.

Broadcast Devices, Inc. is not responsible for any other manufacturer's warranty on original equipment. Nor are we responsible for any failure, damage, or loss of property that may occur due to the installation or operation of our equipment outside of recommended specifications.

Email: Customer.service@broadcast-devices.com

Broadcast Devices, Inc. reserves the right to change materials, specifications, and features from time to time. www.broadcast-devices.com

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