

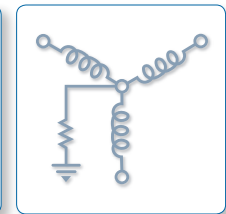
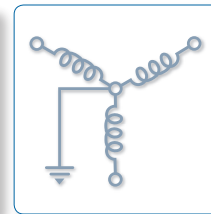
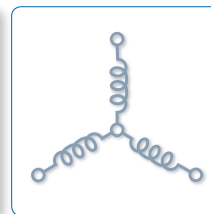
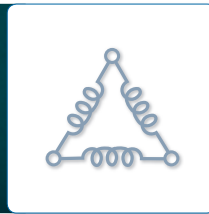


Cross Reference RA Part Number PN-254133



DSP-OHMNI VERSION 1

HIGH RESISTANCE GROUNDING SYSTEM




the power to protect

DSP OHMNI

Instruction Manual C-409EM Rev. 2, June 2010

TABLE 3.2. STANDARD RIBBON CABLES

Length	Function	Catalog Number
365cm (12ft)	DSP-DM to DSP-DPS	DRC-365
150cm (5ft)	DSP-DM to DSP-DPS	DRC-150
5cm (2 in.)	Module to Module connection	RC-3
30cm (12 in.)	Module to Module connection	RC-30



DSP modules are mounted on a 35mm DIN Rail generally located at the rear wall of a switchgear compartment. They should be mounted side by side and connected with 20-conductor ribbon cable in a daisy chain configuration. This applies to the DSP-DPS, DSP-DSM and DSP-DFM modules only.

DSP (Outline Dimensions). Care should be taken not to over tighten the 8-32 nuts used to retain the DSP-DM

It will be necessary to provide a reliable power source (which is not interrupted by operation of the DSP output contacts) for control power. The supply should be 100-240 V AC/DC. The control supply must be fused by 1 Ampere fuses as shown in Fig. 4.1a (Connection Diagram). Ideally the alarm, warning bell should be connected to a separate control supply from the DSP (see para. 8.3.1).

4 WIRING

No. 14 or No. 16 switchboard wire is used for all current sensor, control and DDR2 connections, which need not be shielded. 4-wire shielded cable should be used for the serial communications, however. A typical wiring schematic is shown in Figure 4.1a.

Sensor wiring is not generally limited by length and may be up to a kilometer without degradation of performance, since the sensor is a current source. Selecting a higher conductor gauge in case of longer distances is recommended to ensure adequate performance. Sensor wiring should be run in separate conduit from Power wiring. The recommended sensor wiring connections are shown in Figure 4.2. Two twisted pair wires should be run from each sensor X1 and X2 as indicated to prevent cross coupling between Modules. If existing wiring does not allow this connection because of common connection at X2 as has been common in some installations, then the G terminals of the DSP-DFM modules should be connected as shown in Figure 4.3.

Ribbon cables are available in different lengths as shown in Table 3.2. For other lengths contact I-Gard. The DRC-cable from the DSP-DM to the DSP-DPS, apart from being different in length, also differs in the orientation of the connector. This allows the cable to be run easily from the DSP-DM towards the DSP-DPS power supply. The RC-cables are used for Module to Module connections and are short in length. Note the orientation of the plug as marked on the DSP-DM display module. If a second row of modules is installed on another DIN rail, the last module on the right can be connected to the last module on the right on the second row using the RC-30 cable. Either slot can be used on the DSP-DFM feeder modules for connection.