

Instructions for Resistance-Temperature Detector (RTD) Module

I.L. 17193

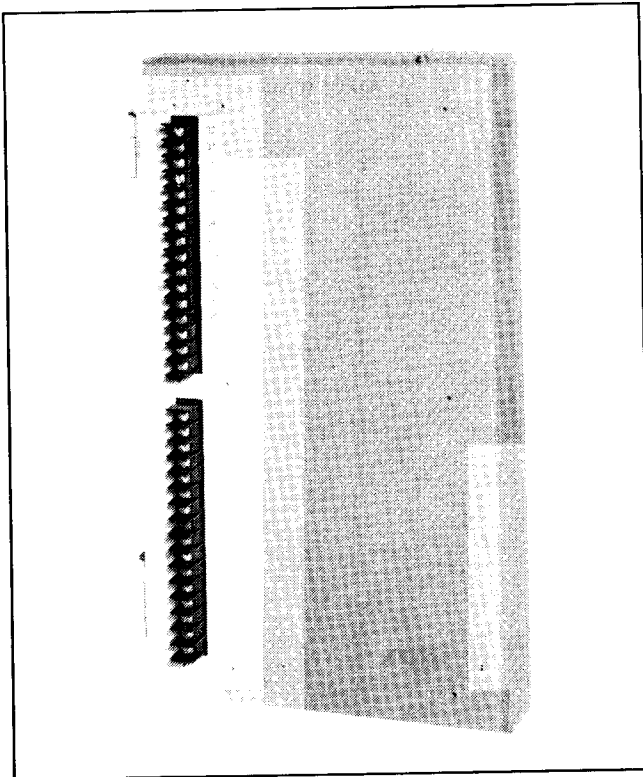


Fig. 1 RTD Module

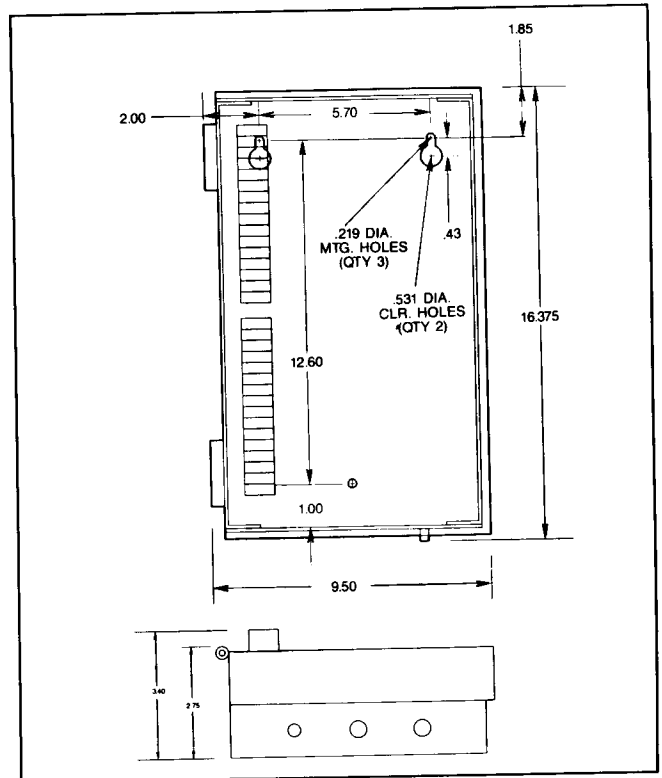


Fig. 2 Dimension Drawing (Dim. in inches)

THE RTD MODULE

The RTD Module is an electronic resistance-temperature detector accessory that is designed to be used in conjunction with the Westinghouse IQ-1000 and IQ-2000 controllers. The RTD Module can be used to monitor up to 10 RTD inputs (6 motor windings, 2 motor bearings and 2 load bearings). Different style RTD Modules are available for 10-ohm, 100-ohm and 120-ohm applications.

The RTD Module can be located remotely up to 500 feet from the IQ-1000 or IQ-2000 controllers.

INSTALLATION

This industrial type control is designed to be installed, operated, and maintained by adequately trained workmen. These instructions do not cover all details, variations, or combinations of the equipment, its storage, delivery, installation, check out, safe operation, or maintenance. Care must be exercised to comply with local, state, and national regulations, as well as safety practices, for this class of equipment.

RTD Wiring

Each RTD must be wired to the RTD Module as shown in the example Figure 3. The following guide-

TABLE I - SPECIFICATIONS

Input Power Requirements

120 VAC ($\pm 15\%$)

Frequency

50/60 Hz

Power Consumption

6 VA

Operating Temperature

-20° to 70°C

(-4° to 158°F)

Storage Temperature

-20° to +85°C

(-4° to +185°F)

Humidity

0 to 95° R.H.

noncondensing

Fuses

2 amp, 250 V, time-delay

Enclosure

Type 1

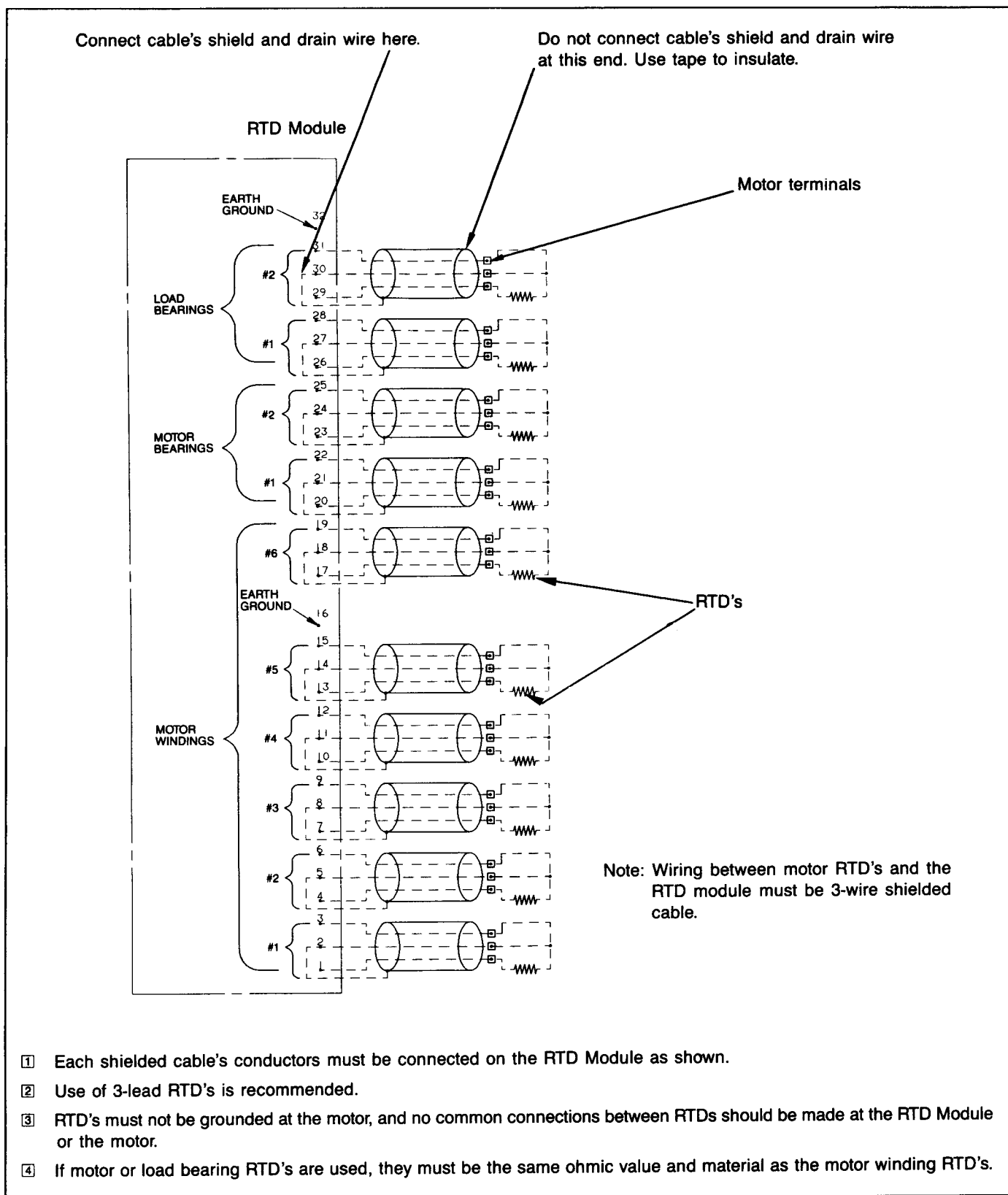


Fig. 3 RTD Wiring (3-Lead Type)

INSTALLATION (cont.)

lines must also be followed:

1. Use only one type of RTD (10-ohm, 100-ohm or 120-ohm) for the particular style of RTD Module.

The RTD type must be specified at the time of order.

2. Use #18, three-conductor, stranded, twisted, copper wire such as Belden No. 8770, or equivalent.

3. Three conductors must be connected from the RTD to the RTD Module. (Two return wires must be connected together.) In cases where the motor provides only two leads from the RTD, connect two of the three conductors together at one of the leads. Make this connection as close to the RTD as possible (see Fig. 4). If only two conductors are connected between the RTD and the RTD Module, IQ-2000 and IQ-1000 controllers will not operate correctly.
4. The cable's shield and drain wire must be connected to the appropriate terminal on the RTD Module. At the opposite end, cut the shield and drain wire short and tape them, to prevent short circuits. Do **not** connect these **at the RTD end**.
5. In cases where one or more of the 10 possible RTD inputs on the module are not used they can be left open or jumpered out without affecting the operation of the IQ-2000 or IQ-1000 controllers.

Wire Routing

Wire routing is divided into two types: high-voltage (440 VAC and higher) and low-voltage (120 VAC and DC signals). Low-voltage would be the control and the RTD wiring. Maintain at least 1½ to 2 feet (45 to 60 cm) between high-voltage and low-voltage conductors. Never route high-voltage and low-voltage lines in the same raceway.

Controller Connection

Use three-wire shielded cable, #16 AWG or #18 AWG, to connect terminal block J2 of the RTD Module to the IQ-2000 and IQ-1000 controllers (see Figure 5 and Table II). Connect as follows:

1. Use adaptor kits 7066C10G01 & G02 for Model A and Model B IQ-2000 controllers, respectively. Wire per Table II.
2. Connect the RTD Module to the IQ-1000 per Table II.
3. Connect the cable shield to a non-current carrying ground. For remote RTD locations, this grounding conductor should be at the RTD location.

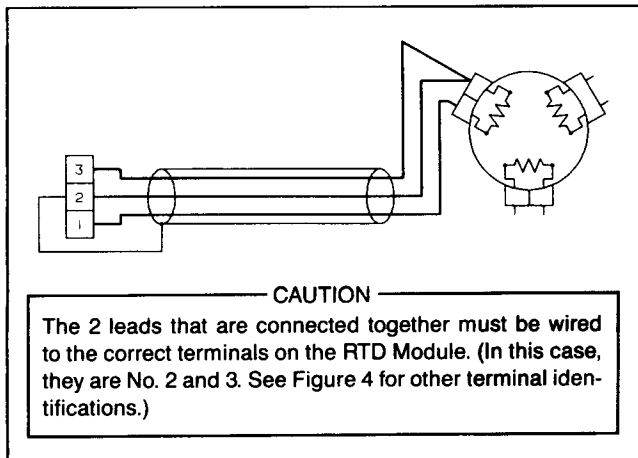


Fig. 4 Two-Lead RTD Wiring

Table II - MODULE CONNECTIONS		
To Controller		
RTD Module	IQ-2000	IQ-1000
J2 Term Block	Adapter Kit Term.	Terminal
#1 (Strobe)	#1	#20
#2 (Gnd.)	#2	#22
#3 (Data)	#3	#21
To Power Supply		
Terminal Block Power	120 VAC Power Supply	
#1	Ground (Non-current carrying)	
#2	Neutral Wire	
#3	"Hot" Wire	

4. Connect the power supply terminals to a suitable 120 VAC source. NOTE: P1 should be connected to a non-current carrying (grounding) conductor. See the particular controller user's manual for RTD temperature display information.

Grounding

Connect terminal 16 or 32 on the RTD Module to a good earth ground with a green #14 AWG or #16 AWG grounding conductor.

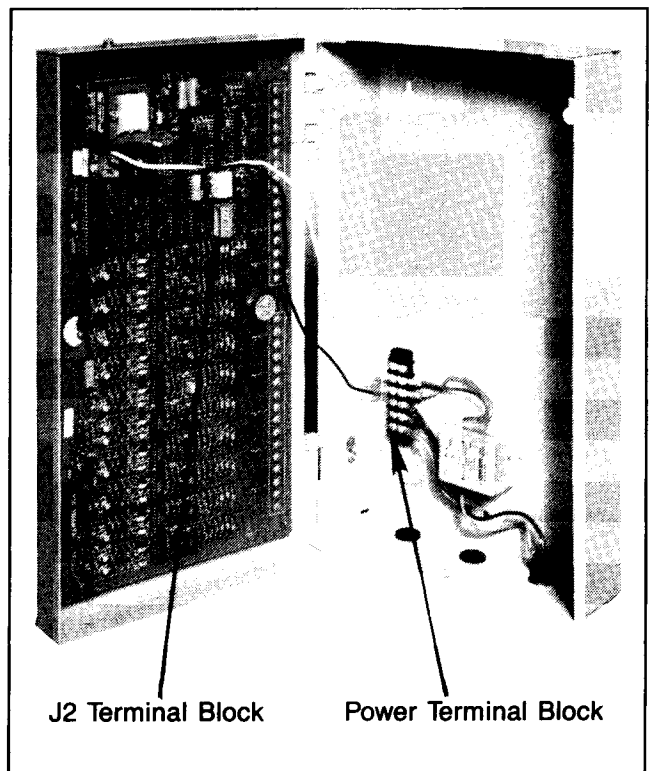


Fig. 5 RTD Module

