Using the RS-232 Option with the AIN ALPHA® Meters

General

The RS-232 option board may be provided on AIN ALPHA meters with TOU time-keeping features. This option board provides a method for connecting a meter to another device for point-to-point communications. As an example, the RS-232 option may be used to connect the meter to an external telephone modem. The maximum cable length in RS-232 communications paths is 7.6 meters (25 feet). The RS-232 option can also be used to provide a direct connection between a meter and a computer using the serial port of the computer.

⚠ WARNING

Use authorized utility procedures to install and service metering equipment. Dangerous voltages are present. Equipment damage, personal injury and death can result if safety precautions are not followed.

Use circuit closing devices on current transformer secondaries. Dangerous currents and voltages are present. Equipment damage, personal injury and death can result if circuit closing devices are not used.

RS-232 Option Board

The RS-232 option board is a single board design providing a cable connector for the RS-232 communication connections. This communication board may also be provided with zero, two, or four relays for pulse output, load control or end-of-interval indication. These relays are optional and must be specified at the time of order entry.

The RS-232 option board connects directly to the main circuit board of the AIN ALPHA meter using the 20-pin connector (J8). Reference Figure 1.

External Connections

The RS-232 cable exits the meter housing through a DB-9 connector at the bottom of the meter housing.

The RS-232 connections are shown in Figure 2.

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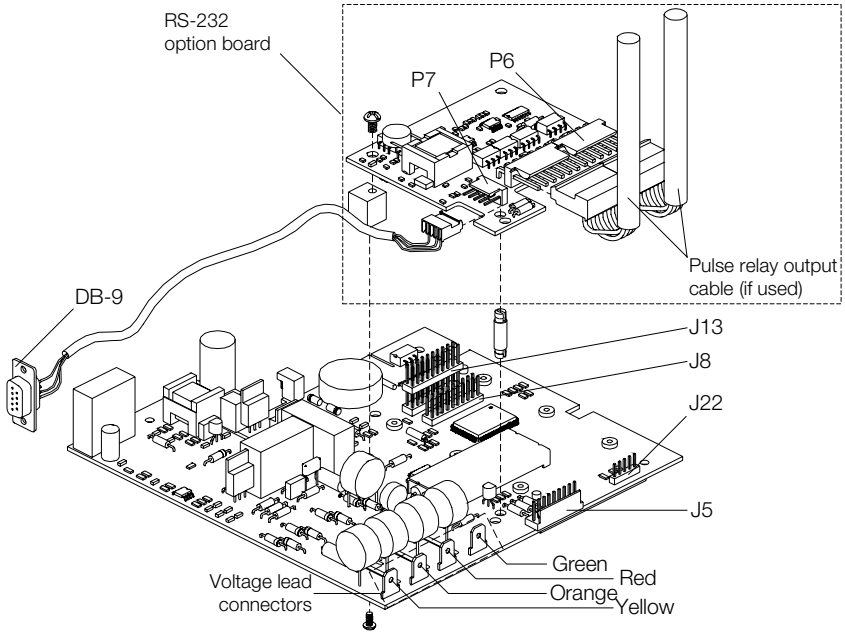
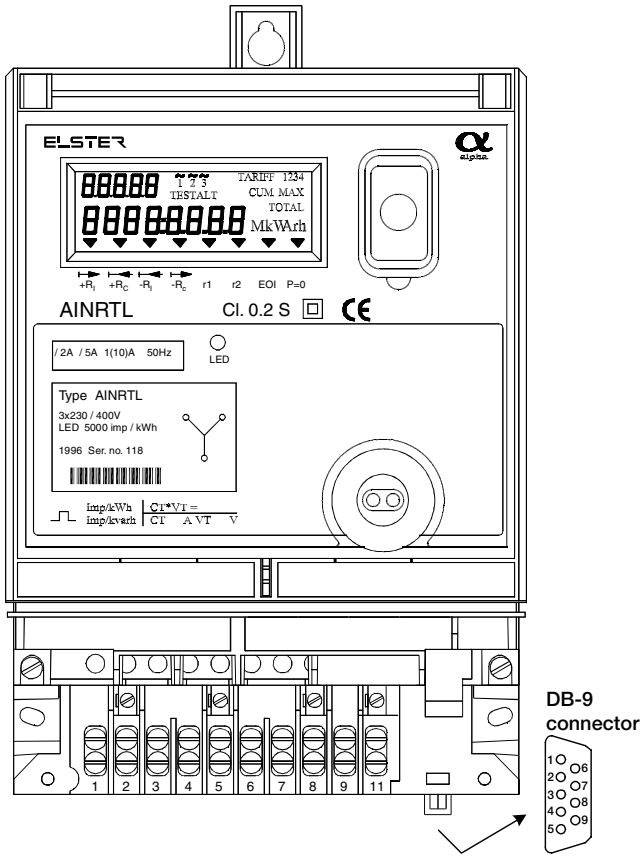


Figure 1. AIN ALPHA meter board with RS-232 option board



Pin assignments

Pin	Description
1*	Data carrier detect
2	Received data
3	Transmitted data
4*	Data terminal ready
5	Signal ground
6*	Data set ready
7	Not used
8	Not used
9	Not used

*Connected together

Figure 2. AIN ALPHA meter with DB-9 connector

Programming

If the RS-232 option is used for connection to an external telephone modem, the meter must be programmed to support this type of communication using an appropriate Remote Definition as developed by Elster Electricity meter support software. If the RS-232 is used to connect to a non-modem device, such as connecting directly to the serial port of a PC, then a null modem or null modem cable must be used between the RS-232 output and the device.

Relay Options

The pulse output relays (when present) are brought out of the meter with a set of terminals mounted in the lower portion of the meter housing. There can be zero, two, or four relays provided with the RS-232 option board. Relay cable coding, identification and specifications may be found in TM42-2380 for the AIN ALPHA meter. Please reference this technical manual for further information.

The relay output is brought to the terminals shown below. Reference Figure 3 to identify pulse output.

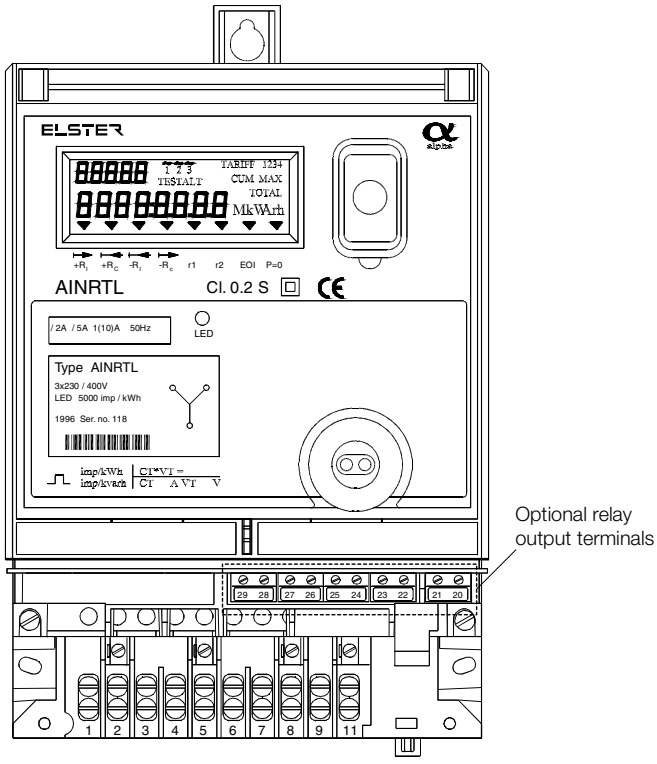


Figure 3. AIN ALPHA meter connections

Notes

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