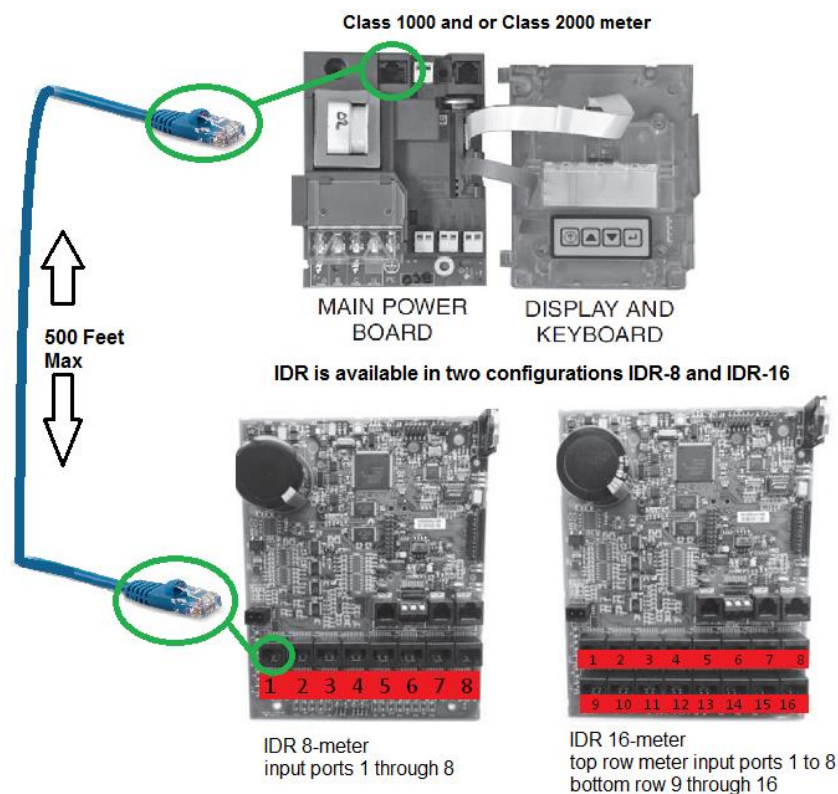


3/30/2018

Honeywell E-Mon Class 1000 and or 2000 Meter Connections to IDR

E-Mon Class 1000 & 2000 meters include two modular jacks located at the top of the main circuit board. The jack on the left (RJ-45, 8-pin) is used to connect the meter to the IDR ports 1 – 8 or 1 – 16 (500 feet maximum cable length.) The jack on the right is for factory use only.

IDR is available in two RJ configurations IDR-8 and IDR-16



Connecting the Class 1000 and 2000 Meter to the IDR

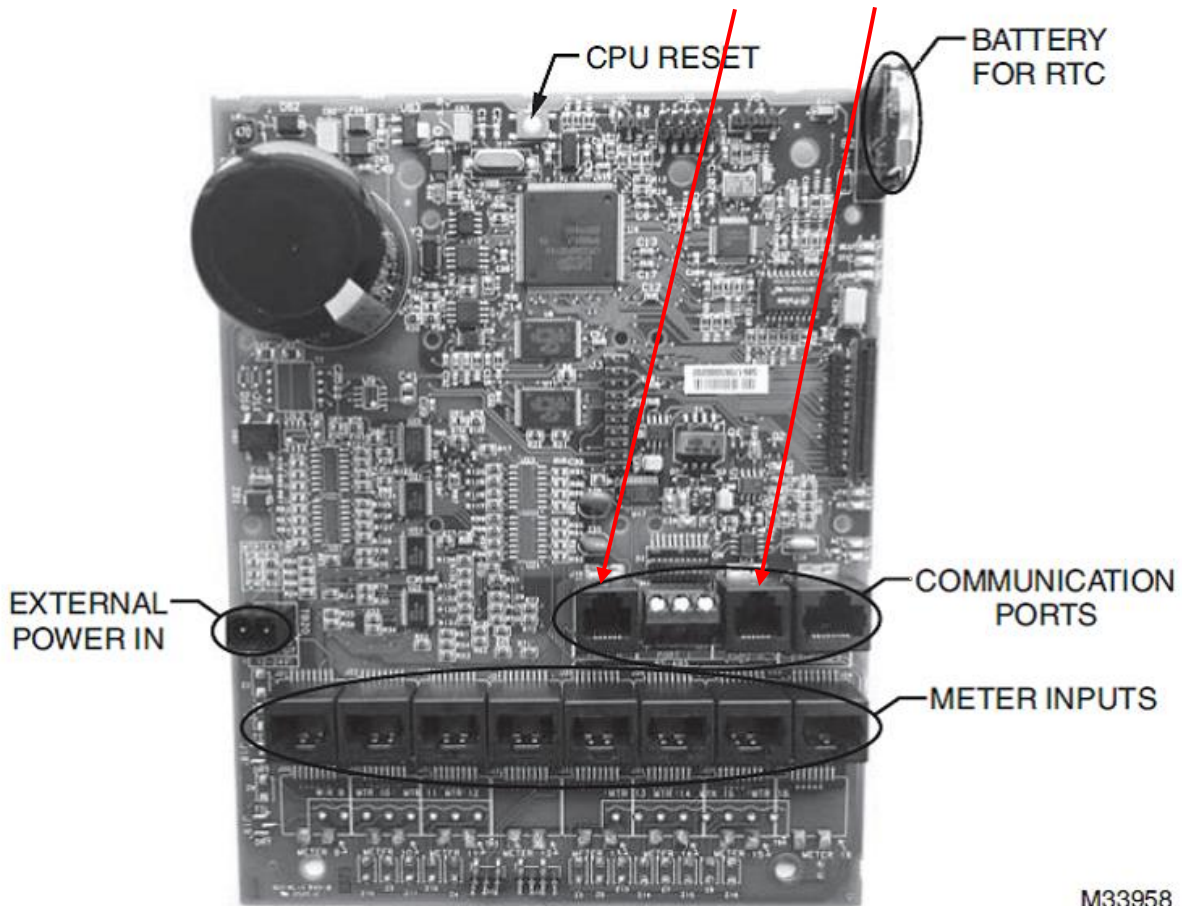
NEVER USE THE JACKS LABELED “PORT 0” OR “PORT 2 or ETHERNET” TO CONNECT A METER TO THE IDR. Connect Class 1000 and 2000 meter’s to the IDR meter input jacks #1-8 using 8 conductor RJ-45 patch cables (500 foot maximum length.)

IDR-16 - If the IDR is an IDR-16, connect the additional meters to the IDR jacks #9- 16 on the circuit board using 8-conductor RJ-45 patch cable (500 foot maximum length.) Wiring for all E-Mon cables must be straight through. See Appendix A for correct cable configuration.

RS-485 Serial Connections: Method 1: Modular Plug Method

This method requires using 4 stranded conductors inside a cable that is fitted with an RJ-11 type plug for 4-conductor modular systems at each end of the cable.

1. Plug the 4-wire RJ-11 cable/plug assembly into either PORT 0 or PORT 2 of the IDR.



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2. The unused RS-485 port is used to connect another cable to the next IDR. This is called a “daisy-chain” connection. The daisy chain may be repeated to connect as many as 52 individual IDRs, smart meters or combinations of both.
3. NOTE: The total combined RS485 cable length must be no more than 4,000 feet.

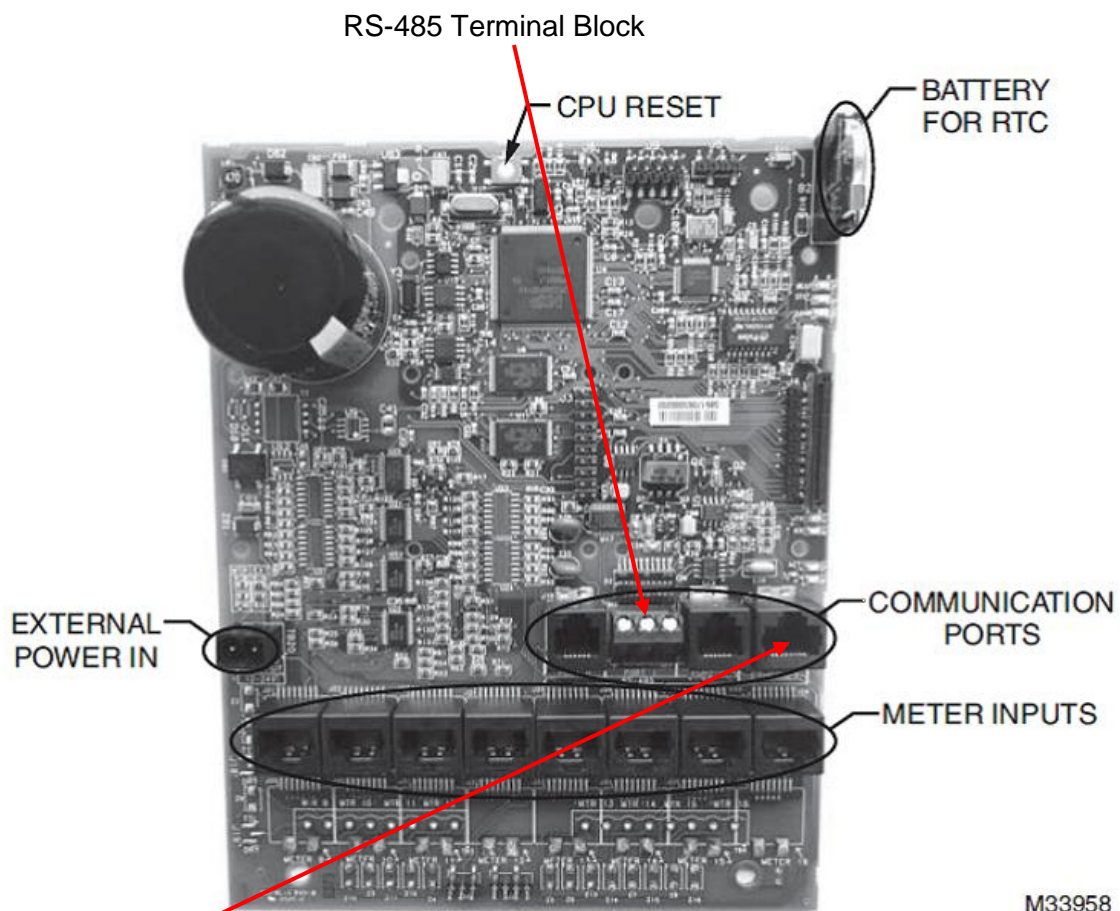
RS-485 Serial Connections: Method 2: Terminal Block Method

IDRs may also be daisy-chained using a 3-conductor cable. Instead of using the two modular jacks for the RS-485 daisy chain, you can use Port 1, between the RJ11 jacks.

1. Daisy-chain the IDRs by connecting:

- All HI (+) terminals together**
- All LO (-) terminals together**
- The SH terminals are not used as the third wire ground is a floating ground.

** This requires putting two wires into each of the 2 terminals.

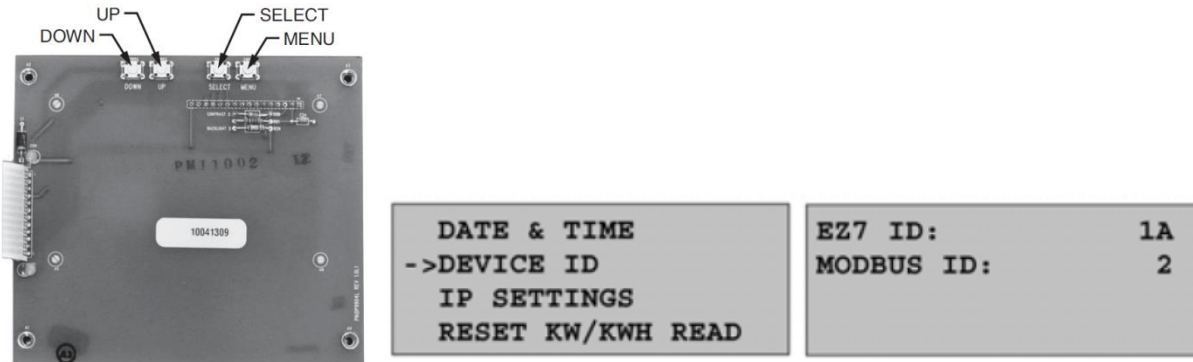


Ethernet jack requires an Ethernet drop and static IP address for TCP/IP communications.

Note: The RS-485 on the IDR does not pass through to the Ethernet port like the Class 3400 and 5000 smart meters do. You may daisy chain multiple IDR's (up to 52) IDR's to one Ethernet drop if the EKM-E model E10039 Ethernet Key modem.

Setting the EZ7 ID

The IDR's EZ7 ID code's, 1A, 1E, 1I, and etcetera, must be set by the installer with the menu and select buttons. Duplicate EZ7 addresses for example two 1A EZ7 ID's will not communicate on the same RS485 network. Set the EZ7 id code so they do not duplicate any other IDR's or Smart Meters on the same RS485 network.



Note when setting the IDR-8 and IDR-16's EZ7 ID codes it uses up blocks of four id's codes. The blocks of four codes are as follows:

Examples:

IDR EZ7 ID set to 1A uses {1A, 1B, 1C, 1D},

Set to 1E uses {1E, 1F, 1G, 1H},

Set to 1I uses {1I, 1J, 1K, 1L},

Set to 1M uses {1M, 1N, 1O, 1P},

Set to 1Q uses {1Q, 1R, 1S, 1T},

Set to 1U uses {1U, 1V, 1W, 1X}

Combinations above repeat with 2A through 8U may be used.

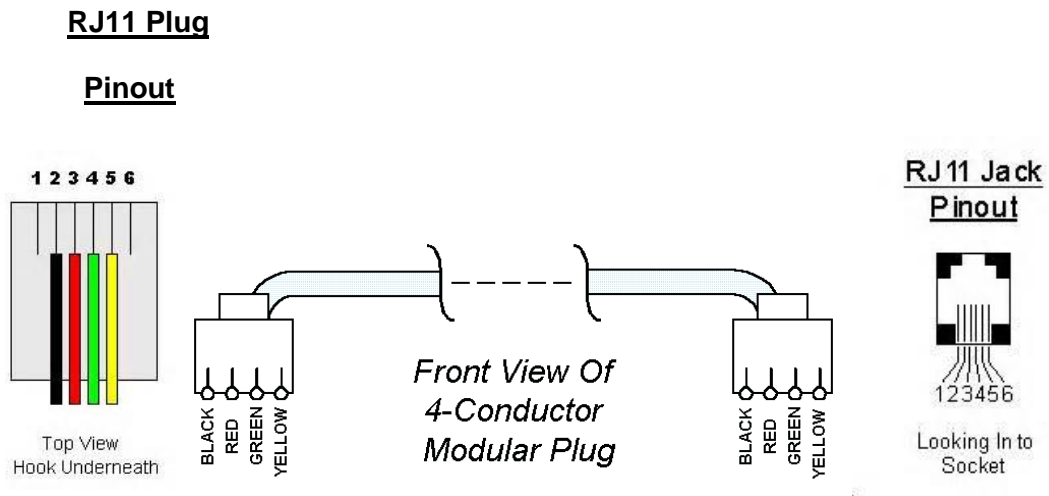
Important

The EZ7 ID code referred to on the previous page and meter input port 1 to 8 or 1 to 16, determines the software's meter ID code 1A1, 1A2, 1A3, through 1A8. Carefully document the IDR EZ7 ID's, cables to the IDR meter input ports, meter model numbers, serial numbers as well as the other information required on Form 4 of the E-Mon Energy startup forms.

Correctly documenting the items on Form 4 is extremely important for the entire AMR system accuracy as the information contained on these forms will be used later to build the E-Mon Energy software database.

Appendix A - Cable Configurations

Four-conductor cables for the IDR RS-485 communication (4,000 foot maximum.)



Pin 1 Not Used

Pin 2 Black

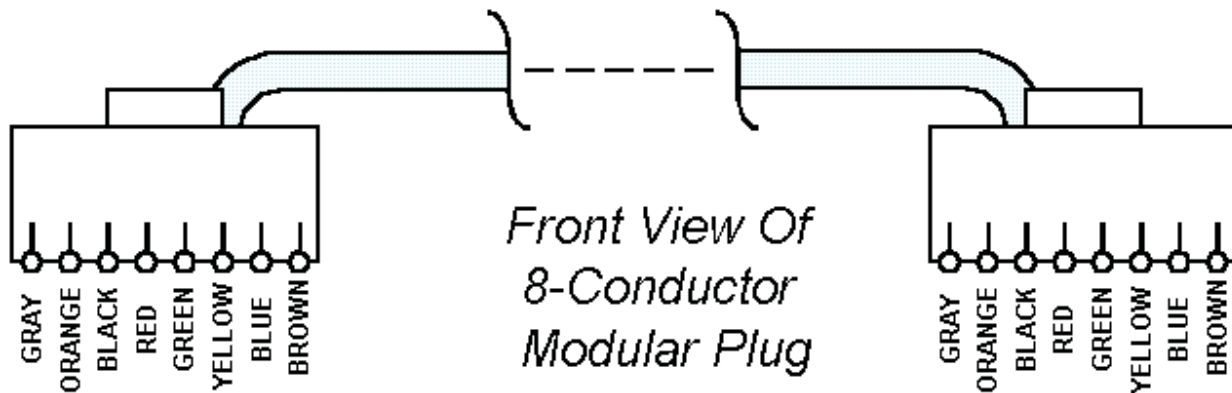
Pin 3 Red (Ground)

Pin 4 Green (+ High)

Pin 5 Yellow (- Low)

Pin 6 Not Used

RJ-45 eight-conductor patch cables for Class 1000 and 2000 meter to IDR inputs 1 through 16
(500 foot maximum.)



NOTE: All cables are wired pin-to-pin (straight through) as shown above.

Example supplier of RJ-45 patch cables:

http://www.staples.com/Belkin-10-Cat6-RJ45-RJ45-Patch-Network-Cable-Black/product_IM1QZ4626

See the IDR installation manual for complete instructions.