INTELLIMETER®

MODELS H AND K
INSTALLATION AND CONNECTIONS

INSTRUCTION MANUAL

(11 Pin Version)

INTRODUCTION

WARNING: Any work on or near energized metering equipment can present a danger of electrical shock. All work on these products should be performed only by qualified industrial electricians and metering specialist in accordance with the local utility safety practices and procedures outlined in the Handbook for Electricity Metering (available from the Edison Electric Institute, 1111 19th St. NW, Washington, DC 20036). The information contained within this book is intended to be an aid to qualified metering personnel. It is not intended to replace the extensive training necessary to install or remove meters from service.

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INTELLIMETER INSTALLATION AND CONNECTION INSTRUCTIONS

(11 Pin version)

SAFETY NOTES

Working clearances should comply with NEC Article 110-16. If not, take corrective action. The Intellimeter is intended for **indoor use only**. Do not install in damp or wet location. Wire bending space should be in compliance with NEC Article 373-6. Verify that current transformer (CT), potential tap and wiring can be installed without crowding subpanel. Verify that the current transformer can be installed with a minimum 1/2 inch clearance to uninsulated live parts in subpanel, and without bearing against dead metal parts. Verify that power is 277/480V or 120/208/240V.

1. If flush mounting, cut a hole in the wall adjacent to the subpanel for 8 by 10 inch Intellimeter enclosure.

2. Secure 1/2 inch metal conduit or flexible metal conduit to subpanel. Use insulating bushing. Locknuts must be tightened enough to pierce paint in cabinet.

3. Secure Intellimeter enclosure in or on wall; wall stud or equivalent support is required.

   NOTE: When flush mounting, the edge of the enclosure is to be flush with the edge of the wall. When surface mounting, use suitable means for mounting.

4. Run CT leads, potential leads and neutral lead from cabinet to Intellimeter enclosure.

5. Cut leads to size and strip 1/4" insulation off ends. No uninsulated wire should be showing outside the 11 position connector. Identify leads with numbered tags at each end of wire within three inches of termination and current transformer. ID is to be visible after installation.

6. Connect leads to the 11 position connector for the appropriate electrical service as shown in Figures (1, 2, and 3). The CT leads with stripes are positive polarity. Solid color leads are negative. Follow the color code for potential and neutral leads. Connect any unused potential inputs (4 or 7) to position 1 with 16 AWG THHN wire to avoid voltage out of tolerance error messages.

   NOTE: Intellimeters use terminal 11 for power-line carrier communications. Whenever possible, use phase 1 for terminal 11 on all meters and low voltage service couplers. Low voltage service couplers are required to establish communication paths around transformers, between separate services, etc.

7. Turn off all breakers in cabinet. Check all loads for voltage.

8. Disconnect power to subpanel. Have temporary lighting at hand, if required.

9. Remove feeders from lugs and place feeder cables through current transformers with **current flow arrows pointed toward loads.**

10. Replace feeders in the lugs and tightly secure connections.

11. Secure CT's on feeders at least 1/2 inch away from uninsulated live parts and not in contact with dead metal, using wire ties.

12. Connect potential leads to feeders on line side of current transformers using an approved method for making the tap.

    Alternate: Route potential lead from input connector through the current transformer in the direction of the current flow arrow and connect to voltage on the load side of the current transformer.

    For proper operation observe proper phasing between potential taps and current transformers.

13. Connect neutral lead to neutral bus.

14. Use wire ties to bundle Intellimeter wiring harness and route it away from other conductors in cabinet. Also bundle wiring harness in Intellimeter enclosure with wire ties before the electronic assembly is installed.

15. Secure cover on subpanel.

16. Install the Intellimeter electronic assembly; insure electronic assembly is a "K" meter for 120/208 or a "H" meter for 277/480 volt service. Adjust tamper switch if necessary. Attach input connector to green header near the center of the circuit board - observe polarization.

17. **IF A FIBER OPTIC LINK IS TO TO BE USED, BE SURE THE FIBER OPTIC LINK IS ATTACHED TO PL4 BEFORE POWER IS APPLIED.**

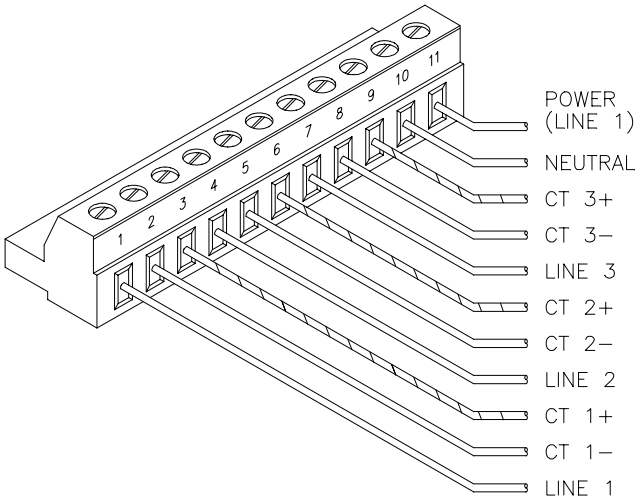
18. If a pulse output option is to be used, install option before power is applied.

19. If a local display is to be used, install display bebefore power is applied.

20. Reconnect power to the subpanel. Turn on the circuit breakers.

Intellimeter Input Connectors

120/208 and 277/480 Volt,
3 Phase, 4 Wire



120/240 Volt, Single Phase, 3 Wire and
120/208 Volt, 2 Phase, 3 Wire

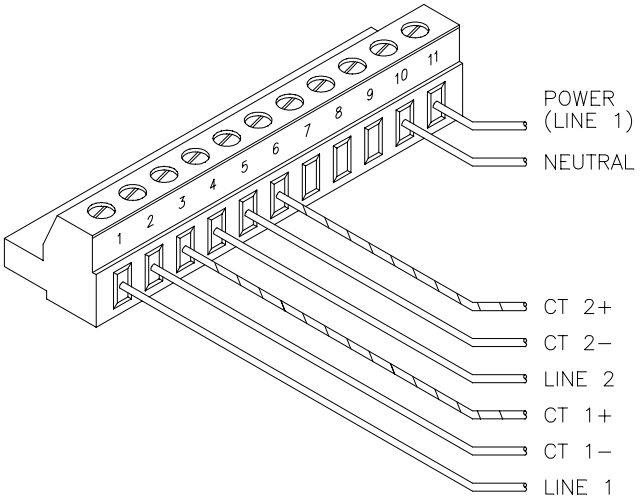


Figure 1

Connect any unused potential inputs (4 or 7) to position (1) with 16 AWG THHN wire to avoid voltage out of tolerance error messages.

4 Wire, 3 Phase Wye Connections

H3 Meter for 277/480V Service
K3 Meter for 120/208V Service

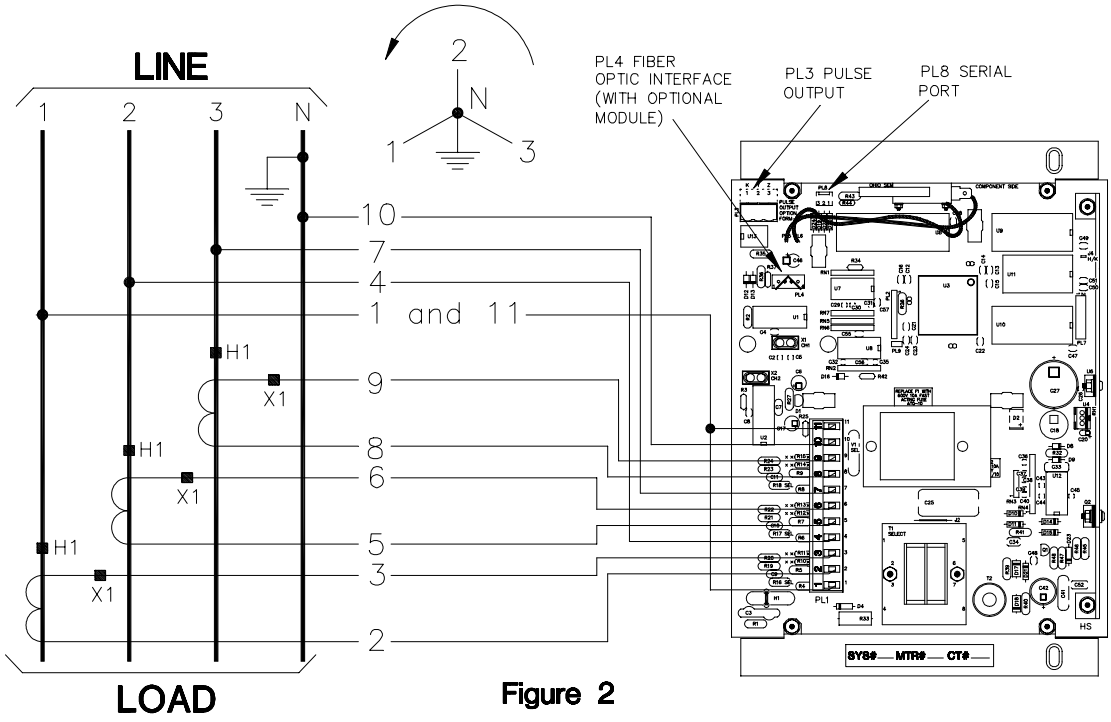


Figure 2

3 Wire Single Phase 120/240V and Network 120/208V

K2 Meter for Both Services

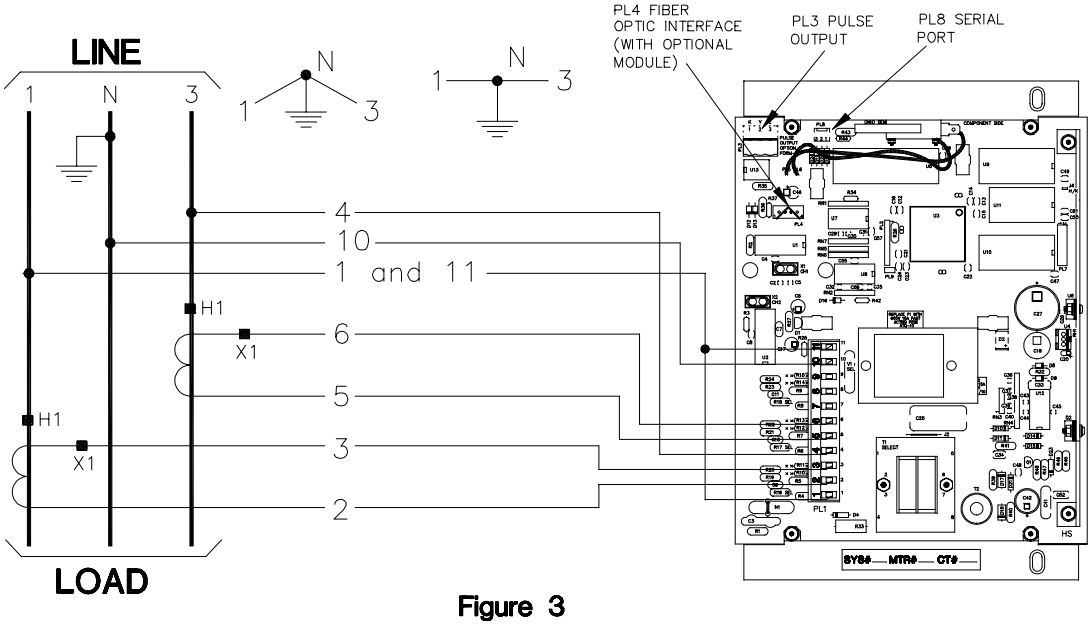


Figure 3

TWO LOAD METERING (AB)
3-WIRE SINGLE-PHASE 120/240V

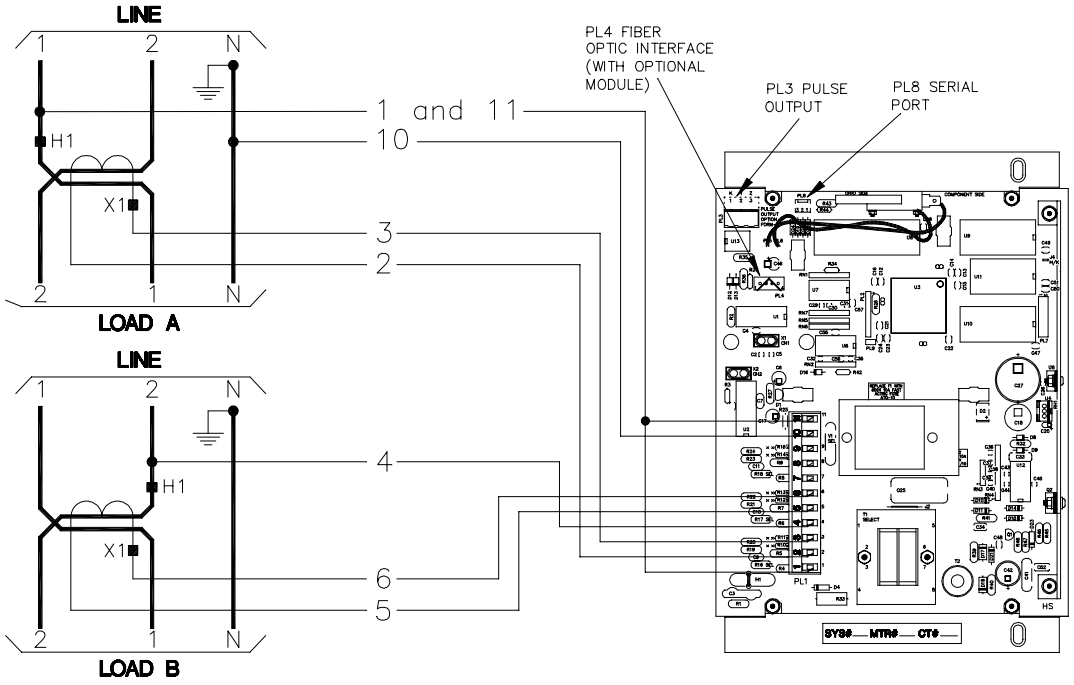


Figure 4

TWO LOAD METERING (AB)
3-WIRE NETWORK PLUS 2-WIRE SINGLE-PHASE

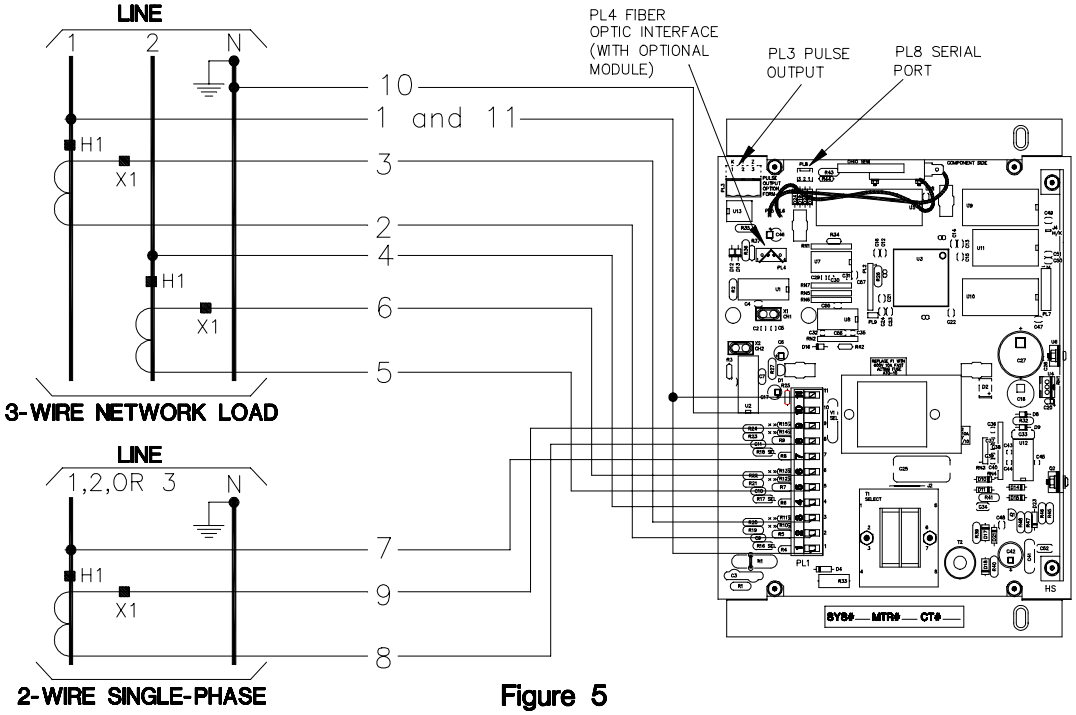


Figure 5