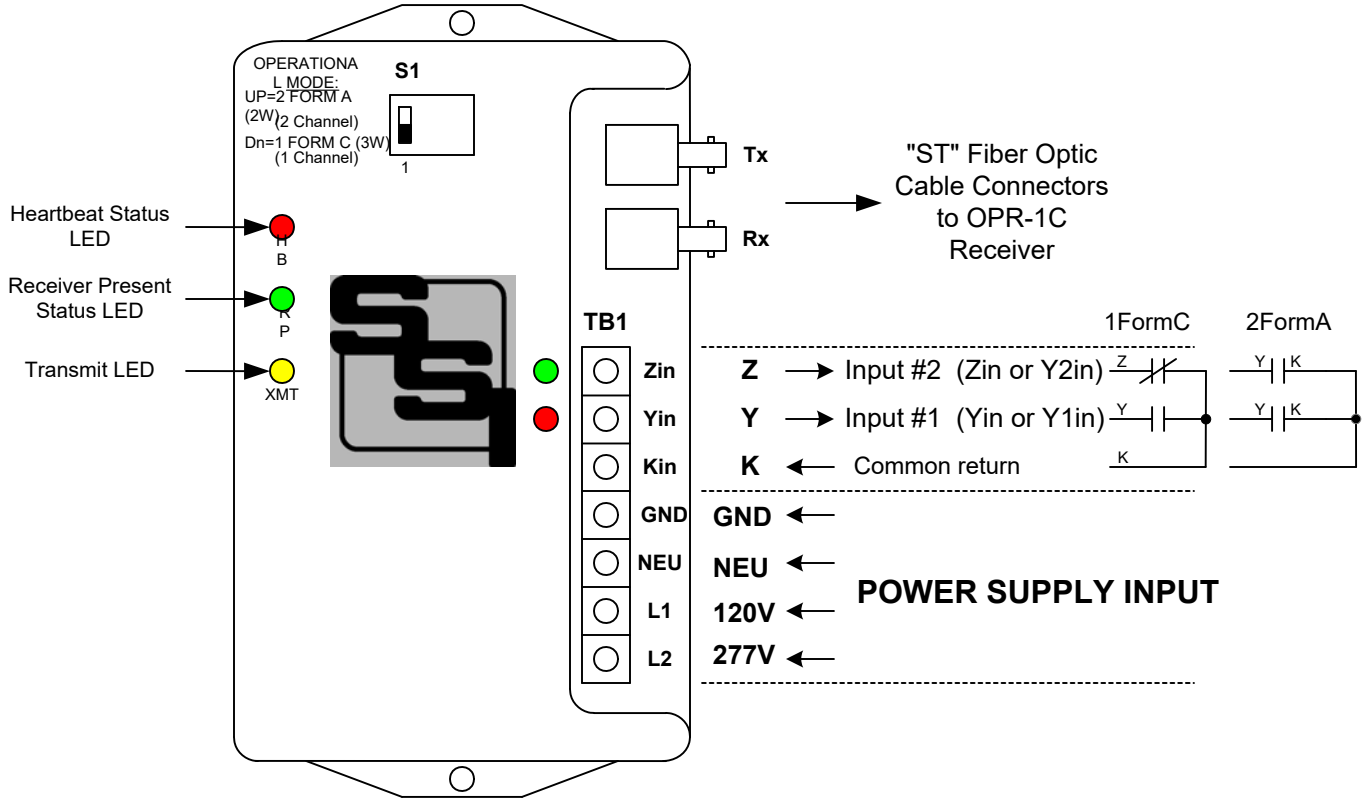
INSTRUCTION SHEET - OPT-1C
OPTICAL FIBER PULSE TRANSMITTER



MOUNTING POSITION - The OPT-1C may be mounted in any position.

POWER INPUT - The OPT-1C can be powered by 120VAC or 208 to 277VAC. Connect the **GND** terminal to the electrical system ground. Connect the Neutral lead to the **NEU** terminal. If no actual Neutral wire exists at the powering location, connect both the NEU and GND terminals to ground. Connect the **L1** terminal to the 120VAC "Hot" lead for 120VAC operation. For 208 to 277VAC operation, connect the "Hot" lead to the **L2** terminal. ***Do not use both L1 and L2.*** **Exercise caution when board is energized. There is voltage present at L1 and L2 when powered.**

METER INPUTS - The OPT-1C may be operated in either 1-Channel or 2-Channel mode. In 1-Channel mode the input is configured as Form C (3-Wire). In 2-Channel mode, both inputs must be wired as Form A (2-Wire). The pulse input terminals are labeled Kin,Yin, & Zin. For 1-Channel (Form C/3-Wire) mode, all three wires must be used. In 2-Channel (2 Form A/2-wire) mode, two wires are used from each meter. Tie both meters' K terminals to the Kin terminal. The meters' pulse outputs must be dry-contact type with NO sourced voltage. Connect the first meter's Y output to the Yin terminal and the second meter's Y output to the Zin terminal. The OPT-1C supplies its own +13VDC wetting voltage to the KYZ pulse output contacts of the meter. The Yin input has a RED LED to indicate when a pulse is received from the meter. The Zin input has a Green LED to indicate when a pulse is received from the meter. In 1-Channel (Form C) mode, these LEDs should toggle, whereas on 2-Channel (Form A) mode they are independent.

SET OPERATIONAL MODE - To configure in 1-Channel mode, set Dip Switch S1.1 down. To set in 2-Channel mode, set Dip Switch S1.1 in the UP position.

GROUND - The GND terminal on the OPT-1C must be connected to the electrical system ground. Do not tie the Ground and Neutral terminals together, unless no "real" neutral exists at the powering location.

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OPT-1C OPTICAL FIBER PULSE TRANSMITTER (con't)

Fiber Optic Cable Connections - Locate the two "ST" fiber optic ports in the OPT-1C's upper right-hand corner. Connect the fiber optic cable to these ports using the twist lock connections. The cables should be "crossed" such that each cable is connected to the "T" fiber optic port on one end and the "R" fiber optic port on the other end.

The OPT-1C will transmit pulse information to the OPR-1C Optical Fiber Pulse Receiver up to approximately 1000 feet using multimode fiber. Care should be taken to follow all proper fiber optical cable implementation standards. Maximum distance will vary with the quality of the multimode fiber.

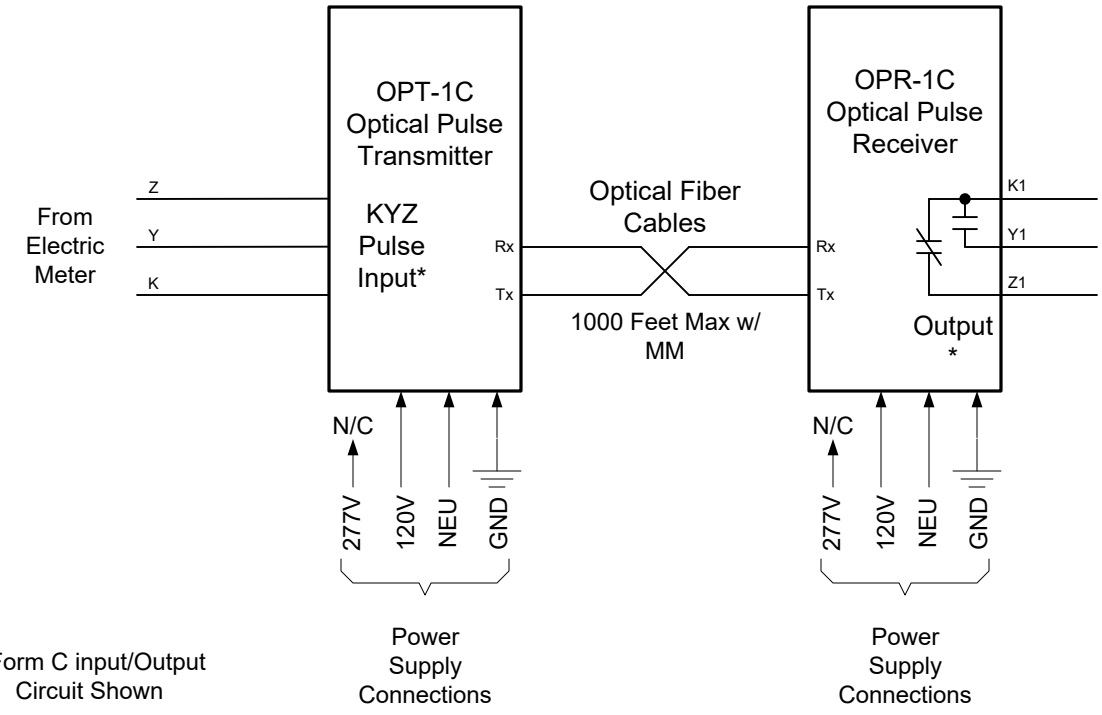
Troubleshooting - LED Status Lights - The OPT-1C has three status lights to help the installer determine system status.

Red "Heartbeat" LED (**HB**) - This LED blinks on and off approximately once per second indicating the system is operating and the microcontroller is going through its program loop. There is no other meaning to this except that the system is alive and running, and appears to be operating normally.

Green "Receiver Present" LED (**RP**) - This LED will remain on all the time as long as the transmitter is connected to and communicating with the OPR-1C Receiver.

Yellow "Transmit" LED (**XMT**) - This LED will blink upon each transmission being sent to the OPR-1C Receiver. The faster the pulse rate the faster this LED will blink.

OPL-1C SYSTEM BLOCK DIAGRAM



* Form C input/Output Circuit Shown

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