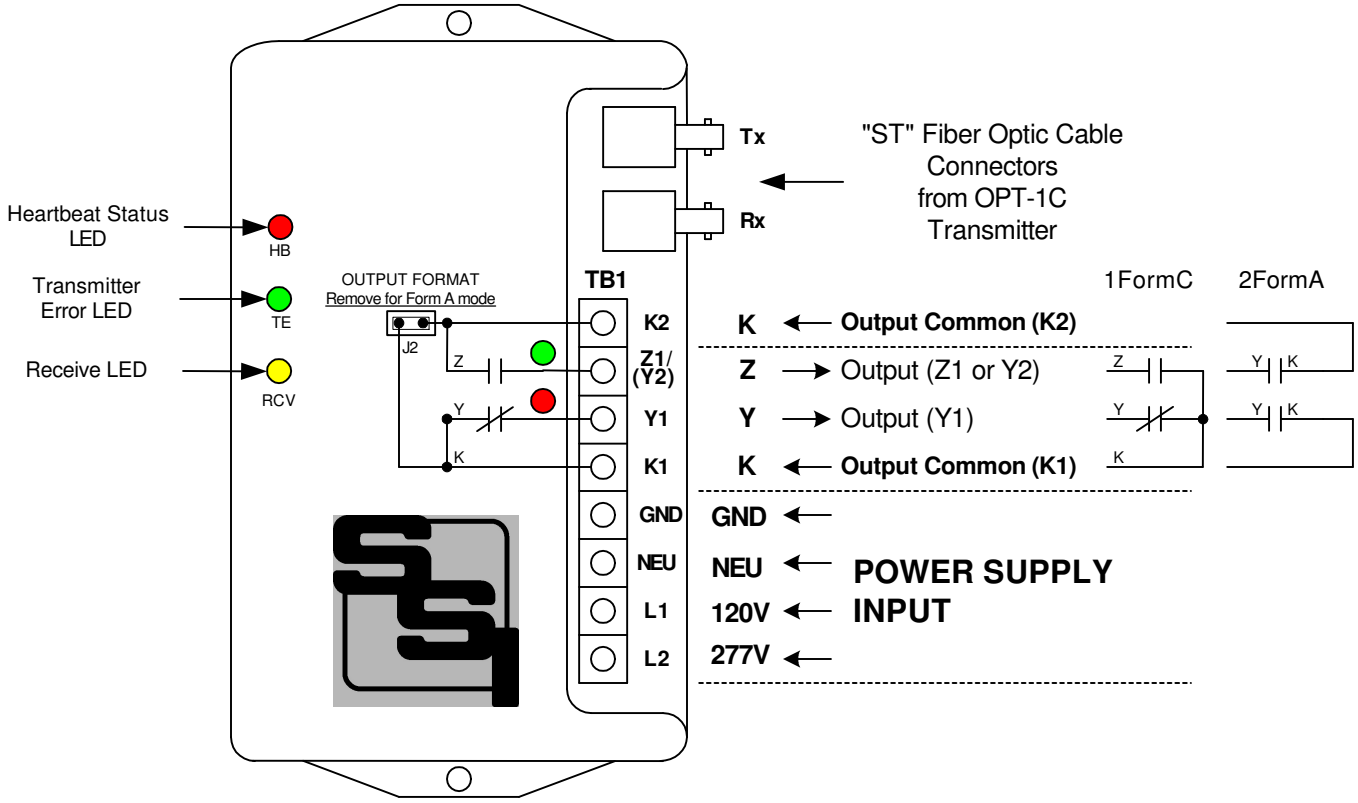
INSTRUCTION SHEET - OPR-1C
OPTICAL FIBER PULSE RECEIVER



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

POWER INPUT - The OPR-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.**

PULSE OUTPUTS - The OPR-1C may be operated in other 1-Channel or 2-Channel mode. The mode is set by dip switch S1.1 on the OPT-1C Transmitter. In 1-Channel mode the output is configured as Form C (3-Wire). In 2-Channel mode, both outputs are independent and must be wired as Form A (2-Wire). The pulse output terminals are labeled K1,Y1, & Z1/Y2. For 1-Channel (3-Wire) mode, all three wires **K1**, **Y1**, and **Z1** may be used. In 2-Channel, 2-wire mode, two wires are used for each output: K1 and Y1 for Channel #1 and K2 and Y2 for Channel #2. To isolate both outputs from each other, remove Jumper J2 in 2-Channel mode. The OPR-1C's pulse outputs are dry-contact type with NO sourced voltage. Maximum output current is 100mA; Maximum voltage is 120VAC/VDC; Maximum load on output is 800mW. A RED LED shows the status of the KY output while a GREEN LED shows the status of the KZ(KY2) output. When the LED is on the output is closed. These LEDs are located adjacent to the output terminals Y1 and Z1.

GROUND - The GND terminal on the OPR-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.

SOLID STATE INSTRUMENTS
a division of Brayden Automation Corp.
6230 Aviation Circle, Loveland Colorado 80538
Phone: (970)461-9600 Fax: (970)461-9605
E-mail: support@solidstateinstruments.com

Revision: 9/27/2015
P/N: 05778-97006A

INSTRUCTION SHEET
OPR-1C OPTICAL FIBER PULSE TRANSMITTER (con't)

Fiber Optic Cable Connections - Locate the two "ST" fiber optic ports in the OPR-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 a "T" fiber optic port on one end and a "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 1500 meters or about 1 mile 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.

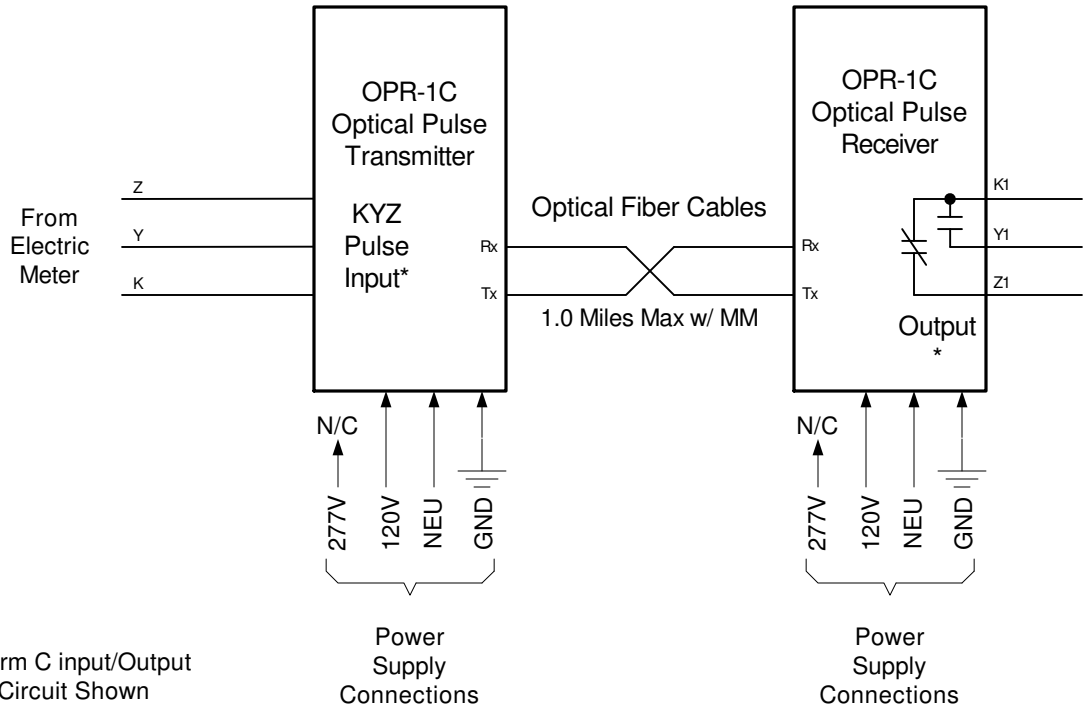
Troubleshooting - LED Status Lights - The OPR-1C has three status lights to help the installer determine system status.

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 "Transmitter Error" LED (**TE**) - This LED will light if the transmission received from the OPT-1C is not valid.

Yellow "Receive" LED (**RCV**) - This LED will blink upon each transmission being received from the OPT-1C Transmitter. The faster the pulse rate the faster this LED will blink.

OPL-1C SYSTEM BLOCK DIAGRAM



* Form C input/Output Circuit Shown

SOLID STATE INSTRUMENTS

a division of Brayden Automation Corp.
6230 Aviation Circle, Loveland Colorado 80538
Phone: (970)461-9600 Fax: (970)461-9605
E-mail: support@solidstateinstruments.com