

OSC/INTELLIMETER®

PULSE OUTPUT OPTION KIT

PART NO. 150871-3

For use on models H & K with serial numbers greater than 41395.

DESCRIPTION

The pulse output option for the Intellimeter provides a KYZ pulse output for kilowatthours. These pulses can be used for load profile or demand side management. The output option provides a solid state, Form C, contact rated at 350 V peak and .120 A maximum.

The pulse option consists of 3 position connector plug and integrated circuit (IC-U13). To install the option disconnect power from the meter, locate the header (PL3) on the main meter board, plug the 8 pin chip in the socket adjacent to PL3 observing the orientation shown in the installation diagram. The 2 wires (Form A) or 3 wires (Form C) picking up the pulses are connected to the connector plug terminals K and Y, or K, Y and Z. The connector plugs into header PL3. See installation diagrams.

The pulse output will begin immediately after reconnecting potential to the Intellimeter. The output pulse value is always 1 kilowatthour per transition, regardless of the meter on which it is used. The pulse output should be multiplied by the same meter multiplier which is applicable to the meter in order to calculate primary values. The following is an explanation of the meter multiplier.

Meter multiplier for Intellimeter using standard issue current transformers:

Meter Type	CT Ratio	Multiplier †	New Value	Meter Type	CT Ratio	Multiplier †	New Value
K2 & K3	100:0.1	1	1 kWh	H3	100:0.1	1	1 kWh
K2 & K3	200:0.1	1*	1 kWh	H3	200:0.1	2	1 kWh
K2 & K3	400:0.1	4	4 kWh	H3	400:0.1	4	4 kWh

*assuming meter has been programmed for 200 amps.

† Multiplier must be doubled if Form A (2 Wire, K, Y) connection is used.

Multiplier for meters using prewraps and 5 amp secondary current transformers:

$$\text{Multiplier } (K_r) = \text{CT}_{\text{ratio}} / \text{Turns}$$

CT_{ratio} = ratio of 5 amp secondary current transformer.

Turns = number of turns on prewrap transformer (usually 10).

Example:

1200:5 split core current transformer and 10 turn prewrap.

$$K_r = 1200:5 / 10 = 240 / 10 = 24 \quad \text{Multiplier } (K_r) = 24$$

Multipliers for common CT ratios (10 turn prewraps):

Ratio	Multiplier	New Value	Ratio	Multiplier	New Value
600:5	12	12 kWh	1200:5	24	24 kWh
800:5	16	16 kWh	1600:5	32	32 kWh
1000:5	20	20 kWh	2000:5	40	40 kWh

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The addition of a potential transformer would also increase the multiplier by the value of the PT ratio. Full load pulse output is calculated as follows:

$$P_{max} = V_n \times I_n \times \# \text{ of elements} / 1000 \text{ WH/pulse.}$$

V_n = nominal phase voltage (excluding external PTs).
 I_n = nominal current (100 or 200 A).
 # of elements = 2 or 3 elements.

Example:

277/480V, 100 amp CT, 3 phase, 4 wire, using an H3 (3 element) meter.

$$P_{max} = (277)(100)(3) / 1000 \text{ WH/pulse} = 83.1 \text{ pulses/hour.}$$

Meter	Current Rating	Max. Pulses	Meter	Current Rating	Max. Pulses
K2	100	24	K3	200	72
K2	200	48	H3	100	83.1
K3	100	36			

INSTALLATION & CONNECTIONS

