SSI TOTALIZERS

MPT-2C METERING PULSE TOTALIZER

REPLACES THE MPT-2C

FUNCTIONAL SUMMARY

	IN	OUT
#	2	2
TYPE	2 or 3 Wire	2 or 3 Wire
FORM	A or C	A or C

MPT-2C

DESCRIPTION

The MPT-2C metering pulse totalizer is designed to provide the totalized pulse output from two 2-wire (Form A) or 3-wire (Form C) pulse input sources. Two 2-wire Form A or 3-wire Form C (K, Y, & Z) outputs from isolated, solid state, dry contact relays are provided. Inputs are signed + or – to provide additive and subtractive capability.

The MPT-2C's output module may be operated in 1-channel or 2-channel mode. In 1-channel mode, the MPT-2C operates with a single KYZ output channel. In 2-channel mode, the MPT-2C operates with two independent KY output channels, each having a unique output value. In both configurations, there are two physical outputs on each channel, eliminating the need for an additional "splitting" or pulse duplicating relay.

Typical applications include interfaces between utility metering devices and customer-owned energy control systems, demand recorder applications, and supervisory control systems (SCADA) interfaces. The MPT-2C pulse totalizer may also be used as a pulse value translator if it is desirable to translate odd pulse values such as 0.1234 KWH/pulse to an even value, 0.5000 KWH/pulse. The pulse signal inputs to the MPT-2C is by two sets of "Y" & "Z" leads with a common "K" lead.

The MPT-2C provides a sense voltage of +13VDC to the two pulse sending units, normally two electric meters. The MPT-2C's inputs may be assigned a four-digit pulse value which can be set from 0001 to 9999. The output value setting is a six digit number between 000001 to 999999. Both the input and output values may be field set without the use of any external devices. All settings are saved in non-volatile memory. In addition, the minimum time between output pulses may be set in 10 millisecond increments between 20 milliseconds and 1000 milliseconds.

An LCD display contained within the unit displays the status of each of the inputs and the output as a Y or Z. In addition, all programming of system values is done using the LCD display and pushbutton switches. With a software debouncing technique, all inputs are first checked for the correct sequence and then a minimum time of contact closure duration to assure a maximum noise rejection. The "K" lead of the MPT-2C's output is fused to prevent damage to the relay under almost any conditions a user might cause such as excessive current, incorrect wiring, etc.

The MPT-2C has built-in MOV transient protection for the solid state relay contacts which eliminates the need for external or off-the-board transient suppressors. All component parts of the MPT-2C, which have power applied to them with the exception of the input/output terminal strip, are enclosed in a polycarbonate cover for maximum protection. The mounting base plate is also made of polycarbonate and offers excellent electrical insulation.

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SPECIFICATIONS

ELECTRICAL

Power Input:	120, 208-277 VAC. Burden: 10 mA at 120 VAC
Pulse Input:	Two 2-wire (Form A) or 3-wire (Form C) inputs. "K" terminal are common return from meter; "Y" and "Z" terminals are pulled-up to a sense voltage of +13 VDC. Compatible with dry-contact mechanical, electro-mechanical or semiconductor outputs (i.e. open connector transistor or MOSFET transistor).
Pulse Output:	Two sets of Form C (K, Y, & Z) dry contacts for energy pulses rated at 100mA at 120VAC/VDC. Factory fused at 1/10 Amp with 3AG fuses. 800mW maximum contact power.
Contact Resistance:	25 ohms maximum, 18 typical
Insulation Resistance:	50 megohms typical
Operate and Release Time:	1 to 2 milliseconds typical
Input/Output Isolation Voltage:	2500Vrms

MECHANICAL

Mounting:	Any position
Size:	3.50" wide, 7.20" high, 1.50" deep
Weight:	13 ounces

TEMPERATURE

Temperature Range:	-38° C to +70° C, -36.4° F to +158° F
Humidity:	0 to 98% non-condensing

AVAILABLE OPTIONS

Input Voltages:	125VDC with DCS-1; 15-48VDC with DCS-2; contact factory for other voltages