



SSI STANDARD

PPG-1 PROGRAMMABLE DIVIDING PULSE RELAY

DESCRIPTION

The PPG-1 is a programmable microcontroller-based, high-speed Pulse Generator designed to provide two independent “dry” 2-wire Form A contacts (KY) outputs at a programmable pulse rate and pattern. The PPG-1 features three pulse output modes making it fast and easy to model most pulse scenarios desired. Programmable On and Off times may be set with on and off times between 50 microseconds* and 100,00 milliseconds (10 seconds).



FUNCTIONAL SUMMARY

	IN	OUT
#	1	2
TYPE	2 Wire	2 Wire
FORM	A	A

The PPG-1 has three modes of operation, Continuous, One-Time and Interval modes. In the Continuous pulse mode, the PPG-1 will continuously generate pulses of a desired width and spacing until such time that the continuous output is terminated. In the One-Time mode, a single sequence of one or more pulses is outputted of a desired width and spacing when triggered. In the Interval mode, a desired number of pulses with specified pulse widths and spacing is outputted, with an interval spacing time before the sequence repeats. It will continuously repeat until the sequence is terminated. All settings are programmable using a PC with a terminal program such as Tera Term or Puddy using the PPG-1’s USB interface. On and Off times are programmable in all three modes.

Output Channels 1 and 2 operate independently. They may be set and operated for different modes and different pulse widths and interval lengths. All settings are stored in non-volatile EEPROM memory. Upon power-up, all system settings are restored and operation resumed.

If the number of output pulses exceeds the timing constraints of the pulse on times and off times, the microcontroller will notify the user that that scenario is not possible to execute.

The PPG-1 utilizes bright red and green LED lamps to indicate the output status, communication status allowing a rapid visual check-out of the system’s performance without requiring any additional test equipment.

The PPG-1 is be programmed using a USB A-B Programming cable with a terminal program, like TeraTerm, Puddy or HyperTerminal.

The input and output circuits’ terminal strip are “Euro” type connectors. The K leads of each of the PPG-1’s isolated outputs are fused to prevent damage to the relays under almost any condition a user might subject it to, such as excessive current, voltage, or incorrect wiring. The K terminal is system ground allowing the use of standard electro-mechanical, dry contact switches or solid-state open-collector transistor or MOS-FET pulse initiators. The PPG-1 has built-in MOV transient protection for the solid-state relay contacts that eliminates the need for external or off-the-board transient suppressors. All component parts of the PPG-1, which have power applied to them with the exception of the input/output terminal strips and the USB programming port connector, are enclosed in a polycarbonate cover for maximum user protection. The mounting base is also made of polycarbonate and offers excellent electrical insulation. Mounting tabs on the base plate allow the PPG-1 to be mounted in an appropriate enclosure for the application and the operating environment.

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SPECIFICATIONS

ELECTRICAL

Electrical Power Input:	120 VAC, 208-277 VAC; Burden: 10 mA at 120 VAC
Pulse Output:	Two sets of dry Form "A" contacts (K & Y). Contacts are solid-state relays rated at 250VAC/VDC, 100 mA MAX. The maximum power dissipation rating of the contacts is 800 mW. Factory fused at 1/10 amp. (3AG)
Contact Resistance:	25 ohms maximum, 18 ohms typical
Operate and Release Time:	1 milliseconds max. operate (turn-on) 1 milliseconds max. release (turn off)
Input/Output Isolation Voltage:	3500Vrms

MECHANICAL

Mounting:	Any position.
Size:	3.50" wide, 7.20" high, 1.50" deep
Weight:	1 pound

TEMPERATURE

Temperature Range:	-38° C to +70° C, -38.4° F to +158° F
Humidity:	0 to 98% non-condensing

AVAILABLE OPTIONS

Input Voltages:	12VDC, 24VAC/VDC, 15-48VDC, 125VDC; For others contact factory
Enclosure:	NEMA 3R or 4X

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