



SSI STANDARD

DPR-1 HIGH SPEED DIVIDING PULSE RELAY

DESCRIPTION

The DPR-1 is a high speed dividing pulse relay designed specifically for water and gas meter for pulse applications up to 200 pulses per second. It provides two sets of isolated “dry” 2-wire Form A contacts (K, Y, & Z) from a 2-wire (Form A) pulse input. The output is divided by a user-selected number, ranging from 21 to 212. The divider’s ratio of input to output pulses ranges from 2 to 4096. The desired division ratio is selected with a single jumper shunt mounted on the relay’s board and is easily adjustable by hand or with a set of needle nose pliers. The DPR-1 counts the input pulses for division only when a correct and valid sequence of pulses occur. Bright yellow and green LED lamps indicate the input and output status of the system at all times thus allowing a rapid visual check-out of the system’s performance without requiring any additional test equipment.



The input and output circuits’ terminal strip are “Euro” type connectors. The K leads of each of the DPR-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 DPR-1 provides a “pulled up” sense voltage of approximately +13 VDC on the Y input terminal to the sending device’s dry contact output. The K terminal is system ground allowing the use of standard mechanical, electro-mechanical, dry contact switches or solid state open-collector NPN or open-drain FET transistor pulse initiators. The DPR-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 DPR-1, which have power applied to them with the exception of the input/output terminal strips, are enclosed in a polycarbonate cover for maximum user protection. The mounting base plate is also made of polycarbonate and offers excellent electrical insulation. The DPR-1 is intended for mounting in an enclosure appropriate for the application and the operating environment.

The DPR-1 may be powered from a 120VAC source or by either of SSI’s optional DCS power supplies. Contact the factory for more information.

FUNCTIONAL SUMMARY

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TYPE

FORM

| IN | OUT |
|--------|--------|
| 1 | 2 |
| 2 Wire | 2 Wire |
| A | A |

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SPECIFICATIONS

ELECTRICAL

| | |
|---------------------------------|--|
| Power Input: | 120, 208-277 VAC. Burden: 3.5 VA |
| Pulse Input Voltage: | +13VDC "pulled-up" on Yin terminal. Common return is Kin terminal. |
| 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: | 5 milliseconds max. operate (turn-on) 5 milliseconds max. release (turn off) |
| Input/Output Isolation Voltage: | 2500Vrms |

MECHANICAL

| | |
|-----------|------------------------------------|
| Mounting: | Any position. |
| Size: | 3.27" wide, 5.65" high, 1.50" deep |
| Weight: | 12 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: | Contact Factory |
| Enclosure: | NEMA 3R or 4X |

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