



**MODEL P770A
FREQUENCY
SPLITTER / ISOLATOR**



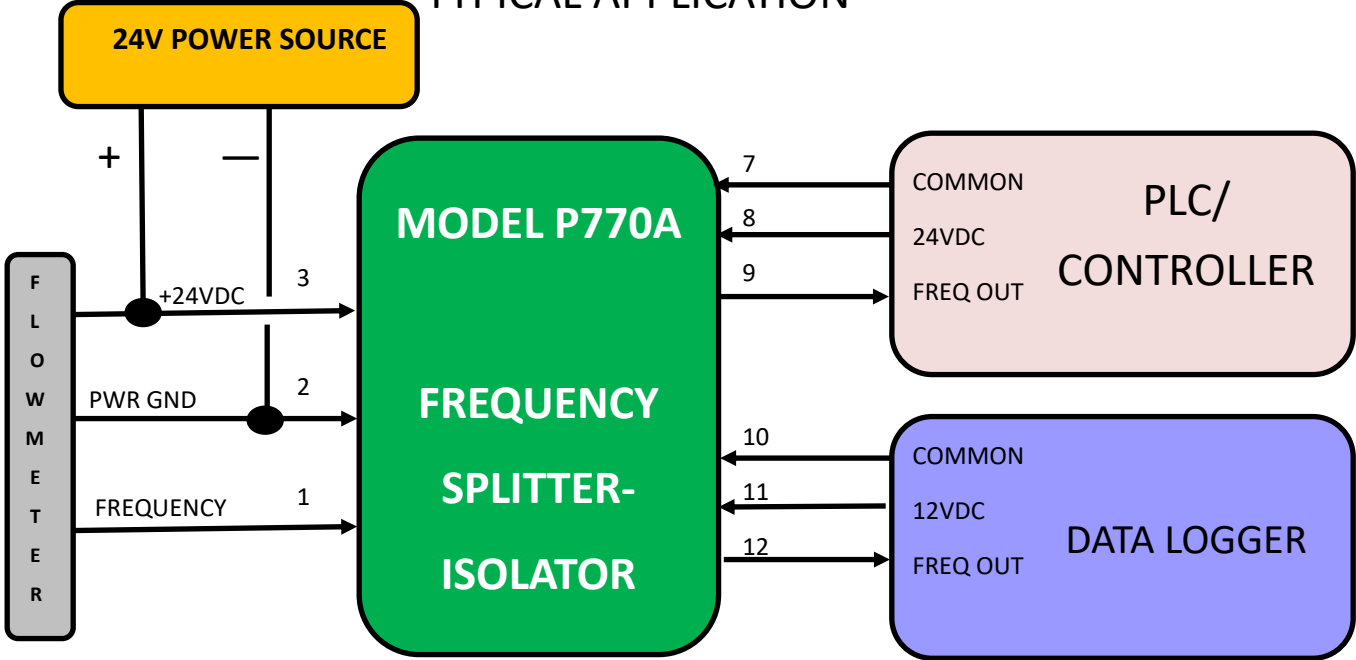
The Compass Instruments P770A Frequency Splitter/Isolator may be used to create two identical isolated frequency outputs from one frequency/pulse input.

The input accepts pulses from near zero volts with an amplitude of at least 3 volts. The threshold for switching is approximately 2.4V. The device has a 45 millivolts hysteresis to prevent double pulsing. Higher signal amplitudes (up to 24V) may also be used safely.

Input impedance is two meg-ohms.

Outputs are isolated and may be powered separately with 5 to 24 volts. Each output has a 5100 ohm pull up to the applied voltage. For higher frequencies, it may be necessary to add an external pull up. Frequency range is from zero to 25KHz.

TYPICAL APPLICATION



NOTE: If isolation is not required, all power grounds and commons may be tied together (Terminals 2, 7 and 10). Also, if signal levels are not an issue, all power terminals may be powered from the same source (Terminals 3, 8, and 11).



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NOTE: If the input is from a low voltage source (i.e. magnetic pick-up or similar device), it must have an amplifier so that the output signal amplitude goes from less than one volt to more than 2.4 volts. If the signal level is too low, signal conditioning will be necessary. Contact Compass Instruments for further assistance.

Specifications:

Input:

Signal input impedance: 2M ohms

Signal input voltage: Greater than zero volts DC. Must cross the switching threshold of +2.4 VDC

Power input to the module: +9 to +30 VDC at ~10mA or less

Isolation:

Greater than 3750Vrms Input to Output per channel

Output:

1:1 input to output signal ratio; output is inverted to the input signal

Frequency Range: 1Hz to 25KHz

Power to Output Channels: +5 to +24VDC at up to 1 amp maximum

Each output has an internal pull-up resistor respective to the power input. Signal output is a square wave with an amplitude approximately equal to the applied power.

Temperature Range:

-20°C to +85°C

Dimensions:

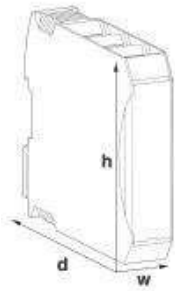
w=17.5mm (0.7")

h=85mm (3.35")

d=70.4mm (2.8")

Weight:

66g (2.3oz)



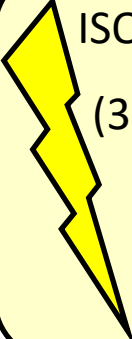


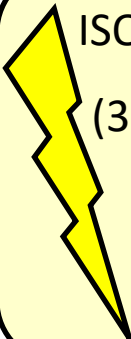
**MODEL P770A
FREQUENCY SPLITTER
APPLICATIONS**

It is often necessary to connect one frequency output to multiple instruments. Unfortunately this can lead to ground loops, incorrect signal amplitudes, excessive loading of signals, and control errors. This is especially true when utilizing a device requiring a frequency input with a low amplitude opposed to a device that requires a higher amplitude signal.

The Compass Instruments Model P770A provides dual frequency outputs that can be powered at different amplitudes.

INPUT SECTION
GREATER THAN ZERO VOLTS DC
MUST CROSS THE SWITCHING THRESHOLD OF +2.4VDC

 **ISOLATION**
(3500Vrms)

 **ISOLATION**
(3500Vrms)

OUTPUT SECTION A
POWERED FROM +5 TO +30VDC SUPPLY
EXAMPLE: BATCH CONTROLLER REQUIRES A +12V AMPLITUDE FREQUENCY INPUT. POWER THIS SECTION WITH +12VDC TO PROVIDE A +12V AMPLITUDE SIGNAL

OUTPUT SECTION B
POWERED FROM +5 TO +30VDC SUPPLY
EXAMPLE: A DATA LOGGER REQUIRES A +24V AMPLITUDE FREQUENCY INPUT. POWER THIS SECTION WITH +24VDC TO PROVIDE A +24V AMPLITUDE SIGNAL