

TransPak™



Frequency Input Two-Wire Transmitter Model T670, T671

Provides an Output Current Signal in Proportion to a Frequency Input

- Wide Ranging Span Adjustability (50%)
- Direct Magnetic Pickup Input
- Protects Equipment with 200V Input-to-Output Isolation (T671)
- Improves EMI/RFI Noise Reduction with Rugged Metal Housing
- FM Safety Approval for Hazardous Installations (T670)
- CSA Certification Available
- Three Year Warranty

APPLICATION

Models T670/T671 are useful in any application requiring a two-wire loop current from a pulse output transducer, such as a magnetic pickup or a turbine flowmeter. The output of the T670/T671 can be used to drive a digital meter for direct display of flow or velocity or to drive a limit alarm for status indication or control applications. Model T670 is FM approved for intrinsically safe operation in Class I, Division 1 hazardous locations when connected in accordance with manufacturer's drawing 790-0024.*

DESCRIPTION

The T671 isolating two-wire transmitter accepts frequency inputs with amplitudes from 100mV to 20V rms. Model T671 provides up to 200V transformer-coupled isolation between input and output signal or common. Model T670

provides a non-isolated output accepting input amplitudes from 25mV to 75V rms. Standard input ranges are listed in Table 1. Both units feature 50% or greater Span "turn-down" on all ranges. Standard output is 4-20mA.

Models T670/T671 are designed for installation in industrial field environments. Circuitry is urethane coated and enclosed in a

rugged, die-cast aluminum housing which is sealed for protection against corrosion, moisture, dust and electrical noise such as radio-frequency (RFI) and electromagnetic (EMI) interference. Top-mounted barrier terminal strip connections are provided in addition to top-mounted sealing caps to protect the zero and span access ports from outside contamination.

Table 1: T670/T671 Input Ranges

Span	Adj. Span Turn-Down	Code
0-10 KHz	to 5KHz	-001
0-5KHz	to 2.2KHz	-002
0-2.2KHz	to 1KHz	-003
0-1KHz	to 500Hz	-004
0-500Hz	to 240Hz	-005
0-240Hz	to 120Hz	-006
0-120Hz	to 60Hz	-007
0-60Hz	to 30Hz	-008
0-30Hz	to 15Hz	-009 (T670 only)
0-15Hz	to 7.5Hz	-010 (T670 only)

Zero Turn-Up to 10% of Adjusted Span



OPTIONS

- A** 10-50mA output.
- D** Dry-Contact/Open Collector (T670 only), provides excitation.
- CS** Canadian Standards Association Certification (T670 only).

CALIBRATION

Top-accessed screwdriver adjustments provide 10% Zero turn-up and 50% Span turn-down adjustability. Standard input ranges are listed in Table 1. With the input at its minimum, adjust zero for 4.00mA output (10.00mA with Option A). Likewise, with the input at maximum, adjust span for

20mA output (50mA/Option A). Repeat adjustments as needed.

Factory Assistance:

For additional information on calibration, operation and installation please contact Action's Technical Services Group. Call toll-free:

800-767-5726

SPECIFICATIONS

Input Ranges

See Table 1

Input Amplitude

T670: 25mV to 75V rms

T671: 100mV to 20V rms

Input Impedance

<200mV: 50K Ω in parallel with 500pF

>200mV: 10K Ω in parallel with 500pF

Output Span

Standard: 4-20mA

Option A: 10-50mA

Supply Voltage Range

Standard: 12-90VDC

Option A: 12-70VDC

Change in Supply-Voltage Effect

0.05% of span, max.

Change in Load Effect

0.05% of Span, max.

Loop Voltage Drop

12VDC @ 20mA

Accuracy (Including Linearity, Hysteresis and Repeatability)

$\pm 0.1\%$ of span typical

Linearity (Best straight line fit)

$\pm 0.05\%$ of span typical

Response Time (typical)

Spans

$\geq 2.2\text{KHz}$: 100ms

240Hz to 1KHz: 250ms

60Hz to 120Hz: 600ms

30Hz: 2 sec.

15Hz: 5 sec.

Maximum Ripple (of span, rms)

Spans

>5KHz: 0.05%

500Hz to 1KHz: 0.1%

15Hz to 240Hz: 0.25%

RFI Effect (5W, 470MHz @ 3 feet)

<1% of span error

Common Mode Rejection

140dB, typical @ 50/60Hz

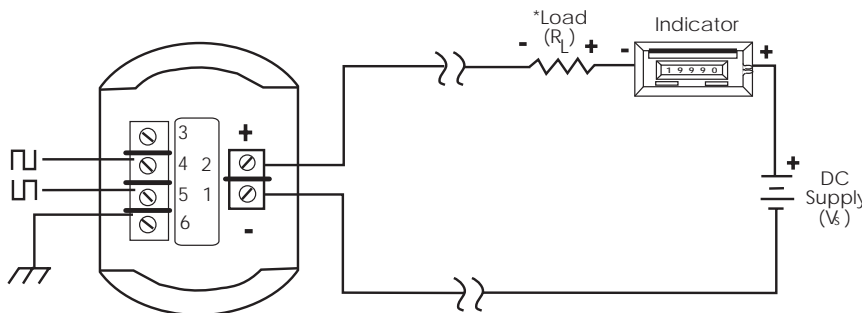
Isolation (T671 only)

200VDC or peak AC

Operating Temperature Range

-40 to 80°C (-40 to 176°F)

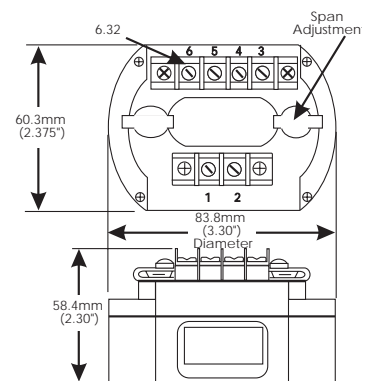
TERMINAL WIRING



*R_L represents any other loads in the current loop.

DIMENSIONS

Dimensions shown in millimeters (inches)



ORDERING INFORMATION

Specify:

1. Model T670, T671
2. Input Range (see Table 1)
3. Options: A, CS (T670 only), D (T670 only)



ACCESSORIES

Model Description

- T800** Explosion-Proof Housing (includes T901).
- T809** Frequency Calibrator.
- 9046** Action Pak 24/40VDC, 65mA Power Supply.

T609 24VDC, 600mA Loop Power Supply.

V560 3-1/2 Digit LCD Indicator, NEMA 4X enclosure. CSA & FM approval standard, specify Option C to house Transpak.

All Prices and Specifications subject to change without notice

For order entry, applications or customer service assistance, call toll-free 800-767-5726

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ACTION INSTRUMENTS

...the Industrial I/O Company