

F R E Q U E N C Y T R A N S D U C E R

TF1 model

Model TF1 Transducer is intended for frequency measurements.

The instruments change the measured value into a proportional, load-independent DC current or DC voltage.

FEATURES

- Accuracy $\pm 0.05\%$ R.O.
- Frequency range from 45 Hz to 10KHz
- High immunity to external noise
- Wide selection of input and output range
- Quick and easy mounting

SPECIFICATION

Accuracy:	$\pm 0.1\%$ R.O. ($\pm 0.05\%$ R.O. option)
Temp. coefficient:	100ppm at 23°C $\pm 3^\circ\text{C}$ (Option 60ppm at 23°C $\pm 3^\circ\text{C}$)
Temp. range:	-20 to 60 °C Operating 0~50°C
Humidity range:	Up to 95% RH
Isolation:	Input/output/power/case
Dielectric test:	DIN-IEC 688. 2K Vrms 50/60 Hz, 1 min. Between terminal to terminal. 2.8K Vrms/1min. Between terminal to case.
Surge test:	DIN-IEC 255-4, ANSI C37. 90a/1974. 5KV (1.2 x 50 μs)
Insulation resistance:	100M Ω or more, DC 500V
Housing material:	Steel sheet
Mounting:	Wall mounting
Power supply:	AC 115/230V $\pm 15\%$, 50/60 Hz, 3VA

INPUT

AC rated:	AC 2V ~ 200V, AC 30V ~ 600V
Burden:	$\leq 0.1\text{VA}$
Overload capacity:	< 600Vrms continuous 1.25 x rated continuous 2 x rated for 10 sec 4 x rated for 5 sec

Range:

AC input signal	Frequency
AC 30V ~ 600V	45 ~ 55Hz
	55 ~ 65Hz
	45 ~ 65Hz
	0 ~ 100Hz
AC 2V ~ 200V	0 ~ 500Hz
	0 ~ 1KHz
	0 ~ 5KHz
	0 ~ 10KHz



OUTPUT

Output variables:	DC voltage or current
Ripple:	<0.5% p-p max.
Response time:	< 0.4 sec. or less
Zero adjustment:	$\pm 5\%$ minimum
Span adjustment:	$\pm 10\%$ minimum
DC current:	0~20mA (max.)

Output	Load resistance	Load voltage 12V
4~20mA	$\leq 600\Omega$	$R = \frac{12V}{\text{Output current}}$ (R = load resistance)
0~20mA	$\leq 600\Omega$	
0~10mA	$\leq 1200\Omega$	
0~1mA	$\leq 12K\Omega$	

DC voltage: 0~12V (max.)

Output	Load resistance	Load voltage 10mA
0~10V	$\geq 1000\Omega$	$R = \frac{\text{Output voltage}}{10\text{mA}}$ (R = load resistance)
0~5V	$\geq 500\Omega$	
1~5V	$\geq 500\Omega$	
0~1V	$\geq 100\Omega$	

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ORDERING INFORMATION

TF1 — □ □ □ □

MODEL _____

1: 45~55Hz
 2: 55~65Hz
 3: 45~65Hz
 4: 0~100Hz
 5: 0~1KHz
 6: 0~10KHz
 7: Option

INPUT VOLT _____

A: AC 80~600V
 B: AC/DC 2~30V
 Y: Option

DC OUTPUT _____

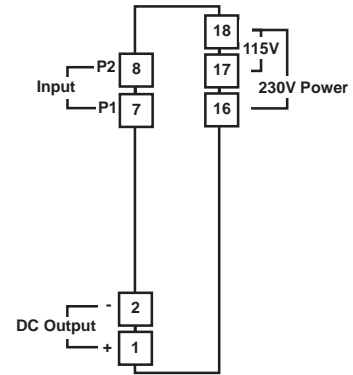
1: 4~20mA
 2: 0~20mA
 3: 0~10mA
 4: 0~1mA
 A: 0~10V
 B: 0~5V
 C: 1~5V
 D: 0~1V
 Y: Option (0~20mA, 0~12V max.)

POWER SUPPLY _____

1: AC 115/230V ±15%, 50/60Hz
 Y: Option

CONNECTION DIAGRAM

■ TF1 (CASE B)



CODE NUMBER

Model-Input Freq./DC Output/Power Supply

Example: TF1-2AB1
Input Freq.: 55~65Hz
Input Volt: AC 80~600V
Output: DC 0~5V
Power Supply: AC 115/230V