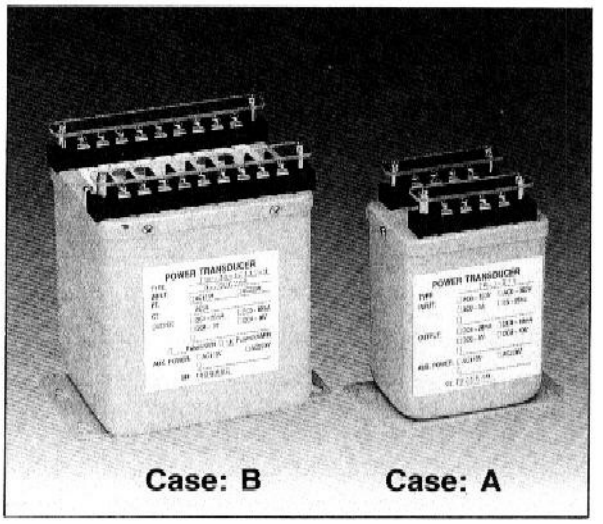
AC CURRENT TRANSDUCER

TA-1 system Single phase, average sensing
TA-3 system Three phase, average sensing
TA-1T system Single phase, True rms sensing
TA-3T system Three phase, True rms sensing

These current transducers are available as average sensing devices calibrated in rms or as true rms units, either with a DC output proportional to the input.
This output signal enables several receivers to be operated simultaneously-such as indicators, recorders, alarm units etc. The input current can be connected via a C.T. or directly.



FEATURES

- High accuracy ±0.2% R.O.
- Precision measurement even for distorted waves
- High immunity to external noise
- Wide selection of input and output range
- Quick and easy mounting

SPECIFICATION

Accuracy: ±0.2% R.O.
(±0.1% R.O. Option)
Temp. coefficient: 100ppm at 23°C±3°C
(Option 60ppm at 23°C±3°C)
Temp. range: −20°C 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, 1min. Between terminal to terminal.
2.8K Vrms/1min, Between terminal to case.
Surge test: DIN-IEC 255-4, ANSI C37. 90a/1974 5KV (1.2×50us)
Insulation resistance: 100MΩ or more, DC 500V
Housing material: Steel sheet
Mounting: Wall mounting
Power supply: AC 115/230V ±15%, 50/60Hz, 3VA
or
Self-powered: Not available on 4-20mA and 1-5 VDC outputs

INPUT

AC input: 0~1A, 0~5A
Frequency: 45Hz~65Hz
Burden: ≤0.2VA (TA-1, TA-1T)
≤0.6VA (TA-3)
Response sensitivity: ≤0.5% of measuring range end value
Overload capacity: 3×rated continuous
10×rated 10 sec
50×rated 1 sec
80×rated 0.5 sec

OUTPUT

Output variables: DC voltage or current
Ripple: <0.5% p-p max.
Response time: <0.4 sec. or less
Zero adjustment: ±5% minimum
Span adjustment: ±10% minimum

DC current: 0~20mA (max.)

Output	Load resistance	
4~20mA	≤ 600Ω	Load voltage 12V
0~20mA	≤ 600Ω	
0~10mA	≤ 1200Ω	$R = \frac{12V}{\text{Output current}}$
0~5mA	≤ 2400Ω	
0~1mA	≤ 12KΩ	(R = load resistance)

DC voltage: 0~12V (max.)

Output	Load resistance	
0~10V	≥ 1000Ω	Load capacity 10mA
0~5V	≥ 500Ω	$R = \frac{\text{Output voltage}}{10mA}$
1~5V	≥ 500Ω	
0~1V	≥ 100Ω	

CODE NUMBER

Model—Input/Output/Power
example: TA-3-251
Input: AC 0~5A
Output: DC 0−1mA
Power: AC 115/230V

ORDERING INFORMATION

TA-1 — □□□
TA-1T — □□□
TA-3 — □□□
TA-3T — □□□

MODEL
TA-1: 1ϕ, average
TA-1T: 1ϕ, true rms
TA-3: 3ϕ, average
TA-3T: 3ϕ, true rms

INPUT
1: AC 0~1A
2: AC 0~5A
Y: Option (0~10A max.)

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

POWER SUPPLY
1: AC 115/230V ±15%
Y: Option

SELF-POWERED MODE AC CURRENT TRANSDUCER (Option)

Model: TAN-1 (1ϕ), TAN-3 (3ϕ)
AC Input: 0~1A, 0~5A, 0~10A
DC Output: 0~1mA

ORDERING INFORMATION

TAN-1 — □□
TAN-3 — □□

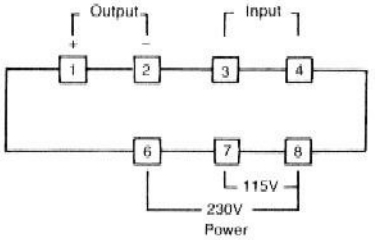
MODEL
TAN-1: 1ϕ, average
TAN-3: 3ϕ, average

INPUT
1: AC 0~1A
2: AC 0~5A
Y: Option (0~10A max.)

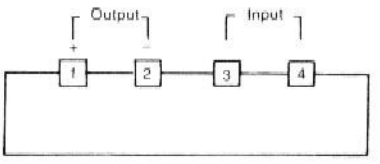
OUTPUT
1. DC 0~1mA (only)

CONNECTION DIAGRAMS

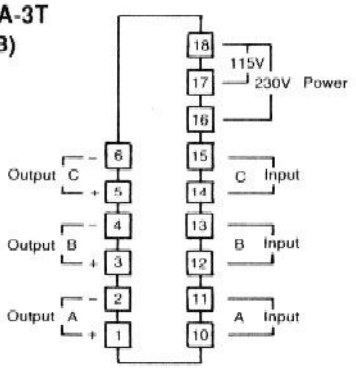
Model: TA-1, TA-1T (CASE A)



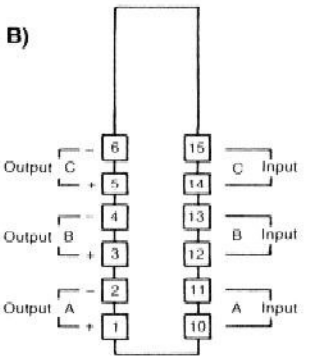
Model: TAN-1 (CASE A)



Model: TA-3, TA-3T (CASE B)



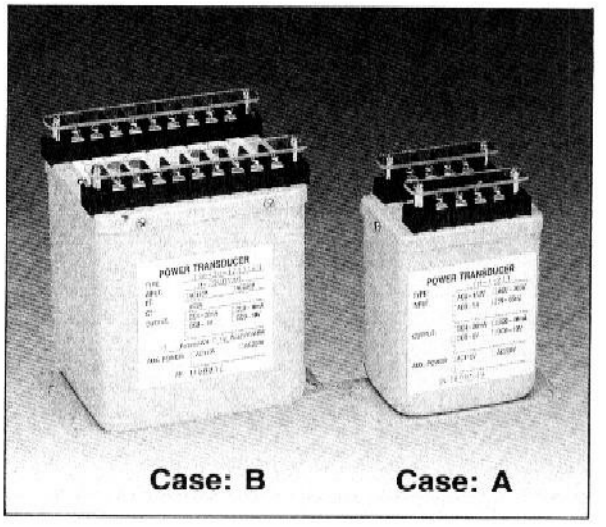
Model: TAN-3 (CASE B)



AC VOLTAGE TRANSDUCER

TV-1 system Single phase, average sensing
TV-3 system Three phase, average sensing
TV-1T system Single phase, True rms sensing
TV-3T system Three phase, True rms sensing

These voltage transducers are available as average sensing devices calibrated in rms or as true rms units, either with a DC output proportional to the input. This output signal enables several receivers to be operated simultaneously-such as indicators, recorders, alarm units etc. The input voltage can be connected via a P.T. or directly.



FEATURES

- High accuracy ±0.2% R.O.
- Precision measurement even for distorted waves
- High immunity to external noise
- Wide selection of input and output range
- Quick and easy mounting

SPECIFICATION

Accuracy: ±0.2% R.O. (±0.1% R.O. Option)
Temp. coefficient 100ppm at 23°C±3°C (Option 60ppm at 23°C±3°C)
Temp. range: −20°C to +60°C, Operating 0−50°C
Humidity range: Up to 95% RH
Isolation: Input/output/power/case
Dielectrictest: DIN-IEC 688. 2K Vrms 50/60 Hz, 1min. Between terminal to terminal. 2.8K Vrms/1min, Between terminal to case.
Surge test: DIN-IEC 255-4, ANSI C37. 90a/1974 5KV (1.2×50us)
Insulation resistance: 100MΩ or more, DC 500V
Housing material: Steel sheet
Mounting: Wall mounting
Power supply: Standard AC 115/230V ±15%
or 50/60Hz, 3VA
Self-powered: Powered system voltage within ±15% to ensure system accuracy

INPUT

AC input: 0−150V, 0−300V, 0−600V
Frequency: 45Hz−65Hz
Burden: ≤0.1VA (TV-1, TV-1T)
≤0.3VA (TV-3)
Response sensitivity: ≤0.5% of measuring range end value
Overload capacity: 1.25×rated continuous
2×rated for 10 sec
4×rated for 5 sec
or 600V rms continuous

OUTPUT

Output variables: DC voltage or DC current
Ripple: <0.5% p-p. max.
Response time: <0.4 sec. or less
Zero adjustment: ±5% minimum
Span adjustment: ±10% minimum

DC current: 0−20mA DC (max)

Output	Load resistance	
4−20mA	≤ 600Ω	Load voltage 12V
0−20mA	≤ 600Ω	
0−10mA	≤ 1200Ω	$R = \frac{12V}{\text{Output current}}$
0−5mA	≤ 2400Ω	
0−1mA	≤ 12KΩ	(R = load resistance)

DC voltage: 0−12V DC

Output	Load resistance	
0−10V	≥ 1000Ω	Load capacity 10mA
0−5V	≥ 500Ω	$R = \frac{\text{Output voltage}}{10mA}$
1−5V	≥ 500Ω	
0−1V	≥ 100Ω	(R: load resistance)

CODE NUMBER

Model—Input/Output/Power
example: TV-1-111
Input: AC 0−150V
Output: DC 4−20mA
Power: AC 115/230V

ORDERING INFORMATION

TV-1 — □□□
TV-1T — □□□
TV-3 — □□□
TV-3T — □□□

MODEL
TV-1: 1ϕ, average
TV-1T: 1ϕ, true rms
TV-3: 3ϕ, average
TV-3T: 3ϕ, true rms

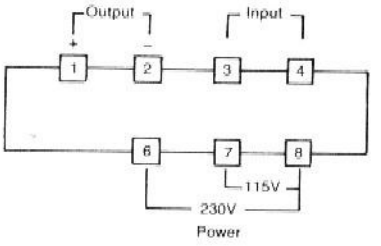
INPUT
1: AC 0 ~ 150V
2: AC 0 ~ 300V
3: AC 0 ~ 600V
Y: Option (0 ~ 600V max.)

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

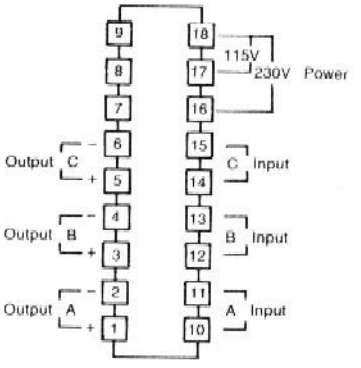
POWER SUPPLY
1: AC 115/230V ±15%, 50/60Hz
2: Self Powered (output 0 ~ 1mA DC only)
Y: Option

CONNECTION DIAGRAMS

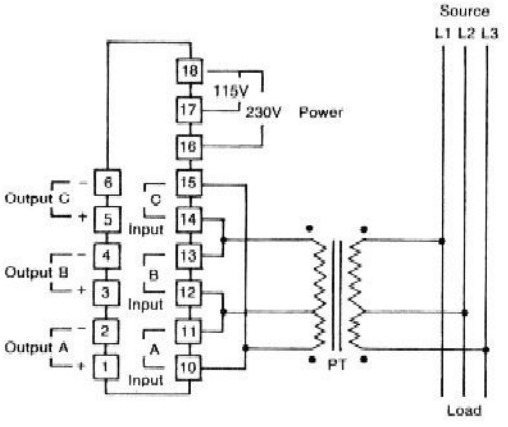
Model: TV-1, TV-1T (CASE A)



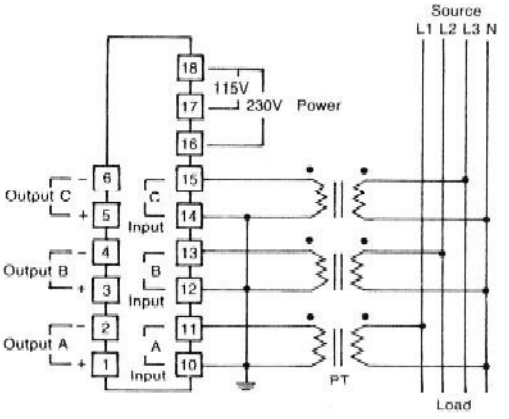
Model: TV-3, TV-3T (CASE B)



3ϕ 3-WIRE VOLTAGE TRANSDUCER CONNECTION
Model: TV-3, TV-3T (CASE B)



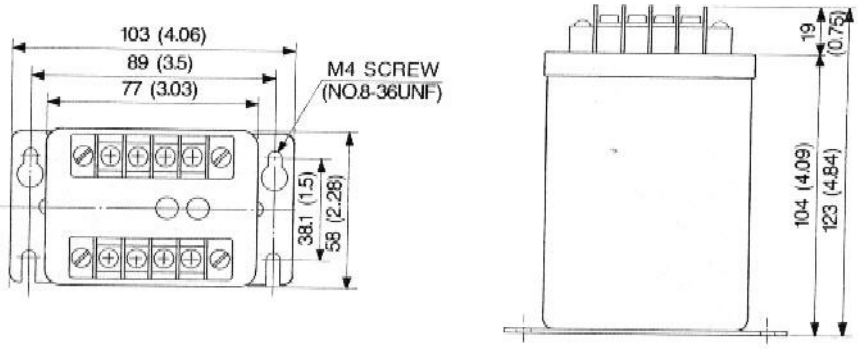
3ϕ 4-WIRE VOLTAGE TRANSDUCER CONNECTION
Model: TV-3, TV-3T (CASE B)



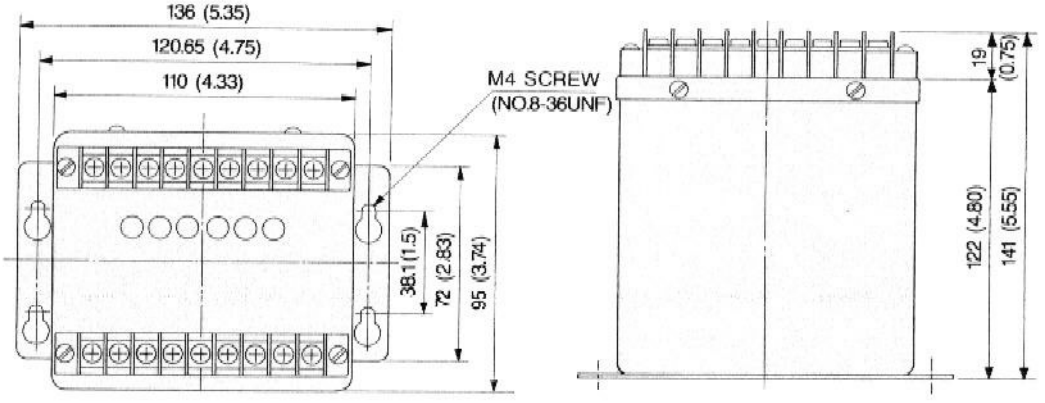
CASE DIMENSIONS

millimeters(inches)

Case: A



Case: B



Case: C