A C   C U R R E N T   T R A N S D U C E R

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 directly or via a C.T.

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 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 50µs)
Insulation resistance:	100MΩ or more, DC 500V
Housing material:	Steel sheet
Mounting:	Wall mounting
Power supply:	AC 115/230V ±15%, 50/60 Hz, 3VA
or	
Self-powered:	Not available on 4-20mA and 1-5VDC 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 x rated continuous 10 x rated 10 sec 50 x rated 1 sec 80 x rated 0.5 sec

Case: B   **Case: A**

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

DC voltage: 0~12V (max.)

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

CODE NUMBER

Model-Input/Output/Power

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

A C   C U R R E N T   T R A N S D U C E R

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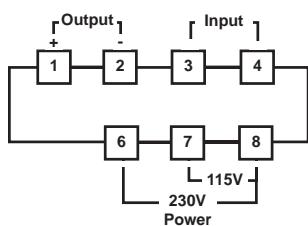**1:** AC 0~1A
2: AC 0~5A
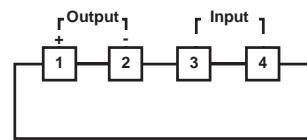**Y:** Option (0~10A max.)

OUTPUT
1: DC 0~1mA (only)
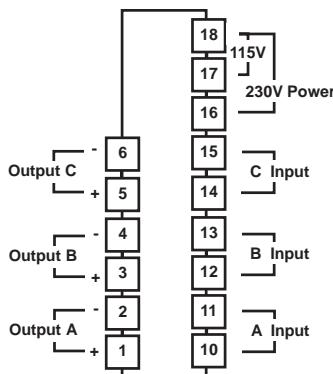
CONNECTION DIAGRAMS

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

MODEL: TAN-1 (CASE A)

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

MODEL: TAN-3 (CASE B)