

### 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  $\pm 0.2\%$  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

<b>Accuracy:</b>	$\pm 0.2\%$ R.O. ( $\pm 0.1\%$ R.O. Option)
<b>Temp. coefficient:</b>	100ppm at 23°C $\pm 3^\circ\text{C}$ (Option 60ppm at 23°C $\pm 3^\circ\text{C}$ )
<b>Temp. range:</b>	-20 to 60 °C Operating 0~50°C
<b>Humidity range:</b>	Up to 95% RH
<b>Isolation:</b>	Input/output/power/case
<b>Dielectric test:</b>	DIN-IEC 688. 2K Vrms 50/60 Hz, 1 min. Between terminal to terminal. 2.8K Vrms/1min. Between terminal to case.
<b>Surge test:</b>	DIN-IEC 255-4, ANSI C37. 90a/1974. 5KV (1.2 x 50 $\mu\text{s}$ )
<b>Insulation resistance:</b>	100M $\Omega$ or more, DC 500V
<b>Housing material:</b>	Steel sheet
<b>Mounting:</b>	Wall mounting
<b>Power supply:</b>	AC 115/230V $\pm 15\%$ , 50/60 Hz, 3VA or
<b>Self-powered:</b>	Not available on 4-20mA and 1-5VDC outputs

#### INPUT

<b>AC input:</b>	0~1A, 0~5A
<b>Frequency:</b>	45Hz~65Hz
<b>Burden:</b>	$\leq 0.2\text{VA}$ (TA-1, TA-1T), $\leq 0.6\text{VA}$ (TA-3)
<b>Response sensitivity:</b>	$\leq 0.5\%$ of measuring range end value
<b>Overload capacity:</b>	3 x rated continuous 10 x rated 10 sec 50 x rated 1 sec 80 x rated 0.5 sec



#### OUTPUT

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

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

**DC voltage:** 0~12V (max.)

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

#### CODE NUMBER

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

# AC CURRENT TRANSDUCER

## ORDERING INFORMATION

	TA-1	—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TA-1T	—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TA-3	—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	TA-3T	—	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**MODEL** \_\_\_\_\_

TA-1: 1 $\phi$ , average  
 TA-1T: 1 $\phi$ , true rms  
 TA-3: 3 $\phi$ , average  
 TA-3T: 3 $\phi$ , 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  $\pm$ 15%  
 Y: Option

## SELF-POWERED MODE AC CURRENT TRANSDUCER (OPTION)

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

## ORDERING INFORMATION

	TAN-1	—	<input type="checkbox"/>	<input type="checkbox"/>
	TAN-3	—	<input type="checkbox"/>	<input type="checkbox"/>

**MODEL** \_\_\_\_\_

TAN-1: 1 $\phi$ , average  
 TAN-3: 3 $\phi$ , average

**INPUT** \_\_\_\_\_

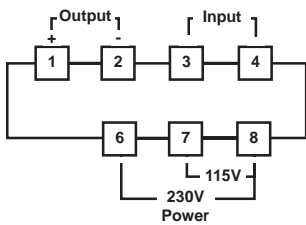
1: AC 0~1A  
 2: AC 0~5A  
 Y: Option (0~10A max.)

**OUTPUT** \_\_\_\_\_

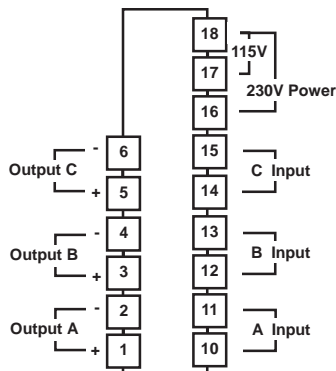
1: DC 0~1mA (only)

## CONNECTION DIAGRAMS

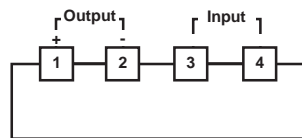
MODEL: TA-1, TA-1T (CASE A)



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



MODEL: TAN-1 (CASE A)



MODEL: TAN-3 (CASE B)

