

# POWER LINE TRANSDUCERS

## MODEL 2371A-2378A

### (DIN Rail Mounting & Surface Mounting Type)

Small-sized transducers  
with high performance:  
Wide selection of  
functions and ranges:



Model 2370A Series

Each of the power line transducers inputs converts power parameters such as AC voltage, AC current, power, phase angle, frequency, etc. to output a DC signal (voltage or current) in proportion to any of these parameters.

In addition to these transducers, MCC has developed the universal transducers with the accuracy of 0.5% in order to meet wide applications. They have almost the same performances as those of the A (0.25%) Series other than the accuracy. Therefore, please select any of them depending on your application.

## Features

### ● Highly versatile for most industrial applications: \*

A DC-to-DC isolator by a photo-coupler was added to each of the transducers in conventional Series in order to meet wide applications:

### ● NO auxiliary power required:

Generally, an auxiliary power is required for any transducer of constant current type. However, the transducers in this Series employ the power self-supplying method. (Excluding DC/DC isolators, and AC current and AC voltage based on the LOG/ANTI-LOG method.)

### ● Various output signals:

Constant voltage outputs: 10 mV, 5V and 10V

Constant current outputs: 1 mA, 5 mA and 4 to 20 mA

Any of the transducers of constant current type can connect a load corresponding to 10 V.

Therefore, it can cope with long-distance wiring for telemetry transmission and general industrial measurement.

### ● Compact design most suitable for highly densified instrumentation:

The transducers are miniaturized down to less than 1/2 compared with the A Series transducers through the miniaturization of parts (especially CT) and the rationalization of circuit design. \*

\* Refer to MCC when special models are required.

\* (For the transducers of power, reactive power, phase angle and frequency)

# List of Specifications of Power Line Transducers 2370A Series

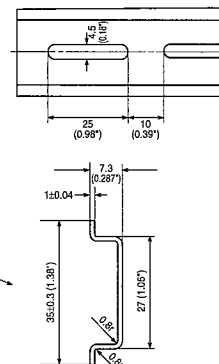
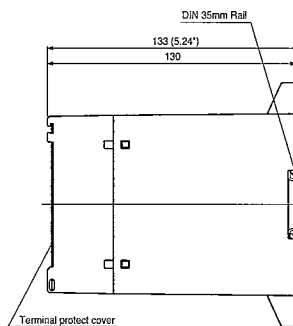
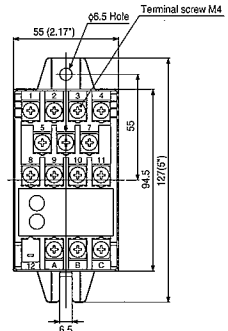
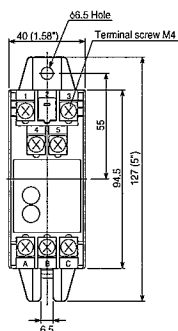
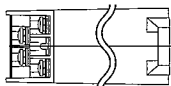
Type Principle of operation	Model		Rated (specify any of them)	Rated output/External load resistance (specify any of them)	Auxiliary power	Frequency used						
DC/DC isolator (photo-coupler)	2371A		DC 50 mV 1 V 5 V	10 mV/10 kΩ or more 5 V/5 mA or less 10 V/5 mA or less 1 mA/10 V or less 5 mA/10 V or less 4-20 mA/10 V or less	AC110 V±10% DC 24/48 V DC 85 to 143 V	DC						
AC voltage & current (Simplified RMS) (Segmented straight-lines by diodes)	2373A		1 A 5 A 150 V 300 V	10 mV/10 kΩ or more 5 V/2 MΩ or more 1 mA/2kΩ or less	Not required	45 to 65 Hz						
				4-20 mA/10 V or less	AC110 V±10% DC 24/48 V DC 85 to 143 V							
AC voltage & current (True RMS) (Log/Anti-Log)	2374A		1 A 5 A 150 V 300 V	10 mV/10 kΩ or more 5 V/5 mA or less 10 V/5 mA or less 1 mA/10 V or less 5 mA/10 V or less 4-20 mA/10 V or less	AC110 V±10% DC 24/48 V DC 85 to 143 V	45 to 10 kHz						
Power (Time-division multiplier)	1 φ 3 φ 3 W 4 W	2375A	10 30 40		110 V/1 A 110 V/5 A 220 V/1 A 220 V/5 A	Not required	45 to 65 Hz					
						Reactive power (Time-division multiplier)	1 φ 3 φ 3 W 4 W	2376A	10 30 40	±10 mV/10 kΩ or more ±5 V/5 mA or less ±10 V/5 mA or less ±1 mA/10 V or less ±5 mA/10 V or less 4-20 mA/10 V or less	Not required	45 to 65 Hz
											Phase angle (Phase discrimination)	1 φ 3 φ 3 W 4 W
Frequency (derivative)	2378A	45-55 Hz 55-65 Hz 45-65 Hz (110 V)	10 mV/10 kΩ or more 5 V/5 mA or less 10 V/5 mA or less 1 mA/10 V or less 5 mA/10 V or less 4-20 mA/10 V or less 4.5 V to 6.5 V/45 to 65 Hz	Not required	—							

Note: 1φ, Single-phase 3φ 3W: 3-phase, 3-wire system 3φ 4W: 3-phase, 4-wire system

## Dimensions (Unit: mm, inch for reference)

2371A, 2372A, 2373A  
2374A, 2378A

2375A, 2376A, 2377A



## 2370A Series

\*Mounting distance to next unit is to be 60 mm (2.36") or more.  
Keep space to next unit is to be 5 mm (0.26") or more.

DIN 46277-3 Rail

**YOKOGAWA**  
Yokogawa M&C Corporation

World Wide Web site at  
[http://www.yokogawa.co.jp/MCC/Welcome\\_e.htm](http://www.yokogawa.co.jp/MCC/Welcome_e.htm)

### NOTICE

- Before using the product, read the instruction manual carefully to ensure proper and safe operation.

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