# §Small-sized plug-in transducer§

*2-output type* *High speed isolator*

FWHS

## ■ Application

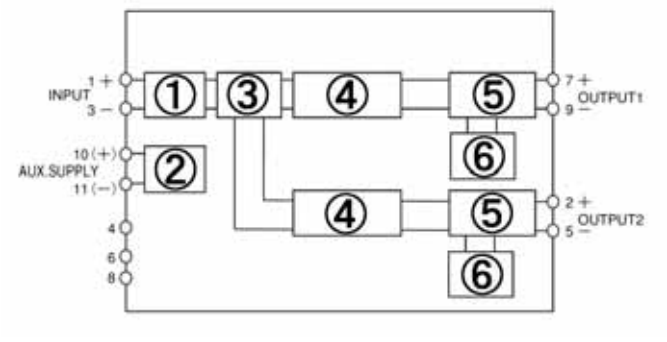
Insulates various kinds of DC signals and converts them into a unified intersystem signal. With input and output insulated, the product offers full advantages in transmitting insulated signals between measuring systems, cutoff of noise, protecting a control circuit from a sneak current, and transmitting an output signal directly to a distant place. Also can be used as a high speed feedback signal (≦500μs/90%) in a control circuit. Because this transducer can extract two insulated outputs, control and monitor can be done by a single unit. Up to 16 units can be housed in an installation base. Keep in mind that because this device is high speed response, its ripple-removal ability is not as high as that of an isolator.


29.5×76×125mm/180g

## ■ Feature

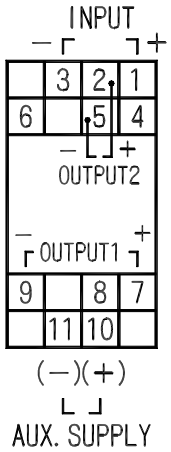
1. Withstand voltage between input and output is AC1, 500V (50/60Hz) for 1 min..
2. Withstand voltage between input/output/auxiliary supply/outer case is AC2, 000V (50/60Hz) for 1 min..
3. Withstand voltage between outputs is AC500V (50/60Hz) for 1 min..
4. Constant voltage/current output type. No need to adjust the product if it operates within load resistance range.
5. A LED can confirm status of electric power applied.
6. Zero/span of 1st and 2nd output can be adjusted individually. (±2% adjustable)

## ■ Block Diagram




① Input filter
② Insulated power source circuit
③ Input amplifying circuit
④ Capacitively-coupled isolation amplifier
⑤ Output circuit
⑥ Reference voltage

## ■ Connection diagram (socket)



# §Small-sized plug-in transducer§

*2-output type* *High speed isolator*

## ■ Specification

● How to specify

Type name **FWHS** - Specification code □□□ □ □ □ □ **0**

| Input (input resistant) | 1st Output (load resistant) | 2nd Output (load resistant) | Auxiliary supply | Power fuse | Common specification |
|---|---|---|---|---|---|
| 0A2 :DC0-50mV (approx.1MΩ)<br>0A3 :DC0-60mV (approx.1MΩ)<br>0A4 :DC0-100mV (approx.1MΩ)<br>0A5 :DC0-1V (approx.1MΩ)<br>0A6 :DC0-5V (approx.1MΩ)<br>0A7 :DC0-10V (approx.1MΩ)<br>0A8 :DC1-5V (approx.1MΩ)<br><br>0B2 :DC±50mV (approx.1MΩ)<br>0B3 :DC±60mV (approx.1MΩ)<br>0B4 :DC±100mV (approx.1MΩ)<br>0B5 :DC±1V (approx.1MΩ)<br>0B6 :DC±5V (approx.1MΩ)<br>0B7 :DC±10V (approx.1MΩ) *1<br><br>0C3 :DC0-1mA (approx.100Ω)<br>0C4 :DC0-5mA (approx.100Ω)<br>0C5 :DC0-10mA (approx.100Ω)<br>0C6 :DC0-16mA (approx.100Ω)<br>0C7 :DC4-20mA (approx.100Ω)<br><br>0D4 :DC±1mA (approx.100Ω)<br>0D5 :DC±5mA (approx.100Ω)<br>0D6 :DC±10mA (approx.100Ω) *1<br><br>ZZZ : other than those above *2 (See product range) | 1:DC0-100mV (≧200Ω)<br>2:DC0-1V (≧200Ω)<br>3:DC0-5V (≧600Ω)<br>4:DC0-10V (≧2kΩ)<br>5:DC1-5V (≧600Ω)<br>6 :DC±5V (≧1kΩ) *1<br>7:DC±10V (≧2kΩ) *1<br><br>A:DC0-1mA (≦10kΩ)<br>B:DC0-5mA (≦2kΩ)<br>C:DC0-10mA (≦1kΩ)<br>D:DC0-16mA (≦600Ω)<br>E:DC1-5mA (≦3kΩ)<br>F:DC4-20mA (≦750Ω)<br>G:DC±1mA (≦10kΩ)*1<br><br>J:DC±5mA (≦2kΩ)*1<br><br>Z :other than those above *2 (See product range) | 1:DC0-100mV (≧200Ω)<br>2:DC0-1V (≧200Ω)<br>3:DC0-5V (≧1kΩ)<br><br>5:DC1-5V (≧1kΩ)<br>6 :DC±5V (≧1kΩ) *1<br><br>A:DC0-1mA (≦7kΩ)<br>B:DC0-5mA (≦1.4kΩ)<br>C:DC0-10mA (≦700Ω)<br>D:DC0-16mA (≦430Ω)<br>E:DC1-5mA (≦1.4kΩ)<br>F:DC4-20mA (≦350Ω)<br>G:DC±1mA (≦7kΩ)*1<br><br>J:DC±5mA (≦1.4kΩ)*1<br><br>Z :other than those above *2 (See product range) | F :AC/DC80-264V<br>Rated Voltage<br>AC100/110V<br>50/60Hz<br>AC200/220V<br>50/60Hz<br>DC100/110V<br><br>5 :DC24V<br>(DC19-30V) | 1 :without fuse<br>2 :with fuse | Conversion accuracy:<br>±0.1%<br><br>Temperature characteristics:<br>0.2%/10℃<br><br>Response time:<br>≦500μs/90%<br><br>Consumption VA:<br>At AC110V: 3.5VA<br>At AC220V: 4.5VA<br>At DC110V: 2.0W<br>At DC24V: 2.5W<br><br>Weight:<br>Without socket:<br>approx.130g<br>With socket:<br>approx.180g |

*1 Plus/minus output is the standard for plus/minus input. *2 Consult with us for specification other than those indicated in the table above.

### Product Range (including special handling)

| Input | 1st output | 2nd output |
|---|---|---|
| Current input : 10μA-50mA<br>Voltage input : 10mV-300V | Current output: -5mA-20mA<br>Voltage output: -10V-10V | Current output: -5mA-20mA<br>Voltage output: -10V-10V |

Current input: conversion accuracy, temperature characteristics and suchlike of an input more than 10μA but less than 499μA are different from standards.
Voltage input: conversion accuracy, temperature characteristics and suchlike of an input more than 10mV but less than 49mV are different from standards.
2nd output: output more than 5.1V but less than 10V is subject to special handling. (Load current 2mA)

### ■ UR-2 precise resistance unit (Selling separately)

Please use a UR-2 combined with an isolator of voltage input. When changing the isolator in a hot line state at the time of current input, if measures against open are necessary, connect UR-2 to socket and convert it into a voltage signal before using it. (UR-2, resistance to be specified) (Specify any one of 10Ω, 50Ω, 62.5Ω, 100Ω, 250Ω, 500Ω, 1kΩ)