§Small-sized plug-in transducer§

2-output type *Potentiometer transducer*

FWRT

■ Application

29.5×76×125mm/180g

Replaces mechanical displacement of an angle or a position with resistance value change of a potentiometer, inputs the resistance change, then insulates and. converts it into a DC signal proportional to the change. 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.

■ Feature

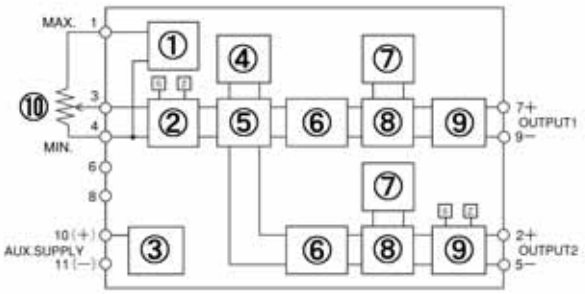
1. Compact and high withstand voltage.
2. Withstand voltage between input/output/auxiliary supply/outer case is AC2, 000V (50/60Hz) for 1 min..
3. Withstand voltage between outputs is AC500V (50/60Hz) for 1 min..
4. Compatible with resistance range 100Ω-10kΩ of a potentiometer.
5. Constant voltage/current output type. No need to adjust the product if it operates within load resistance range.
6. A LED can confirm status of electric power applied.

■ How to adjust

(1) Please adjust 1st output ZERO VR/SPAN VR of front VR in accordance with the potentiometer you actually use. Hereat 1st and 2nd output are changing simultaneously. Variable range of 1st output ZERO VR/SPAN VR are as follows.
(ZERO VR: 0-50% of nominal resistance value, SPAN VR: 50-100% of nominal resistance value)

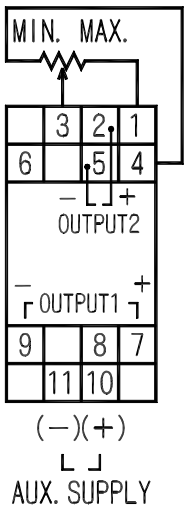
(2) 2nd output ZERO VR/SPAN VR of front are sensitivity difference (between 1st and 2nd output) adjusting VR. Ordinarily, there is no need to adjust it. Only use it when an adjustment is required Variable range of 2nd output ZERO VR/SPAN VR is adjustable within ±2%.

■ Block Diagram



① Specified voltage circuit
② Input amplifying circuit
③ Insulated power source circuit
④ Oscillating circuit
⑤ Pulse width modulation circuit
⑥ Photo coupler insulation
⑦ Reference voltage
⑧ Pulse width demodulation circuit
⑨ Output circuit
⑩ Potentiometer

■Connection diagram (socket)



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■ Specification

● How to specify

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

Input (nominal resistant)	1st Output (load resistant)	2nd Output (load resistant)	Auxiliary supply	Power fuse	Common specification
00F : Any value within 100Ω-10kΩ Any potentiometer of range 100Ω-10kΩ can be used within the following adjustment range of output signal. Voltage between terminals: approx. DC 0.5V (from No. 1 to No. 4) ZZZ : other than those above *1 (See product range)	1:DC0-100mV(≧200Ω) 2:DC0-1V (≧200Ω) 3:DC0-5V (≧600Ω) 4:DC0-10V (≧2kΩ) 5:DC1-5V (≧600Ω) A:DC0-1mA (≦10kΩ) B:DC0-5mA (≦2kΩ) C:DC0-10mA (≦1kΩ) D:DC0-16mA (≦600Ω) E:DC1-5mA (≦3kΩ) F:DC4-20mA (≦750Ω) Z:other than those above *1 (See product range)	1:DC0-100mV(≧200Ω) 2:DC0-1V (≧200Ω) 3:DC0-5V (≧1kΩ) 5:DC1-5V (≧1kΩ) A:DC0-1mA (≦7kΩ) B:DC0-5mA (≦1.4kΩ) C:DC0-10mA (≦700Ω) D:DC0-16mA (≦430Ω) E:DC1-5mA (≦1.4kΩ) F:DC4-20mA (≦350Ω) Z:other than those above *1 (See product range)	F: AC/DC80-264V Rated Voltage AC100/110V 50/60Hz AC200/220V 50/60Hz DC100/110V 5: DC24V (DC19-30V)	1 :without fuse 2 :with fuse	Conversion accuracy:±0.3% Temperature characteristics: 0.3%/10℃ Response time: ≦0.5s/90% Consumption VA: At AC110V: 4.0VA At AC220V: 5.0VA At DC110V: 2.5W At DC24V: 2.5W Weight: Without socket: approx.130g With socket: approx.180g

***1** Consult with us for specification other than those indicated in the table above.

Product Range (including special handling)

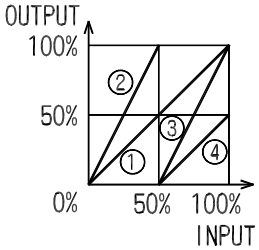
Input	1st Output	2nd Output
Nominal resistance value: 50Ω-10kΩ	Current output: -5mA-20mA Voltage output: -10V-10V	Current output: -5mA-20mA Voltage output: -10V-10V

Input: Nominal resistance value 50—99.99Ω is subject to special handling. (Conversion accuracy ±0.3%)
Output: Plus/minus output is subject to special handling.
2nd output: output between 5.1V and 10V is subject to special handling. (Load current 2mA)

Adjustment range of output signal

Input form 00F

ZERO adjustment range: 0—50% of nominal resistance value (can be changed from the front of converter)
SPAN adjustment range: 50—100% of nominal resistance value (can be changed from the front of converter)



① ZERO……0%, SPAN……100% Standard
② ZERO……0%, SPAN……50%
③ ZERO……50%, SPAN……50% (parallel shift of ②)
④ ZERO……50%, SPAN……100% (parallel shift of ①)

* Output value can be adjusted to zero against any input value between 0-50%.

●Because this device is potential-free type, factory preset input is 0—10kΩ; factory preset output is indicated in graph 1 above (standard)