

# Dual-output Potentiometer Converter

WSP-MSW



This compact plug-in signal converter connects with 3-wire type potentiometer, and provides DC voltage or current.  
This converter has Isolator built-in and a burnout protection circuit as standard equipment

## Features

- ★ Zero & span adjustment  $\pm 10\%$  full scale (Fine adjustment by 25 turn trimmer)
- ★ Safe design by dielectric strength of 3000Vac
- ★ 5 years warranty, long life
- ★ CE approved
- ★ Burnout protection circuit as standard equipment

## Ordering code

WSP- **MSW** -     -

Code	Input (Total Resistance)	Span Ad. Range	Zero Ad. Range
30	50 to 500Ω FS	50 to 100% FS	50 to 50% FS
31	501 to 10kΩ FS	±20% FS	±20% FS
19	0 to 343Ω (1kΩ FS)	(FS = 343Ω)	(FS = 343Ω)
99 * 1	Contact us for other than the above		

Code	Test Report
X	None
T	With Test report

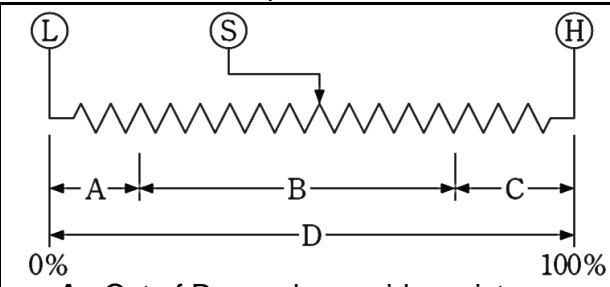
Code	Power Supply
A	100 to 240Vac $\pm 10\%$ 50/60Hz
D	24Vdc $\pm 10\%$
* 2	10.8 to 30Vdc
8	110Vdc $\pm 10\%$

Code	Output 1	Allowable Load Resistance
A	4 to 20mA dc	750Ω or less
B	1 to 5mA dc	3kΩ or less
D	0 to 1mA dc	15kΩ or less
E	0 to 10mA dc	1.5kΩ or less
G	0 to 20mA dc	750Ω or less
H	1 to 5Vdc	1kΩ or more
J	0 to 10mVdc	10kΩ or more
K	0 to 100mVdc	100kΩ or more
L	0 to 1Vdc	200Ω or more
N	0 to 5Vdc	1kΩ or more
P	0 to 10Vdc	2kΩ or more
R	±10Vdc	2kΩ or more
S * 1	Contact us for other than the above Current output 20mA or less Voltage output 10V or less	

Code	Output 2	Allowable Load Resistance
A	4 to 20mA dc	350Ω or less
D	0 to 1mA dc	7kΩ or less
G	0 to 20mA dc	350Ω or less
H	1 to 5Vdc	1kΩ or more
L	0 to 1Vdc	200Ω or more
N	0 to 5Vdc	1kΩ or more
P	0 to 10Vdc	2kΩ or more
R	±10Vdc	2kΩ or more
S * 1	Contact us for other than the above Current output 20mA or less Voltage output 10V or less	

### ★ Note: Zero & Span Adjustment

The measuring range must be 50% or more of total resistance of a potentiometer.



- A: Out of Range, lower side resistance
- B: Measuring range
- C: Out of Range, upper side resistance
- D: Total resistance of a Potentiometer

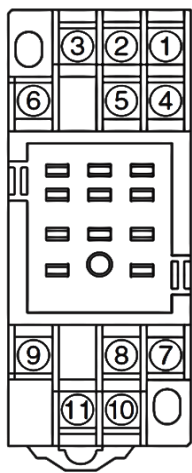
A procedure for adjustment, adjust Zero first, and then adjust the Span.

- \* 1...CE approval do not adapt input range code 99 and output range code S.
- \* 2...CE approval do not adapt when power supply is 10.8Vdc to 30Vdc.

## Specifications

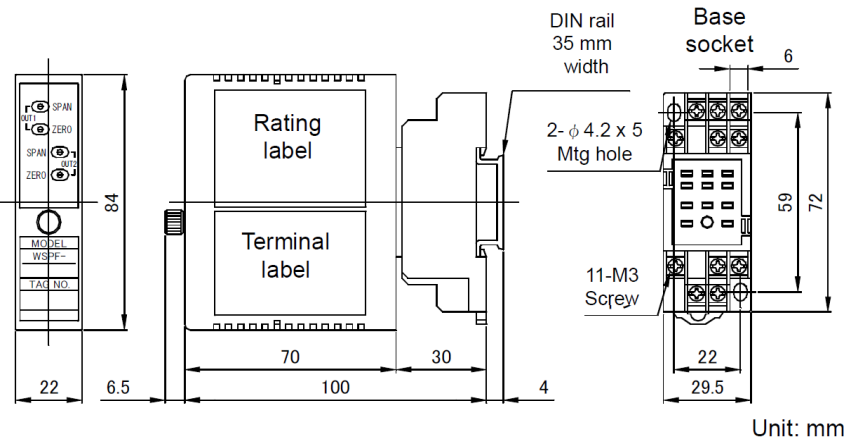
Input signal	3-wire type potensiometer
Accuracy	$\pm 0.1\%$ FS (at 23°C)
Response time	Approx. 25ms (0 to 90%)
Allowable load	Current output First output : 15V or less of voltage drop between output Second output : 11V or less of voltage drop between output Voltage output Load current 5mA or less *1μA or less if the output is less than 1V FS
Span adjustment	50 to 100% of rated input (25 turn trimmer) ( $\pm 20\%$ for input 19)
Zero adjustment	0 to 50% of span ( $\pm 20\%$ for input 19)
Operating temperature	-5 to +55°C
Operating relative humidity	90% or less (Non-condensing)
Temperature coefficient	$\pm 0.015\%$ FS of span per °C
Burnout protection	Upscale / downscale *Please specify when you order for downscale
Isolation	Between input, output, and power supply
Insulation resistance	100MΩ or more with 500Vdc megger Between input, output, and power supply terminal
Dielectric strength	2000Vac for 1 minute
Power consumption	Approx. 5.6VA (AC), Approx. 88mA (DC)
Power supply variation	$\pm 0.1\%$ FS (within the range of rated voltage)
Dimensions	84(H) X 29.5(W) X 106.5(D)mm
Weight	Approx. 150g
Structure	Plug-in (Body part and socket part)
Connection	M3 SEMS screw part of the base socket (Tightening torque 0.6N·m)
Mounting	DIN rail or wall surface
Case color and material	Ivory, ABS resin, flame retardant grade UL94V-0
EMC directive	EN61326-1, EN61010-1, EN IEC 63000 Installation category : II, Pollution degree : 2
Rated altitude	2000m or less

## Terminal connections



No	Symbol	Description
1	INPUT	HIGH
2	OUTPUT-2	+
3	INPUT	SLIDE
4	INPUT	LOW
5	OUTPUT-2	-
6	NC	No connection
7	OUTPUT-1	+
8	NC	No connection
9	OUTPUT-1	-
10	POWER	U(+)
11	POWER	V(-)

## Demensions



\* Specification is subject to change without notice