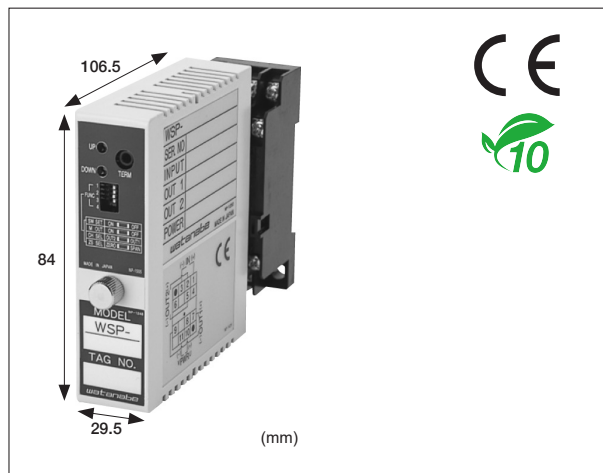




This is a compact plug-in converter that converts the rotation angle, linear displacement, or similar quantity obtained from the resistance value of a 3-wire potentiometer into a DC current or DC voltage.

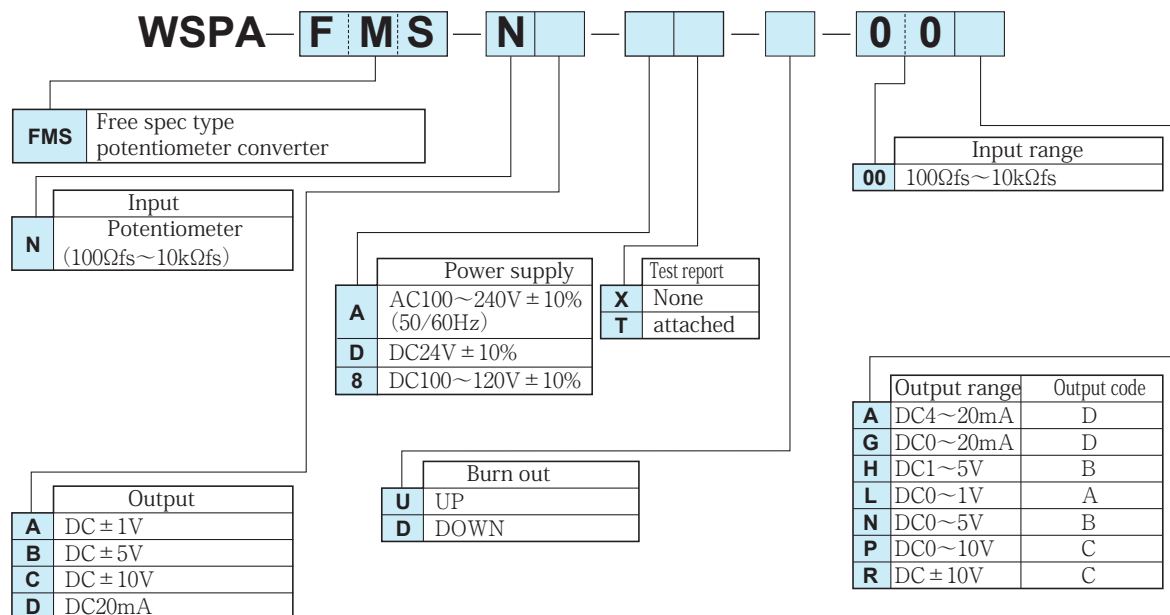
It is a digital-type converter with an onboard CPU, allowing the input range, output range, and various parameters to be changed, along with monitoring and simulated input/output, on site using a dedicated setting tool.

It is equipped with a linearizer and a burnout circuit that alarms on sensor wire breakage.

Features

- Input range, output range, and various parameters can be freely changed
- Long-life design
- Input linearization setting (101 points) available
- Compact plug-in design for easy wiring and maintenance
- Worldwide power supply support
- CE marking compliant

Ordering Code



Specifications

Response time	Approx. 180 ms (0~90%) (moving average processing, no first-order lag response)
Burnout time	Within 30 s (with moving average, first-order lag response 0.1 s)
Power consumption	Approx. 6.5 VA (AC), approx. 100 mA (DC)
Insulation resistance	100 MΩ or more (DC500V), between input, output, and power terminals
Dielectric strength	AC2000V for 1 min., between input, output, and power terminals
Setting retention on power failure	Stored in the unit's internal flash memory
Parameter retention	Typ. 100,000 / min. 10,000 rewrite cycles; min. retention period 100 years
Operating temp. / humidity range	-5°C to +55°C, 90%RH or less (non-condensing)
Temperature characteristics	±0.015%/°C; if overall accuracy exceeds ±0.15%, then overall accuracy /10°C
Power voltage effect	±0.1%fs (within rated voltage)
Dimensions	84(H) × 29.5(W) × 106.5(D) mm
Weight	Approx. 150 g
External drawing	See Dimension Drawing I
Self-diagnostics	Provided
Watchdog function	Provided
Applicable EN standards	EN61326-1, EN61010-1, EN IEC 63000; Installation category: II; Pollution degree: 2

• PC Setting Details

Password	4 single-byte characters
Comment	16 single-byte characters (8 double-byte characters)
Operation range	Sets whether I/O signals are processed as unipolar (0~100%) or bipolar (~100~100%) (default: "unipolar")
Input scaling setting	Freely configurable within the input range
Input filter	Moving average on/off (default: "on")
Input low-level cut	Sets input low-level cut value in % (0.00~120.00%) (default: "none") *Disabled when bipolar
First-order lag response	None, or 0.0~999.9 s (63% response) (default: "0.1 s")
Linearization table	101 breakpoints; sets I/O relationship in % (-120.00 to +120.00%)
Output scaling setting	Freely configurable within the output range. Voltage: ±120%fs. Current: ~20 to +120%fs
Output low-level cut	Sets output low-level cut value in % (0.00~120.00%) (default: "none") *Disabled when bipolar
Startup delay time	Sets time from power-on to output start (0~99 s) (default: "0")
Simulated I/O	In % (percent) or actual value
Monitor function	In % (percent) or actual value
Initialization	Restores factory shipment settings

Input Specifications

Input signal	Potentiometer (3-wire)
Input range	Total resistance: 100 Ωfs to 10 kΩfs. The measurement resistance range can be changed via the input scaling setting (PC setting).
Number of input points	1 point
Reference voltage	0.5 V or less
Burnout	UP/DOWN is specified at time of order (cannot be changed by the customer)

Accuracy (Overall Accuracy)

● Overall accuracy, not including additional accuracy, is one of the following:

- When both input and output accuracy are $\pm 0.1\%$ fs or less:
Overall accuracy = $\pm 0.1\%$ fs
- When either input or output accuracy is $\pm 0.1\%$ fs or more:
Overall accuracy = the larger of input accuracy or output accuracy
- When both input and output accuracy are $\pm 0.1\%$ fs or more:
Overall accuracy = input accuracy + output accuracy - 0.1% fs

● Input Accuracy

Sensor type	Full-scale setting range	Sensor input accuracy (% of span)
Potentiometer	50% or more of fs	$\pm 0.1\%$
	Less than 50% of fs	$\pm 0.1\% \times (\text{potentiometer rating } [\Omega]/2) / \text{full-scale setting range } [\Omega]$

● Output Accuracy

Output rating	Set output span width	Output accuracy (% of span)
± 1 V	0.8 V or more	$\pm 0.1\%$
	Less than 0.8 V	$\pm 0.1\% \times 0.8 \text{ V} / \text{set output span width } [\text{V}]$
± 5 V	4 V or more	$\pm 0.1\%$
	Less than 4 V	$\pm 0.1\% \times 4 \text{ V} / \text{set output span width } [\text{V}]$
± 10 V	8 V or more	$\pm 0.1\%$
	Less than 8 V	$\pm 0.1\% \times 8 \text{ V} / \text{set output span width } [\text{V}]$
20 mA	16 mA or more	$\pm 0.1\%$
	Less than 16 mA	$\pm 0.1\% \times 16 \text{ mA} / \text{set output span width } [\text{mA}]$

Output Specifications

Output signal	DC voltage / DC current
Number of output points	1 point

Output range allowable load resistance

Output signal type	Output range	Allowable load resistance
A	DC ± 1 V ($\pm 20\%$)	1 kΩ or more
B	DC ± 5 V ($\pm 20\%$)	2.5 kΩ or more
C	DC ± 10 V ($\pm 20\%$)	5 kΩ or more
D	DC0–20 mA ($\pm 20\%$)	Resistance that keeps the output terminal voltage at 15 V or less (750 Ω or less at 20 mA output)

Shipped with the output range based on the model code. The output range scaling can be changed via settings (PC setting).

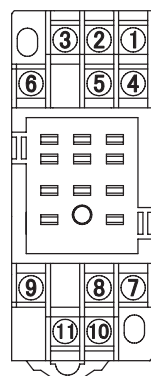
*The output signal type cannot be changed by the customer.

Output range	Voltage: $\pm 120\%$ fs of output range. Current: -20 to $+120\%$ fs of output range
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Output update interval	Approx. 5 ms (output hardware filter: 0–90% response 50 ms)
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Output zero-span adjustment	Adjustable using the front-panel setting switch
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Terminal Layout



No.	Symbol		Content
4	INPUT	HIGH	Input signal
1		SLIDE	
3		LOW	
7	OUTPUT	+	Output signal
9		-	
2	NC		No connection
5	NC		No connection
6	NC		No connection
8	NC		No connection
10	POWER	U(+)	Power
11		V(-)	

*Do not wire the empty (NC) terminals.