

General Specifications

Models WR9A, WR9V
Dew Point Converter

JUXTA

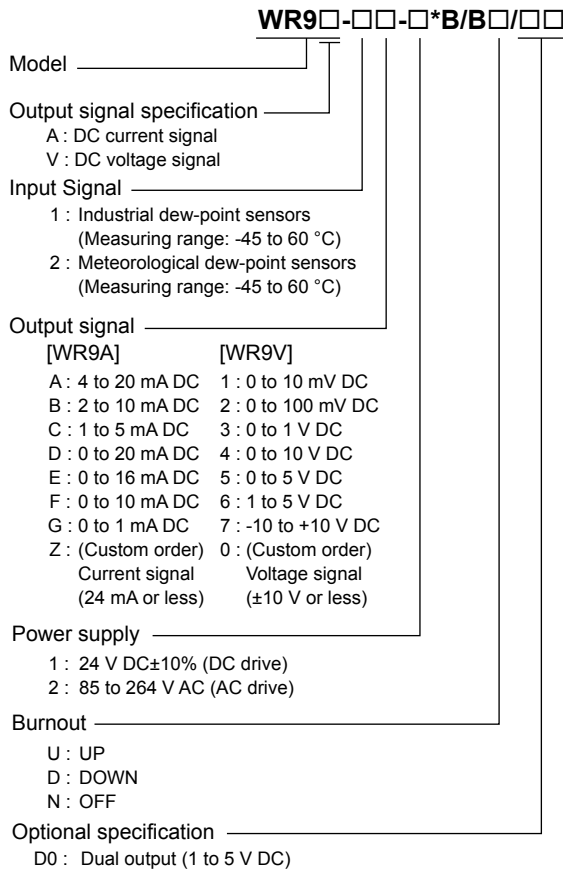
GS 77J09R09-01E

■ General

The WR9A/WR9V is a compact, front terminal connection type dew point converter that converts dew-point temperature signals into isolated DC current or DC voltage signals.

- Burnout setting, I/O adjustment and I/O monitoring can be made using the optional Parameter Setting Tool (VJ77) or Handy Terminal (JHT200).
- Dual output and 2000 V AC withstand voltage specifications are available upon requests.

■ Model and Suffix Codes

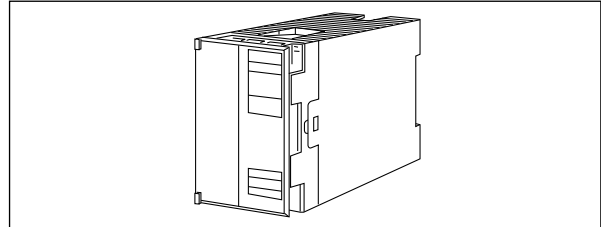


Note: Difference between Industrial and Meteorological dew-point sensors.
 Industrial: a dew-point less than 0°C comes in contact with the ice.
 Meteorological: a dew-point less than 0°C comes in contact with supercooled water.
 These sensors are different in the dew-point and resistance of 45 to 0°C. At the temperature of 0 to 60°C, they are the same.

■ Ordering Information

Specify the following when ordering.

- Model and suffix codes: e.g. WR9V-A6-2*B
- Input range :e.g. -20 to +40°C



■ Input/Output Specifications

Input signal: Ni RTD (3-wire type) of dew-point sensor
 Measuring range: -45 to +60°C
 Measuring span: 10°C or more
 Allowable leadwire resistance: 150 Ω or less per wire
 (Each resistance of the 3 lines should be equal.)
 Measuring current: Approx. 1 mA DC
 Output signal: DC current or DC voltage signal
 Allowable load resistance:

DC current output	Allowable load resistance	DC voltage output	Allowable load resistance
4 to 20 mA	750 Ω or less	0 to 10 mV	250 kΩ or more
2 to 10 mA	1500 Ω or less	0 to 100 mV	250 kΩ or more
1 to 5 mA	3000 Ω or less	0 to 1 V	2 kΩ or more
0 to 20 mA	750 Ω or less	0 to 10 V	10 kΩ or more
0 to 16 mA	900 Ω or less	0 to 5 V	2 kΩ or more
0 to 10 mA	1500 Ω or less	1 to 5 V	2 kΩ or more
0 to 1 mA	15 kΩ or less	-10 to +10 V	10 kΩ or more

Input adjustment: ±1% (Zero/Span)
 Output adjustment: ±10% (Zero/Span)

■ Standard Performance

Accuracy rating: ±0.2% of span or 0.2°C, whichever is greater (including linearization error)
 Accuracy is not guaranteed for output level less than 0.5% of the span of a 0 to X mA output range type.

Dual output (optional): Dual output (optional):
 Relative error between output 1 and 2 is within ±0.2%. These outputs are not insulated.

Response speed: 200 ms, 63% response (10 to 90%)
 Burnout: Up, Down or Off ; burnout time is 60 sec. or less.

Insulation resistance: 100 MΩ or more at 500 V DC between input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.

Withstand voltage:

DC drive 1500 V AC/min. between input and (output and power supply). 500 V AC/min. between output and power supply.
 AC drive 1500 V AC/min. between input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.

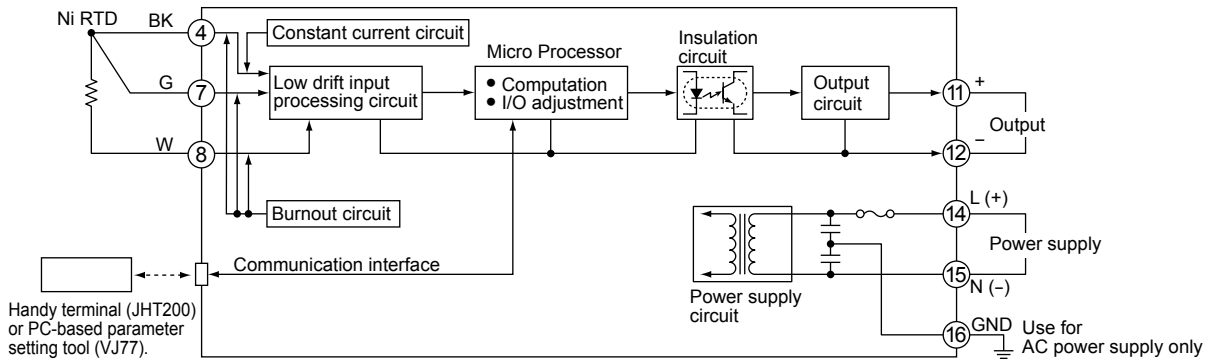
■ Environmental Conditions

Operating temperature range: 0 to 50°C
 Operating humidity range: 5 to 90% RH (no condensation)
 Power supply voltage: 85 to 264 V AC, 47 to 63Hz or 24 V DC±10%
 Effect of power supply voltage fluctuations: ±0.1% of span or less for fluctuation within the operating range of power supply voltage specification.
 Effect of ambient temperature change: ±0.2% of span or less for a temperature change of 10°C.
 Effect of leadwire resistance change: ±0.1°C or less for a change of 10 Ω per a wire
 Current consumption:
 24 V DC 90 mA (WR9A), 55 mA (WR9V)
 Power consumption:
 100 V AC 10 VA (WR9A), 6 VA (WR9V)

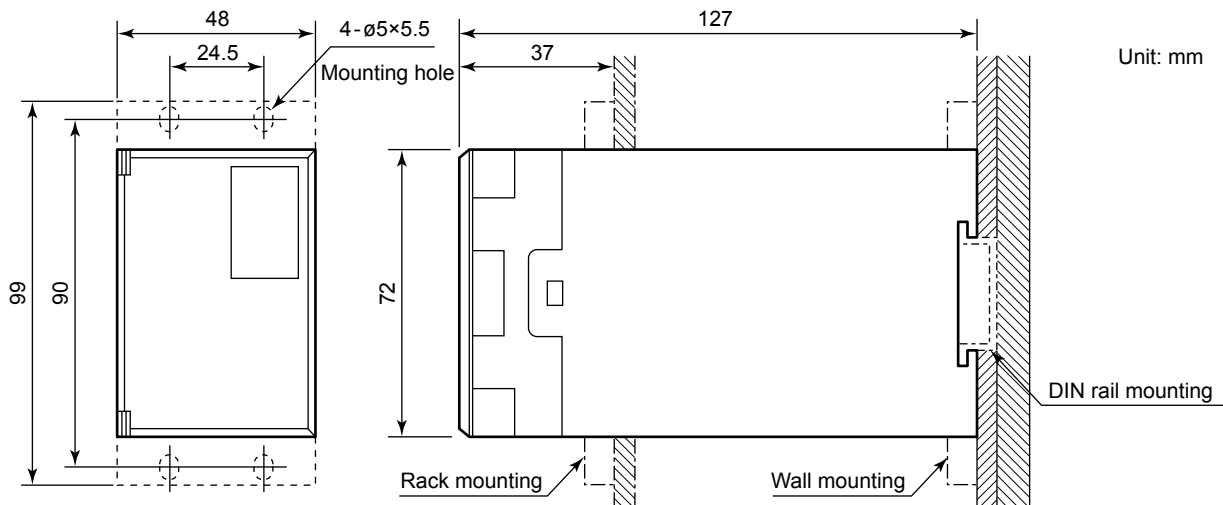
■ Mounting and Dimensions

Material: ABS resin (Case body)
 Mounting method: Rack, Wall or DIN rail mounting
 Connection method: M4 screw terminals
 External dimensions: 72 (H) × 48 (W) × 127 (D) mm
 Weight: DC; Approx. 150 g, AC; Approx. 300 g

■ Block Diagram



■ External Dimensions



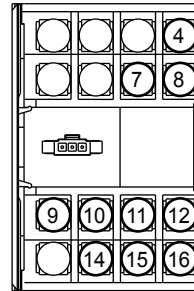
■ Standard Accessories

Tag number label: 1
 Mounting block: 2
 Mounting screw: M4 screw x 4

■ Custom Order Specifications

	Current signal	Voltage signal
Output range (DC)	0 to 24 mA	-10 to +10 V
Span (DC)	1 to 24 mA	10 mV to 20 V
Zero elevation	0 to 200%	-100 to +200%

■ Terminal Assignments



4	Input	(BK)
7	Input	(G)
8	Input	(W)
9	Output 2	(+)
10	Output 2	(-)
11	Output 1	(+)
12	Output 1	(-)
14	Supply	(L+)
15	Supply	(N-)
16	Ground	(GND)*

* Use for AC power supply only.

Terminal ⑨-⑩ are used for output 2 in case dual output is specified.