

General Specifications

Models WH9A, WH9V
Linearizer



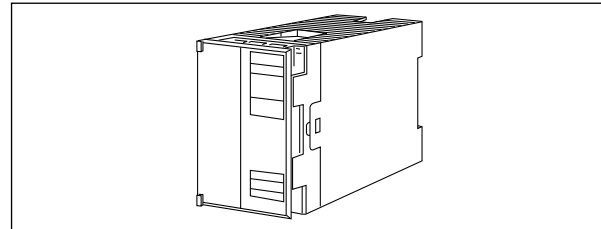
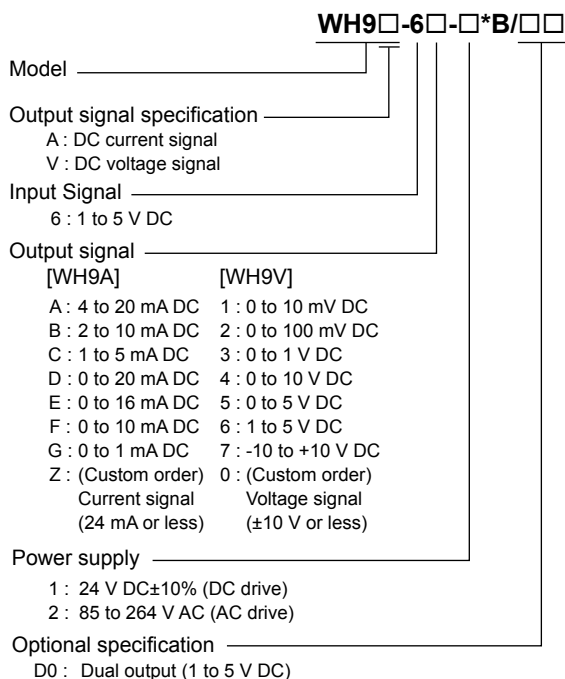
GS 77J09H09-01E

General

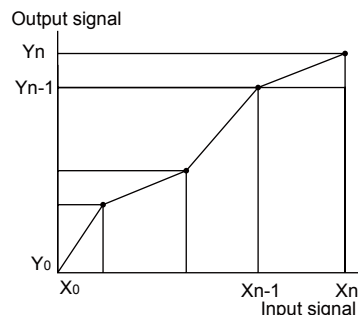
The WH9A/WH9V is a compact, front terminal connection type isolator that receives non-linear signals generated by analyzers or sound level meters, and converts them into linear DC current or DC voltage signals.

- Zero/span adjustment, I/O monitoring, etc. 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



- Set the breakpoints according to the following:
 For input: $-12.5\% \leq X_0 < X_1 < X_2 \dots X_{31} - 1 \leq 112.5\%$
 For output: $-10.0\% \leq Y_0$ to $Y_{31} < 110.0\%$



Output characteristic: Output for lowcut point or less is cramped with straight line proportional to input.

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: 90 to 110 %

Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. WH9A-6A-2*B
- Breakpoints: write the data to work sheet on page 3.

Input/Output Specifications

Input signal: 1 to 5 V DC (non-linear)
 Input resistance: 1 MΩ during power on, 100 kΩ during power off
 Maximum allowable input: ±9 V DC or less
 Linearization:
 Breakpoint setting: Up to 32 points
 (Set a relationship between input and output with % value over the span.)

Standard Performance

Accuracy rating: ±0.1% of span

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): 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%)

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 for one minute 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 63 Hz 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
- Current consumption:
24 V DC 85 mA (WH9A), 50 mA (WH9V)
- Power consumption:
100 V AC 9 VA (WH9A), 5 VA (WH9V)

■ Mounting and Dimensions

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

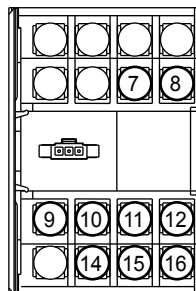
■ Standard Accessories

- Tag number label: 1
- Mounting blocks: 2
- Mounting screws: 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

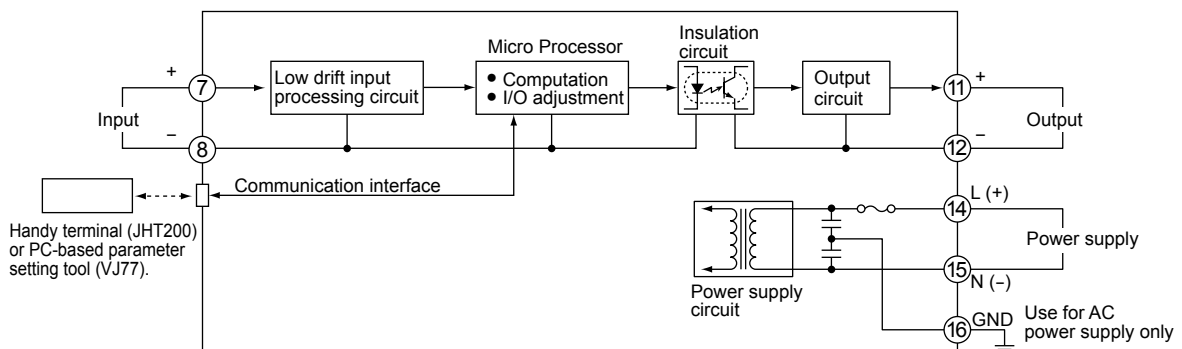


7	Input (+)
8	Input (-)
9	Output-2 (+)
10	Output-2 (-)
11	Output-1 (+)
12	Output-1 (-)
14	Supply (L+)
15	Supply (N-)
16	Ground (GND)*

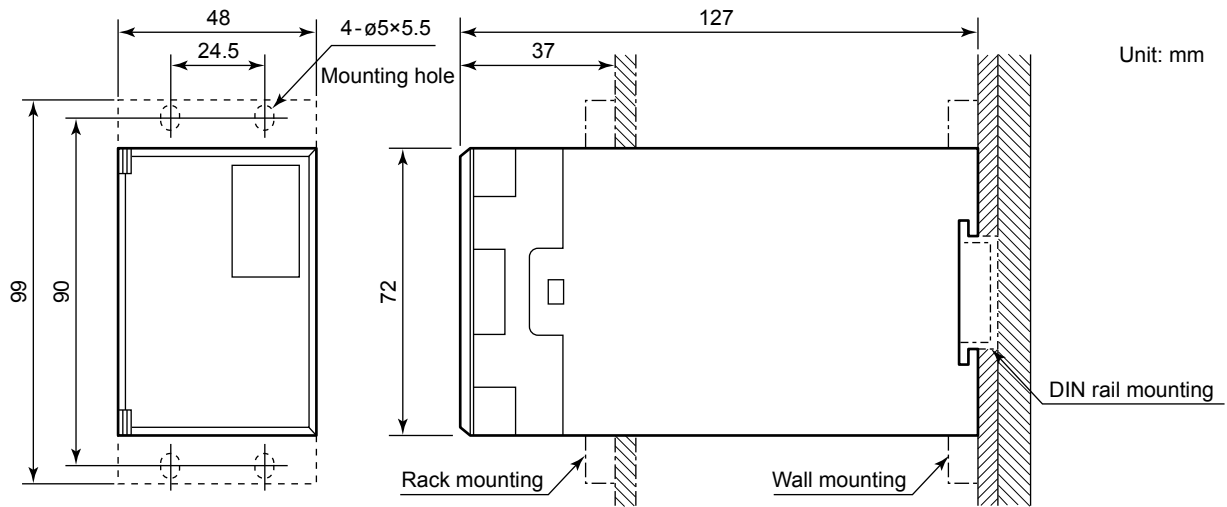
Terminals ⑨—⑩ are used for Output2 when the dual output is specified.

*: Use for AC power supply only

■ Block Diagram



External Dimensions



Work Sheet

Model and Suffix Codes

Write at least 2 points for input and output breakpoint data.

Input (%)				Output (%)				Input (%)				Output (%)			
X0			.	Y0			.	X16			.	Y16			.
X1			.	Y1			.	X17			.	Y17			.
X2			.	Y2			.	X18			.	Y18			.
X3			.	Y3			.	X19			.	Y19			.
X4			.	Y4			.	X20			.	Y20			.
X5			.	Y5			.	X21			.	Y21			.
X6			.	Y6			.	X22			.	Y22			.
X7			.	Y7			.	X23			.	Y23			.
X8			.	Y8			.	X24			.	Y24			.
X9			.	Y9			.	X25			.	Y25			.
X10			.	Y10			.	X26			.	Y26			.
X11			.	Y11			.	X27			.	Y27			.
X12			.	Y12			.	X28			.	Y28			.
X13			.	Y13			.	X29			.	Y29			.
X14			.	Y14			.	X30			.	Y30			.
X15			.	Y15			.	X31			.	Y31			.

<Specification conditions>

Input breakpoints: $-12.5\% \leq X_0 < X_1 < X_2 < \dots < X_{n-1} < X_n \leq 112.5\%$; minimum digit 0.1%

Output breakpoints: $-10.0\% \leq (Y_0 \text{ to } Y_n) \leq 110.0\%$; minimum digit 0.1%

Note: Breakpoints are fixed at the time of ordering. Note that the settings cannot be changed in the field.