

General Specifications

Model VJHK
Limit Alarm (DC Input Type)

JUXTA

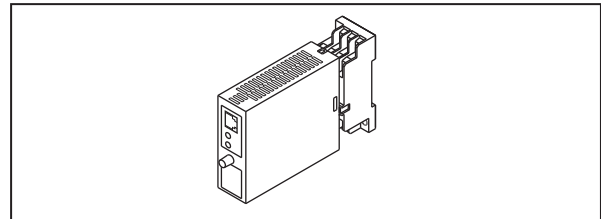
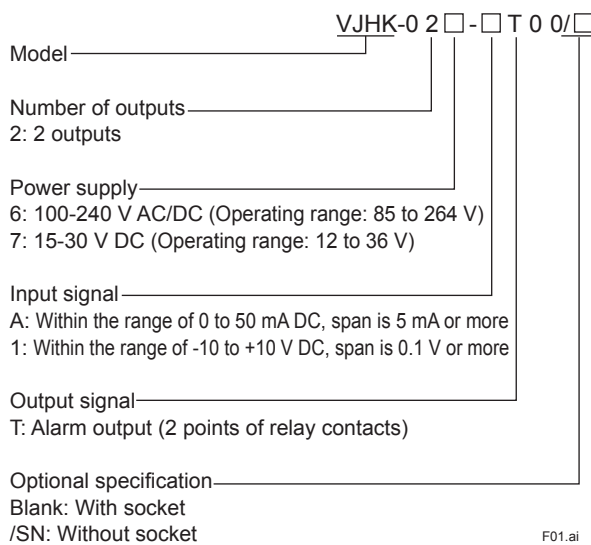
GS 77J01H21-01E

■ General

This plug-in type Limit Alarm for DC input receives DC current or DC voltage signal.

- Each parameter setting can be changed using a PC (VJ77 PC-based Parameters Setting Tool) or the Handy Terminal (JHT200).

■ Model and Suffix Codes



■ Input Specifications

Input signal: DC current or DC voltage signal
Input range:

Code A: Within the range of 0 to 50 mA DC, and span is 5 mA or more

Code 1: Within the range of -10 to +10 V DC, and span is 0.1 V or more

Input resistance:

DC current signal: 100 Ω (Shunt resistor externally connected)

DC voltage signal: 1 MΩ (100 kΩ during power off)

■ Output Specifications

Signal type: Relay contact

Output signal: NO contact output (contact turns on when energized), 2 points

Contact rating: 120 V AC/1 A, 220 V AC/0.5 A (resistance load)

30 V DC/1 A, 120 V DC/0.1 A (resistance load)

Direction of alarm action: High-limit alarm or low-limit alarm

Direction of relay action: Energized or de-energized under normal condition

Alarm setting range: 0 to 100% of input range

Setting resolution: 0.1%

Hysteresis setting range: 0 to 100% of input range

Setting resolution: 0.1%

Alarm ON delay: Condition monitoring time from the establishment of alarm conditions to its output. (For example, when an alarm ON delay is set to 1 second, alarm output is generated if alarm status continues for 1 second or more after the input value exceeds the alarm setpoint.)

Setting range: 0 to 999 seconds

Setting resolution: 1 second (However, about 0.2 second is to be added to the set time to prevent wrong operation.)

Alarm OFF delay: Condition monitoring time from the establishment of return-to-normal conditions to its output. (For example, when an alarm OFF delay is set to 2 seconds, alarm output is released if normal condition continues for 2 seconds or more after the input value has returned to normal from the alarm status.)

■ Ordering Information

Specify the model and suffix codes at the time of order.

If the input range is specified with the order, the specified value will be assigned before shipment.

For other setting items, the initial values shown below are to be assigned.

- Model and suffix codes: e.g. VJHK-026-AT00
- Input range: e.g. 4 to 20 mA DC

■ Initial Values (Factory-set Values)

The initial values (factory-set values) are as follows.

- Input range: 4 to 20 mA DC (for current input) or 1 to 5 V DC (for voltage input)
- Direction of alarm action: High-limit alarm (alarm 1), low-limit alarm (alarm 2)
- Direction of relay action: Energized at alarm status (alarm 1 and alarm 2).
- Alarm setting: 100% (alarm 1), 0% (alarm 2)
- Hysteresis: 3% (alarm 1 and alarm 2)
- Alarm ON delay: 0 second (alarm 1 and alarm 2)
- Alarm OFF delay: 0 second (alarm 1 and alarm 2)

Setting range: 0 to 999 seconds
 Setting resolution: 1 second (However, about 0.2 second is to be added to the set time to prevent wrong operation.)
 Indication of alarm action: The alarm indicator lamp (LED) on the front panel lights up if an alarm occurs. (2 lamps)

■ Items Available to Be Set

The following items can be set using a PC (VJ77 PC-based Parameters Setting Tool) or the Handy Terminal (JHT200):

Input range, direction of alarm action, direction of relay action, alarm setting, hysteresis, alarm ON delay and alarm OFF delay

■ Standard Performance

Accuracy rating: $\pm 0.1\%$ of span

However, accuracy is limited in the following cases according to the input range settings.

When the input range is within the range of -10 to $+10$ V (H range), and span is less than 5 V:

$$\text{Accuracy (\%)} = \pm 0.1 (\%) \times 5 (\text{V}) / \text{input span (V)}$$

When the input range is within the range of -5 to $+5$ V (M range), and span is less than 2.5 V:

$$\text{Accuracy (\%)} = \pm 0.1 (\%) \times 2.5 (\text{V}) / \text{input span (V)}$$

When the input range is within the range of -1 to $+1$ V (L range), and span is less than 0.5 V:

$$\text{Accuracy (\%)} = \pm 0.1 (\%) \times 0.5 (\text{V}) / \text{input span (V)}$$

For current input, apply the value [input range \times input resistance] to the above and add the resistor error 0.1%.

Response speed: 450 ms (Time to alarm output when the input change is 10 to 90% and alarm setpoint is 50%. When the alarm delay setting and hysteresis are minimum.)

Effect of power supply voltage fluctuations: $\pm 0.1\%$ of span or less for the fluctuations within the allowable range of each power supply voltage specification

Effect of ambient temperature change: $\pm 0.2\%$ of span or less for a temperature change of 10°C

■ Power Supply and Isolation

Power supply rated voltage:
 100-240 V AC/DC \approx 50/60 Hz or
 15-30 V DC \approx

Power supply input voltage: 100-240 V AC/DC \approx
 $(-15, +10\%)$ 50/60 Hz or
 15-30 V DC \approx ($\pm 20\%$)

Power consumption: 24 V DC 1.4 W, 110 V DC 1.4 W
 100 V AC 3.9 VA, 200 V AC 4.9 VA

Insulation resistance: 100 M Ω /500 V DC between input, output 1, output 2, power supply and grounding terminals mutually.

Withstand voltage: 2000 V AC/minute between input, (output 1, output 2), power supply and grounding terminals mutually.
 1000 V AC/minute between output 1 and output 2 terminals.

■ Environmental Conditions

Operating temperature range: 0 to 50°C

Operating humidity range: 5 to 90% RH (no condensation)

Operating conditions: Avoid installation in such environments as corrosive gas like sulfide hydrogen, dust, sea breeze and direct sunlight.

Installation altitude: 2000 m or less above sea level.

■ Mounting and Dimensions

Construction: Compact plug-in type

Material: Modified polyphenylene oxide resin (casing)

Mounting method: Wall or DIN rail mounting, or mounting using VJ mounting base

Connection method: M3 screw terminal

External dimensions: 29.5 (W) \times 76 (H) \times 124.5 (D) mm (including a socket)

Weight: Approx. 170 g

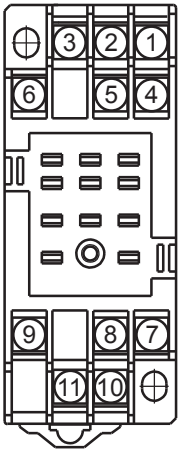
■ Accessories

Tag number label: 1 sheet

Range label: 1 sheet

Shunt resistor: 1 (supplied when current input is specified)

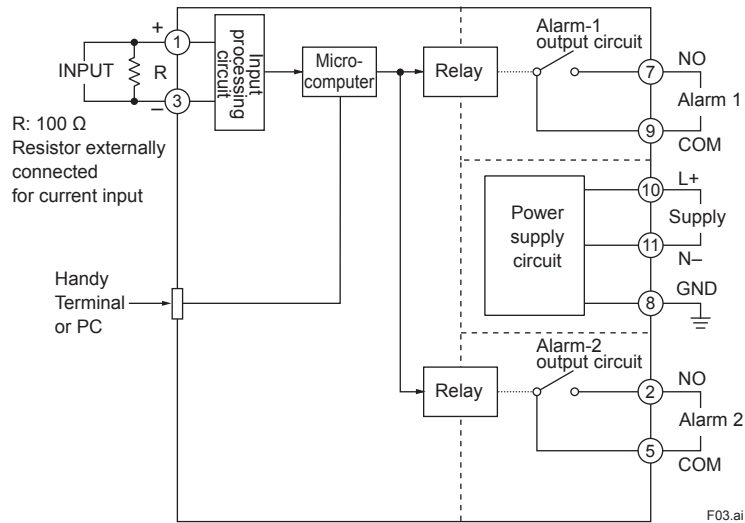
■ Terminal Assignments



Terminal No.	Signal
1	Input (+)
2	Alarm 2 (NO)
3	Input (-)
4	N.C.
5	Alarm 2 (COM)
6	N.C.
7	Alarm 1 (NO)
8	Ground (GND)
9	Alarm 1 (COM)
10	Supply (L+)
11	Supply (N-)

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■ Block Diagram



■ External Dimensions

