

General Specifications

Model WH1K
Limit Alarm

JUXTA

GS 77J09H21-01E

General

The WH1K is a compact, front terminal connection type Limit Alarm that receives DC current or DC voltage signals, compares them with internal setting values and outputs alarm contacts.

- Two alarm outputs: each output has an alarm, hysteresis and direction set points.

Model and Suffix Codes

WH1K-□1-□*B

Model	_____
Input Signal	_____
A: 4 to 20 mA DC	3: 0 to 1 V DC
B: 2 to 10 mA DC	4: 0 to 10 V DC
C: 1 to 5 mA DC	5: 0 to 5 V DC
D: 0 to 20 mA DC	6: 1 to 5 V DC
E: 0 to 16 mA DC	7: -10 to +10 V DC
F: 0 to 10 mA DC	0: (Custom order) Voltage signal
G: 0 to 1 mA DC	(±10 V or less)
H: 10 to 50 mA DC	
Z: (Custom order) Current signal (50 mA or less)	
Output signal	_____
1: Relay contact (Transfer contact (c contact): 2 points)	
Power supply	_____
1: 24 V DC±10% (DC drive)	
2: 85 to 264 V AC (AC drive)	

Ordering Information

Specify the following when ordering.

- Model and suffix codes :e.g. WH1K-A1-2*B

Factory Default Values

The factory default values are as follows:

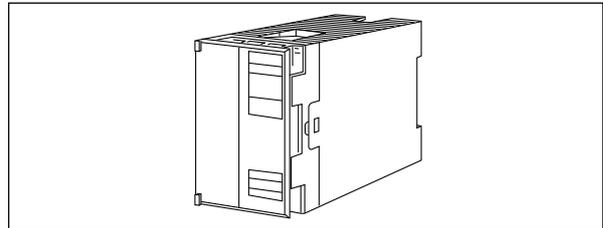
- Direction of alarm action:
 - Alarm 1, Direct action (DIR);
 - Alarm 2, Reverse action (RVS)
- Alarm settings:
 - Alarm 1, 100%; Alarm 2, 0%
- Hysteresis:
 - Alarm 1, 1%; Alarm 2, 1%

(Basically, although the above settings should be set by users, can also be specified before shipment.)

Input/Output Specifications

Input signal: DC current or DC voltage signal
Input resistance:

DC current input	Input resistance	DC voltage input	Input resistance
4 to 20 mA	250 Ω	0 to 1 V	1 MΩ during power on
2 to 10 mA	500 Ω	0 to 10 V	
1 to 5 mA	1 kΩ	0 to 5 V	100 kΩ during power off
0 to 20 mA	250 Ω	1 to 5 V	
0 to 16 mA	250 Ω	-10 to +10 V	
0 to 10 mA	500 Ω		
0 to 1 mA	1 kΩ		
10 to 50 mA	100 Ω		



Maximum allowable input:

Current input: Any level that satisfies the following condition,
 $(\text{Input current})^2 \times \text{Input resistance} \leq 0.5 \text{ W}$

Voltage input: Within ±30 V DC

Output signal type: Relay contact

Alarm output: Transfer contact (c contact), 2 points

Contact rating: 100 V AC/1 A (resistance load)

20 V AC/0.5 A (resistance load)

30 V DC/1 A (resistance load)

125 V DC/0.1 A (resistance load)

Direction of alarm action: Direct action (DIR) or reverse action (RVS)

Alarm 1 and Alarm 2 are set by the jumper pin respectively.

Direction of relay action: De-energized under normal condition

Alarm action point setting range: 0 to 100% of input range

Alarm 1 and Alarm 2 are set by the volume respectively.

Hysteresis: 0 to 10%

Alarm 1 and Alarm 2 are set by the volume respectively.

Standard Performance

Alarm action point setting accuracy:

4 to 20 mA DC or 1 to 5 V DC input: ±0.2% of span

Other input: ±1% of span

Reproducibility of alarm action point: ±0.05% of span

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 1000 V AC/min. between input and output, output and power supply, and input and power supply.

AC drive 1000 V AC/min. input and output, input and power supply, input and ground, output and power supply, output and ground, and power supply and ground.

Environmental Conditions

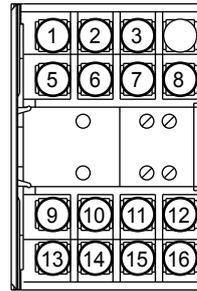
Operating temperature range: 0 to 50°C

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: $\pm 0.1\%$ of span or less for fluctuation within the operating range of power supply voltage specification.
 Effect of ambient temperature change: $\pm 0.2\%$ of span or less for a temperature change of 10°C .
 Current consumption: 24 V DC 60 mA
 Power consumption: 100 V AC 6 VA

Terminal Assignments



1	Alarm 1 output	(NC)
2	Alarm 1 setting monitor	
3	Alarm 1 hysteresis monitor	
5	Alarm 1 output	(COM)
6	Alarm 1 output	(NO)
7	Input	(+)
8	Input	(-)
9	Alarm 2 output	(COM)
10	Alarm 2 output	(NO)
11	Alarm 2 setting monitor	
12	Alarm 2 hysteresis monitor	
13	Alarm 2 output	(NC)
14	Supply	(L+)
15	Supply	(N-)
16	Ground	(GND)*

Mounting and Dimensions

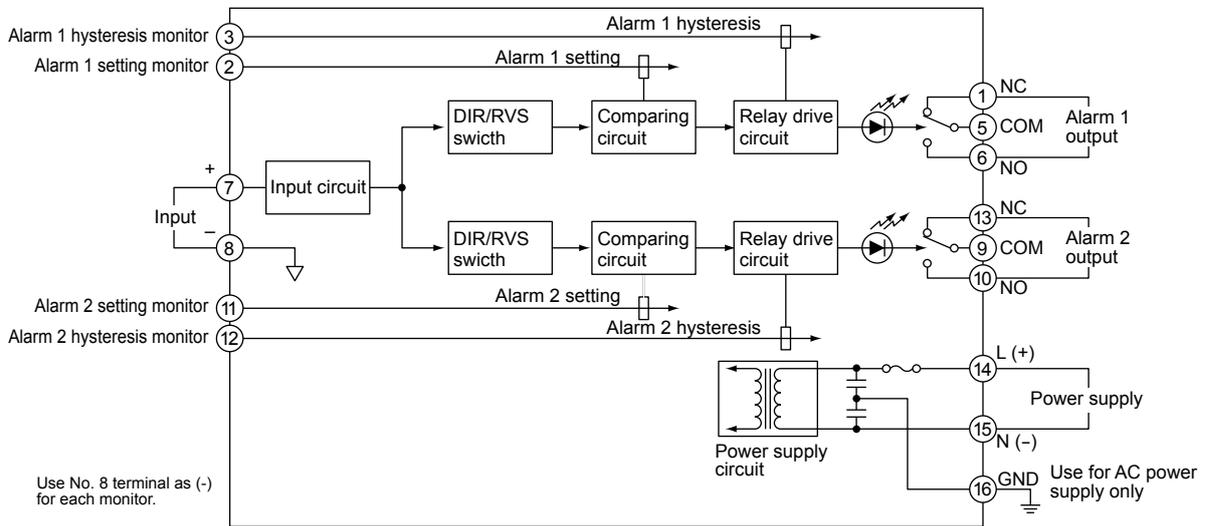
Material: ABS resin (Case body)
 Mounting method: Rack, Wall or DIN rail mounting
 Connection method: M4 screw terminals
 External dimensions: 72 x 48 x 127 mm (H x W x D)
 Weight: DC; Approx. 150 g, AC; Approx. 300 g

Standard Accessories

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

*: Use for AC power supply only.

Block Diagram



External Dimensions

