General Specifications

Model SKYD (Style R)
Alarm Unit

yewSeries 80

GS 01B04K01-02E

■ GENERAL

The Model SKYD Alarm Unit accepts input signals, and provides absolute or deviation alarm outputs. Absolute alarms are output after comparison of input signals from a single source with one or two setpoints, and deviation alarms are output after comparison of input signals from two sources with two setpoints. Direct or reverse alarm action can be selected for each of the alarm output settings. The front panel is provided with an alarm LED for confirming alarm relay operation (when relay is energized).

The JHT200 Handy Terminal[1] is used for setting Alarm Unit parameters. On the SKYD model with display setter (SKYD-□04), input indication (engineering unit) and alarm settings can be set on the front panel.

*1: • The BT200 BRAIN Terminal of YOKOGAWA Electric Corporation can also be connected.
 • The adapter for modular jack (E9786WH) is required for connecting the JHT200 Handy Terminal to the Alarm Unit.

■ STANDARD SPECIFICATIONS

Input Signals

Input: 1 to 5 V DC
Number of inputs: 1 (SKYD-1/2 type) or 2 (SKYD-3 type)
Load Resistance: 1 MΩ

Square root extraction (absolute alarm only)

Computation: $E_0 = 2\sqrt{E_1 - 1} + 1$

When E_1 is less than low cut, $E_0 = E_1$
E_0: Input Signal (after square root calculation),
E_1: Input Signal (before square root calculation)

Output Signals

Output: Relay contact
Contact Capacity: 100 V AC, 1 A (resistive load)
   220 V AC, 0.5 A (resistive load)
   30 V DC, 1 A (resistive load)
   110 V DC, 0.1 A (resistive load)
Contact Life Expectancy: 600,000 times
Number of Outputs:
   1 (SKYD-1 type) or 2 (SKYD-2/3 type)

Alarm Functions

Alarm operation: 1 input absolute alarm (SKYD-1/2 type)
   2 input deviation alarm (SKYD-3 type)

Alarm Setting

Input absolute alarm: 0 to 100%
Input deviation alarm: -100 to +100%
Hysteresis: 0 to 100%
Alarm ON/OFF delay: 0 to 999 sec.

<Following setting ranges only on SKYD-□04>

Input absolute alarm/deviation alarm:
   -19999 to +32000 (engineering unit)
Hysteresis: 0 to 32000 (engineering unit)

Direction of alarm action: Direct/reverse
   Excluding SKYD-□04
      Selection by parameter setting
   SKYD-□04 Selection by jumper switch setting
Direction of alarm relay action (at normal operation):
   De-energized/energized

Direction of alarm relay action: De-energized setting at normal operation

Action	Input value or deviation value < Setting value	Setting value < Input value or deviation value
Direct	Relay de-energized	Relay energized
Reverse	Relay energized	Relay de-energized

Direction of alarm relay action: Energized setting at normal operation

Action	Input value or deviation value < Setting value	Setting value < Input value or deviation value
Direct	Relay energized	Relay de-energized
Reverse	Relay de-energized	Relay energized

Alarm Output: 1 transfer contact for each setting
   NO: (Normally Open) means open when relay is not energized.
   NC: (Normally Closed) means closed when relay is not energized.
BRAIN Communication Function:
   Alarm action is set and this function is specified by the JHT200 Handy Terminal. [1]
Indicator setting function (SKYD-□04):
   Digital indicator 5-digit 7-segment LED (1 line)
   Indication range:
      -19999 to +32000 (decimal point selectable)

YOKOGAWA ◆

At input value/input deviation value indication,
SP indicator is not indicated.
LED indicators (ALM: yellow, SP: green)
Alarm action indication (ALM1/2)
Lit at relay energized state
Alarm setting value indication (SP1/2)   Lit
(ALM2 and SP2 are provided on SKYD-2/3 type only.)
Setter   Setting ($\rightarrow$, $\uparrow$, SET, $\triangle$) switches   4
Setting enable switch   1
Alarm setting values can be set.
Indication Function (excluding SKYD-□04):
Digital indicator is not provided
LED indicators (ALM1/2: yellow)
Alarm action indicators (ALM1/2)
Lit at relay energized state
(ALM2 is provided on SKYD-2/3 type only.)

■ MOUNTING AND APPEARANCE

Mounting: Rack mounting
Wiring
Signal Wiring: ISO M4 size (4 mm) screws on terminal
block
Power and Ground Wiring
100 V version: JIS C 8303 two-pin plug with earthing
contact
220 V version: CEE 7 VII (CENELEC standard) plug
(/A2ER)
Cable Length: 300 mm
External Dimensions (depth behind panel):
180 (H) x 48 (W) x 300 (D) (mm)
Weight: 1.7 kg (including rack-mounting case)

■ STANDARD PERFORMANCE

Accuracy: ±0.2% of span
±0.5% of span with square root characteristic

Model	Power Supply		
	24 V DC	100 V AC	220 V AC
SKYD-1 type	50mA	4.8VA	8.0VA
SKYD-2, 3 type	70mA	5.8VA	8.7VA

Maximum Power Consumption
Insulation Resistance
Between Input/alarm output terminal and Ground:
100 MΩ/500 V DC
Between Power and Ground: 100 MΩ/500 V DC
Dielectric Strength
Between Input terminals and Ground:
500 V AC for 1 minute
Between Alarm output terminal/Power and Ground:
1000 V AC for 1 minute (100 V version)
1500 V AC for 1 minute (220 V version)

■ NORMAL OPERATING CONDITIONS

Ambient Temperature: 0 to 50°C
Ambient Humidity: 5 to 90%RH (non-condensing)
Power Supply: AC/DC both usage
100 V version: DC drive 20 to 130 V, no polarity
AC drive 80 to 138 V, 47 to 63 Hz
220 V version: DC drive 120 to 340 V, no polarity
(/A2ER)   AC drive 138 to 264 V, 47 to 63 Hz

■ OPTIONS

/A2ER: 220V version with power supply plug
/NHR: Without case
/TB: With power supply terminal (for 100V
version)

■ ACCESSORIES

Fuse (1A): 1
Alarm label: 1 sheet

■ MODEL & SUFFIX CODES

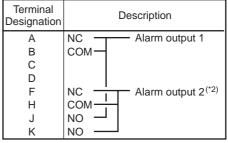| Model	Suffix Codes		Description
SKYD -	- -		Alarm Unit
Alarm	-1 - - - - - - - - - - - - - - - - - -		One input, one setpoint absolute alarm
	-2 - - - - - - - - - - - - - - - - -		One input, Two setpoints absolute alarms
	-3 - - - - - - - - - - - - - - - - -		Two inputs, Two setpoints deviation alarms
		0 - - - - - - - - - - - - - - -	Always 0
Setting Scale[*1]		0 - - - - - - - - - - - - -	0 to 100 linear
		1 - - - - - - - - - - - -	0 to 10 square root [*2]
		2 - - - - - - - - - - - -	-100 to 0 to +100 linear [*3]
		4 - - - - - - - - - - - -	Actual scale (with display setter)
Style Code		*R - - - - - - - -	Style R
Option		/A2ER	220V version with power supply plug
		/NHR	Without case
		/TB	With power supply terminal (for 100V version)

*1: In the case of two set points, the setting ranges of one set
point/two set points are the same.
*2: The value obtained by squaring the setting value functions as the
alarm setting value.
*3: 2-input deviation alarm only
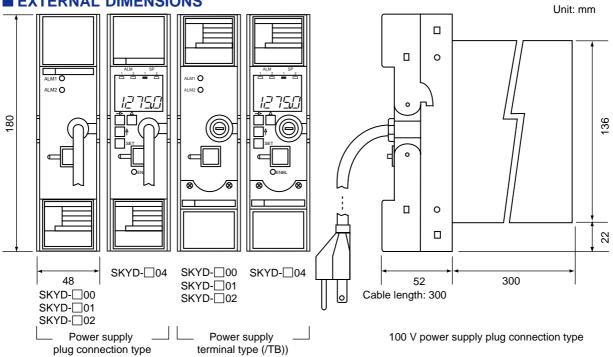
■ TERMINAL CONNECTIONS

Terminal Designation	Description
1	
2	+ / − > Input 1
3	
4	
5	
6	+ / − > Input 2 [*1]
7	
8	

*1: For SKYD-3 type only.

Terminal Designation	Description
A	NC — Alarm output 1
B	COM
C	
D	
F	NC — Alarm output 2 [*2]
H	COM
J	NO
K	NO

When output is not used, the terminals are opened.
*2: Except SKYD-1 type.

■ ORDERING INSTRUCTIONS

1. Model and suffix codes and option codes, if necessary

■ EXTERNAL DIMENSIONS

Unit: mm

48

SKYD-☐00
SKYD-☐01
SKYD-☐02

Power supply
plug connection type

SKYD-☐04

SKYD-☐00
SKYD-☐01
SKYD-☐02

Power supply
terminal type (/TB))

SKYD-☐04

Cable length: 300

52   300

100 V power supply plug connection type

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