# *Shinko* SE Series

#### **SPEC SHEET**

2ch Alarm Detector (Direct Current) (with two large displays) Model: SE2AA

Features Alarm Energized/ 맴맴 De-energized Alarm HOLD function <u>nun</u> Alarm delay function Set value lock SE  $\bigcirc$ Model SE2AA - 🛛 - 🔲 - 🔲 Socket 1: Screw fall prevention Finger-safe (for Y terminal) 2: For Ring terminal Power supply 0: 100 to 240V AC 1: 24V AC/DC Output points -0: 2-points (Alarm 1, 2 outputs) 1: 6-points (Alarm 1 to 6 outputs) How to Order Specify a model. (E.g.) SE2AA-1-0-0 Factory adjusted value: CH1 input 4 to 20mA DC

Accessories (sold separately)	

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Na	me	Model	Spec.			
		RES-S01-050	50Ω ±0.1%			
	Ring	RES-S01-100	100Ω ±0.1%			
	terminal	RES-S01-200	200Ω ±0.1%			
Shunt		RES-S01-01K	1kΩ ±0.1%			
Resistor		RES-S06-050	50Ω ±0.1%			
	Y	RES-S06-100	100Ω ±0.1%			
	terminal	RES-S06-200	200Ω ±0.1%			
		RES-S06-01K	1kΩ ±0.1%			

4 to 20mA DC

#### Input Specifications

CH2 input

**Direct current** [Connect a shunt resistor (sold separately) between input terminals.]

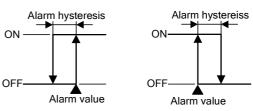
Input range	Shunt resistor	
4 to 20mA DC		
0 to 20mA DC	50Ω	
0 to 16mA DC		
2 to 10mA DC	1000	
0 to 10mA DC	10032	
1 to 5mA DC	200Ω	
0 to 1mA DC	1kΩ	

# Output Specifications

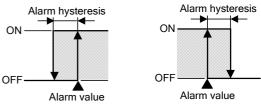
A maximum of 3 points of alarm output are available for one input.

For each alarm output, one of the following types can be selected in [Alarm type]: High limit alarm, Low limit alarm, High limit alarm with standby and Low limit alarm with standby.

High limit alarm
Low limit alarm



• High limit alarm with standby • Low limit alarm with standby



Standby functions.

Alarm action: ON/OFF action Alarm hysteresis: 0.1 to 100.0%FS Alarm delay time: 0 to 9999 sec Alarm Energized/De-energized, Selectable Alarm HOLD function Enabled/Disabled, Selectable Alarm 1 output: Relay contact 1a Control capacity: 3A 250V AC (resistive load) 1A 250V AC (inductive load  $\cos\phi=0.4$ ) Electric life: 100,000 cycles Alarm 2, 3 outputs: Open collector Control capacity: 0.1A 24V DC

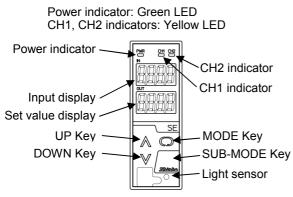
#### Performance

Reference accuracy (Ambient temperature: 23°C) • Direct current input: Within ±0.1% Indication accuracy: Within Reference input accuracy ±1 digit Input sampling period: 25msec, 125msec, 250msec (Selectable by keypad) Temperature coefficient: ±0.015%/°C or less Insulation resistance: 10MΩ or more, at 500V DC (Input - Output - Power) Dielectric strength: 1.5kV AC for 1 minute (Input - Output - Power) ■ General Structure

Case: Flame-resistant resin Color: Light gray

Front panel: Membrane sheet Setting: Using the front keypad Display: Input display: 7-segment Red LED display 4-digit, Character size, 10x4.6mm (HxW) Set value display: 7-segment Red LED display 4-digit, Character size, 10x4.6mm (HxW)

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#### Installation Specifications

Power supply: 100 to 240V AC 50/60Hz

24V AC/DC 50/60Hz

Allowable voltage range: 85 to 264V AC, 20 to 28V AC/DC Power consumption: Approx. 9VA

Ambient temperature: -5 to 55°C Ambient humidity: 35 to 85%RH (non-condensing) Mounting: DIN rail

External dimensions: W30xH88xD108mm(socket included) Weight: Approx. 200g (socket included)

## Attached Functions

Auto-light function: Automatically measures and controls brightness of the displays to conserve power.

Power failure countermeasure:

The data is backed up in non-volatile IC memory. Self diagnosis: The CPU is monitored by a watchdog timer, and when an abnormal status is found on the CPU, the unit is switched to warm-up status turning all outputs OFF.

#### Environmental Specification

RoHS directive compliance

## Settings

#### Function keys

- (1) UP Key: Increases a numerical value.
- (2) DOWN Key: Decreases a numerical value.
- (3) MODE Key: Selects a setting mode.
- (4) SUB-MODE Key: Re-lights displays. (UP Key, DOWN Key or MODE Key also re-lights displays.)

## Displays and Indicator

Input display: Indicates the input value.

- Indication of -2000 or less: The minus (-) sign and input value light alternately.
- Indication of 10000 or more: The lower 4 digits flash. Under range: -10% of input span or less:
- "\_\_\_\_" flashes on the Input display. Over range: 110% of input span or more:

" "flashes on the Input display. Warm-up indication: The CH1 input type is displayed on the Input display, CH2 input type is displayed on the Set value display for 3 sec after power is turned ON.

Set value display: Alarm 1 (A1), Alarm 2 (A2), Alarm 3 (A3) values are indicated (follows the selection in "Display selection".).

If the UP Key is pressed for 1 second during alarm value indication, alarm values will be switched thus. (A1 $\rightarrow$  A2  $\rightarrow$  A3 $\rightarrow$  A1).

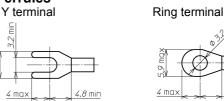
When power is turned ON, A1 value is indicated. When alarm output is ON, the relevant CH1/CH2 indicator with the alarm ON flashes, and " $\vec{H}$  ,  $\vec{n}$ " and the value selected in [Display selection] are alternately indicated on the Set value display. If the UP Key is pressed together with the DOWN Key in the above status, the alarm output currently being turned ON will be displayed.

(E.g.) If CH1 Alarm 1 and CH2 Alarm 3 outputs are ON, "I - R I" and "Z - R B" are displayed in order.

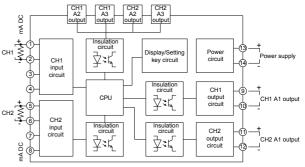
Power indicator (green): Lit when power is turned ON. CH1 indicator (yellow): Lit when CH1 is selected in

[Display selection]. CH2 indicator (yellow): Lit when CH2 is selected in [Display selection].

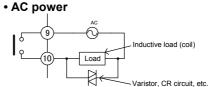
# Ferrules

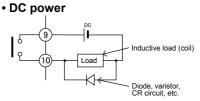


#### Circuit Configuration & Terminal Arrangement

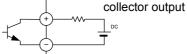


# Alarm 1 output: Take the following measures for relay contact protection and noise reduction.





Alarm 2, 3 outputs: Connection example of Open



# External Dimensions (Scale: mm)

