

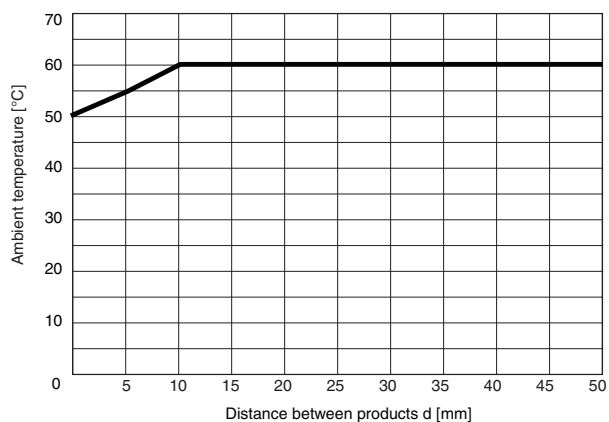
Specifications

Input frequency		50/60 Hz
Overload capacity		Continuous 500 V
Repeat accuracy	Operating value	±0.5% full scale (at 25°C and 65% humidity, rated power supply voltage, 50/60 Hz sine wave input)
	Operating time	±50 ms (at 25°C and 65% humidity, rated power supply voltage)
Applicable standards	Conforming standards	EN 60947-5-1 Installation environment (pollution level 2, installation category III)
	EMC	EN 60947-5-1
	Safety standards	UL 508 (Recognition), Korean Radio Waves Act (Act 10564), CSA: C22.2 No.14, CCC: GB/T 14048.5
Insulation resistance		20 MΩ min. Between external terminals and case Between input terminals and output terminals
Dielectric strength		2,000 VAC for one minute Between external terminals and case Between input terminals and output terminals
Noise immunity		1,500 V power supply terminal common/normal mode Square-wave noise of ±1 μs/100 ns pulse width with 1-ns rise time
Vibration resistance		Frequency: 10 to 55 Hz, 0.35-mm single amplitude 10 sweeps of 5 min each in X,Y, and Z directions
Shock resistance		100 m/s ² , 3 times each in 6 directions along 3 axes
Degree of protection		Terminals: IP20

● Relationship of Mounting Distance between K8DS-PA Relays and Ambient Temperature (Reference Values)

The following diagram shows the relationship between the mounting distances and the ambient temperature.

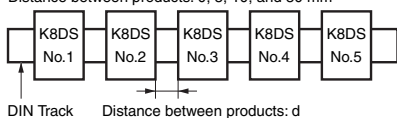
If the relay is used with an ambient temperature that exceeds these values, the temperature of the K8DS may rise and shorten the life of the internal components.



Test method

Sample: K8DS-PA

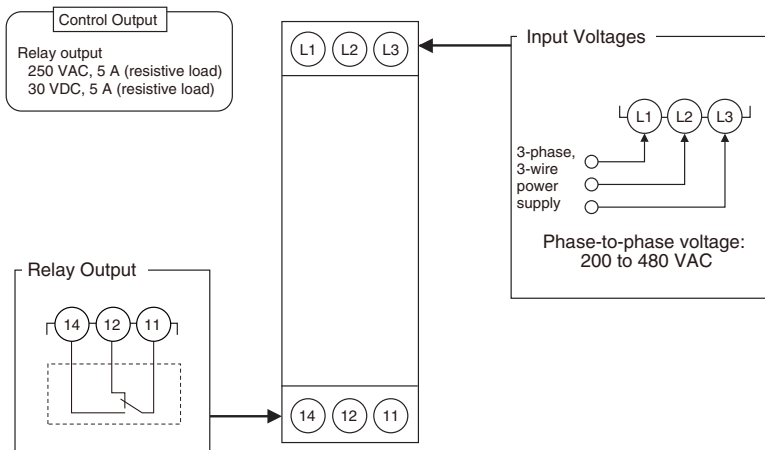
Distance between products: 0, 5, 10, and 50 mm



K8DS-PA

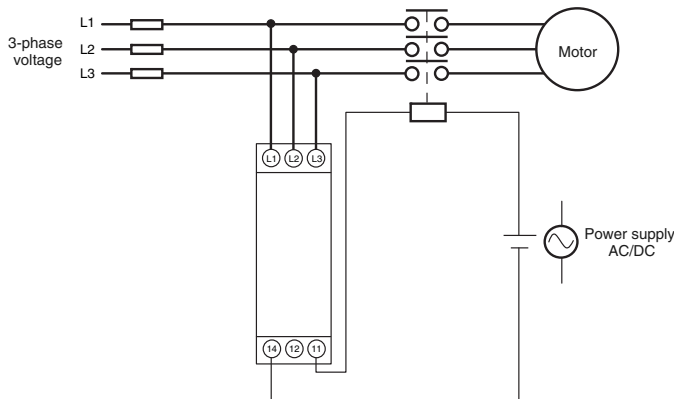
Connections

Terminal Diagram



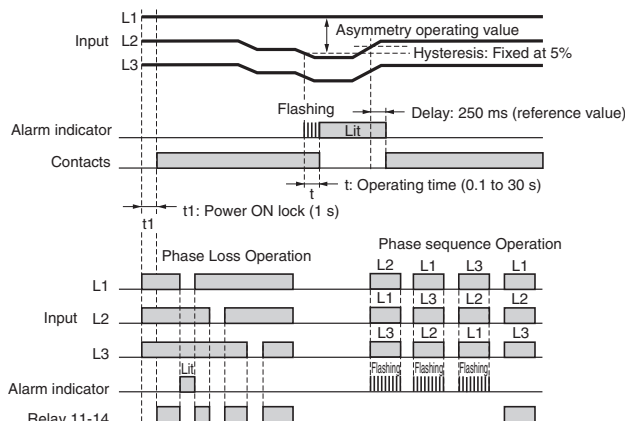
Note: Use the recommended ferrules if you use twisted wires.

Wiring Example



Timing Charts

● Voltage Asymmetry and Phase Sequence/Phase Loss Operation Diagram



- Note:**
1. The K8DS-PA□ output contacts are normally operative.
 2. The power ON lock prevents unnecessary alarms from being generated during the unstable period when the power is first turned ON. There is no contact output during timer operation.
 3. Phase loss is detected by a drop in the L1, L2, or L3 voltage. A phase loss is detected when any of the phase-to-phase voltages goes below 60% of the rated input.
 4. L2 and L3 are also used for the power supply. If the voltage becomes very low, the Relay will not operate.
 5. Phase loss is not detected in the motor load during operation.
 6. Phase loss cannot be detected on the load side because detection is based on the voltage.

Calculation Formula for Asymmetry Operating Value

$$\text{Asymmetry operating condition} = (\text{Highest voltage} - \text{Lowest voltage}) > \text{Asymmetry operating value}$$

$$\text{Asymmetry operating value} = \text{Rated input voltage (V)} \times \text{Asymmetry set value (\%)}$$
Note: The rated input voltage is set with a rotary switch.

Operation Table

Item	Indicators		Contact operation
	RY_LED	ALM_LED	
Asymmetry	OFF	ON	OFF
Phase loss	OFF	ON ^{*1}	OFF
Phase sequence	Incorrect phase	OFF	Flashing ^{*2}
	Correct phase	ON	OFF

*1 L2 and L3 are also used for the power supply. If the voltage becomes very low, the indicator will turn OFF.

*2 The indicator will flash once per second after an incorrect phase is detected and once per 0.5 second during the detection time.