

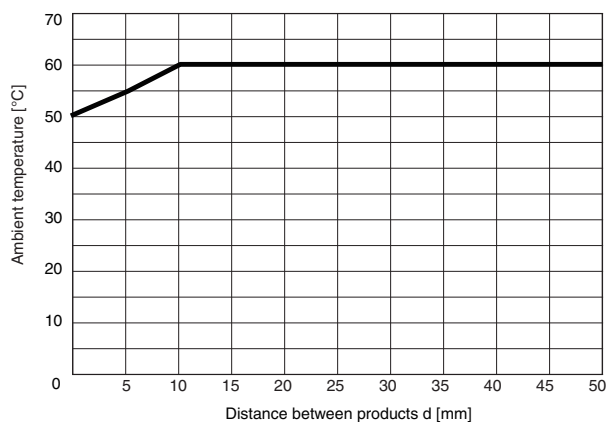
## Specifications

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

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

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

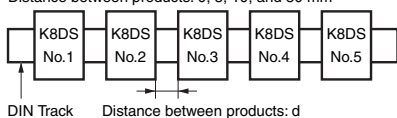
If the relay is used with an ambient temperature that exceeds these values, the temperature of the K8DS may rise and shorten the life of the internal components.



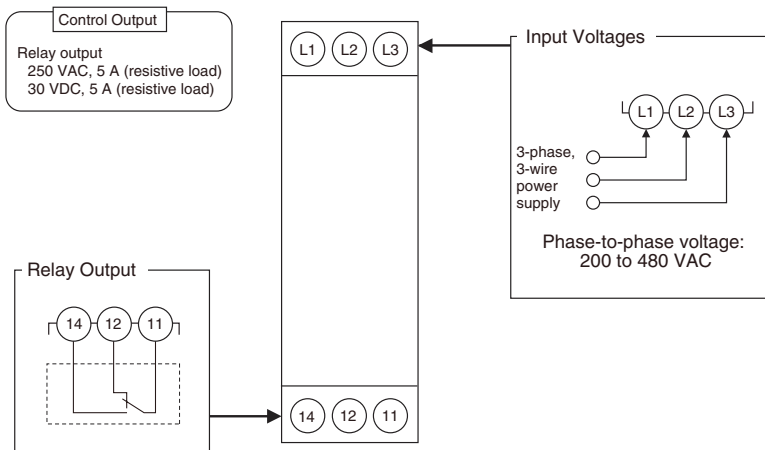
#### Test method

Sample: K8DS-PZ

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

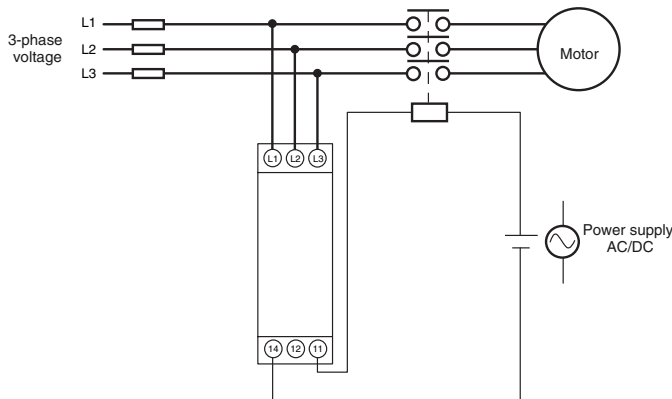


### Terminal Diagram



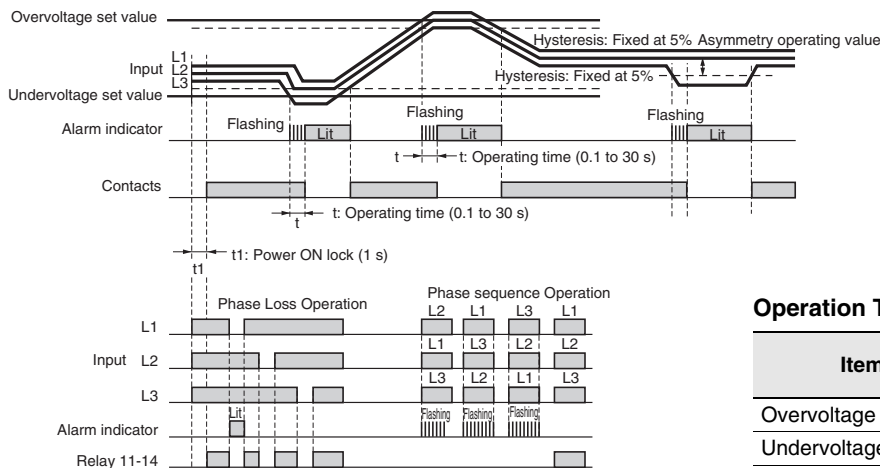
**Note:** Use the recommended ferrules if you use twisted wires.

### Wiring Example



### Timing Charts

#### ● Overvoltage, Undervoltage, Phase Sequence, and Phase Loss Operation Diagram



- Note:**
1. The K8DS-PZ□ 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 (on power supply side and load side) is not detected in the motor load during operation.

#### Operation Table

Item	Indicators		Contact operation	
	RY_LED	ALM_LED		
Overvoltage	OFF	ON	OFF	
Undervoltage	OFF	ON	OFF	
Asymmetry	OFF	ON	OFF	
Phase loss	OFF	ON <sup>*1</sup>	OFF	
Phase sequence	Incorrect phase	OFF	Flashing <sup>*2</sup>	OFF
	Correct phase	ON	OFF	ON

\*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.