

Ratings

Power supply voltage	K8DT-VS□□□D: 24 VAC 50/60Hz, 24 VDC K8DT-VS□□□A: 100 to 240 VAC 50/60Hz
Power consumption	24 VAC/DC: 1.8 VA/1 W max. 100 to 240 VAC: 2.5 VA max.
Rated insulation voltage	600 VAC
Operating value setting range (SV)	10% to 100% of maximum setting range K8DT-VS2: 1 to 10 V AC/DC 3 to 30 V AC/DC 15 to 150 V AC/DC K8DT-VS3: 20 to 200 V AC/DC 30 to 300 V AC/DC 60 to 600 V AC/DC
Operating value	100% operation at set value
Reset value setting range (HYS)	5% to 50% of operating value
Reset method	Manual reset/automatic reset (switchable) Note: Manual reset: Turn OFF power supply for 1 s or longer.
Operating time setting range (T)	0.1 to 30 s
Power ON lock time	1 s or 5 s (Switched using DIP switch.)
Indicators	Power (PWR): Green, Relay output (RY): Yellow, Alarm outputs (ALM): Red
Input impedance	Refer to <i>Input Range</i> on page 2.
Output form	Relay Output: SPDT contact Transistor Output: 1 Switchable between normally open and normally closed with a DIP switch setting.
Output relay ratings	Rated load 5 A at 250 VAC (Resistive load) 5 A at 30 VDC (Resistive load) 1 A at 250 VAC (Inductive load) 0.2 A at 48 VDC (Inductive load) Minimum load: 5 VDC, 10 mA (reference values) Mechanical life: 10 million operations min. Electrical life: 5 A at 250 VAC or 30 VDC: 50,000 operations 3 A at 250 VAC or 30 VDC: 100,000 operations
Transistor output ratings	Rated voltage: 24 VDC (maximum voltage: 26.4 VDC) Maximum current: 50 mA DC
Ambient operating temperature	-20 to 60°C (with no condensation or icing)
Storage temperature	-25 to 65°C (with no condensation or icing)
Ambient operating humidity	25% to 85% RH (with no condensation)
Storage humidity	25% to 85% RH (with no condensation)
Altitude	2,000 m max.
Applicable wires	Stranded wires, solid wires, or ferrules
Applicable wire size	0.25 to 1.5 mm ² (AWG24 to AWG16)
Wire insertion force	8 N max. for AWG20 wire
Screwdriver insertion force	15 N max.
Wire stripping length	8 mm
Ferrule length	8 mm
Recommended flat-blade screwdriver	XW4Z-00B (Omron) SZF 0.4 × 2.5 (Phoenix Contact) 210-719 (Wago) SDI 0.4 × 2.5 × 75 (Weidmuller)
Current capacity	10 A (per pole)
Number of insertions	50 times
Case color	N1.5
Case material	PC, UL 94 V-0
Weight	Approx. 100 g
Mounting	Mounts to DIN Track, or screw mounting
Dimensions	17.5 × 90 × 90 mm (W×H×D)

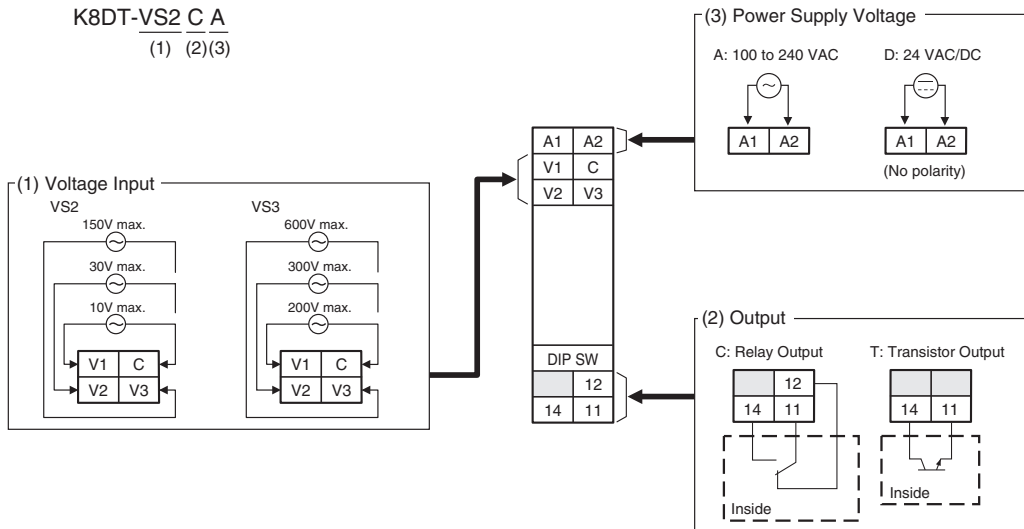
Specifications

Allowable operating voltage range	85% to 110% of rated power supply voltage	
Allowable operating frequency range	50/60 Hz ±5 Hz	
Input frequency range	40 to 500 Hz	
Overload capacity	Continuous input at 115% of maximum input, 10 s at 125% (up to 600 VAC).	
Repeat accuracy	Operating value	±0.5% full scale (at 25°C and 65% humidity, rated power supply voltage)
	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, Overvoltage category III)
	EMC	EN 60947-5-1
	Safety standards	UL 60947-5-1 (Listing), Korean Radio Waves Act (Act 10564), CCC (GB14048.5)
Insulation resistance		20 MΩ min. Between external terminals and case Between power supply terminals and input terminals Between power supply terminals and output terminals Between input terminals and output terminals
	Dielectric strength	
Impulse withstand voltage		6 kV (between live terminals and exposed, non-charged metal parts)
Noise immunity		Square-wave noise of 1-μs/100-ns pulse width with 1-ns rise time 100 to 240 VAC: 1,500 V power supply terminal common/normal mode 24 VAC: 1,500 V power supply terminal common/normal mode 24 VDC: 480 V power supply terminal common
	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	

K8DT-VS

Connections

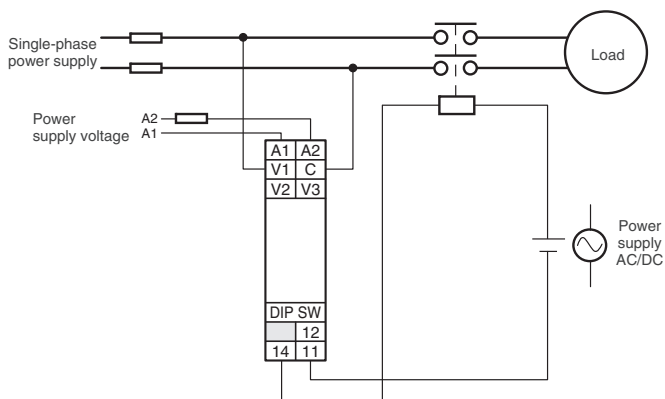
Terminal Diagram



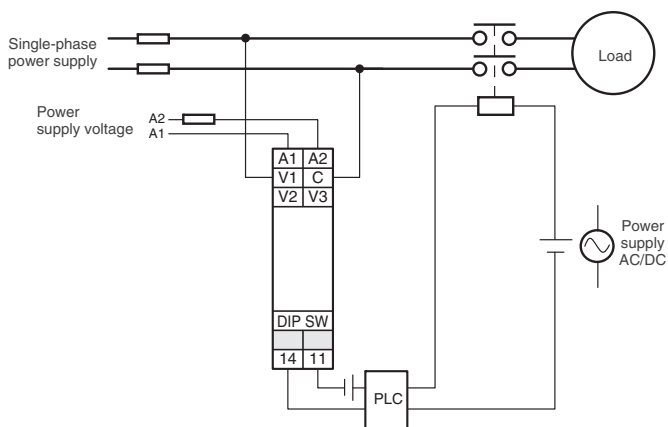
- Note:**
1. Do not connect anything to terminals that are shaded in gray.
 2. There is no polarity for the DC power supply input.
 3. For the voltage input, you can input only from the C terminal and one other terminal.
 4. Refer to Setting Ranges and Wiring Connections for information on the V1, V2, and V3 voltage input terminals.

Wiring Example

Relay Output



Transistor Output



Note: Use copper wires with a rating of 75°C or an equivalent rating.