

KR-series



KRE-20A

KRE-40A

Feature

- Redundancy module
- For DIN (35mm) rail products
- Wide input voltage range
- Wide operating ambient temperature range
- Input voltage balance OK LED
- Input voltage OK LED and relay output

Safety agency approvals

UL60950-1, UL508, C-UL (CSA60950-1), EN60950-1

CE marking

Low Voltage Directive
RoHS Directive

EMI

Complies with FCC-B, CISPR22-B, EN55011-B, EN55022-B, VCCI-B

EMS Compliance : EN61204-3, EN61000-6-2

EN61000-4-2
EN61000-4-3
EN61000-4-4
EN61000-4-6

5-year warranty

KRE -20A / -40A**KRE -□□A**

① ②

① Series name
KRE : Euro style I/O terminals
② Output current



MODEL	KRE-20A	KRE-40A
DC OUTPUT CURRENT	20	40
DC PEAK OUTPUT CURRENT	30	60

SPECIFICATIONS

	MODEL	KRE-20A	KRE-40A
INPUT	VOLTAGE[V]	DC10 ~ 60	DC10 ~ 30
	CURRENT[A]	10 (×2 Input)	20 (×2 Input)
	PEAK CURRENT[A]	15 (×2 Input)	30 (×2 Input)
	INPUT-OUTPUT POTENTIAL DIFFERENCE[V]	0.6typ (Ta=25°C ,Io=100%)	0.4typ (Ta=25°C ,Io=100%)
OUTPUT	CURRENT[A]	20	40
	PEAK CURRENT[A]	*1 30	60
FUNCTION	DC_OK LAMP	LED (Green)	
	Balance_OK LAMP	LED (Green)	
	DC_OK CONTACT	Relay contact 30VDC 0.5Amax , 30VAC 0.5Amax (resistive load)	
ISOLATION	INPUT-OUTPUT-Chassis	AC1,000V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)	
	INPUT-OUTPUT-DC_OK	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)	
	DC_OK-Chassis	AC500V 1minute, Cutoff current = 100mA, DC500V 50MΩ min (At Room Temperature)	
ENVIRONMENT	OPERATING TEMP.,HUMID.AND ALTITUDE	-25 to +70°C (Refer to "Derating"), 20 - 90%RH (Non condensing)	
	STORAGE TEMP.,HUMID.AND ALTITUDE	-25 to +85°C, 20 - 90%RH (Non condensing)	
	VIBRATION	*2 10 - 55Hz, 19.6m/s ² (2G), 3minutes period, 60 minutes along Z axis (Non operating, mounted on DIN Rail)	
	IMPACT	196.1m/s ² (20G), 11ms, once each X, Y and Z axis (Packing state)	
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1), EN60950-1, UL508	
	CE MARKING	LVD	
OTHERS	CASE SIZE	*3 38×124×117mm (W×H×D) [1.5X4.88X4.61 inches]	
	WEIGHT	480g max	610gmax
	COOLING METHOD	Convection	

*1 Refer to 2, instruction manual.

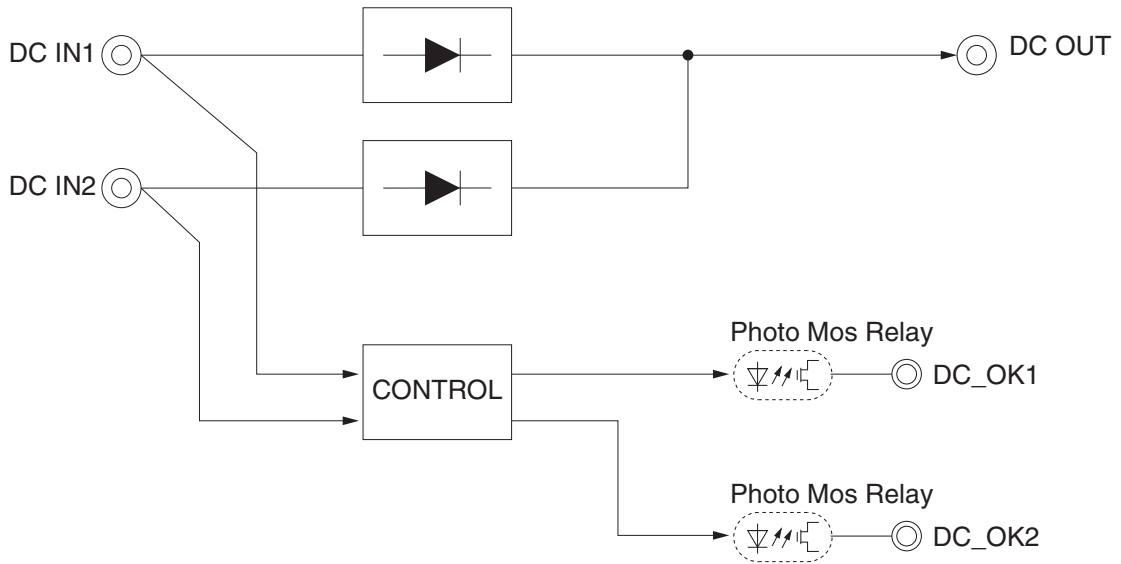
*2 Only as standard mounting orientation (A). Refer to the "Assembling and Installation Method".

*3 If install other than standard mounting orientation (A), please fix the power supply for withstand the vibration and impact.

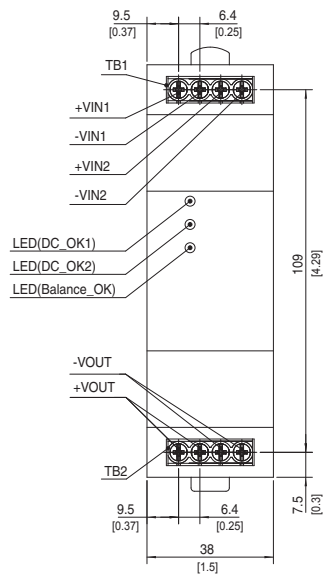
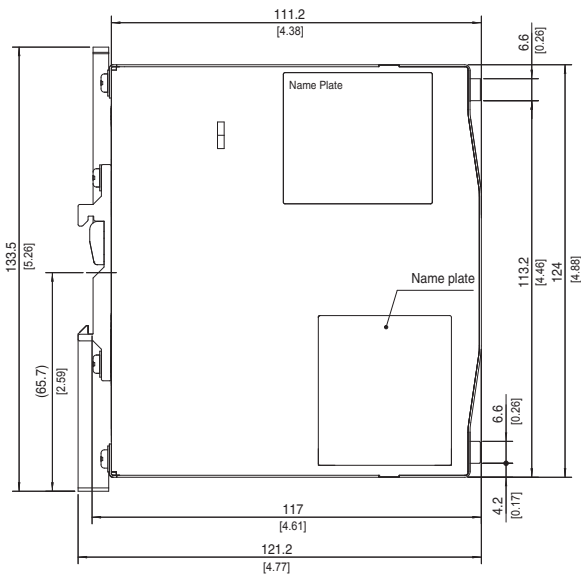
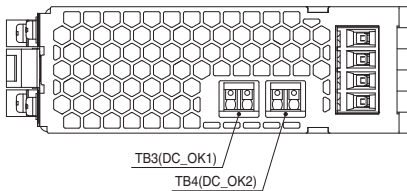
*4 Case size contains neither the umbo.

*5 To meet the specifications. Do not operate over-loaded condition.

Block diagram



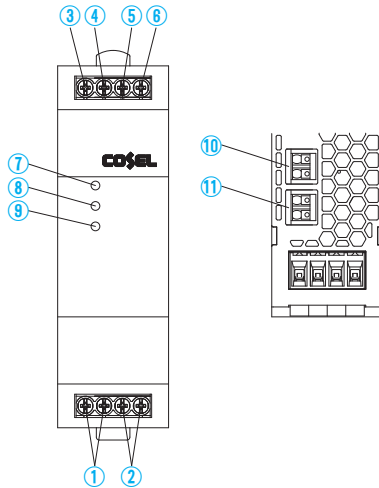
External view



- ※ Tolerance : ±1.5 [±0.06]
- ※ Weight : KRE-20A 480g max
KRE-40A 610g max
- ※ PCB Material/thickness : FR-4 / 1.6mm [0.06]
- ※ Chassis material : Aluminum
- ※ Case material : Stainless steel
- ※ DIN rail attachment material : Aluminum,
Stainless steel, Nylon
- ※ Dimensions in mm, [] = inches
- ※ Screw tightening torque : 1N · m max

Terminal Blocks

KRE-20A/-40A



Terminal Number	Terminal Name	Function
①	+VOUT	+Output Terminals
②	-VOUT	-Output Terminals
③	+VIN1	+Input Terminals 1
④	-VIN1	-Input Terminals 1
⑤	+VIN2	+Input Terminals 2
⑥	-VIN2	-Input Terminals 2
⑦	DC_OK1	LED for input voltage 1 confirmation
⑧	DC_OK2	LED for input voltage 2 confirmation
⑨	Balance_OK	LED for input voltage balance confirmation
⑩	DC_OK1	Input voltage 1 confirmation (relay contact)
⑪	DC_OK2	Input voltage 2 confirmation (relay contact)

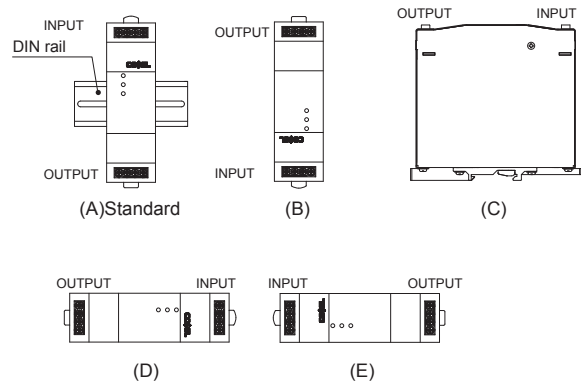
Assembling and Installation Method

Installation method

■ About DIN-Rail Attachment available with DIN EN60715 TH 35 (35×7.5mm or 35×15mm) (Top hat shaped DIN rail)

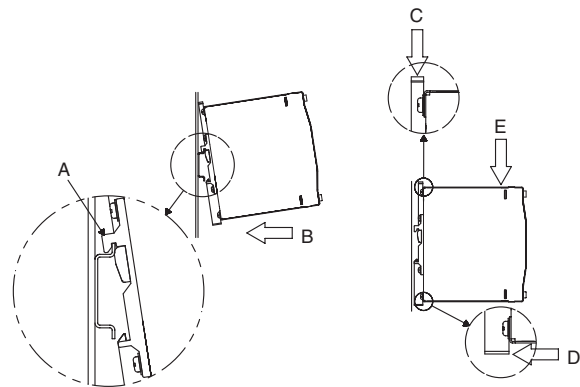
■ Below shows mounting orientation.

If install other than standard mounting orientation (A), please fix the power supply for withstand the impact and vibration.



■ When you mount a power supply on a DIN rail, have the area marked A catch one side of the rail and push the unit to the direction of B. To remove the power supply from the rail, either push down the area marked C or insert a tool such as driver to the area marked D and pull the unit apart from the rail.

When you couldn't remove the unit easily, push down the area marked C while lightly pushing the unit to the direction of E.



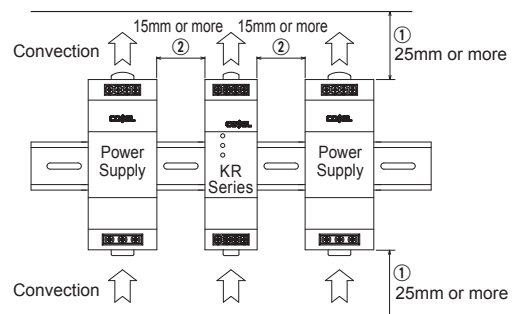
■ Shown below the notes about installation clearance of a unit.

① Installation clearance at above and below the unit.

Please have clearance of at least 25mm above and below the unit to avoid heat accumulation.

② Installation clearance at the side of the unit.

Please have clearance of at least 15mm side the unit to avoid interfering with heat radiation from housing.

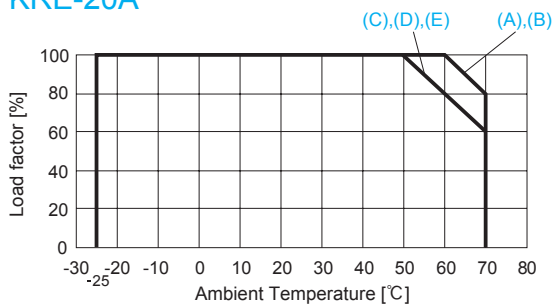


Derating

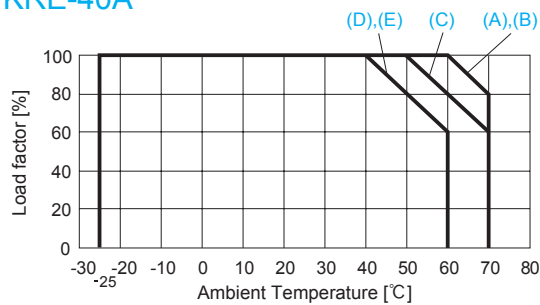
Ambient temperature derating

- The operative ambient temperature as different by input voltage. Derating curve is shown below.
- Derating Curve (Convection)
- Refer to instruction manual 3 for Ambient temperature measurement point.

● KRE-20A



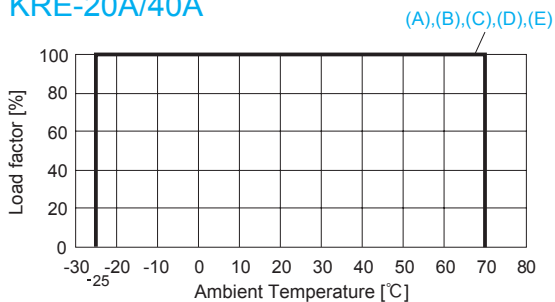
● KRE-40A



■ Derating Curve (Forced air)

- * UL508 (Listing) is excluded.
- Use the temperature measurement point as shown in instruction manual 3. Please use at the temperature dose not exceed the values in instruction manual 3.

● KRE-20A/40A



Instruction Manual

- ◆ It is necessary to read the "Instruction Manual" and "Before using our product" before you use our product.

Basic Characteristics Data

Model	Circuit method	PCB/Pattern		
		Material	Single sided	Double sided
KRE-20A	Diode	FR-4		Yes
KRE-40A	Diode	FR-4		Yes