



# 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), EN62368-1

## CE marking

Low Voltage Directive  
RoHS Directive

## UKCA marking

Electrical Equipment Safety Regulations  
RoHS Regulations

## 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 <sup>2</sup> (2G), 3minutes period, 60 minutes along Z axis (Non operating, mounted on DIN Rail)	
	IMPACT	196.1m/s <sup>2</sup> (20G), 11ms, once each X, Y and Z axis (Packing state)	
SAFETY	AGENCY APPROVALS	UL60950-1, C-UL (CSA60950-1) , EN62368-1 , 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.

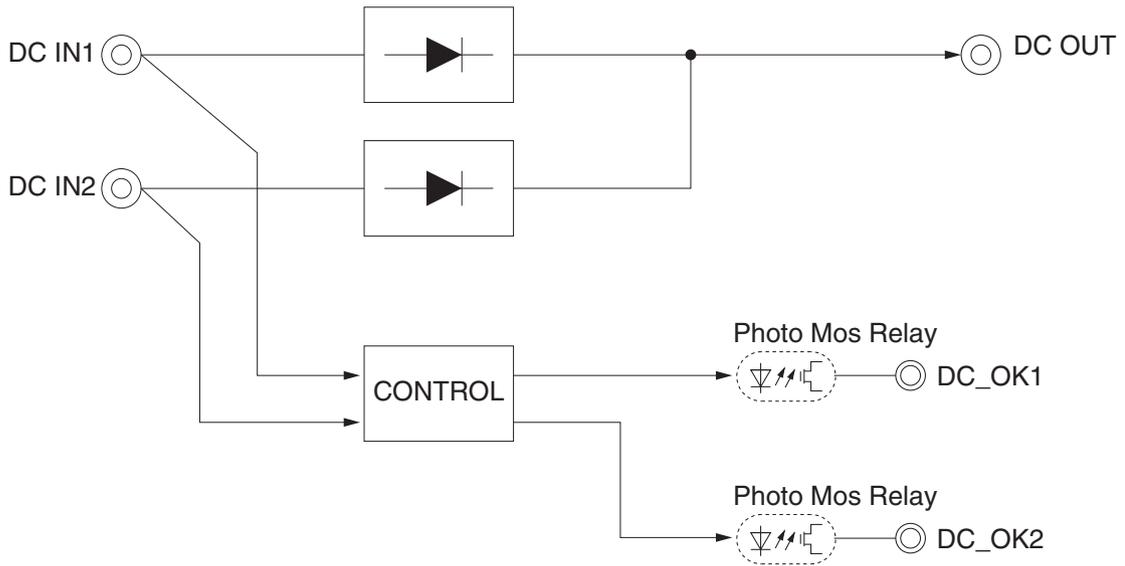
\*2 Only as standard mounting orientation (A). Refer to the "Assembling and Installation Method".

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

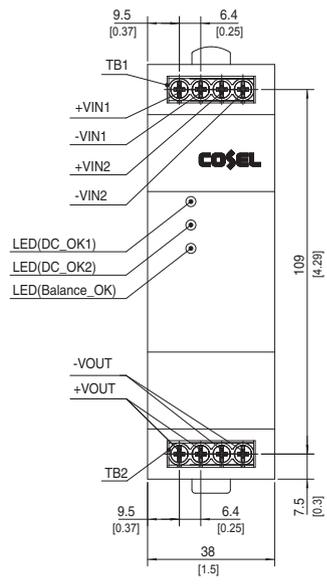
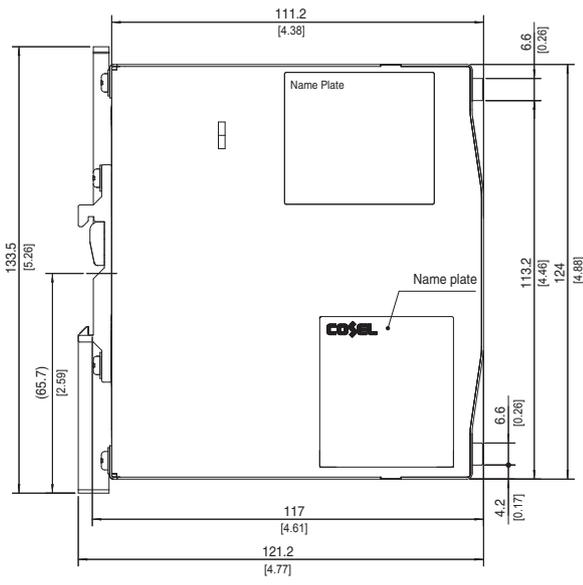
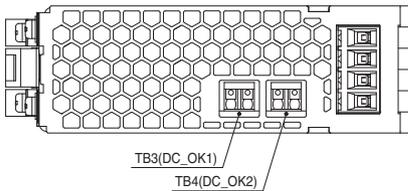
\*3 Case size contains neither the umbo.

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

Block diagram



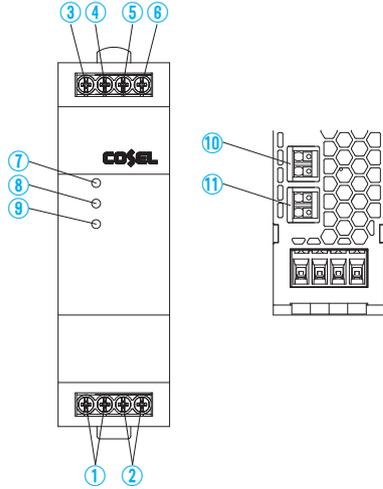
External view



- ※ 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)

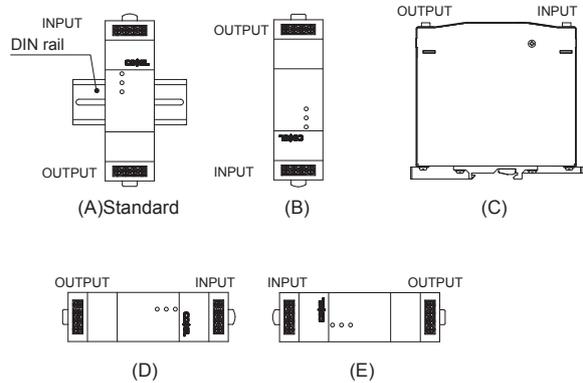
Assembling and Installation Method

Installation method

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

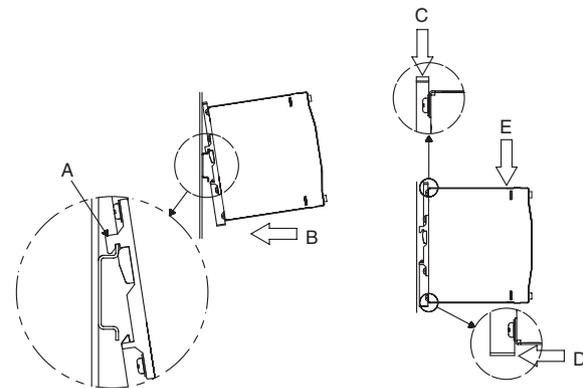
■ Below shows mounting orientation.

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



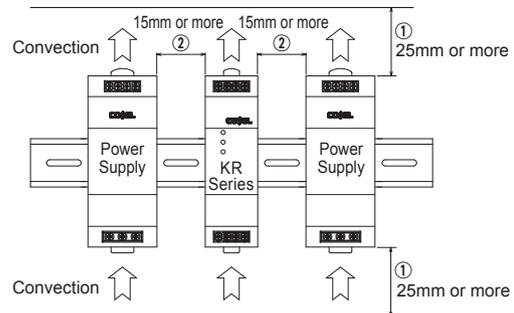
■ When you mount a power supply on a DIN rail, have the area marked A catch one side of the rail and push the unit to the direction of B. To remove the power supply from the rail, either push down the area marked C or insert a tool such as driver to the area marked D and pull the unit apart from the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

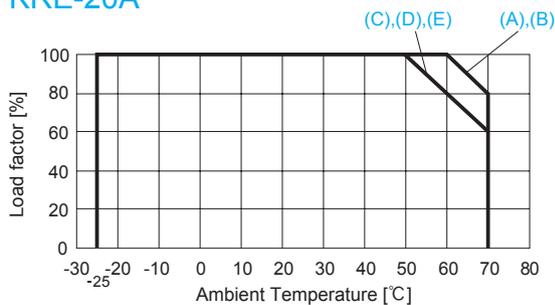


Derating

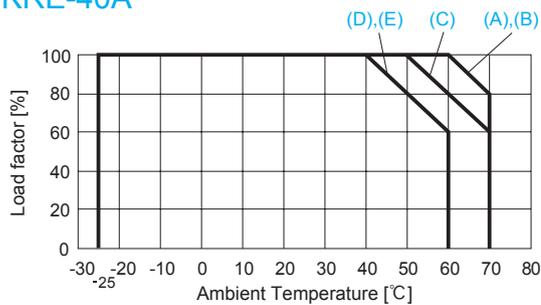
Ambient temperature derating

- 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



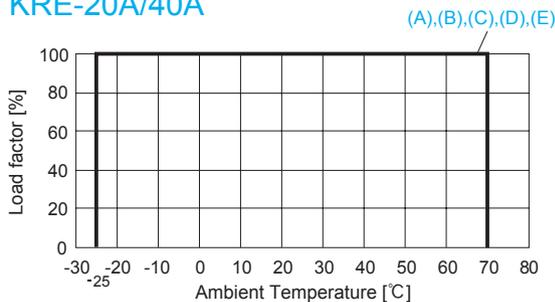
● KRE-40A



■ 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