



# KSR Series

Single Phase Solid State Relays



- Slim type single phase SSR
- LED indicator of the control input status
- Over heat alarm output of SSR with connector cable
- Available heatsink integrated SSR

## Ordering Information

KSR- ① ② ③ ④ ⑤

|                   |   |              |
|-------------------|---|--------------|
| ①<br>Load Voltage | 2 | 90 - 240 VAC |
|                   | 5 | 90 - 480 VAC |

| ② Load Current |     |     |     |
|----------------|-----|-----|-----|
| 005            | 5A  | 050 | 50A |
| 015            | 15A | 060 | 60A |
| 030            | 30A | 080 | 80A |
| 040            | 40A |     |     |

|                   |   |            |
|-------------------|---|------------|
| ③<br>Operate mode | Z | Zero Cross |
|-------------------|---|------------|

|                    |   |                         |
|--------------------|---|-------------------------|
| ④<br>Input voltage | D | 24VDC(4-32V)            |
|                    | A | 220VAC(90-240V 50/60Hz) |

|               |    |                     |
|---------------|----|---------------------|
| ⑤<br>Heatsink |    | Mount Type          |
|               | H  | Heatsink Type       |
|               | HF | Heatsink + Fan Type |

## Specifications

|                        | Low Voltage   | High Voltage            |
|------------------------|---|-------------------------|
| Release Time           | Cycle of 1/2 Load + Less than 1 ms                      |                         |
| Output on Voltage Drop | Less than 1.6V (RMS)                                    | Less than 1.8V (RMS)    |
| Leakage Current        | Less than 10mA (AC200V)                                 | Less than 20mA (AC480V) |
| Insulation Resistance  | more than 100MΩ (DC500V)                                |                         |
| Withstand Voltage      | AC 5,000V 50/60Hz 1min                                  |                         |
| Vibration Resistance   | 10-55-10Hz Peak Amplitude 0.35mm (Dual Amplitude 0.7mm) |                         |
| Shock Resistance       | 294m/s <sup>2</sup>                                     |                         |
| Storage Temperature    | -30 - +100°C (non-condensing)                           |                         |
| Ambient Temperature    | -30 - +80°C (non-condensing)                            |                         |
| Ambient Humidity       | 45 - 85%RH  |                         |

## Over temperature alarm specification

|                             |   |        |
|-----------------------------|---|--------|
| Output                      | NPN Open Collector                        |        |
|                             | Opens at 95 ± 5°C of SSR Body temperature |        |
| Madimum Current Rating      | 50mADC                                    |        |
| Alarm Voltage Drop          | Typical                                   | 2.8VDC |
|                             | Maximum                                   | 4VDC   |
| Visual Indication           | Continuous Red LED                        |        |
| Reverse Polarity Protection | 24VDC                                     |        |

## Characteristics

### Input Ratings (Ambient Temp of 25°C)

| Rated Control Voltage | Control Voltage Range | Control Voltage Levels |                  |  | Input Current |
|-----------------------|-----------------------|------------------------|------------------|--|---------------|
|                       |                       | Pick-up Voltage        | Drop-out Voltage |  |               |
| 24VDC                 | 4-32VDC               | Less than 4VDC         | More than 1.4VDC |  | 10±3mA        |
| 220VAC                | 90-240VAC             | Less than 90VAC        | More than 50VAC  |  | 10±5mA        |

### Low Voltage Load

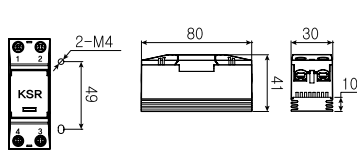
|                          | 2005  | 2015 | 2030 | 2040 | 2050 | 2060 | 2080 |
|--------------------------|---|------|------|------|------|------|------|
| Rated Load Voltage       | AC 220V (50/60Hz)                           |      |      |      |      |      |      |
| Load Voltage Range       | AC 90-240V (50/60Hz)                        |      |      |      |      |      |      |
| Rated Load Current       | 5A  | 15A  | 30A  | 40A  | 50A  | 60A  | 80A  |
| Load Current Ragne       | 0.5A - Rated Current @ Ambient Temp of 25°C |      |      |      |      |      |      |
| Peak Voltage             | 600V  |      |      |      |      |      |      |
| Single Cycle             | 84  | 260  | 420  | 520  | 580  |      |      |
| Surge Current Resistance | 60Hz, 1 Cycle                               |      |      |      |      |      |      |

### High Voltage Load

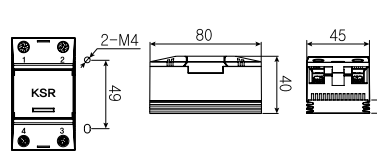
|                          | 5005  | 5015 | 5030 | 5040 | 5050 | 5060 | 5080 |
|--------------------------|---|------|------|------|------|------|------|
| Rated Load Voltage       | AC 440V (50/60Hz)                           |      |      |      |      |      |      |
| Load Voltage Range       | AC 90-480V (50/60Hz)                        |      |      |      |      |      |      |
| Rated Load Current       | 5A  | 15A  | 30A  | 40A  | 50A  | 60A  | 80A  |
| Load Current Ragne       | 0.5A - Rated Current @ Ambient Temp of 25°C |      |      |      |      |      |      |
| Peak Voltage             | 1,200V                                      |      |      |      |      |      |      |
| Single Cycle             | 80  | 250  | 370  | 500  | 580  |      |      |
| Surge Current Resistance | 60Hz, 1/2 Cycle                             |      |      |      |      |      |      |

# Dimensions

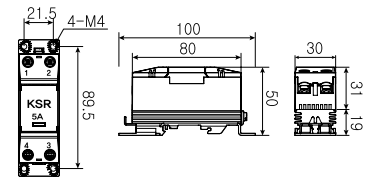
Mount Type 5 / 15 / 30A



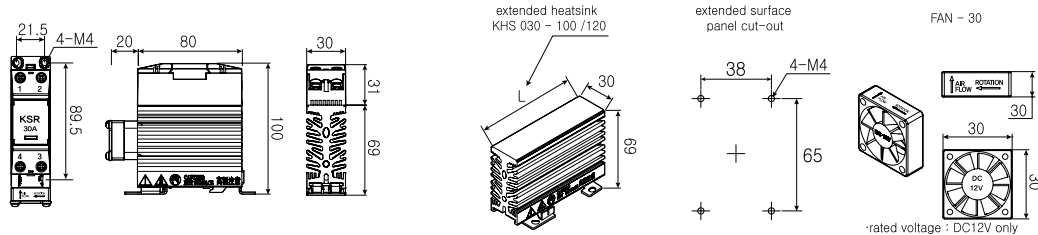
Mount Type 40 / 50 / 60 / 80A



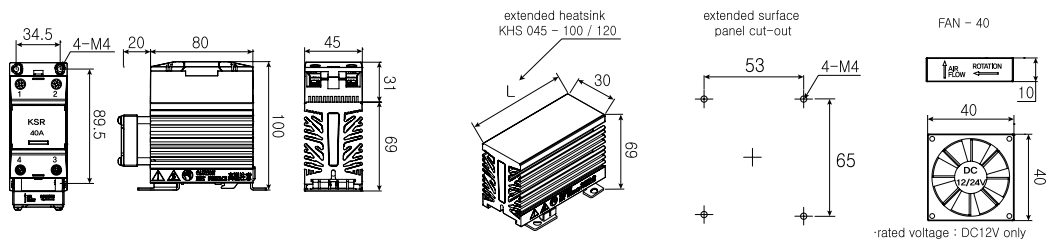
Heatsink Type 5A



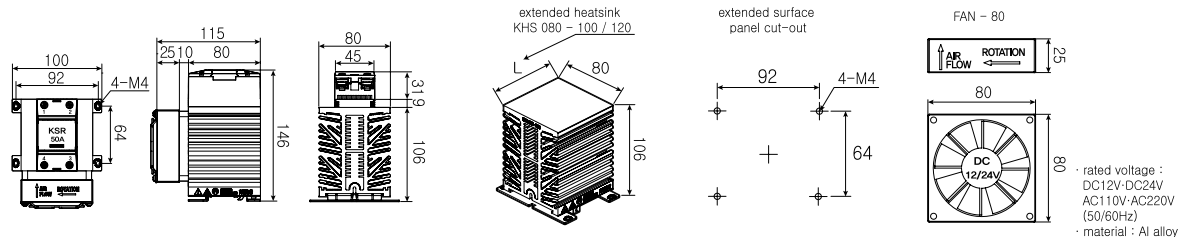
Heatsink + Fan Type 30A



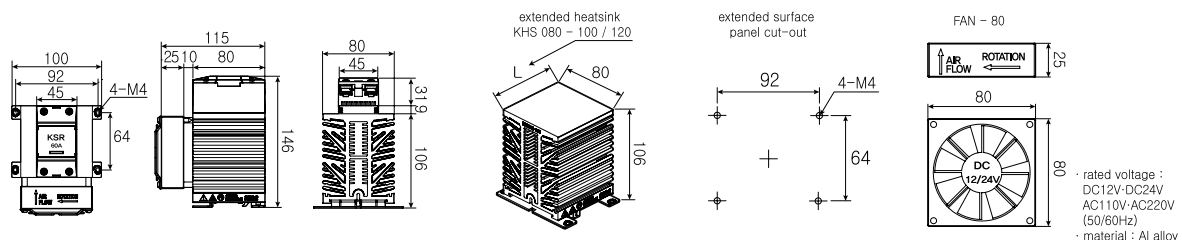
Heatsink + Fan Type 40A



Heatsink + Fan Type 50A



Heatsink + Fan Type 60A



Heatsink + Fan Type 80A

