

# DIN RAIL SWITCHING POWER SUPPLY 60W

## KSE – 06012N / 06024N

### USER'S MANUAL

## INTRODUCTION

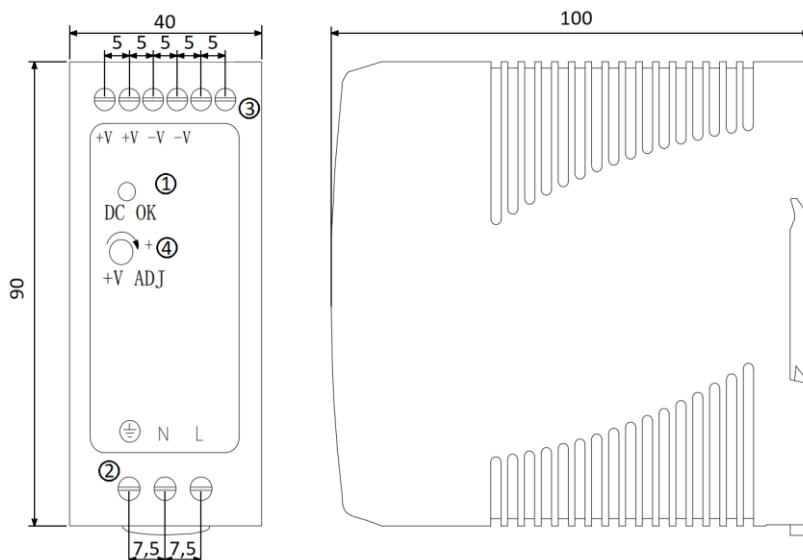
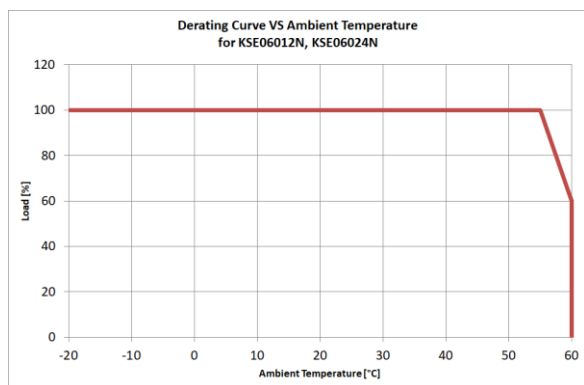
This range of compact DIN mounted switching power supplies are designed for a wide range of control equipment which demands good quality regulated DC power source with excellent EMC immunity and electrical performance in an industrial environment.

## FEATURES

1. Overload Protection: The constant current circuitry is adopted to prevent from overload. The DC output DC OK indicator will turn off when the unit is overloaded.(1)
2. Over Temperature Protection: The over temperature circuitry is functioned when the unit is over a certain high temperature to prevent the unit from damage by the high temperature. When the circuitry is functioned, the output voltage and current will drop down and the DC output DC OK indicator will turn off. (1)
3. Over Voltage Protection: The over voltage circuitry protect the unit and the loading equipment from damage by abnormal high input voltage.
4. The concealed trimmer (Fine tune access port) allows fine tuning of output voltage. (4)

## PANEL DESCRIPTION

1. DC OK output (ON) indicator.
2. AC input terminal block.
3. DC output terminal block.
4. Fine tune access port.



## INSTALLATION

1. The KSE060XX series power supplies are build-in units and designed for mounting on a standard DIN- rail TS35 (35x15/7.5).
2. Make sure the correct mounting position for optimal cooling performance.
3. To fix the unit on the DIN rail, hook top part of clip on DIN rail, push down and inwards until you hear a clipping sound.
4. To remove the unit, insert a insulated flat head screwdriver into the recess in the clip closest to bottom of the unit and then push down to remove it from the recess and lift it off from DIN rail.

*Note: For Indoor Use Only.*

## SAFETY PRECAUTIONS

1. **NEVER** remove the metal cover of the power supply while AC power is connected.
2. **NEVER** touch the unit when your hands are wet.
3. **NEVER** touch the enclosure during the unit is full load powered, touching it may burn your hands or part of your body by high temperature.
4. This series are build-in power supplies and should be installed inside a main frame with at least 200 CFM air ventilation.
5. **NEVER** operate the unit if foreign materials such as metallic objects, water, or other debris have fallen inside. Contact your dealer for check and repair.
6. **NEVER** operate the unit that was being damaged, as the voltage regulation circuitry may have been disabled. The resulting high voltage could damage your equipment.
7. **NEVER** allow foreign objects to touch the DC Power Output Terminals.
8. If you have the need to inspect the interior of the unit, let it to cool down completely, as some components may be enough to burn your hand in the event of component failure.
9. **NEVER** block the air intake window

## CONNECTION AND OPERATION

1. A protective device (fuse, MCB) and an easy accessible isolating device for disconnecting the power supply must be provided.
2. Ensure that the main switch is switched off and prevented from being switched on again. In case of non-observance touching at any alive components or improper dealing with this power supply can result in death or severe injury.
3. Connect the equipment to the unit. If flexible wires are used, the wires have to be terminated. (e.g. by using ferrules) The wire should be at least 0.5 to 0.75mm<sup>2</sup> for flexible cable.



## SPECIFICATIONS

Model	KSE-06012N	KSE-06024N
Voltage Range (Auto Select)	100-240 VAC 140-340 VDC	
Frequency	47 – 63 Hz~	
Full Load AC Current	1,2 A - 100 VAC ; 0,5 A - 230 VAC	
No Load AC Current	20 mA - 100 VAC ; 40 mA - 230 VAC	
Inrush Current, cold start 25°C*	30A - 100 VAC ; 60A - 230 VAC	
Efficiency	86%	88%
<b>OUTPUT</b>		
Normal DC Voltage	12 V	24 V
Voltage Adjust Range	12 – 15 V	24 – 30 V
Rated Current	5 A	2,5 A
Rated Power	60 W	
Ripple & Noise (peak to peak)**	≤ 150 mV	
Line Regulation	≤ 1%	
Load Regulation (10% - 100%)	≤ 1%	
Hold-up Time (Full Load)	> 20 ms - 100 VAC ; > 50 ms - 230 V	
Parallel Operation	No function	
<b>PROTECTION</b>		
Over load / Over Current	105%-150% rated power, constant current limits, auto restart	
Over Output Voltage	15,6-18 VDC, restart required	31,2-36 VDC, restart required
<b>SAFETY &amp; EMC</b>		
Safety Standards	EN60950, UL508	
Withstand Voltage	I/P - O/P 3 kVAC ; I/P - F/G 1,5 kVAC ; O/P - F/G 0,5 kVAC	
Insulation Resistance	I/P-O/P, I/P-F/G, O/P-F/G 100M Ohm/500 VDC/25°C/70%RH	
EMI Radiation & Conduction	Compliance to EN55011, EN55032(CISPR32), EN61204-3 Klasa B,	
Harmonics Current	Compliance to EN61000-3-2, -3	
EMC Immunity	Compliance to EN61000-4-2, 3, 4, 5, 6, 8, 11 EN55024, EN61000-6-2, EN61204-3 heavy Ind. Level criteria A	
<b>ENVIRONMENT</b>		
Working Temperature	-20°C ~ +70°C	
Derating temperature above 55°C	See: Derating Curve	
Working Humidity	10 - 95 RH, non-condensing	
Storage Temperature Humidity	od -40°C od +85°C , 10 - 95 RH, non-condensing	
Vibration	Component: 10-500Hz, 2G 10min/1 cycle, 60min each along the X, Y, Z axis	
<b>GENERAL</b>		
Case Material	PC/ABS Enclosure	
Case Protection	IP 20	
Weight	0,35kg	
Dimensions	90 × 40 × 100mm	
Mounting	Snap on type with self-locking can be installed on 35 mm Din-Rails / 7.5 or 15	
Connection	Screw terminals with double terminals for output	
<b>REMARK</b>	* Ta = 25°C, cold start	

\* All values are based on the Standard ambient Temperature 25°C and Pressure 0,1 MPa. \*

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