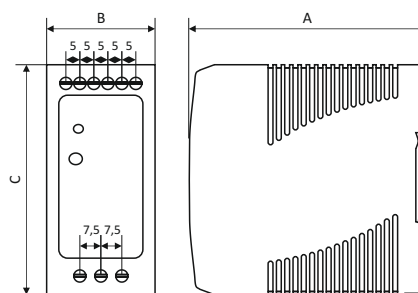


KSE 010; KSE 020



KSE 040; KSE 060; KSE 100

Power: **10; 20; 40; 60; 100W**  
 Input voltage: **85 - 264V AC 47/63Hz; 140 - 340V DC**  
 Output voltage: **12; 24; 48V**  
 Efficiency: **80 - 94% (typical)**

Stabilized, direct current output power supplies designed for assembly in general electric instalations on T-35 bus. Equipped with LED diode signaling activation and overload, cooled by natural air flow. The 100W power supplies are additionally equipped with the PFC power factor improvement system. Overcurrent, short circuit and thermal protection. Manufactured with IP20 protection grade.

Manufactured in compliance with EN55032, EN61000-3-2, EN61000-3-3, EN55035, EN60950-1.

Type	Power	Output voltage	Current	Dimensions [mm]			Weight [kg]
	[W]	[V]	[A]	A	B	C	
<b>KSE 01012P</b>	10	12	0,84	100	22,5	90	0,18
<b>KSE 02012P</b>	20	12	1,67	100	22,5	90	0,20
<b>KSE 04012P</b>	39,9	12	3,33	100	40	90	0,32
<b>KSE 06012P</b>	60	12	5	100	40	90	0,35
<b>KSE 10012P</b>	90	12	7,5	100	55	90	0,45
<b>KSE 01024P</b>	10	24	0,42	100	22,5	90	0,18
<b>KSE 02024P</b>	24	24	1	100	22,5	90	0,20
<b>KSE 04024P</b>	40,8	24	1,7	100	40	90	0,32
<b>KSE 06024P</b>	60	24	2,5	100	40	90	0,35
<b>KSE 10024P</b>	96	24	4	100	55	90	0,45

## KSE 01012P / KSE 01024P

### 1. Introduction:

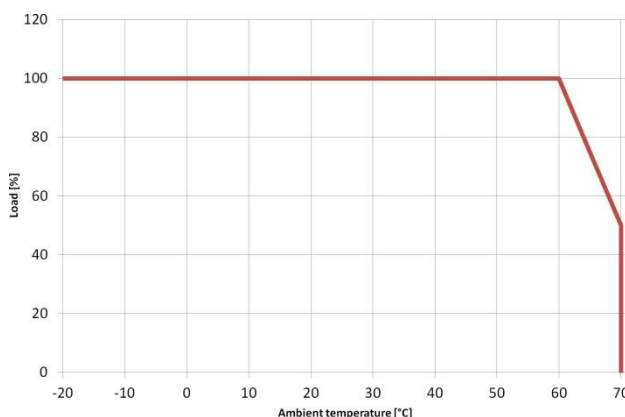
This series of single-phase DIN-rail-mounted switching power supplies is designed for a wide range of control equipment requiring high-quality DC power supplies with excellent EMC (electromagnetic compatibility) immunity and performance in industrial environments.

### 2. Features:

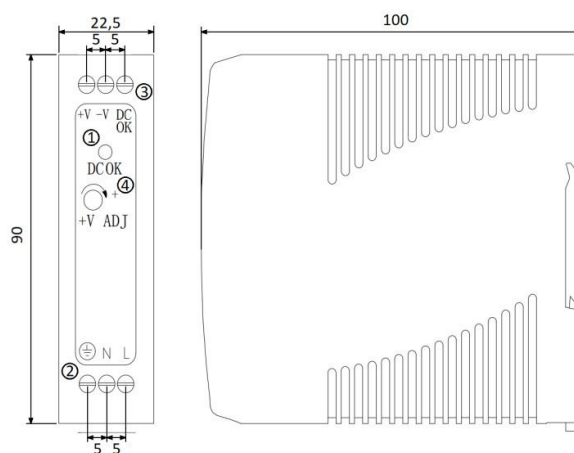
- **Overload protection:** The DC electrical circuitry protects the device from overload. In the event of an overload, the DC OK (ON) indicator of the DC output turns off. (1)
- **Overheating protection:** To protect the device from damage caused by high temperatures, an electrical circuit set is activated when the unit exceeds a specified temperature. When this system is triggered, the voltage and current values drop, and the DC OK (ON) indicator of the DC output turns off. (1)
- **Overvoltage protection:** The overvoltage circuit protects the unit and connected equipment from damage caused by excessive input voltage.
- **Adjustment element** (fine-tuning access port) allows precise adjustment of the output voltage. (4)

### 3. Panel description:

1. DC OK (ON) indicator for the DC output.
2. AC input terminal block assembly.
3. DC output terminal block assembly.
4. Fine-tuning access port.



Graph 1. The derating curve of the rated output load as a function of temperature.



### 4. Installation:

- The KSE series switching power supplies are devices designed for mounting on a standard TS35 DIN rail (35 x 15/7.5).
- Ensure the mounting position allows optimal cooling performance; the ideal operating position is vertical.
- To mount the device on the DIN rail, hook the upper part of the terminal onto the rail, then press the device down and inward until you hear a distinct click, indicating that the terminal is securely locked in place.
- To remove the unit from the rail, insert a flat, insulated screwdriver into the recess of the terminal, as close to the bottom of the device as possible, and press to release the unit from the recess before removing it from the DIN rail.
- **NOTE:** For indoor use only.

## 5. Safety precautions:

- **NEVER** remove the metal cover of the power supply while the AC power is live or connected.
- **NEVER** touch the unit with wet hands.
- **NEVER** touch the enclosure while the unit is under full load power; touching it may burn your hands or other parts of your body due to high temperature.
- This series consists of built-in power supplies and should be installed inside a main frame with at least 200 CFM of airflow.
- **NEVER** operate the unit if foreign materials, such as metallic objects, water, or debris, have fallen inside. Contact your dealer for inspection and repair.
- **NEVER** operate a damaged unit, as the voltage regulation circuit may be compromised. The resulting high voltage could damage your equipment.
- **NEVER** allow foreign objects to come into contact with the DC power output terminals.
- If you need to inspect the interior of the unit, allow it to cool down completely, as some components may be hot enough to burn your hand in the event of a failure.
- **NEVER** block the air intake vent.

## 6. Connection and operation:

- Ensure the use of a protective device (fuse, miniature automatic fuse) and easily accessible insulating devices that allow for power disconnection.
- Ensure that the main switch is turned off and secured against being turned on again. Failure to follow this recommendation could result in electric shock, death, or serious injury from touching live parts or improper handling of the power supply.
- Connect the equipment to the unit. When using flexible cables, connect them to the terminals (e.g. using ferrules).
- The cross-sectional area of the power cable should range from 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> for flexible cables.

## 7. Specifications:

	KSE 01012P	KSE 01024P
Voltage Range	100-240VAC; 140-340VDC	
Frequency	47-63Hz~	
Full Load AC Current	0,33A/100VAC; 0,21A/230VAC	
No Load AC Current	15mA/100VAC; 20mA/230VAC	
Inrush Current, cold start 25°C*	20A/100VAC; 40A/230VAC	
Efficiency	80%	83%

### Output

Rated DC Voltage	12V	24V
Voltage Adjust Range	10,5-13,5V	21-28V
Rated Current	0,84A	0,42A
Rated Power	10W	10W
Ripple & Noise (peak to peak)**	≤ 120mV	≤ 150mV
Line Regulation	≤ 3%	
Load Regulation (10% - 100%)	≤ 3%	
Hold-up Time (Full Load)	> 30 ms/100VAC ; > 30ms/230VAC	
Parallel Operation	Not possible	

## Protection

Overload/Overcurrent	110%-150% of rated output power, constant current limit, automatic restart	
Over Output Voltage	13,8-16,2VDC, restart required	27,6-32,4VDC, restart required

## Safety & EMC

Safety Standards	EN60950
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 with EN55011, EN55032(CISPR32), EN61204-3 Class B
Harmonics Current	Compliance with EN61000-3-2, -3
EMC Immunity	Compliance with EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2, EN61204-3 heavy industry, class A

## Environment

Working Temperature	-20°C ~ +70°C
Derating Temperature above 60°C	See: Derating curve
Working Humidity	10 - 95 RH, non-condensing
Storage Temperature and Humidity	from -20°C to +85°C , 10 - 95 RH, non-condensing
Vibration	10-500Hz, 2G 10min/1cycle, period for 60min each along X, Y, Z axes

## General

Case Material	PC/ABS
Case Protection	IP 20
Weight	0,2kg
Dimensions	90 × 22,5 × 100mm
Mounting	Snap-on type with self-locking feature, can be installed on 35 mm DIN rails 7,5 or 15
Connection	Screw terminals
<b>REMARK</b>	* Ta = 25°C, cold start

\* All values are based on a standard ambient temperature of 25°C and pressure of 0.1MPa.\*

## KSE 02012P / KSE 02024P

### 1. Introduction:

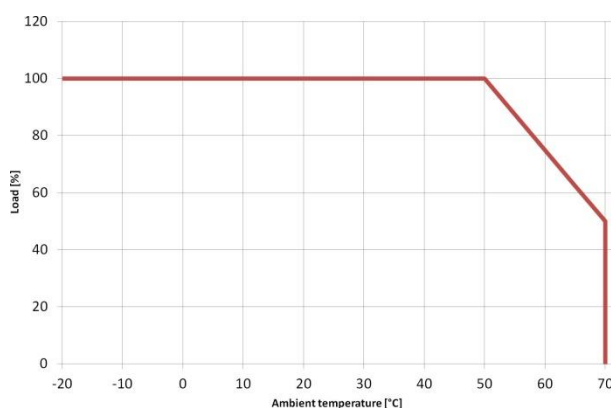
This series of single-phase DIN-rail-mounted switching power supplies is designed for a wide range of control equipment requiring high-quality DC power supplies with excellent EMC (electromagnetic compatibility) immunity and performance in industrial environments.

### 2. Features:

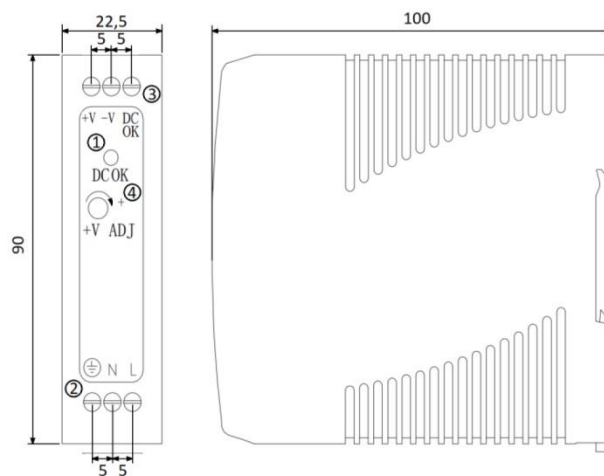
- **Overload protection:** The DC electrical circuitry protects the device from overload. In the event of an overload, the DC OK (ON) indicator of the DC output turns off. (1)
- **Overheating protection:** To protect the device from damage caused by high temperatures, an electrical circuit set is activated when the unit exceeds a specified temperature. When this system is triggered, the voltage and current values drop, and the DC OK (ON) indicator of the DC output turns off. (1)
- **Overvoltage protection:** The overvoltage circuit protects the unit and connected equipment from damage caused by excessive input voltage.
- **Adjustment element** (fine-tuning access port) allows precise adjustment of the output voltage. (4)

### 3. Panel description:

1. DC OK (ON) indicator for the DC output.
2. AC input terminal block assembly.
3. DC output terminal block assembly.
4. Fine-tuning access port.



Graph 1. The derating curve of the rated output load as a function of temperature.



### 4. Installation:

- The KSE series switching power supplies are devices designed for mounting on a standard TS35 DIN rail (35 x 15/7.5).
- Ensure the mounting position allows optimal cooling performance; the ideal operating position is vertical.
- To mount the device on the DIN rail, hook the upper part of the terminal onto the rail, then press the device down and inward until you hear a distinct click, indicating that the terminal is securely locked in place.
- To remove the unit from the rail, insert a flat, insulated screwdriver into the recess of the terminal, as close to the bottom of the device as possible, and press to release the unit from the recess before removing it from the DIN rail.
- **NOTE:** For indoor use only.

## 5. Safety precautions:

- **NEVER** remove the metal cover of the power supply while the AC power is live or connected.
- **NEVER** touch the unit with wet hands.
- **NEVER** touch the enclosure while the unit is under full load power; touching it may burn your hands or other parts of your body due to high temperature.
- This series consists of built-in power supplies and should be installed inside a main frame with at least 200 CFM of airflow.
- **NEVER** operate the unit if foreign materials, such as metallic objects, water, or debris, have fallen inside. Contact your dealer for inspection and repair.
- **NEVER** operate a damaged unit, as the voltage regulation circuit may be compromised. The resulting high voltage could damage your equipment.
- **NEVER** allow foreign objects to come into contact with the DC power output terminals.
- If you need to inspect the interior of the unit, allow it to cool down completely, as some components may be hot enough to burn your hand in the event of a failure.
- **NEVER** block the air intake vent.

## 6. Connection and operation:

- Ensure the use of a protective device (fuse, miniature automatic fuse) and easily accessible insulating devices that allow for power disconnection.
- Ensure that the main switch is turned off and secured against being turned on again. Failure to follow this recommendation could result in electric shock, death, or serious injury from touching live parts or improper handling of the power supply.
- Connect the equipment to the unit. When using flexible cables, connect them to the terminals (e.g. using ferrules).
- The cross-sectional area of the power cable should range from 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> for flexible cables.

## 7. Specifications:

	KSE 02012P	KSE 02024P
Voltage Range	100-240VAC; 140-340VDC	
Frequency	47 – 63Hz~	
Full Load AC Current	0,55A/100VAC ; 0,35A/230VAC	
No Load AC Current	15mA/100VAC ; 20mA/230VAC	
Inrush Current, cold start 25°C*	20A/100VAC ; 40A/230VAC	
Efficiency	80%	83%

### Wyjście

Rated DC Voltage	12V	24V
Voltage Adjust Range	10,5-13,5V	21-28V
Rated Current	1,67A	1A
Rated Power	20W	24W
Ripple & Noise (peak to peak)**	≤ 100mV	≤ 120mV
Line Regulation	≤ 1%	
Load Regulation (10% - 100%)	≤ 1%	
Hold-up Time (Full Load)	> 30ms/100VAC; > 30ms/230VAC	
Parallel Operation	Not possible	

## Protection

Over load/Over Current	110%-150% of rated output power, constant current limit, automatic restart	
Over Output Voltage	13,8-16,2VDC, restart required	27,6-32,4VDC, restart required

## Safety & EMC

Safety Standards	EN60950
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 with EN55011, EN55032(CISPR32), EN61204-3 class B
Harmonics Current	Compliance with EN61000-3-2, -3
EMC Immunity	Compliance with EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024, EN61000-6-2, EN61204-3 heavy industry, class A

## Environment

Working Temperature	-20°C ~ +70°C
Derating Temperature above 50°C	See: Derating curve
Working Humidity	10 – 95% RH, non-condensing
Storage Temperature Humidity	from -20°C to +85°C, 10-95% RH, non-condensing
Vibration	10-500Hz, 2G 10min/1cycle, period for 60min each along X, Y, Z axes

## General

Case Material	PC/ABS
Case Protection	IP 20
Weight	0,2kg
Dimensions	90 × 22,5 × 100mm
Mounting	Snap-on type with self-locking feature, can be installed on 35 mm DIN rails 7,5 or 15
Connection	Screw terminals
<b>REMARK</b>	* Ta = 25°C, cold start

\* All values are based on a standard ambient temperature of 25°C and pressure of 0.1MPa.\*

## KSE 04012P / KSE 04024P

### 1. Introduction:

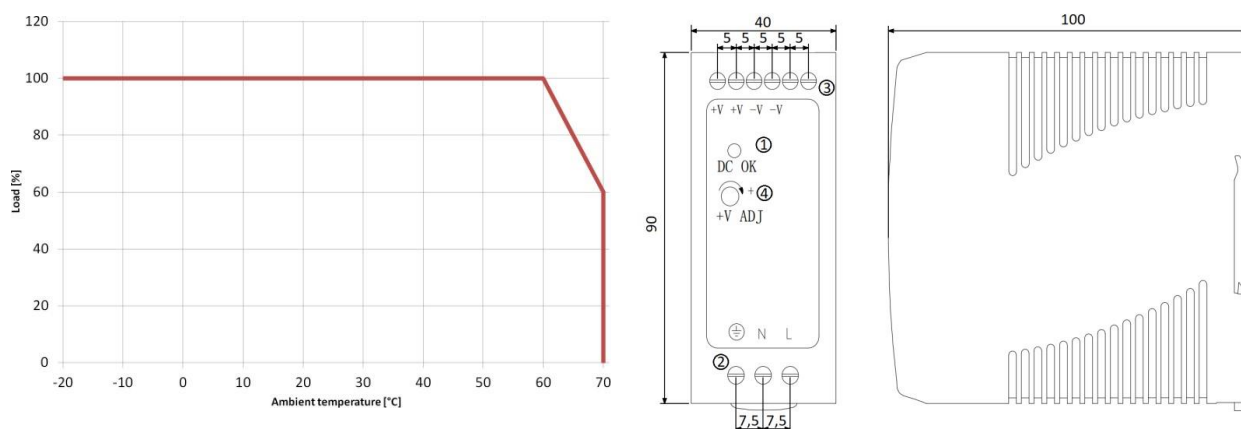
This series of single-phase DIN-rail-mounted switching power supplies is designed for a wide range of control equipment requiring high-quality DC power supplies with excellent EMC (electromagnetic compatibility) immunity and performance in industrial environments.

### 2. Features:

- **Overload protection:** The DC electrical circuitry protects the device from overload. In the event of an overload, the DC OK (ON) indicator of the DC output turns off. (1)
- **Overheating protection:** To protect the device from damage caused by high temperatures, an electrical circuit set is activated when the unit exceeds a specified temperature. When this system is triggered, the voltage and current values drop, and the DC OK (ON) indicator of the DC output turns off. (1)
- **Overvoltage protection:** The overvoltage circuit protects the unit and connected equipment from damage caused by excessive input voltage.
- **Adjustment element** (fine-tuning access port) allows precise adjustment of the output voltage. (4)

### 3. Panel description:

1. DC OK (ON) indicator for the DC output.
2. AC input terminal block assembly.
3. DC output terminal block assembly.
4. Fine-tuning access port.



*Graph 1. The derating curve of the rated output load as a function of temperature.*

### 4. Installation:

- The KSE series switching power supplies are devices designed for mounting on a standard TS35 DIN rail (35 x 15/7.5).
- Ensure the mounting position allows optimal cooling performance; the ideal operating position is vertical.
- To mount the device on the DIN rail, hook the upper part of the terminal onto the rail, then press the device down and inward until you hear a distinct click, indicating that the terminal is securely locked in place.
- To remove the unit from the rail, insert a flat, insulated screwdriver into the recess of the terminal, as close to the bottom of the device as possible, and press to release the unit from the recess before removing it from the DIN rail.
- **NOTE:** For indoor use only.



## 5. Safety precautions:

- **NEVER** remove the metal cover of the power supply while the AC power is live or connected.
- **NEVER** touch the unit with wet hands.
- **NEVER** touch the enclosure while the unit is under full load power; touching it may burn your hands or other parts of your body due to high temperature.
- This series consists of built-in power supplies and should be installed inside a main frame with at least 200 CFM of airflow.
- **NEVER** operate the unit if foreign materials, such as metallic objects, water, or debris, have fallen inside. Contact your dealer for inspection and repair.
- **NEVER** operate a damaged unit, as the voltage regulation circuit may be compromised. The resulting high voltage could damage your equipment.
- **NEVER** allow foreign objects to come into contact with the DC power output terminals.
- If you need to inspect the interior of the unit, allow it to cool down completely, as some components may be hot enough to burn your hand in the event of a failure.
- **NEVER** block the air intake vent.

## 6. Connection and operation:

- Ensure the use of a protective device (fuse, miniature automatic fuse) and easily accessible insulating devices that allow for power disconnection.
- Ensure that the main switch is turned off and secured against being turned on again. Failure to follow this recommendation could result in electric shock, death, or serious injury from touching live parts or improper handling of the power supply.
- Connect the equipment to the unit. When using flexible cables, connect them to the terminals (e.g. using ferrules).
- The cross-sectional area of the power cable should range from 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> for flexible cables.

## 7. Specifications:

	KSE 04012P	KSE 04024P
Voltage Range	100-240VAC; 140-340VDC	
Frequency	47-63Hz~	
Full Load AC Current	0,8A/100VAC ; 0,4A/230VAC	
No Load AC Current	20mA/100VAC; 40mA/230VAC	
Inrush Current, cold start 25°C*	30A/100VAC; 60A/230VAC	
Efficiency	86%	88%

### Output

Rated DC Voltage	12V	24V
Voltage Adjust Range	12-15V	24-30V
Rated Current	3,33A	1,7A
Rated Power	40W	
Ripple & Noise (peak to peak)**	≤ 120mV	≤ 150mV
Line Regulation	≤ 1%	
Load Regulation (10% - 100%)	≤ 1%	
Hold-up Time (Full Load)	> 20ms/100VAC; > 50ms/230VAC	
Parallel Operation	Not possible	

## Protection

Over load/Over Current	105%-150% of rated output power, constant current limit, automatic restart	
Over Output Voltage	12,6-36VDC, restart required	31,2-36VDC, restart required

## Safety & EMC

Safety Standards	EN60950, UL508	
Withstand Voltage	I/P - O/P 3kVAC ; I/P - F/G 1,5kVAC ; O/P - F/G 0,5kVAC	
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 with EN55011, EN55032(CISPR32), EN61204-3 class B	
Harmonics Current	Compliance with EN61000-3-2, -3	
EMC Immunity	Compliance with EN61000-4-2, -3, -4, -5, -6, -8, -11 EN55024, EN61000-6-2, EN61204-3 heavy industry, class A	

## Environment

Working Temperature	-20°C ~ +70°C
Derating Temperature above 60°C	See: Derating curve
Working Humidity	10 - 95 RH, non-condensing
Storage Temperature Humidity	from -40°C to +85°C, 10-95% RH, non-condensing
Vibration	10-500Hz, 2G 10min/1cycle, period for 60min each along X, Y, Z axes

## General

Case Material	PC/ABS
Case Protection	IP 20
Weight	0,32kg
Dimensions	90 × 40 × 100mm
Mounting	Snap-on type with self-locking feature, 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 a standard ambient temperature of 25°C and pressure of 0.1MPa.\*

## KSE 06012P / KSE 06024P

### 1. Introduction:

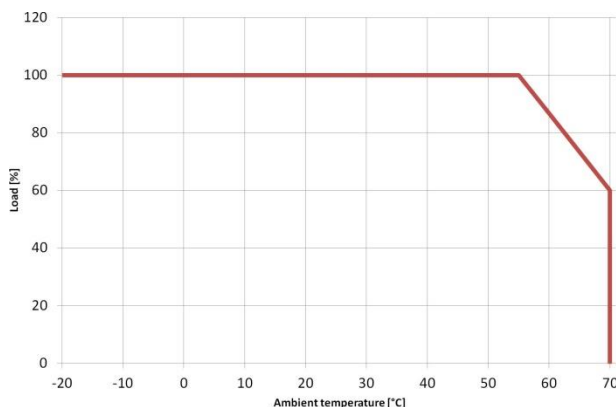
This series of single-phase DIN-rail-mounted switching power supplies is designed for a wide range of control equipment requiring high-quality DC power supplies with excellent EMC (electromagnetic compatibility) immunity and performance in industrial environments.

### 2. Features:

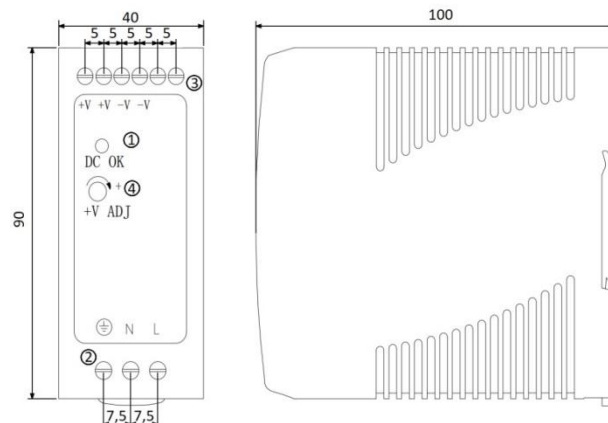
- **Overload protection:** The DC electrical circuitry protects the device from overload. In the event of an overload, the DC OK (ON) indicator of the DC output turns off. (1)
- **Overheating protection:** To protect the device from damage caused by high temperatures, an electrical circuit set is activated when the unit exceeds a specified temperature. When this system is triggered, the voltage and current values drop, and the DC OK (ON) indicator of the DC output turns off. (1)
- **Overvoltage protection:** The overvoltage circuit protects the unit and connected equipment from damage caused by excessive input voltage.
- **Adjustment element** (fine-tuning access port) allows precise adjustment of the output voltage. (4)

### 3. Panel description:

1. DC OK (ON) indicator for the DC output.
2. AC input terminal block assembly.
3. DC output terminal block assembly.
4. Fine-tuning access port.



Graph 1. The derating curve of the rated output load as a function of temperature.



### 4. Installation:

- The KSE series switching power supplies are devices designed for mounting on a standard TS35 DIN rail (35 x 15/7.5).
- Ensure the mounting position allows optimal cooling performance; the ideal operating position is vertical.
- To mount the device on the DIN rail, hook the upper part of the terminal onto the rail, then press the device down and inward until you hear a distinct click, indicating that the terminal is securely locked in place.
- To remove the unit from the rail, insert a flat, insulated screwdriver into the recess of the terminal, as close to the bottom of the device as possible, and press to release the unit from the recess before removing it from the DIN rail.
- **NOTE:** For indoor use only.

## 5. Safety precautions:

- **NEVER** remove the metal cover of the power supply while the AC power is live or connected.
- **NEVER** touch the unit with wet hands.
- **NEVER** touch the enclosure while the unit is under full load power; touching it may burn your hands or other parts of your body due to high temperature.
- This series consists of built-in power supplies and should be installed inside a main frame with at least 200 CFM of airflow.
- **NEVER** operate the unit if foreign materials, such as metallic objects, water, or debris, have fallen inside. Contact your dealer for inspection and repair.
- **NEVER** operate a damaged unit, as the voltage regulation circuit may be compromised. The resulting high voltage could damage your equipment.
- **NEVER** allow foreign objects to come into contact with the DC power output terminals.
- If you need to inspect the interior of the unit, allow it to cool down completely, as some components may be hot enough to burn your hand in the event of a failure.
- **NEVER** block the air intake vent.

## 6. Connection and operation:

- Ensure the use of a protective device (fuse, miniature automatic fuse) and easily accessible insulating devices that allow for power disconnection.
- Ensure that the main switch is turned off and secured against being turned on again. Failure to follow this recommendation could result in electric shock, death, or serious injury from touching live parts or improper handling of the power supply.
- Connect the equipment to the unit. When using flexible cables, connect them to the terminals (e.g. using ferrules).
- The cross-sectional area of the power cable should range from 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> for flexible cables.

## 7. Specifications:

	KSE 06012P	KSE 06024P
Voltage Range	100-240VAC; 140-340VDC	
Frequency	47-63Hz~	
Full Load AC Current	1,2A/100VAC; 0,5A/230VAC	
No Load AC Current	20mA/100VAC; 40mA/230VAC	
Inrush Current, cold start 25°C*	30A/100VAC; 60A/230VAC	
Efficiency	86%	88%

### Output

Rated DC Voltage	12V	24V
Voltage Adjust Range	12-15V	24-30V
Rated Current	5A	2,5A
Rated Power	60W	
Ripple & Noise (peak to peak)**	≤ 150mV	
Line Regulation	≤ 1%	
Load Regulation (10% - 100%)	≤ 1%	
Hold-up Time (Full Load)	> 20ms/100VAC; > 50ms/230VAC	
Parallel Operation	Not possible	

## Protection

Over load/Over Current	105%-150% of rated output power, constant current limit, automatic restart	
Over Output Voltage	15,6-18VDC, restart required	31,2-36VDC, restart required

## Safety & EMC

Safety Standards	EN60950, UL508	
Withstand Voltage	I/P - O/P 3kVAC ; I/P - F/G 1,5kVAC ; O/P - F/G 0,5kVAC	
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 with EN55011, EN55032(CISPR32), EN61204-3 class B	
Harmonics Current	Compliance with EN61000-3-2, -3	
EMC Immunity	Compliance with EN61000-4-2, -3, -4, -5, -6, -8, -11 EN55024, EN61000-6-2, EN61204-3 heavy industry, class A	

## Environment

Working Temperature	-20°C ~ +70°C
Derating Temperature above 55°C	See: Derating curve
Working Humidity	10-95% RH, non-condensing
Storage Temperature Humidity	from -40°C to +85°C, 10-95% RH, non-condensing
Vibration	10-500Hz, 2G 10min/1cycle, period for 60min each along X, Y, Z axes

## General

Case Material	PC/ABS
Case Protection	IP 20
Weight	0,35kg
Dimensions	90 × 40 × 100mm
Mounting	Snap-on type with self-locking feature, 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 a standard ambient temperature of 25°C and pressure of 0.1MPa.\*

## KSE 10012P / KSE 10024P

### 1. Introduction:

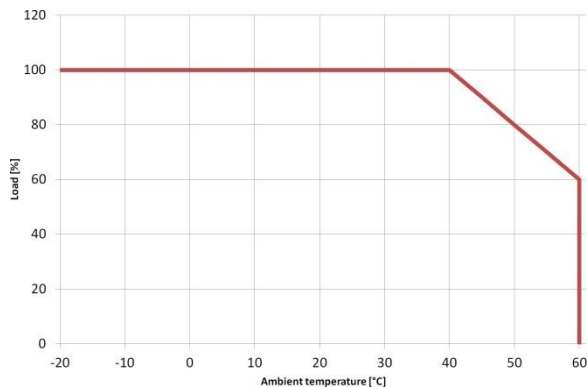
This series of single-phase DIN-rail-mounted switching power supplies is designed for a wide range of control equipment requiring high-quality DC power supplies with excellent EMC (electromagnetic compatibility) immunity and performance in industrial environments.

### 2. Features:

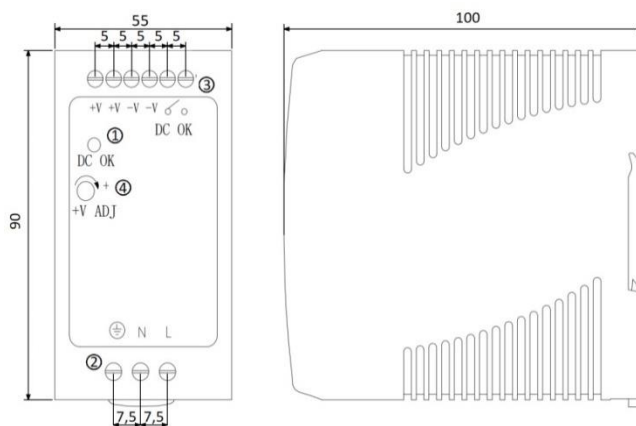
- **Overload protection:** The DC electrical circuitry protects the device from overload. In the event of an overload, the DC OK (ON) indicator of the DC output turns off. (1)
- **Overheating protection:** To protect the device from damage caused by high temperatures, an electrical circuit set is activated when the unit exceeds a specified temperature. When this system is triggered, the voltage and current values drop, and the DC OK (ON) indicator of the DC output turns off. (1)
- **Overvoltage protection:** The overvoltage circuit protects the unit and connected equipment from damage caused by excessive input voltage.
- **Adjustment element** (fine-tuning access port) allows precise adjustment of the output voltage. (4)

### 3. Panel description:

1. DC OK (ON) indicator for the DC output.
2. AC input terminal block assembly.
3. DC output terminal block assembly.
4. Fine-tuning access port.



*Graph 1. The derating curve of the rated output load as a function of temperature.*



### 4. Installation:

- The KSE series switching power supplies are devices designed for mounting on a standard TS35 DIN rail (35 x 15/7.5).
- Ensure the mounting position allows optimal cooling performance; the ideal operating position is vertical.
- To mount the device on the DIN rail, hook the upper part of the terminal onto the rail, then press the device down and inward until you hear a distinct click, indicating that the terminal is securely locked in place.
- To remove the unit from the rail, insert a flat, insulated screwdriver into the recess of the terminal, as close to the bottom of the device as possible, and press to release the unit from the recess before removing it from the DIN rail.
- **NOTE:** For indoor use only.

## 5. Safety precautions:

- **NEVER** remove the metal cover of the power supply while the AC power is live or connected.
- **NEVER** touch the unit with wet hands.
- **NEVER** touch the enclosure while the unit is under full load power; touching it may burn your hands or other parts of your body due to high temperature.
- This series consists of built-in power supplies and should be installed inside a main frame with at least 200 CFM of airflow.
- **NEVER** operate the unit if foreign materials, such as metallic objects, water, or debris, have fallen inside. Contact your dealer for inspection and repair.
- **NEVER** operate a damaged unit, as the voltage regulation circuit may be compromised. The resulting high voltage could damage your equipment.
- **NEVER** allow foreign objects to come into contact with the DC power output terminals.
- If you need to inspect the interior of the unit, allow it to cool down completely, as some components may be hot enough to burn your hand in the event of a failure.
- **NEVER** block the air intake vent.

## 6. Connection and operation:

- Ensure the use of a protective device (fuse, miniature automatic fuse) and easily accessible insulating devices that allow for power disconnection.
- Ensure that the main switch is turned off and secured against being turned on again. Failure to follow this recommendation could result in electric shock, death, or serious injury from touching live parts or improper handling of the power supply.
- Connect the equipment to the unit. When using flexible cables, connect them to the terminals (e.g. using ferrules).
- The cross-sectional area of the power cable should range from 0.5 mm<sup>2</sup> to 0.75 mm<sup>2</sup> for flexible cables.

## 7. Specifications:

	KSE 10012P	KSE 10024P
Voltage Range	100-240VAC; 140-340VDC	
Frequency	47-63Hz~	
Full Load AC Current	1,3A/100VAC; 0,8A/230VAC	
No Load AC Current	20mA/100VAC; 40mA/230VAC	
Inrush Current, cold start 25°C*	30A/100VAC; 60A/230VAC	
Efficiency	82%	85%

### Output

Rated DC Voltage	12V	24V
Voltage Adjust Range	12-15V	24-30V
Rated Current	7,5A	4A
Rated Power	90W	96W
Ripple & Noise (peak to peak)**	≤ 120mV	≤ 150mV
Line Regulation	≤ 1%	
Load Regulation (10% - 100%)	≤ 1%	
Hold-up Time (Full Load)	> 20ms/100VAC; > 50ms/230VAC	
Parallel Operation	Not possible	

## Protection

Over load/Over Current	105%-150% of rated output power, constant current limit, automatic restart	
Over Output Voltage	15,6-18VDC, restart required	31,2-36VDC, restart required

## Safety & EMC

Safety Standards	EN60950, UL508	
Withstand Voltage	I/P - O/P 3kVAC ; I/P - F/G 1,5kVAC ; O/P - F/G 0,5kVAC	
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 with EN55011, EN55032(CISPR32), EN61204-3 class B	
Harmonics Current	Compliance with EN61000-3-2, -3	
EMC Immunity	Compliance with EN61000-4-2, -3, -4, -5, -6, -8, -11 EN55024, EN61000-6-2, EN61204-3 heavy industry, class A	

## Environment

Working Temperature	-20°C ~ +70°C
Derating Temperature above 40°C	See: Derating curve
Working Humidity	10-95% RH, non-condensing
Storage Temperature Humidity	from -40°C to +85°C, 10-95% RH, non-condensing
Vibration	10-500Hz, 2G 10min/1cycle, period for 60min each along X, Y, Z axes

## General

Case Material	PC/ABS
Case Protection	IP 20
Weight	0,45kg
Dimensions	90 × 55 × 100mm
Mounting	Snap-on type with self-locking feature, 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 a standard ambient temperature of 25°C and pressure of 0.1MPa.\*