

# **Rittal – The System.**

**Faster – better – worldwide.**



**Schaltschrank-Heizgerät SK  
Panel heater SK  
Resistance chauffante SK  
Schackelkastverwarming SK  
Värmeelement  
för apparatskåp SK  
Riscaldatore anticondensa SK  
Resistencia calefactora SK  
パネルヒーター SK**

SK 3105.xxx

**Montage-, Installations- und Bedienungsanleitung  
Assembly and operating instructions  
Manuel d'installation et de maintenance  
Montage- en bedieningshandleiding  
Montage- och hanteringsanvisning  
Istruzioni di montaggio e funzionamento  
Instrucciones de montaje  
取扱説明書**

ENCLOSURES

POWER DISTRIBUTION

CLIMATE CONTROL

IT INFRASTRUCTURE

SOFTWARE & SERVICES



## 1. Technical specifications

### Enclosure heaters without fans

| Model No. SK                                                                    | 3105.310           | 3105.320         | 3105.330         | 3105.340         | 3105.350         | 3105.360          | 3105.370           |
|---------------------------------------------------------------------------------|--------------------|------------------|------------------|------------------|------------------|-------------------|--------------------|
| Dimensions mm                                                                   | W                  | 45               | 45               | 64               | 64               | 64                | 90                 |
|                                                                                 | H                  | 120              | 120              | 155              | 155              | 230               | 165                |
|                                                                                 | D                  | 46               | 46               | 56               | 56               | 56                | 75                 |
| Hole distance <b>A</b> mm                                                       | 42                 |                  |                  |                  |                  | 60                |                    |
| Rated operating voltage Volt, Hz                                                | 110 – 240 V, 50/60 |                  |                  |                  |                  |                   |                    |
| <b>Continuous thermal output at <math>T_u = 10\text{ }^\circ\text{C}</math></b> | <b>8 – 10 W</b>    | <b>18 – 20 W</b> | <b>23 – 30 W</b> | <b>49 – 50 W</b> | <b>63 – 75 W</b> | <b>86 – 100 W</b> | <b>130 – 150 W</b> |
| Pre-fuse T                                                                      | 2 A                |                  | 4 A              |                  |                  |                   |                    |

Special voltages available on request. We reserve the right to make technical modifications.

### Enclosure heaters with fans

| Model No. SK 110 V                                                              | 3105.410                  | 3105.420                  | 3105.430                  |
|---------------------------------------------------------------------------------|---------------------------|---------------------------|---------------------------|
| Model No. SK 230 V                                                              | 3105.380                  | 3105.390                  | 3105.400                  |
| Dimensions mm                                                                   | W                         | 103                       | 103                       |
|                                                                                 | H                         | 200                       | 200                       |
|                                                                                 | D                         | 103                       | 103                       |
| Hole distance <b>A</b> mm                                                       | 171                       |                           |                           |
| Rated operating voltage V, Hz                                                   | 110 or 230 V, 50/60       |                           |                           |
| <b>Continuous thermal output at <math>T_u = 10\text{ }^\circ\text{C}</math></b> | <b>250 W<sup>1)</sup></b> | <b>400 W<sup>1)</sup></b> | <b>800 W<sup>1)</sup></b> |
| Pre-fuse gG for 110 V                                                           | 4 A                       | 6 A                       | 10 A                      |
| Pre-fuse gG for 230 V                                                           | 4 A                       | 6 A                       | 6 A                       |

<sup>1)</sup> Output with fan.

We reserve the right to make technical modifications.

## 2. Mounting

The panel heater is fitted vertically, i.e. with the connection terminal or fan facing downwards. To permit the required convection, a minimum clearance to the adjacent components must be observed. A safety clearance of at least 300 mm must be left above the heater in the case of heaters with fans, and 100 mm for heaters without fans. (For both a thermal safety clearance to the sides of 60 mm and 100 mm at the bottom is required).

If these clearances are observed, the ambient temperature does not rise above 65 °C.

2.1 Snap-type fastening onto a 35 mm support rail DIN EN 50 022 (Fig. 1.1).

2.2 Screw fastening onto the mounting plate (Fig. 1.2).

It should be ensured that the heater and connection cables are mounted firmly and securely. Electric cables must not touch the body of the heater fan and must not be routed directly past the hot air outlet.

The heater must not be mounted in the vicinity of flammable materials.

## 3. Mains connection

The heater must be connected to a power supply of the voltage stated on the rating plate via the quick-connect terminals. The unit must be connected to the mains via an isolating device which ensures at least 3 mm contact opening when switched off.

Electrical connections must be made using solid wire (max. 2.5 mm<sup>2</sup>) or stranded wire with wire end ferrules.

Due to the specific characteristics of the PTC heater element, the momentary switch-on current may be up to 6 A. A slow-blowing fuse (gL) is therefore imperative. IEC 6100-4-5 requires that the customer provides safety devices for impulse voltages of more than 1000 V. The double connection terminal permits the cascading of several heaters and thus simplifies wiring. A separate thermostat (SK 3110.000) or a digital thermostat (SK 3114.200) must be used to control the enclosure temperature.

The humidity of the air in the enclosure can be controlled by incorporating a hygrostat (SK 3118.000).



### Caution!

Overvoltage peaks of more than 2 kV may destroy the unit.

### 3.1 Proper usage

Rittal enclosure heaters were developed and designed in accordance with the state of the art and the recognised rules governing technical safety. Nevertheless, if used improperly, they may pose a threat to life and limb or cause damage to property. The heater is only designed to heat components and to be installed inside housings and enclosures. The manufacturer will not be liable for any damages caused as a result of improper use, or for incorrect assembly, installation or use. All risk is borne solely by the user.

## 4. Safety notes

- When carrying out the electrical installation, it is important to observe all valid national and regional regulations as well as the provisions of the responsible power supply company.
- Electrical installation must only be carried out by a qualified electrician who is responsible for compliance with the existing standards and regulations.
- Use only original spare parts!
- The heater must not be touched while switched on : Risk of burns from hot surfaces! The heater must be allowed to cool for approx. 15 minutes after switching off.



### Caution!

Risk of burns from hot surfaces!

## 5. Scope of supply

1 heater  
1 set of assembly instructions  
Assembly parts

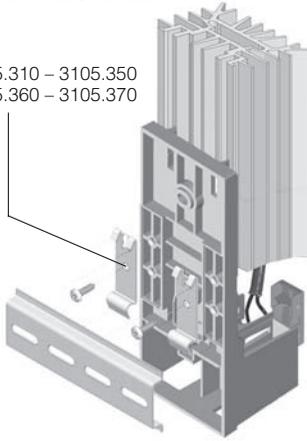
## 6. Warranty

This unit is covered by a 1-year guarantee from the date of supply, subject to correct usage. Within this period, the returned unit will be repaired in the factory or replaced free of charge.

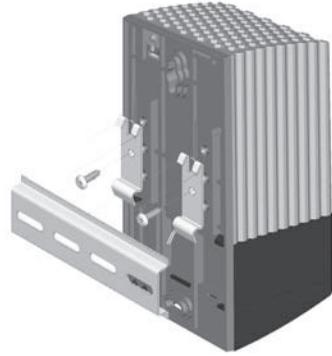
Unauthorised utilisation or incorrect connection will invalidate the manufacturer's guarantee. No liability will be assumed for any damage arising from such situations.

### SK 3105.310 – SK 3105.370

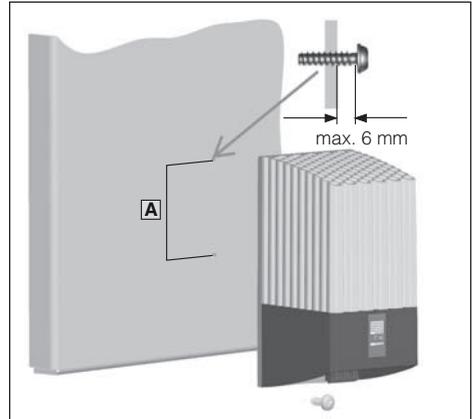
1 x SK 3105.310 – 3105.350  
2 x SK 3105.360 – 3105.370



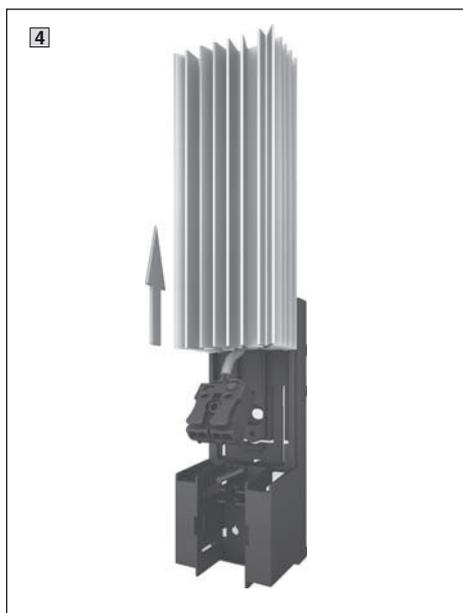
### SK 3105.380 – SK 3105.430



- Abb. 1.1: Schnapbefestigung auf 35 mm-Tragschiene DIN EN 50 022  
Fig. 1.1: Snap-type fastening onto a 35 mm support rail DIN EN 50 022  
Fig. 1.1: Fixation par enclenchement sur un rail porteur de 35 mm selon DIN EN 50 022  
Afb. 1.1: Snapbevestiging op een 35 mm-montagerail DIN EN 50 022  
Bild 1.1: Ihakningsmontage på en 35 mm profilskena DIN EN 50 022  
Fig. 1.1: Fissaggio ad innesto su guida DIN 35 mm secondo EN 50 022  
Imagen 1.1: Fijación a presión sobre un carril soporte de 35 mm DIN EN 50 022  
図 1.1: DIN レール (35 mm DIN EN 50 022) へのスナップ固定



- Abb. 1.2: Schraubbefestigung auf Montageplatte  
Fig. 1.2: Screw fastening onto a mounting plate  
Fig. 1.2: Fixation par vis sur une plaque de montage  
Afb. 1.2: Schroefbevestiging op een montageplaat  
Bild 1.2: Skruvmontage på en montageplåt  
Fig. 1.2: Fissaggio a vite su piastra di montaggio  
Imagen 1.2: Fijación atornillada sobre una placa de montaje  
図 1.2: マウンティングプレートへのねじ取付け
- A** = Lochabstand  
**A** = Hole distance  
**A** = Distance entre les perçages  
**A** = Hartafstand  
**A** = Hålavstånd  
**A** = Interasse fori  
**A** = Distancia entre centros de taladros  
**A** = 取付穴間の距離



Demontage der Geräte

Removal of the units

Démontage des appareils

Demontage van de verwarmingen

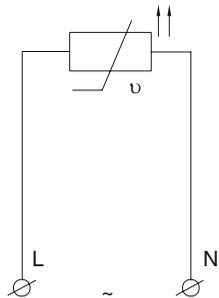
Demontage

Smontaggio dell'apparecchio

Desmontaje de los aparatos

ユニットの取外し

**SK 3105.310 – SK 3105.370**



110 – 230 V AC, 50/60 Hz, DC

Schaltplan Heizung

Wiring plan – Heater

Schéma de connexions de la résistance chauffante

Bedradingsschema verwarming

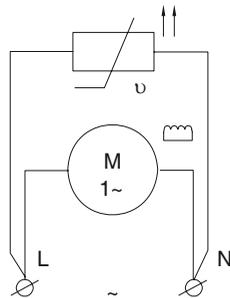
Kopplingsschema värmeelement

Schema elettrico – Riscaldatore

Esquema de conexión – Resistencia

ヒーター 配線図

**SK 3105.380 – SK 3105.430**



110 – 230 V AC, 50/60 Hz

Schaltplan Heizung mit Lüfter

Wiring plan – Heater with fan

Schéma de connexions de la résistance chauffante avec ventilateur

Bedradingsschema verwarming met ventilator

Kopplingsschema värmeelement med fläkt

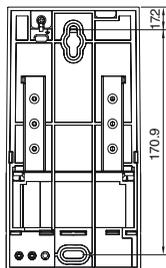
Schema elettrico – Riscaldatore con ventilatore

Esquema de conexión – Resistencia con ventilador

ファン付きヒーター

配線図

**SK 3105.380 – SK 3105.430**



d = 5 mm

170.9

Befestigung auf Montageplatte

Fastening onto a mounting plate

Fixation sur une plaque de montage

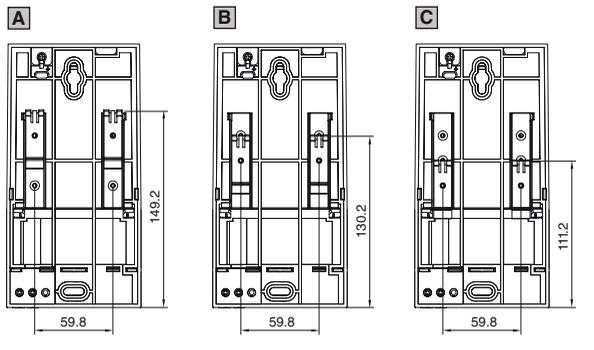
Bevestiging op een montageplaat

Montage på en montageplåt

Fissaggio su piastra di montaggio

Fijación sobre una placa de montaje

マウンティングプレート取付



Befestigungsmöglichkeiten auf Tragschiene

Fastening onto a support rail

Fixation sur un rail porteur

Bevestiging op een montagerail

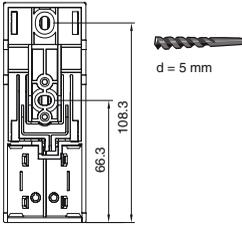
Montage på profilskena

Fissaggio su guida di supporto

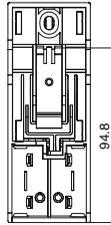
Fijación sobre un carril soporte

DIN レール取付

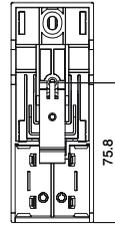
### SK 3105.310/.320



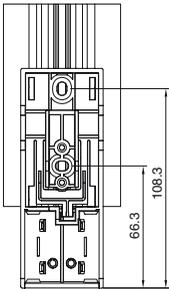
**A**



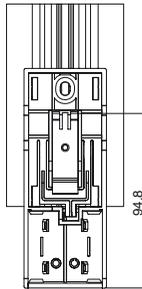
**B**



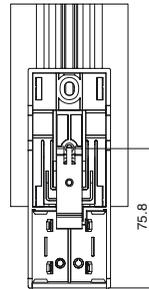
### SK 3105.330 – SK 3105.350



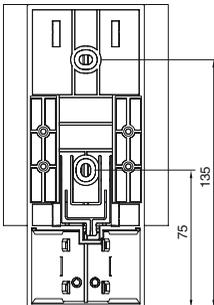
**A**



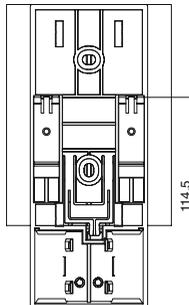
**B**



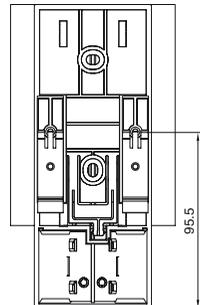
### SK 3105.360/.370



**A**



**B**



Befestigung auf Montageplatte  
Fastening onto a mounting plate  
Fixation sur une plaque de montage  
Bevestiging op een montageplaat  
Montage på en montageplåt  
Fissaggio su piastra di montaggio  
Fijación sobre una placa de montaje  
マウンティングプレート取付

Befestigungsmöglichkeiten auf Tragschiene  
Fastening onto a support rail  
Fixation sur un rail porteur  
Bevestiging op een montagerail  
Montage på profilskena  
Fissaggio su guida di supporto  
Fijación sobre un carril soporte  
DIN レール取付



# Rittal – The System.

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**Faster – better – worldwide.**

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- Power Distribution
- Climate Control
- IT Infrastructure
- Software & Services

RITTAL GmbH & Co. KG  
Postfach 1662 • D-35726 Herborn  
Phone +49(0)2772 505-0 • Fax +49(0)2772 505-2319  
E-mail: info@rittal.de • www.rittal.com

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