

RSI, 1.5 - 250 kW

Safety instructions and other important information



RSI, 1.5 - 250 kW
Safety instructions
(all available languages)
<http://net.grundfos.com/qr/i/99095689>

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GRUNDFOS 

RSI, 1.5 - 250 kW

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■ Original safety instructions

These safety instructions give a quick overview of the safety precautions to be taken in connection with any work on this product. Observe these safety instructions during handling, installation, operation, maintenance, service and repair of this product. These safety instructions are a supplementary document, and all safety instructions will appear again in the relevant sections of the installation and operating instructions. Keep these safety instructions at the installation site for future reference.

General information



Read this document before you install the product. Installation and operation must comply with local regulations and accepted codes of good practice.

Installing the product



DANGER

Death or serious personal injury

- Before installation, make sure that the power supply is switched off and it cannot be switched on unintentionally.



WARNING

Death or serious personal injury

- Installation must be carried out by qualified staff.



WARNING

Death or serious personal injury

- Use appropriate tools and safety equipment when handling the product.



CAUTION

Minor or moderate personal injury

- Use a proper lifting method when necessary.

Electro-magnetic compatibility (EMC)

The drive must comply with the standard IEC 61000-3-12. The short-circuit power SSC must be a minimum of 120 RSCE at the interface point between your and the public mains. Make sure to connect the drive and the motor to the mains with a short-circuit power SSC that is a minimum of 120 RSCE. If necessary, contact your mains operator.

Using an RCD or an RCM device

The drive can cause a current in the protective grounding conductor. Use a residual current-operated protective (RCD) device, or a residual current-operated monitoring (RCM) device to give protection against a direct or an indirect contact. Use a type B RCD or RCM device on the mains side of the drive.



Adjust the minimum frequency to a value that ensures water is discharged from the outlet of the pump.



To adjust the minimum frequency, click the Home button on the control panel and select minimum frequency.



To ensure a proper convective cooling effect, install the RSI according to fig. Installation example showing the required clearance when mounting the product.

Do not install the equipment in direct sunlight.



CAUTION

Minor or moderate personal injury

- Ensure that the mounting wall can support the weight of the inverter. See the weight in [Technical data](#).

Electrical connection



WARNING

Death or serious personal injury

- To avoid the risk of electric shock or fire, make sure that the power supply has been switched off before connecting the equipment, and make sure the earth terminal is reliably grounded.



WARNING

Death or serious personal injury

- Make sure that reinforced protective ground connection is present. It is mandatory because the touch current of the AC drives is more than 3.5 mA AC (refer to EN 61800-5-1).



WARNING

Death or serious personal injury

- Install the electrical connections according to the wiring diagrams.

WARNING

Death or serious personal injury



- The drive must always be grounded with a grounding conductor that is connected to the grounding terminal. The terminal is identified with the grounding symbol in *RSI input terminals*.



To avoid arc discharge and fire, tighten all terminals with the specified torque.

For distances (pump to the inverter) exceeding 15 m (50 ft), use a sine-wave filter with matching current ratings.

Minimum cross-sectional area of protective conductors (HD 60364-5-54)

Cross-sectional area of the phase conductors (S) [mm ²]	The minimum cross-sectional area of the protective grounding conductor [mm ²]
$S \leq 16$	S
$16 < S \leq 35$	16
$35 < S$	S/2

The values of the table are valid only if the protective earthing conductor is made of the same metal as the phase conductors. Otherwise the cross-sectional area of the protective earthing conductor must be determined in a manner that produces a conductance equivalent to that which results from the application of this table.

The cross-sectional area of each protective grounding conductor that is not a part of the mains cable or the cable enclosure, must be a minimum of 2.5 mm² if there is mechanical protection, and 4 mm² if there is not mechanical protection. If you have cord-connected equipment, make sure that the protective grounding conductor in the cord is the last conductor to be interrupted, if the strain-relief mechanism breaks.

Make sure to comply with the local regulations on the minimum size of the protective grounding conductor.

RSI input terminals

WARNING**Electric shock**

Death or serious personal injury



- Make sure that AC and DC power source are never supplied to the RSI simultaneously, unless it is installed with PowerAdapt. An interlocked change over switch is recommended.

Operation**DANGER****Electric shock**

Death or serious personal injury



- Do not touch the motor cable terminals U, V, W, the brake resistor terminals, or the DC terminals when the drive is connected to mains. These terminals are live when the drive is connected to mains, also when the motor does not operate.

WARNING

Death or serious personal injury



- Check all electrical connections before setting up the system.

WARNING**Hot surface**

Death or serious personal injury



- The heat sink becomes hot during running. Do not touch it.



In case of altitudes over 1000 m (3280 ft), reduce the output current by 10 % for every 1500 m (4921 ft).



Adjust control parameters according to the steps indicated in this manual before the first start.

Servicing the product**DANGER****Electric shock**

Death or serious personal injury



- Before servicing the product, make sure that the power supply is switched off and it cannot be switched on unintentionally.

**WARNING**

Death or serious personal injury

- Maintenance and inspection must be performed by a qualified electrician.

WARNING

Death or serious personal injury



- To do work on the terminal connections of the drive, disconnect the drive from mains and make sure that the motor is stopped. Wait 5 minutes before opening the cover of the drive. Use a measuring device to make sure that there is no voltage. The terminal connections and the components of the drive are still live for 5 minutes after they have been disconnected from the motor.

Inspection and maintenance requirements**WARNING**

Death or serious personal injury



- Before inspecting the product, make sure that the power supply is switched off and it cannot be switched on intentionally.

EU declaration of conformity

GB: EU declaration of conformity

We, Grundfos, declare under our sole responsibility that the product RSI, to which the declaration below relates, is in conformity with the Council Directives listed below on the approximation of the laws of the EU member states.

FR: Déclaration de conformité UE

Nous, Grundfos, déclarons sous notre seule responsabilité, que le produit RSI, auquel se réfère cette déclaration, est conforme aux Directives du Conseil concernant le rapprochement des législations des États membres UE relatives aux normes énoncées ci-dessous.

- Low Voltage Directive (2014/35/EU)
Standards used:
EN 61800-5-1:2007
- EMC Directive (2014/30/EU)
Standards used:
EN 61800-3:2004 + A1:2012
- RoHS Directive (2011/65/EU and 2015/863/EU)
Standards used:
EN 50581:2012
- Ecodesign Directive 2009/125/EC
Commission Regulation (EU) 2019/1781
Commission Regulation (EU) 2021/341
Standards used:
EN 61800-9-2:2017

This EU declaration of conformity is only valid when published as part of the Grundfos Safety instructions (publication number 99095689).

Bjerringbro, 7th July 2021



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Person authorised to compile technical file and empowered to sign the EU declaration of conformity.

ES: Declaración de conformidad de la UE

Grundfos declara, bajo su exclusiva responsabilidad, que el producto RSI al que hace referencia la siguiente declaración cumple lo establecido por las siguientes Directivas del Consejo sobre la aproximación de las legislaciones de los Estados miembros de la UE.

PT: Declaração de conformidade UE

A Grundfos declara sob sua única responsabilidade que o produto RSI, ao qual diz respeito a declaração abaixo, está em conformidade com as Directivas do Conselho sobre a aproximação das legislações dos Estados Membros da UE.

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