

# 1. VACON® 100 X - HEATER (ARCTIC OPTION)

Document code: DPD01097C

## 1.1 SAFETY

This manual contains clearly marked cautions and warnings which are intended for your personal safety and to avoid any unintentional damage to the product or connected appliances.

**Please read the information included in dangers carefully.**

**The optional heater allows the drive to operate in low temperature conditions down to -40°C. This option is intended to be installed inside the drive.**

**Only VACON® authorized, trained and qualified personnel are allowed to install and maintain this component.**

## 1.2 DANGERS

Table 1. Dangers



The components of the optional heater are live when the element is connected to mains potential. Coming into contact with this voltage is extremely dangerous and may cause death or severe injury.



The heater can be used only inside the drive and in combination with only the VACON® 100 X. Before connecting the heater to mains, make sure that the VACON® 100 X drive is closed firmly.

## 1.3 TECHNICAL DATA

The optional heater has to be supplied with single-phase 230V. The thermal element is always supplied and if the drive is connected at -40°C the drive will be heated up until the temperature of -10°C is exceeded. The heating is temperature controlled and an internal fan ensures that the air is equally distributed inside the enclosure.

The integrated relay output (switching capacity: 24VDC / 3A, 277VAC / 3A) can be used to control the power-up of the drive. The contact is closed when the internal temperature is higher than the minimum allowed value for the power-up (~ -10°C). This can be included and managed in the logic of the entire system. A bi-color LED (on the enclosure of this option), shows the status of the drive, ready or not-ready.

Table 2. Technical information on input and relay terminals.

Heater connections		
Terminal	Signal	Technical information
L1	Line	Supply voltage input terminals: 1AC 230V 50Hz 60 Hz 900 mA Tolerance: 208V -15%... 250V +10% External fuse needed: <ul style="list-style-type: none"> <li>• class T ( UL&amp; CSA) min. 300V</li> <li>• class J ( UL&amp; CSA) min. 300V</li> </ul>
N	Neutral	

Table 2. Technical information on input and relay terminals.

Heater connections		
Terminal	Signal	Technical information
X1	Feedback relay output	Switching capacity: 24VDC / 3A 250VAC /3A

1.3.1 FUSES

The recommended fuse types for the heater supply voltage are shown in the table below.

Table 3. Fuses ratings.

Fuses for heater supply voltage input - 230VAC		
gG/gL (IEC 60269-1) 500V	class T ( UL& CSA) 600V	class J ( UL& CSA) 600V
1A	1A	1A

1.4 MOUNTING INSTRUCTIONS: MM4 EXAMPLE

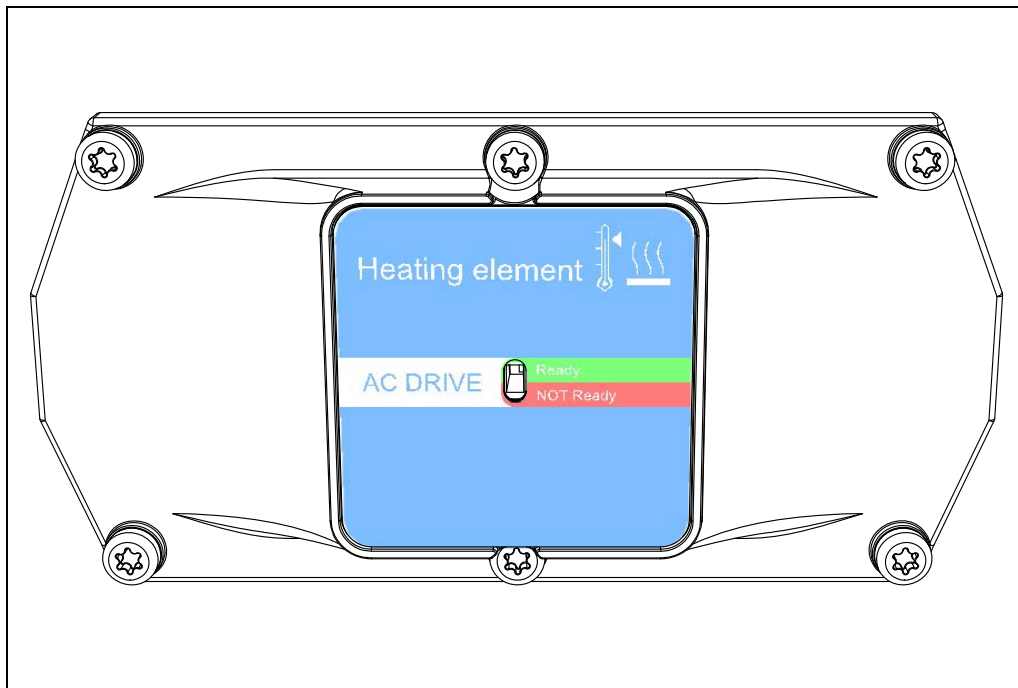


Figure 1. Heater option for MM4.

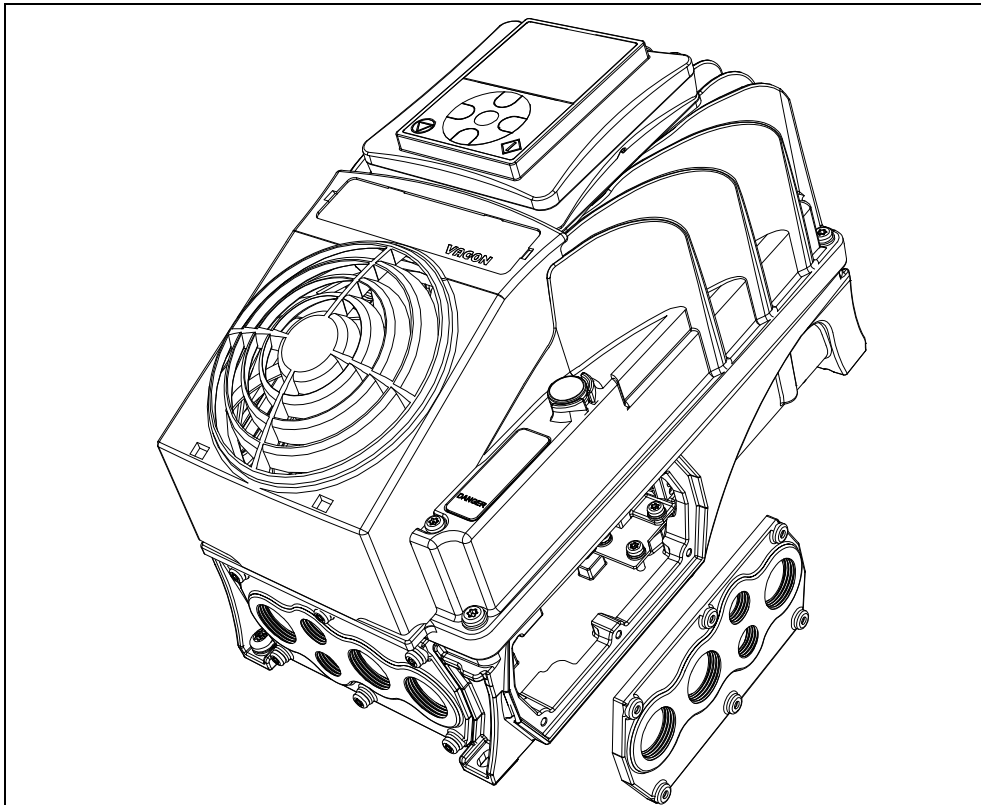


Figure 2. Remove the cable entry plate (right side example).

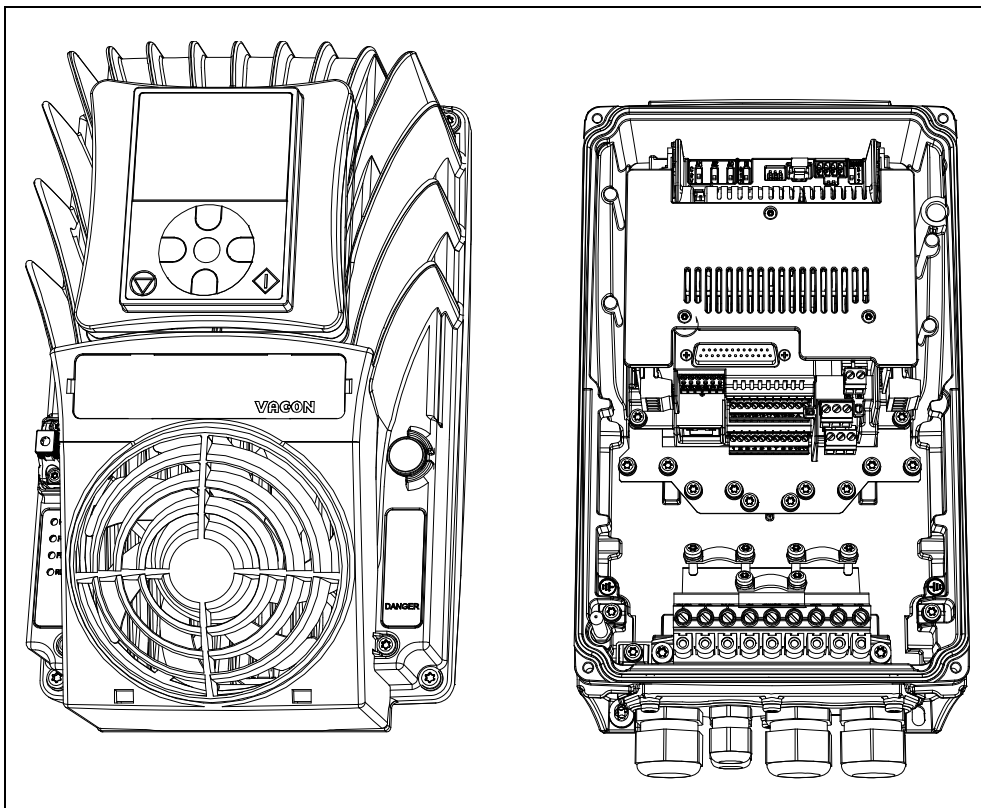


Figure 3. Remove the powerhead from the terminal box.

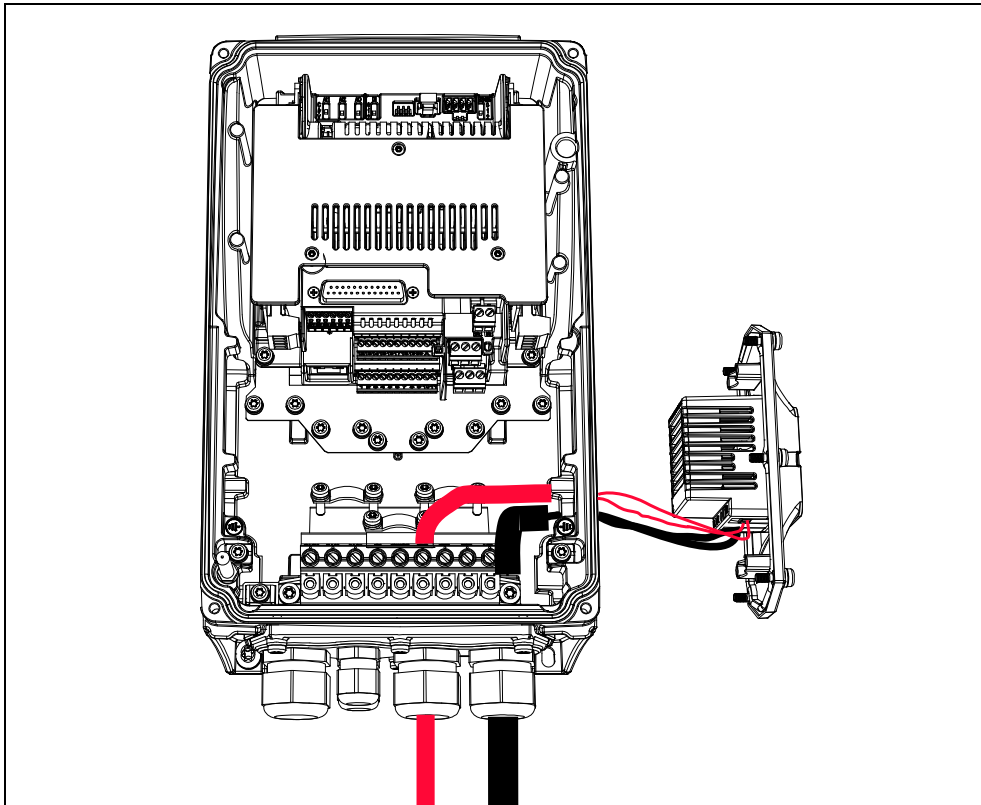


Figure 4. Connect the supply voltage (black cable) and the output relay (red cable) to the optional heater through the bottom cable entry plate. Colors of the cables are only examples.

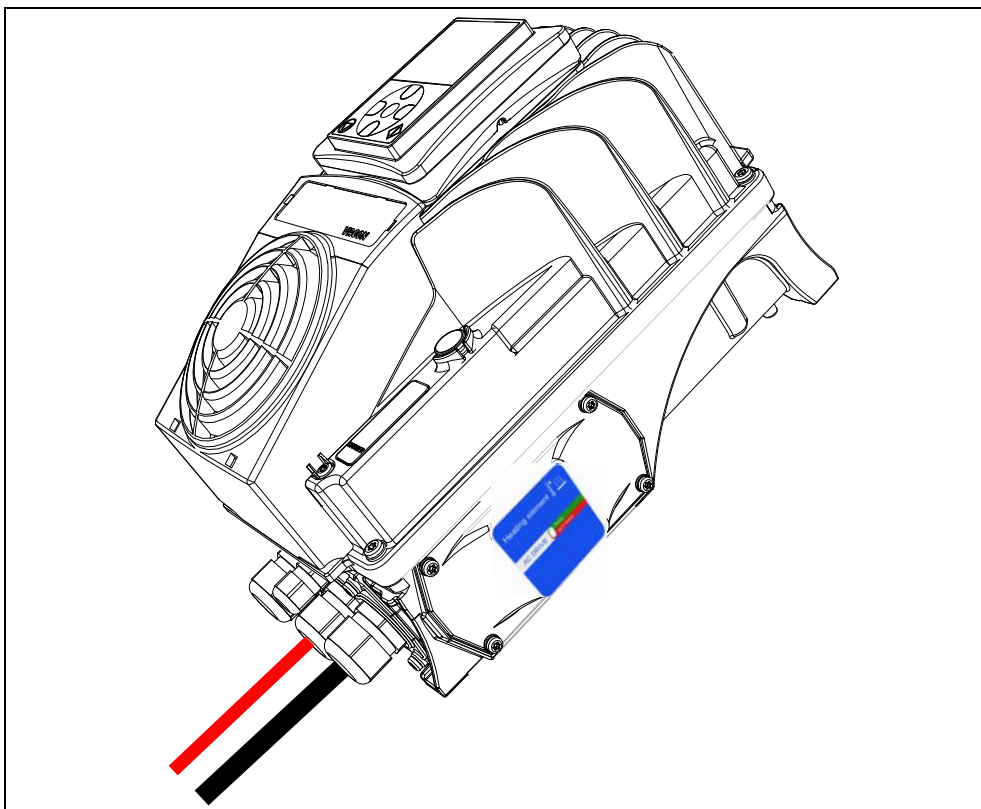


Figure 5. Mount the optional heater on the terminal box and then close the powerhead.