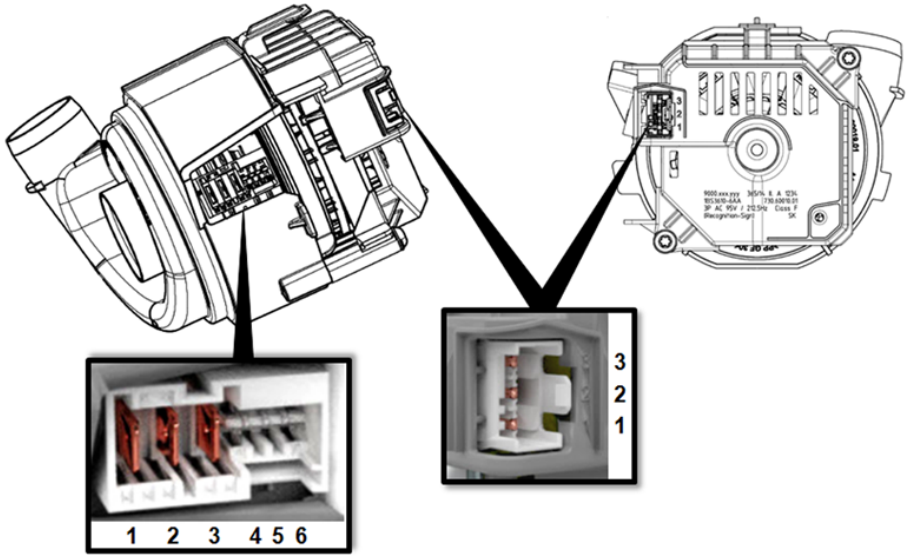
5.4 Heat pump terminal measurements

There are two connectors, 6-pin heater / NTC's and 3-pin motor.

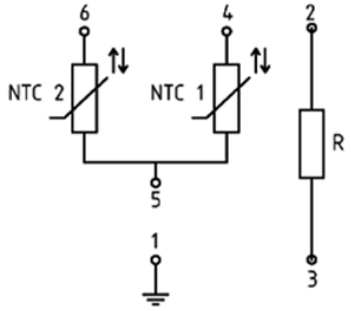


Graphic 50:6–pin heater / NTC's and 3–pin motor terminals

The 6-pin connector on the side of the heat pump connects to the heat pump heater, heater NTC's and ground (terminals 1 - 6).

To check the 1200 W heater, measure the resistance between terminals 2 – 3. If the resistance = ∞, the heater has failed and the heat pump must be replaced.

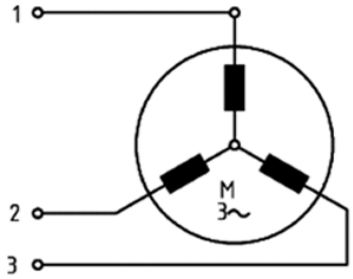
Heater and NTC resistances as follows:



Graphic 51:Heater and NTC's wiring diagram

Heater 2 – 3: ~ 8.9 Ω (@ 77 ºF)
NTC 4 – 5: ~ 10 k# (@ 77 ºF)
NTC 5 – 6: ~ 10 k# (@ 77 ºF)
NTC 4 – 6: ~ 20 k# (@ 77 ºF)
The 3-pin connector on the end of the heat pump connects to the 3-pole BLDC motor (terminals 1-3). The power module controls motor speed, starting and stopping.

Motor resistances as follows:



Graphic 52:Heat pump motor wiring diagram

Motor 1 – 2: ~ 14.7 Ω (@ 68 ºF)
Motor 2 – 3: ~ 14.7 Ω (@ 68 ºF)
Motor 3 – 1: ~ 14.7 Ω (@ 68 ºF)