

Screw-in heater

with combination of temperature control, safety temperature limiter, operating light and contactor



Application

Auxiliary heating system of industrial water and heating water in solar plants and heat pump systems.

Features

- SH The heating element is made of three U-shaped heating tubes, which are soldered into a 1½" sonical brass nipple.
The unheated zone is 150 mm for all types.
- TC Electromechanical temperature control acc. EN 14597, not fail safe.
- STL Electromechanical safety temperature limiter acc. EN 14597, fail safe. If nominal value is reached, the limiter switches and stays locked in this position. Reset is performed manually and is only possible after the sensing element is cooled off by approx. 10 K.
- Time factor of sensing element acc. EN 14597
 - Operation type TC Type 2 B acc. EN 14597
 - Operation type STL Type 2 BK acc. EN 14597

Type summary

Industrial water
Cronifer 1.4529

| Type | Order-No. | Power | Immersion length [EL] |
|-------------|-----------|----------------|-----------------------|
| AHR-B-B-1.0 | 012-3301 | 1.0kW; 400V 3~ | 300mm |
| AHR-B-B-1.5 | 012-3302 | 1.5kW; 400V 3~ | 300mm |
| AHR-B-B-2.0 | 012-3303 | 2.0kW; 400V 3~ | 300mm |
| AHR-B-B-2.5 | 012-3304 | 2.5kW; 400V 3~ | 300mm |
| AHR-B-B-3.0 | 012-3305 | 3.0kW; 400V 3~ | 400mm |
| AHR-B-B-3.8 | 012-3306 | 3.8kW; 400V 3~ | 450mm |
| AHR-B-B-4.5 | 012-3307 | 4.5kW; 400V 3~ | 500mm |
| AHR-B-B-6.0 | 012-3308 | 6.0kW; 400V 3~ | 600mm |
| AHR-B-B-7.5 | 012-3309 | 7.5kW; 400V 3~ | 700mm |
| AHR-B-B-9.0 | 012-3310 | 9.0kW; 400V 3~ | 750mm |
| AHR-H-B-1.0 | 012-3321 | 1.0kW; 400V 3~ | 300mm |
| AHR-H-B-1.5 | 012-3322 | 1.5kW; 400V 3~ | 300mm |
| AHR-H-B-2.0 | 012-3323 | 2.0kW; 400V 3~ | 300mm |
| AHR-H-B-2.5 | 012-3324 | 2.5kW; 400V 3~ | 300mm |
| AHR-H-B-3.0 | 012-3325 | 3.0kW; 400V 3~ | 400mm |
| AHR-H-B-3.8 | 012-3326 | 3.8kW; 400V 3~ | 450mm |
| AHR-H-B-4.5 | 012-3327 | 4.5kW; 400V 3~ | 500mm |
| AHR-H-B-6.0 | 012-3328 | 6.0kW; 400V 3~ | 600mm |
| AHR-H-B-7.5 | 012-3329 | 7.5kW; 400V 3~ | 700mm |
| AHR-H-B-9.0 | 012-3330 | 9.0kW; 400V 3~ | 750mm |

Heating water
CN 18/8 1.4541

Technical data

The following indications are valid for the above listed standard types. Due to the function, other types might show different data.

| | | |
|-------------------|---|--------------------|
| Application range | Adjustable cut-off temperature | 0...*...28...85 °C |
| | Safety cut-off temperature ϑ_{off} | 110 °C (0-9 K) |
| | Ambient temperature on switching head | max. 50 °C (T50) |
| | Thermal switching differential | 11.0 K ± 5.5 K |
| | Ambient temperature for storage and transport | -30...+90 °C |
| Calibration | Calibration tolerance | ± 7 K |
| | Time factor in water | <45 s |

Specification

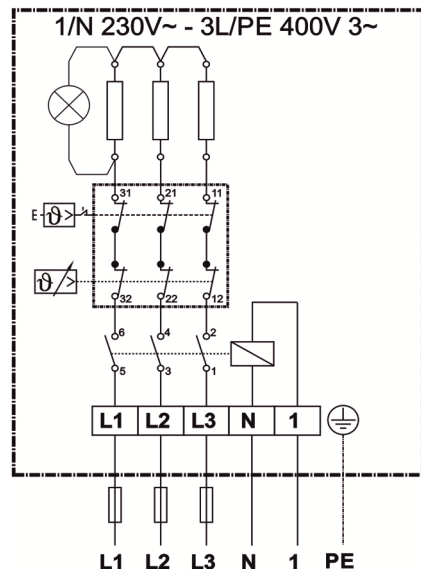
Fitting thread
 Brass nipple
 Heating tube industrial water
 Heating tube heating water
 Surface load
 Electrical connection
 Operating pressure
 Housing cover
 Housing base
 Protection mode

R 1½" sonical
 CuZn40Pb2
 Cronifer 1.4529, Ø 8.2 mm
 CN 18/8 1.4541, Ø 8.2 mm
 8-9 W/cm²
 Spring clip
 10 bar max.
 Polycarbonate, RAL 7035 (light gray)
 Polycarbonate, RAL 7016 (anthracite gray)
 IP41 acc. EN 60529

Fitting notes

The device must be installed horizontally. The heating tubes must be covered entirely by the liquid. The circulation of the liquid shall not be inhibited.

Wiring diagram



Operating voltage
 L1/L2/L3 400 V 3~
 1/N 230 V~

Dimension drawing

