

Screw-in heater
insulated mounting

AHIR-BI-OP-...

With combination of temperature control and safety
temperature limiter
Compatible with the consumption regulator
Fronius Ohmpilot

PV own power consumption

- Immersion heater with continuous adjustment via Ohmpilot from Fronius
- Power regulation from 0 to 100%



Application Features

Auxiliary heating system of industrial water and heating water in photovoltaic systems.

SH The heating element is made of three U-shaped heating tubes, which are mounted isolated into a 1½" conical brass nipple by food-safe plastic sleeves. Thanks to the insulated mounting of the heating tubes, the devices are also suitable for enamelled boilers. By using the integrated DIP switch, the potential equalisation resistance for the usage in stainless steel tanks is bridgeable. 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 145979

Type summary

Industrial and heating water
Incoloy 825, 2.4858

| Type | Order no. | Power | Immersion length [EL] |
|----------------|-----------|------------------|-----------------------|
| AHIR-BI-OP-1.0 | 012-5501 | 1.00 kW; 400V 3~ | 300mm |
| AHIR-BI-OP-2.0 | 012-5502 | 2.00 kW; 400V 3~ | 300mm |
| AHIR-BI-OP-2.5 | 012-5503 | 2.50 kW; 400V 3~ | 350mm |
| AHIR-BI-OP-3.0 | 012-5504 | 3.00 kW; 400V 3~ | 400mm |
| AHIR-BI-OP-3.8 | 012-5505 | 3.80 kW; 400V 3~ | 450mm |
| AHIR-BI-OP-4.5 | 012-5506 | 4.50 kW; 400V 3~ | 500mm |
| AHIR-BI-OP-6.0 | 012-5507 | 6.00 kW; 400V 3~ | 600mm |
| AHIR-BI-OP-7.5 | 012-5508 | 7.50 kW; 400V 3~ | 700mm |
| AHIR-BI-OP-9.0 | 012-5509 | 9.00 kW; 400V 3~ | 750mm |

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

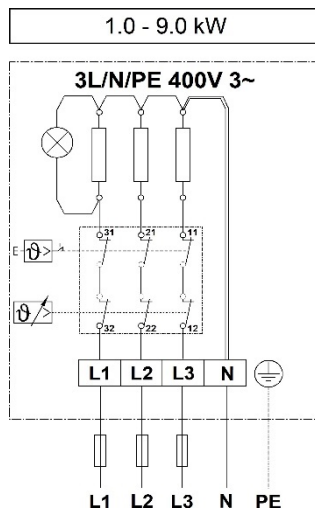
Fitting thread
 Brass nipple
 Heating tube
 Surface load
 Electrical connection
 Operating pressure
 Housing
 Protection mode

R 1½ " conical
 CuZn40Pb2
 Incoloy 825, 2.4858
 8-9 W/cm2
 Screw clip
 max. 10 bar
 Polycarbonate, RAL 7035 (light 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



Dimension drawing

