

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

- Heating elements for stepless control with:
 - Fronius Ohmpilot up to 9 kW
 - AC•THOR (my PV)
 - o AC•THOR up to max.3 kW
 - o AC•THOR 9s up to max. 9 kW
 - SolarEdge Home hot water controller up to max. 3 kW
- Power regulation from 0 to 100%



**Application
Features**

Auxiliary heating system of drinking 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 14597

Type summary

Drinking- and heating water
Incoloy 825, 2.4858

Type	Order no.	Power	Immersion length [EL]
AHIR-BI-OP-1.0	012-5501	1.00 kW; 230V~ / 400V 3~	300mm
AHIR-BI-OP-2.0	012-5502	2.00 kW; 230V~ / 400V 3~	300mm
AHIR-BI-OP-2.5	012-5503	2.50 kW; 230V~ / 400V 3~	350mm
AHIR-BI-OP-3.0	012-5504	3.00 kW; 230V~ / 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

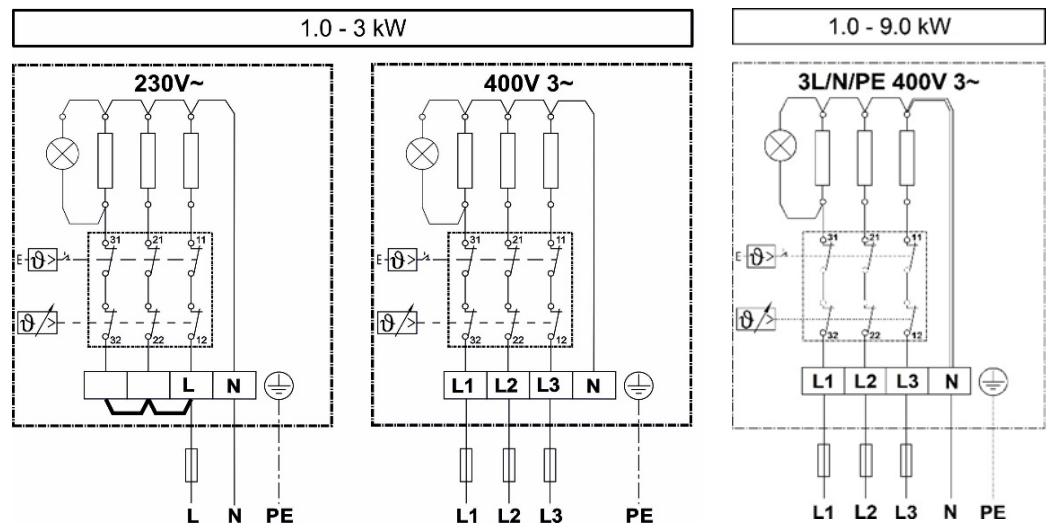
The following indications are valid for the above listed standard types. Due to the function, other types might show different data.

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 \pm 5.5 K
	Ambient temperature for storage and transport	-30...+90 °C
Calibration	Calibration tolerance	\pm 7 K
	Time factor in water	<45 s
Specification	Fitting thread	R 1½" conical
	Brass nipple	CuZn40Pb2
	Heating tube	Incoloy 825, 2.4858
	Surface load	8-9 W/cm ²
	Electrical connection	Screw clip
	Operating pressure	max. 10 bar
	Housing cover	Polycarbonate, RAL 7035 (light gray)
	Housing base	Polycarbonate, RAL 7016 (anthracite grey)
Protection mode	IP41 acc. EN 60529	

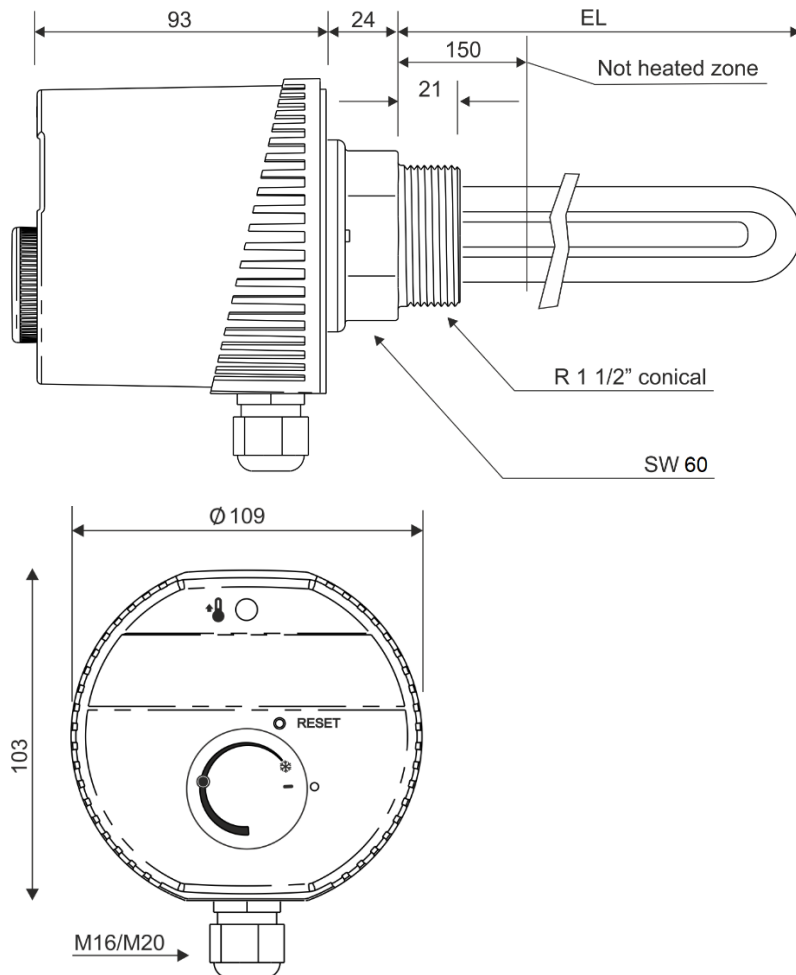
Fitting notes

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
012-5501 – 012-5507**



**Dimension drawing
012-5508 – 012-5509**

