

# EX HKA ... / U AT

Radiator



### Characteristics

- High performance
- Optimized radiation by dense black lacquer and heating ribs
- Controller and limiter integrated in the connector block
- Mounting bracket included

The radiator consists of two flat tube heat conductors, which are pressed into heating ribs. The standard version is hot dip galvanized and enamel finish. The junction box contains the temperature limit, temperature control and if applicable the temperature signal and is filled with resin. The cable is about 1,20 m long and for the standard version of PTFE.

Special version:

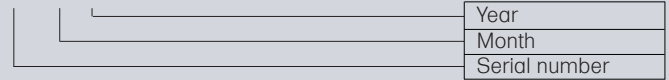
-V2A protective sleeve around the cable

For the annexation of iron assembly four holes are provided with a diameter of 6,5 mm. The radiators can be installed in two different positions in the cabinets, vertical and horizontal. Because of this and because of the low space requirements they can be easily installed in existing, with equipment fitted cabinets, additionally. The radiator is designed for space heaters with high specific need of heat (2W/liter volume) at the lowest possible temperature difference in the room. It is especially suitable for ambient temperatures up to 80°C without derating.

The various internal resistances are provided for series circuit of different heating elements and need of heat at constant voltage systems e.g. 3A. The same applies for pilot schemes.

### SERIAL NUMBER

xxxx / 03.03



### ORDER REFERENCE

EX HKA  / U AT

<b>1</b>		Internal resistance (see table 1)
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<b>3</b>	-	Standard
	s	with protective hose
	T	with teflon coating
	sT	with protective hose and teflon coating

Table 1

Internal resistance in Ohm	130	105	80	33	20
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## GENERAL TECHNICAL DATA

Series voltage	≤ 252 V ~
Rated voltage	230 V
Rated current	1,8 A - 4,4 A
Rated output power	max. 370 W*
Type of protection	H2G
Dimensions (mm)	210 x 273 x 50
Mounting dimensions (mm)	210 (15) x 30
Ambient temperature range	-55°C to +100°C
Maximum temperature at the terminal compartment (encapsulation)	130 °C
Surface temperature	166 °C
Type of protection	IP 65/ DIN 40 0 50
Type of ignition protection (Gas)	II 2 G Ex eb mb IIC
EU-Type examination certificate	PTZ 16 ATEX 0023 U
Identification	<div style="display: flex; align-items: center; gap: 20px;"> <div style="text-align: center;">  0344             </div> <div style="text-align: center;">  II 2 G Ex eb mb IIC             </div> </div>

\* Horizontal mounting, ground clearance 40mm, supply air to radiator surface 90°K. Max. heating with vertical installation.

\*\* System certification in preparation for the following applications:  
 a) Operating voltage is reduced, so that a physical limit is given.  
 b) HKA U/ AT in connection with capillary controller + limiter

Table 1

Internal resistance	Rated current	Rated operating voltage
Ohm	Ampère	Volt
130	1,8	230
105	2,2	230
80	2,2	180
33	3,4	115
20	4,4	90

Electrical connection, cable PTFE 3 x 1,5mm² or 1,2m lang, 5-6 mm

## AREA OF APPLICATION

The radiator is used for the heating of cabinets, particularly of instrument enclosures and may only be operated with equivalent external protection. The radiator contains no facility for the surface temperature limit. The surface temperature limit must, depending on the application, be guaranteed by an external device or other means. External measures must guarantee that the conditions of EN 50014 are met. To achieve, for example, by a room thermostat and a limiter that monitors the surface temperature. Or the radiator is operated with a supply voltage which excludes undue heat at a given installation of the radiator.

Depending on the version it is intended for a system in which also other users are connected in series and the operating voltage of the system is reduced by phase angle control as necessary that it is just so large that the specified rated current of the heating element is not exceeded more than 10%. The series voltage for all versions is 230V  $\pm$  +10%.

## PROTECTIVE MEASURE

The protective measure for the heating circuits is earthing (potential equalizing). Due to the often long lead and the resulting capacitive-related errors, which can still increase considerably due to the moisture saturation of the insulation, fault current protection switches with 300 mA are advisable. Depending on brands fault current protection switches respond differently for capacitive-related errors.

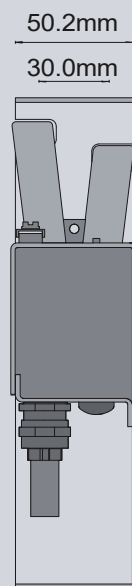
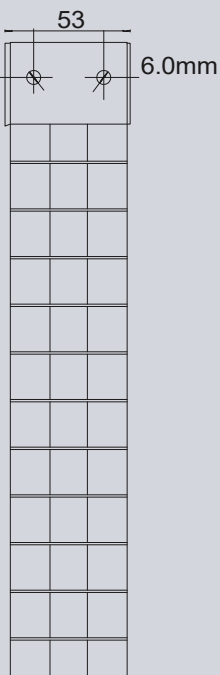
## INSTALLATION

1. If the connection cable does not have an additional protection, no metal part of the heating element or an other object may be placed on the cord, (applies to storage and transport.)
2. The heating element may not be carried on the connection lead.
3. If the radiator falls down, the connectin lead must be checked for damage.
4. The installations should always be horizontal in the protective cabinet: When vertically mounted, the connection should be sideways.
5. One kind of surface temperature limit is required.
6. There is a temperature control of the enclosure required.
7. It must be checked, if the max. attainable inside temperature of the protection cabinet is permitted for the installations.
8. The connection cable must be laid mechanically protected.

## DIMENSIONS

Side view

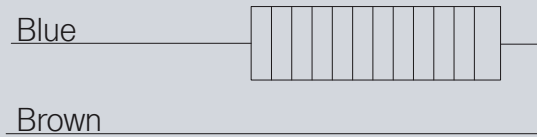
Top view





## INSTALLATION INSTRUCTIONS

- a. If the cabinet is opened often for the purpose of operation, a touch protection for the radiator should be present.
- b. When installed a short-term exposure of less than 5 kg permitted at the radiator.
- c. When working on the piping in the cabinet the radiator must be removed.
- d. No objects may be stored on the heating element.

## CONNECTION DIAGRAMM

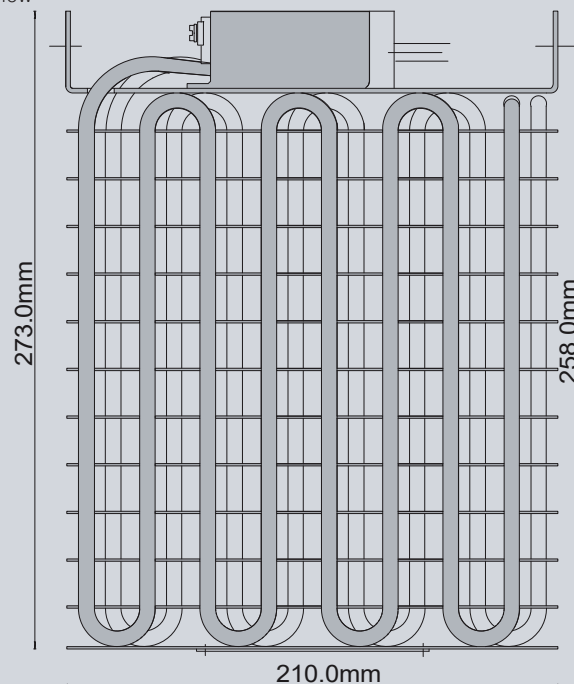


## NAMEPLATE

 <b>ERICH OTT</b> D-65189 Wiesbaden			
<b>Ex HKA 20U/AT</b>			
1	CE 0344	Nr.:	
2		Nennstrom	4,4 A
		Innenwiderstand	20 Ohm
		Reihenspannung	230 V $\approx$
		Nennspannung	90 V $\approx$
		Umgebungstemperatur:	-55 °C - +100°C
3			
4		II 2 G Ex-eb mb IIC	PTZ 16 ATEX 0023U

1-	Supervising agency	6-	Serial number
2-	Rated current	7-	Rated voltage
3-	Ex- identification	8-	Ambient temperature range
4-	Type of protection	9-	EU-type examination certificate
5-	Type designation		

View



Please take further information from the operating instructions.  
 Download on [www.erich-ott.de](http://www.erich-ott.de)