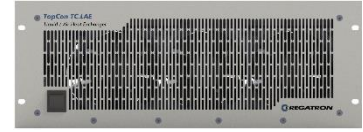


TC.LAE.5.230 / TC.LAE.5.400

Liquid to air heat exchanger



Features

TC.LAE

For systems with significant cooling demands and without liquid cooling system in the lab.

With modular concept for easy installation in a switch cabinet.

In a compact design with 2 integrated liquid to air heat exchangers and temperature controlled fans for noise reduced operation.

For a closed cooling circuit with minimal maintenance work.

With optional connection variants of the cooling interfaces G 1/2" to complete the product line. E.g. Quick release non-drip coupling.

CE conformity declaration

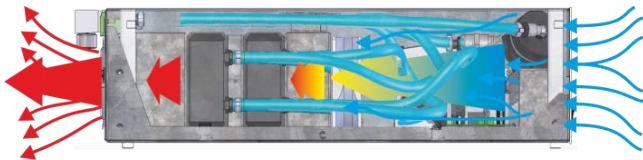
Graduated product line: 230 V_{AC}, 400 V_{AC}

Function

The TC.LAE is a liquid cooling device that transfers the generated heat energy from the attached device to the surrounding air. An internal pump circulates the cooling liquid between the device to be cooled and the TC.LAE.

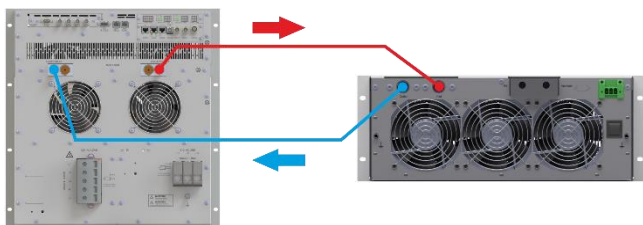
The heated liquid flows through the radiators to be cooled down by the surrounding air, which is forced through the radiators by six powerful temperature controlled fans.

The temperature reduced coolant returns via tube outlet to the attached device.



Application Example

Closed cooling circuit



Technical Data

Key Values

Liquide to air heat exchanger	
Line voltage	100...240 V _{AC} or 380...480 V _{AC}
Line frequency	50/60 Hz
Max. Cooling Power @20 °C ambient temperature ¹⁾	5 kW
Case	19" / 4 U

Technical Data

AC Lineside Ratings

TC.LAE.5.400

Line voltage	380...480 V _{AC} ±10%
Line frequency	48...62 Hz
Mains connection type	2L + PE (no neutral)
Input current @400 V _{AC}	0.5 A
Leakage current L to PE	<10 mA
Input power	200 VA
Powerfactor	≥0.98

Isolation

Power to PE (L1 / L2)	working voltage	333 V _{ACrms}
Power to PE (L1 / L2)	working voltage	500 V _{DC}

TC.LAE.5.230

Line voltage	100...240 V _{AC} ±10%
Line frequency	48...62 Hz
Mains connection type	L + N + PE
Input current @230 V _{AC}	0.87 A
Leakage current L to PE	<10 mA
Input power	200 VA
Powerfactor	≥0.98

Isolation

Power to PE (L1 / N)	working voltage	264 V _{ACrms}
Power to PE (L1 / N)	working voltage	500 V _{DC}

Cooling

Internal liquid to air heat-exchange system using temperature-controlled fans

Heat Exchanger

Material	Brass
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Cooling Power¹⁾

Max. Cooling Power @20 °C ambient temperature	5 kW
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Recommended coolant characteristics

Coolant:	
Substance	Antifrogen N Clariant® (30%)
For further information see manufacturer's datasheet	

Liquid temperature

Inlet temperature (non-condensing)	15...65 °C
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Protection

Type of protection (according EN 60529)

Basic construction	IP 20
Mounted in cabinet	up to IP 54 ¹⁾

1) Derating of cooling power depending on ambient temperature and maximum permissible coolant outlet temperature.

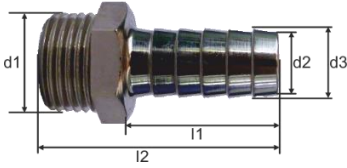
General Data

Weight & Dimension (see Figure 1)

Weight	approx. 25 kg
Width front panel	483 mm / 19"
Width housing	444 mm / 17 1/2"
Height housing	178 mm / 4 U / 7"
Depth with output terminals	649 mm / 25 1/2"
Depth housing	601 mm / 23 3/4"
Connections: Inlet/Outlet	G 1/2"

Connection

The TC.LAE device is delivered with a hose fitting.



Thread diameter d1	G 1/2"
Hose connector diameter d2	13 mm / 1/2"
Hose connector diameter d3	14.2 mm / 9/16"
Hose connector length l1	30 mm / 1 3/16"
Total length l2	47 mm / 1 7/8"

Ambient

Operating temperature	5...40 °C
Storage temperature (with orig. coolant)	-18...70 °C
Relative air humidity (non-condensing)	0...95%
Installation altitude	0...2000 m above sea level ¹⁾
Installation	in 19" switch cabinet
	IEC 60721-3-3 indoor, air-conditioned
Vibration	IEC 60068-2-6 Test Fc
Operating orientation	upside
Storage, transport orientation	upside
Acoustic noise level	ISO 3746:2010 ≤75 dB @2 m

Standards

Protection class	I
Overvoltage category	III
Degree of pollution	2
Area of application	industrial

Approval CE

Low Voltage Directive 2014/35/EU	EN 62477-1:2012 + A11 :2014 + A1 :2017 + A12 :2021
EMC Directive 2014/30/EU	
EMC immunity (industrial)	EN 61000-6-2:2005
EMC emission (industrial)	EN 61000-6-4:2007 + A1:2011
RoHS Directive 2011/65/EU	EN IEC 63000:2018

Approval UKCA

Electrical Equipment (Safety) Regulations 2016	BS EN 62477-1:2012 + A11 :2014 + A1 :2017 + A12 :2021
Electromagnetic Compatibility Regulations 2016	
EMC immunity (industrial)	BS EN 61000-6-2:2005
EMC emission (industrial)	BS EN 61000-6-4:2007 + A1:2011
The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012	BS EN IEC 63000:2018

Dimensions

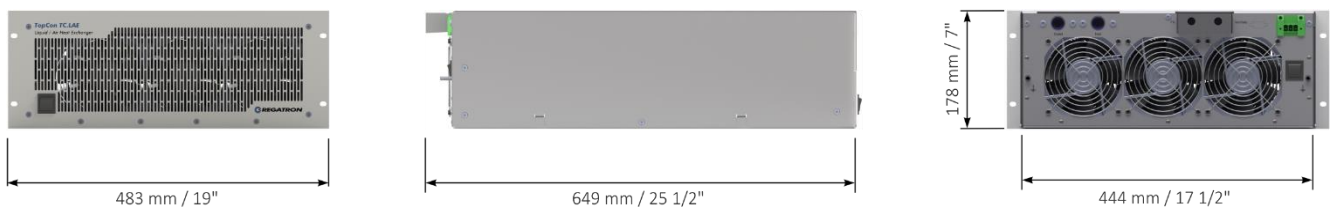


Figure 1: Front, right hand side and rear view. 19-inch module with 4 units in height.

This product is developed, produced and tested according to ISO9001 by REGATRON.

For detailed technical information, contact REGATRON or your local sales partner.

Regatron AG	Regatron Inc.
Feldmuehlestrasse 50	100 Overlook Center, 2 nd Floor
9400 Rorschach	Princeton, NJ 08540
SWITZERLAND	USA
sales@regatron.com	inquiries@us.regatron.com
www.regatron.com	www.us.regatron.com

All product specifications and information contained herein are subject to change without notice.

Filename: DS_TC.LAE.5.230 / TC.LAE.5.400_EN_221206

Class: Project-specific-use-only

1) above 1000 m, slight temperature derating possible