AHC-XP

Dew-point driven power controller for glass and handrail heaters in combination with DCC-XP

Front view

Features

- Cost-optimised operation
- Used in combination with DCC-XP from version 5
- Room temperature sensor and humidity sensor can be connected to the device or over a CAN bus (TRH-XP, TRS)
- Emergency power mode to avoid peak loads by digital input
- Display of store temperature, relative humidity, dew point and operating time
- 4 phase-shifted outputs each for 2 ECA970 electronic load relays
- Even distribution of current loads
- 8 different control characteristics per channel for all standard refrigeration units
- Adjustable minimum operating time per channel
- Good temperature stability with 72 switchings per hour
- Operating time storage for statistical evaluation
- Graphical representation of power consumption in FRIGODATA XP
- Simple parameter settings
- Foreign-language front plates available on request
- Direct connection of a CAN-USB to the service socket
- Connection to the Wurm system by communication bus (CAN bus) and FRIGODATA XP

Writing conventions

Symbol	Meaning
⚠ **CAUTION**	Avoid the described hazard: otherwise **minor** or **medium** physical injury or damage to property will result.
⚠ **WARNING**	Avoid the described hazard: otherwise there is danger from **electric voltage** that could lead to death or **serious** physical injury.

For your safety

For safe operation and to avoid personal injury and equipment damage through operator error, always read these instructions, become familiar with the device, and follow all safety instructions on the product and in this document, as well as the safety guidelines of Wurm GmbH & Co. KG Elektronische Systeme. Keep these instructions ready to hand for quick reference and pass them on with the device if the product is sold.
Wurm GmbH & Co. KG Elektronische Systeme accepts no liability in case of improper use or use for other than the intended purpose.

Target group	These instructions are intended for "service technicians".
Intended use	The AHC-XP is a dew-point-controlled power controller for the cost-optimised operation of glass and handrail heaters.

⚠ **WARNING**
Danger to life from electric shock and/or fire!

- Switch off the power to the entire plant when installing, wiring or removing. Otherwise a mains voltage and/or external voltage may still be present even if the control voltage is switched off. Always remove both power plugs (L and N).
- Only qualified electricians are permitted to wire the device.
- Use only the correct tools for all work.
- Check all wiring after connection.
- Take note of the maximum loads on all connections.
- Never expose the device to moisture, for example due to condensation or cleaning agents.
- Take the device out of operation if it is faulty or damaged and is therefore compromising safe operation.
- Do not open the device.
- Do not repair the device yourself. If the device requires repairs, send it in with an exact description of the fault.

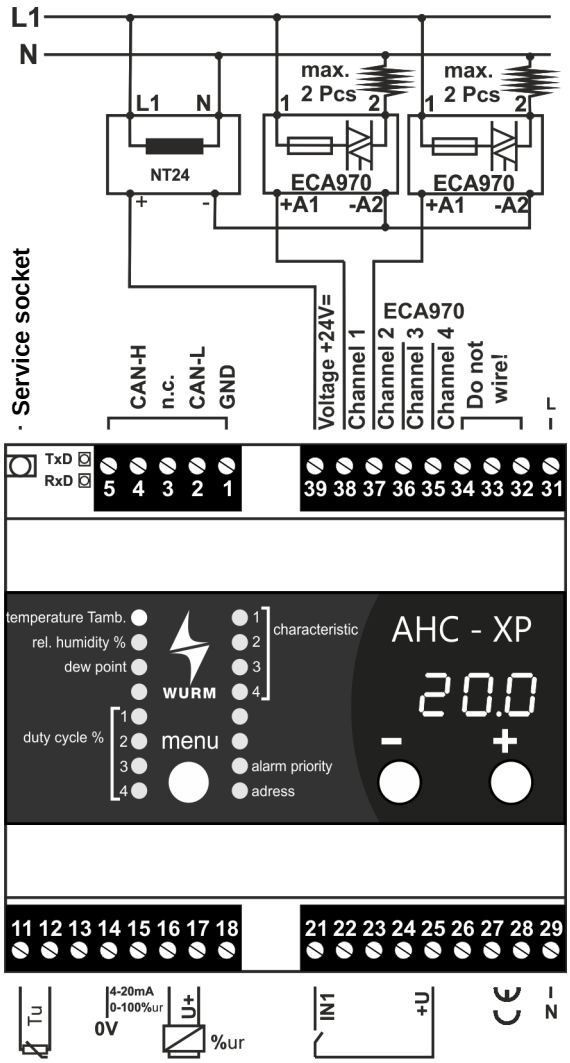
	Wurm Infocenter	paperless info

Software revisions and validity of documentation

Software version		
V2.20	2019-04	Documentation status

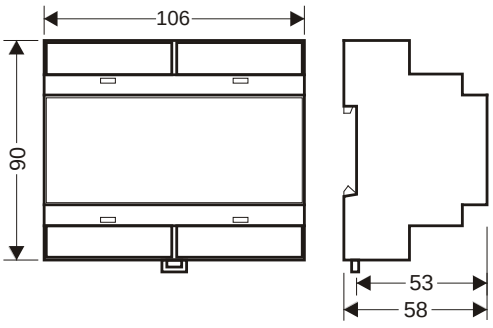
Any software versions not listed are special solutions for individual projects and are not described in detail in this document.
This document automatically ceases to be valid if a new technical description is issued.
Manufacturer: Wurm GmbH & Co. KG Elektronische Systeme, Morsbachtalstraße 30, D-42857 Remscheid
For further information, see our website at www.wurm.de

Connection diagram AHC-XP with ECA970

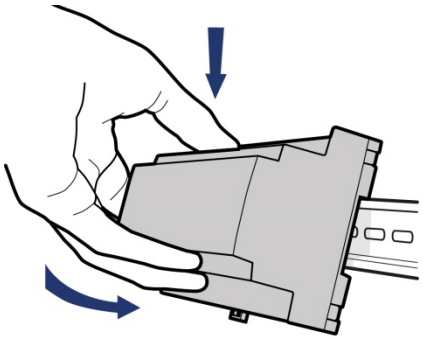


Installing and connecting

⚠	**WARNING** **Danger to life from electric shock and/or fire!** ▪ Switch off the power to the entire plant when installing, wiring or removing. Otherwise a mains voltage and/or external voltage may still be present even if the control voltage is switched off. Always remove both power plugs (L and N).



This device is designed for top-hat rail installation. The housing is a standard size and is also suitable for installation in fuse boxes.
The devices can be positioned next to one another without gaps.



Place the device with the upper guide edge on the top-hat rail.
Then press the device gently downward until it engages with the fastening safety catch on the top-hat rail.

For wiring the data lines, we recommend using standard 2x2x0.8ø telephone cable with length up to 100m. The shielding must be grounded in the control cabinet. With cable lengths from 100m to 400m, a shielded line with braided shield should be used.

A shielded cable is recommended for sensor extensions.

Cable length	Cross section
Up to 100m	0.75mm²
Up to 400m	1.5mm²

Technical data

Power supply	230V~, +10% / -15%, approx. 6VA
Temperature sensor	TRK277/7 PLUS
Humidity sensor	Type RHS950
Switch outputs	4 x galvanically isolated optocoupler output each controlling 2 ECA970 electronic relays
Central unit	Single-chip microcomputer, data memory
Monitoring system	Monitoring of connected sensors, self-monitoring of data memory and microcomputer
Communication	3-wire CAN bus interface with integrated power supply, galvanically isolated, service socket
Internal clock time	Detection of system clock time from the gateway (only for use in the CAN bus system), power reserve of approx. 2 days in the event of a power failure
Dimensions	(WxHxD) 106 x 90 x 58mm (DIN 43880)
Fastening	Top-hat rail TH 35-15 or TH 35-7.5 (DIN EN 60715)
Ambient temperature	Operation: 0...+55°C, storage: -25…+70°C
Weight	About 450g
CE conformity	– 2014/30/EU (EMC Directive) – 2014/35/EU (Low Voltage Directive) CE
	RoHS II
Valid from	Version 2.20