1 ATV230

Control module for electronic expansion valves

1.1 Front view

Fig. 1: Front view

1.2 Features

- AC/DC driver with electronic relay in combination with FKP002B, FKP003, FKD003, FKE003, FKL003 and FKV003
- Connection of a pulsed electronic expansion valve per module
- Valve control, either 230V~ or 230V=
- Wide output range of 4...60VA / 4...60W
- Switching display by LED

1.3 Safety instructions

Writing conventions

CAUTION

- Avoid the described hazard: Otherwise **minor** or **medium** bodily injury or property damage will result.

WARNING

- Avoid the described hazard: otherwise, **electric voltage** represents a danger that could lead to fatal or **serious** bodily 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 the case of improper use or use for purposes other than the intended purpose.

Target group	This manual is intended for “service technician” personnel.
Intended use	The **ATV230** is a control module for electronic expansion valves.

WARNING

DANGER TO LIFE FROM ELECTRIC SHOCK AND/OR FIRE!

- Switch off the power to the entire plant when carrying out installation, wiring or disassembly work! Otherwise, mains voltage and/or external voltage may still be present, even if the control voltage is switched off!
- Connection of the device should be carried out only by a qualified electrician.
- Use the correct tools for any work!
- Check the entire wiring after connection!
- Observe the maximum loads for all connections!
- Never expose the device to moisture, for example due to condensation or cleaning agents.
- Stop operating the device if it is faulty or damaged and its safe operation is compromised!
- 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!

CAUTION

ELECTROMAGNETIC INTERFERENCE MAY CAUSE FAULTS!

- Always use shielded data cables and place them far away from power lines.

Wurm Infocenter

paperless info

Validity of the documentation

Date	
2024-02	Documentation status

This document will automatically cease to be valid if a new technical description is issued.
Manufacturer: Wurm GmbH & Co. KG Elektronische Systeme, Morsbachtalstraße 30, D-42857 Remscheid
You can find more information on our website at www.wurm.de.

1.4 Connection diagram

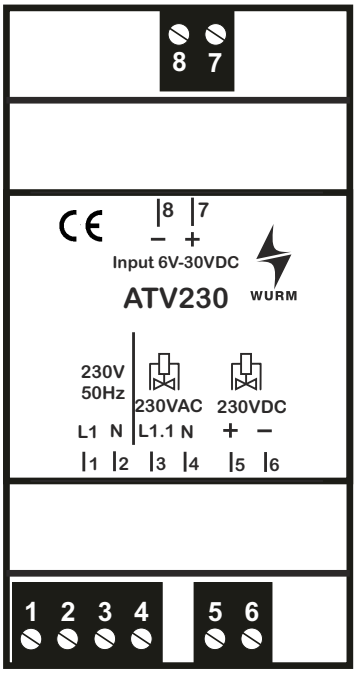

Fig. 2: Connection diagram

1.5 Control by field modules

Connection	ATV230	FKP003	FKD003	FKE003	FKL003	FKV003
U_{DC}	7	29	ZCB-C/AO-2.0 (brown)	ZCB-C/AO-2.0 (brown)	43	43
GND	8	28	ZCB-C/AO-2.0 (white)	ZCB-C/AO-2.0 (white)	42	42

1.6 Installing the device

This device is designed for top-hat rail installation. The housing has standard DIN 43880 dimensions and is suitable for installation in fuse boxes, distribution cabinets, or the load sections of refrigeration units.

The device can be positioned immediately adjacent to another device without gaps.

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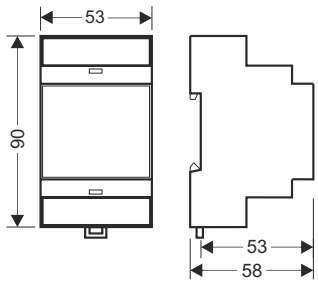

Fig. 3: Dimensions

WARNING

DANGER TO LIFE FROM ELECTRIC SHOCK AND/OR FIRE!

- Switch off the power to the entire plant before installing. Otherwise, mains voltage and/or external voltage may still be present, even if the control voltage is switched off.

✓ The entire plant must be free of voltage.

1. **(A)** Place the device with the leading edge at an acute angle to the top-hat rail.
2. **(B)** Push the device downwards onto the top-hat rail.
   ▶ The device snaps into place with the fastening safety catch **(a)** on the top-hat rail.
   ▶ You can now connect the device.

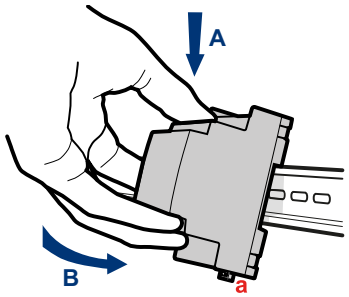

Fig. 4: Top-hat rail installation

1.7 Technical data

Power supply	230V~, +10% / -15%
Input	8…30V=, corresponds to 6...30mA current consumption at the input
Valve control output	Electronic, either 230V~ or 230V=
Load capacity	4…60VA / 4…60W
Connection cross-section	Max. 2.5mm^2
Dimensions	(W x H x D) 53 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 60g
CE conformity	- 2014/30/EU (EMC Directive) - 2014/35/EU (Low Voltage Directive) CE
	RoHS II