Product Description

The Thermoelectric Valve Drive is used to open and close valves in Heating, Ventilating and Air-Conditioning (HVAC) systems.

The device can be controlled (2-point output or pulse width modulation) with the Electronic Switch Actuator ES/S, with the Valve Drive Actuator VAA/S or VAA/A or with the Electronic Relay ER/U in combination with the Universal Interface US/U and a Room Thermostat.

The snap-on mounting on valves or in heating circuit distributors will be established by Valve Adapters VA/Z.
Technical Data

Version

Normally Closed
First-Open function

NC

Enables heating operation during the carcass construction phase even when the electric wiring of the single room control is not yet complete.

Power supply

Operating Voltage
230 V AC ± 10 %, 50/60 Hz

Operating current
5 mA

Max. inrush current
<550 mA during 100 ms max.

Operating power
1 W

Over voltage protection according to EN 60730-1
At least 2.5 kV

Connection

Connection cable (pluggable)
2 x 0.75 mm², light grey

Length
1 m

Operating and display elements

Function display
Displays whether the valve is opened or closed

Valve drive mechanic

Actuator travel
4 mm

Actuator force
100 N ± 5%

Closing and opening times
Approx. 3 min.

Ambient temperature range

Fluid
0 °C ... + 100 °C

Environment
0 °C ... + 60 °C

Storage
– 25 °C ... + 60 °C

Design

Compact device for placing on valve bases

Housing

Dimensions (H x W x D)
60 x 44 x 49 mm

Material
Plastic

Colour
Light grey, RAL 7035

Mounting

Snap-on mounting
Via Valve Adapter VA/Z

Installation positions
360° (vertical and horizontal recommended)

Type of protection

IP 54 (in all installation positions)
According to DIN EN 60529

Protection class

II
According to DIN EN 61140

Weight

0.1 kg

CE-norm

According to EN 60730

Accessory

Type

Model

VA/Z 10.1
Valve Adapter (M 30 x 1.5) for Durnser, Chronatherm, Vescal, KaMo

VA/Z 50.1
Valve Adapter (M 30 x 1.5) for Honeywell, Reich, Cazzaniga, Landis & Gyr., MNG

VA/Z 78.1
Valve Adapter (Flange) for Danfoss RA

VA/Z 80.1
Valve Adapter (M 30 x 1.5) for Heimeier, Herb, Onda, Schlösser (from 93), Oventrop
ABB i-bus® KNX
Thermoelectric Valve Drive, 230 V
TSA/K 230.2, 2CDG 120 049 R0011

Circuit diagram

Dimension drawing

Dimension drawing installation height
AABB i-bus® KNX
Thermoelectric Valve Drive, 230 V
TSA/K 230.2, 2CDG 120 049 R0011

Characteristic curves

Mounting and Installation

Generally all installation positions are possible for practical use. Preferred installation positions of the valve drive are vertical and horizontal. An upside-down position may reduce product life through special circumstances (e.g. contaminated water).

The valve adaptation occurs via the Valve Adapter VA/Z. Those are available for the most common valve bases and heating circuit distributors. See also Accessory.

In its delivery state the valve drive is normally open due to the First-Open function. This enables heating operation during the carcass construction phase even when the electric wiring of the single room control is not yet complete. When commissioning the system at a later date, the First-Open function is automatically unlocked by applying the operating voltage (> 6 min.) and the valve drive is fully operable.

We recommend the following wires for installation a 230 V system:

- Light plastic-sheathed cable: NYM 1.5 mm²
- Flat webbed building wire: NYIF 1.5 mm²
ABB i-bus® KNX
Thermoelectric Valve Drive, 230 V
TSA/K 230.2, 2CDG 120 049 R0011

Important notes

Installation and commissioning of the device may only be carried out by trained electricians. The relevant standards, directives, regulations and instructions must be observed when planning and implementing the electrical installation.

Protect the device against moisture, dirt and damage during transport, storage and operation!

Do not operate the device outside the specified technical data (e.g. Temperature range)!

Cleaning

Should the device become soiled, it may be cleaned with a dry cloth. If this does not suffice, a cloth lightly moistened with soap solution may be used.

On no account should caustic agents or solvents be used.

Maintenance

The device is maintenance free. Should damage have occurred, e.g. due to transport or storage, no repairs should be carried out.

The warranty expires if the device is opened!
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