6-Way Valve
Voltage values in the FCC/S

<table>
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<th>GPG BUILDING AUTOMATION</th>
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<td>Doc.-Type: Function Description</td>
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<td>Department: BA Engineering</td>
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<td>System: i-bus® KNX</td>
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Introduction

This document provides a brief introduction to the 6-way valve, including its functions and how to connect it to the FSS/S using parametrization.

It also explains how to send the valve’s technical data to the FCC/S parameters in ETS.

Objectives of the document

− Provide an introduction to the 6-way valve
− Provide an example of technical data transfer

Content

1. Basic information

The 6-way valve has six separate pipe connections. When installing the valve, it’s essential to note the flow direction. As a rule, this is marked with arrows on the corresponding valve.

Heating circuit connection

Cooling circuit connection

The 6-way valve is specially designed for use in heating/cooling ceilings, and also very compact. It operates up to four straightway valves using just one 0–10 V connection. Its advantages in these types of applications are easier troubleshooting and less cabling work.
2. FCC/S connection and settings

The 6-way valve connects to the 0–10 V interface on the FCC/S (Channel A). The valve also requires an auxiliary voltage.

**You can enable the 6-way valve via application parameters** straight from the application, where all the additional settings options will then be shown.

![Application parameters](image)

Example of voltage settings for the 6-way valve based on a 6-way ball valve. You will find this type of curve in the valve manufacturer’s technical data.

![Valve voltage values](image)

- max. valve position, cooling at 2 V
- max. valve position, cooling at 4.7 V
- max. valve position, heating at 10 V
- max. valve position, heating at 7.3 V

**Closed**

4.7 V–7.3 V

Check and adjust the voltage values based on the valve manufacturer!

**The voltage curve provides the settings values for entry in the FCC/S parameters.**

You need to enter the voltage values for both minimum and maximum heating/cooling so that the valve can be actuated coherently.

The opening/closing time of the drive provides the specific information that ensures the valve purge works properly.
The entered voltage values are then used to calculate and set the actual control values for the 6-way valve.

### References to other documents
- FAQ Home and Building Automation
- FAQ 6-way valve and FCC/S
- Engineering Guide Database

### Summary
The 6-way valve is a highly compact solution that makes it easy to control heating/cooling ceilings. Certain specifications are required (voltage curve adjustment) in order to actuate the valve. The FCC/S supports these automatically.