

IP65/IP67-PROTECTED

Pneumatic valves with CANopen interface

The Airline Field (Type 8653) valve island from Buerkert (Germany) was developed for use outside of the control cabinet, for example in process automation applications.



Airline Field Type 8653 pneumatic valve island is IP65/IP67 protected (Source: Buerkert)

The valve island provides features for the predictive device maintenance. Diagnostic functions are visualized on the LC display in clear text and as symbols. This facilitates assignment of the displayed messages and helps to save time during the start-up and in the maintenance phase. The diagnostic messages are also available in the controller, which enables an overview of the plant status. Installation of the device on the DIN rail is possible. Pneumatic functions ensure process reliability. For instance, the non-return valves in the exhaust air ducts make sure that there is no unplanned actuation due to pressure peaks. Used media include compressed air and neutral gases. Pressure range up to 8 bar and flow rate of 310 l/min is supported. With a supply voltage of 24 V_{DC} the device consumes 0,7 W per valve (0,1 W after power reduction). The device is designed to work at the ambient temperatures from -10 °C to +55 °C.

For the CANopen connection, the circular 5-pin M12 connector is used. The valve island can be programmed using the Buerkert Communicator software. The software can be run under the MS Windows operating systems and is available for free on the company's website. It allows system configuration and parametrization of the connected CANopen devices. One of the accessory parts serves as the interface between the computer and the process-related devices. It translates USB data into CANopen-related data. The software allows diagnosis, parametrization, registration, and storage of process data. It also allows to generate a process graph and to update the firmware of the connected devices.

Several valve islands can be connected via the ME43 gateway to access the CANopen data via an Industrial Ethernet connection. The gateway consists of a fieldbus coupler, which transmits the internal CANopen-based data of the connected devices to Ethernet-based networks and other fieldbus systems. With the supported graphical programming feature sub-systems can be configured according to customer's needs e.g. controlled mixing of gases, error monitoring through limit value switches, and use of time switches. Up to 128 input and 128 output variables can be assigned on the gateway.

CAN in Automation (CiA) provides the CiA 408 CANopen device profile suitable for hydraulic and pneumatic valves. Buerkert supported the release of the latest profile version by reviewing it. If a CANopen device profile is implemented, the data of the device is accessible via the CANopen network in a standardized manner. The same CANopen interface can be used for all device variants independent of the measurement technique and measurement range. A device can also be integrated into CANopen applications from diverse manufacturers.



[of](#) ME43 gateway can connect several CANopen devices to Industrial Ethernet (Source: Buerkert)