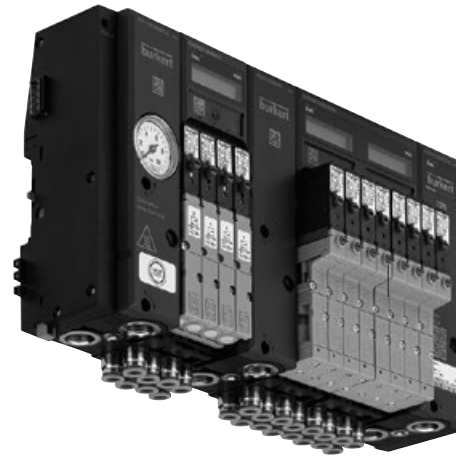


Type 8647 Valve block AirLINE SP

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Important information for devices with UL approval

1 Intended use

The valve block AirLINE SP Type 8647 is intended for activating pneumatic consumers in automation systems. The valve block should only be used to activate suitable pneumatic consumers.

- ▶ Use the device for its intended purpose only. Non-intended use of the device may be dangerous to people, nearby equipment and the environment.
- ▶ In areas at risk of explosion, only use devices approved for use in those areas. These devices are identified by additional approval data on the type label. When used in potentially explosive atmospheres, always observe the details on the type label and the additional instructions for the potentially explosive atmosphere included in the scope of delivery.
- ▶ Install the device in a suitable control cabinet or in a suitable housing. The control cabinet or housing requirements correspond to those of the distributed Siemens I/O systems "SIMATIC ET 200SP" or "SIMATIC ET 200SP HA", but at least to degree of protection IP54.
- ▶ Do not use the device outdoors.
- ▶ Correct transportation, correct storage as well as correct installation, start-up, operation and maintenance are essential for reliable and problem-free operation.
- ▶ When using the device, observe the permitted data, operating conditions and application conditions. This information can be found in the contractual documents, the operating instructions and on the type label.
- ▶ Use the device only in conjunction with third-party devices and components recommended and authorized by Bürkert.
- ▶ Do not operate the device unless it is in perfect working order.

The valve terminal is only intended for use in industrial environments.

The valve terminal is only permitted in applications where there is a danger to life and limb if the SIA and EVS functions provided for this purpose are used with appropriate, approved equipment (safety relays, etc.).

2 Basic safety instructions

Risk of injury due to high pressure and escape of medium as well as uncontrolled movement of the actuators.

- ▶ Before working on the device or system, secure the actuators against moving.
- ▶ Before working on the device or system, switch off the pressure. Vent or drain lines.

Risk of injury due to electric shock.

Only the following supply options are permitted:

- Limited Energy Circuit (LEC), according to UL/IEC 61010-1
- Limited Power Source (LPS), according to UL/IEC 60950
- SELV/PELV with UL Recognized Overcurrent Protection, dimensioned according to UL/IEC 61010-1, Table 18
- NEC Class 2 power supply

Risk of burns from hot device components.

- ▶ Keep the device away from highly flammable substances and media.

Risk of injury due to improper installation and maintenance.

- ▶ Only trained technicians may perform installation and maintenance work.
- ▶ Perform installation and maintenance work with suitable tools only.

Risk of injury due to unintentional activation and uncontrolled start-up of the device and system.

- ▶ Secure the device and system to prevent unintentional activation.
- ▶ Ensure that the system does not start up in an uncontrolled manner.

Risk of injury due to allergic reactions to lubricants.

- ▶ Avoid skin contact with lubricants.
- ▶ Wear protective gloves.

General hazardous situations.

To prevent injury, ensure the following:

- ▶ Install the device according to the regulations applicable in the country.
- ▶ Do not supply the medium connectors of the device with aggressive or flammable media.
- ▶ Do not supply the medium connectors of the device with liquids.
- ▶ After an interruption, ensure that the process is restarted in a controlled manner.
Observe the sequence:
1. Connect power supply.
2. Charge with medium.
- ▶ Do not make any changes to the device.
- ▶ Do not subject the device to mechanical loading.
- ▶ Observe the general rules of technology.

3 Technical data

Ambient temperature	0...+55 °C
Humidity	75% on average, 85% occasionally, condensation not permitted
Media	Neutral gaseous media, oiled or unoled, max. particle size 5 µm
Altitude	Restricted to max. 2000 m above sea level for UL approved versions
Degree of protection (acc. to EN 60529)	IP20 verified by Bürkert, not evaluated by UL IP65 in closed control cabinets
UL Type Rating (acc. to UL 50/50E)	4X in combination with AirLINE Quick in closed control cabinets

4 Installing the valve block on the standard rail in the control cabinet

NOTE

- ▶ Observe the specifications in the configuration file for the installation sequence.
- ▶ Before installation in the control cabinet, check that the standard rail is anchored firmly in the control cabinet.

The valve block must be freely accessible from above. When installing the standard rail in the control cabinet, note that the valve block requires a minimum clearance of 5 cm to the upper edge of the control cabinet.

The minimum clearance is necessary for

- Assembly and disassembly of the device on the standard rail
- Avoidance of heat build-up through the device waste heat

If the device contains electronic base modules with EVS function, a minimum clearance of 8 cm to the upper edge of the control cabinet is recommendable. This makes the EVS connection more accessible.

- ▶ Make sure all the fastening screws of the valve block are turned all the way counter-clockwise.
- ▶ Place the valve block slightly tilted upwards on the standard rail in the desired position and swing it onto the standard rail. **Hold the valve block if not installed horizontally!**
- ▶ Tighten the fastening screws clockwise (tightening torque approx. 1.8 Nm).
- ▶ Attach the BaseUnits of SIMATIC ET 200SP/SP HA to the standard rail on the left of the valve block according to the instructions provided by the manufacturer. Push the BaseUnits to the valve block until the catch hook audibly engages. To ensure the plug-in connections are connected properly, make sure the BaseUnits are firmly on the valve block along the entire length.
- ▶ Preferably install a light-colored BaseUnit (type code BU...D or BU...D/T) immediately to the left of the valve block (required in combination with SIMATIC ET 200SP HA).
- ▶ To the right of the valve block, install either the server module or further BaseUnits of SIMATIC ET 200SP (only permissible with SIMATIC ET 200SP stations, not with SIMATIC ET 200SP HA stations). If further BaseUnits are to be installed, the first BaseUnit after the valve block must be a light-colored BaseUnit (BU...D or BU...D/T) to supply the necessary load voltage.

5 Installing the valve block on the base of the control cabinet (with AirLINE Quick)

When using the control cabinet base adaption "AirLINE Quick", the device is mounted to the control cabinet base via a solid metal plate. In this case, the device supports the standard rail (incl. the modules of SIMATIC ET 200SP mounted thereon) rather than the other way round.

NOTE

The cut-out on the control cabinet must be burr-free for the seal not to become damaged between AirLINE Quick and the control cabinet.

- ▶ Insert the seal between AirLINE Quick and the control cabinet free from damage into the groove of the AirLINE Quick metal plate.
- ▶ Place the valve block in the control cabinet on the prepared cut-out.
- ▶ Attach the stability plate from the outside and fix with M5×10 screws.

6 Pneumatic installation of connection units

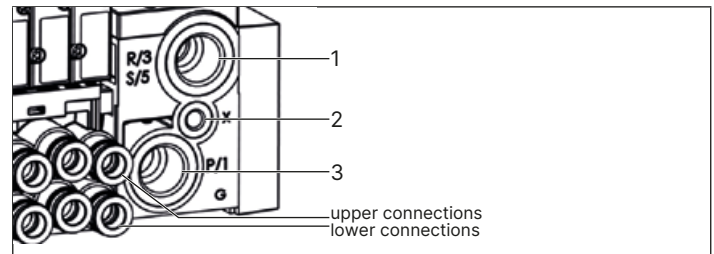


Fig. 1: Pneumatic installation of connection units/valve units

Pos. (Fig.1)	Identification	Function	Connection type
1	R/3 S/5	Exhaust air	G1/4
2	X	Activation EXT: auxiliary control air INT: pilot control exhaust air	M5
3	P/1	Pressure supply	G1/4

7 Pneumatic installation of valve units

NOTE

For 3/2-way valves, the upper connections remain free.

Pos. (Fig.1)	3/2-way valve Type 6524	2×3/2-way valve Type 6524	5/2-way valve Type 6525	Valve Type 0460
upper connections	Not used	2	2	2
lower connections	2	4	4	4

Tab. 1: Configuration of the working connections of the valve units

8 Electrical installation

The electrical connections of the valve block (load voltage, backplane bus, grounding) are established automatically when latched to the BaseUnits of SIMATIC ET 200SP. An exception are the EVS connections of the electronic base modules with "EVS" (see "8.2.1 "EVS" connection").

The power supply of the valve block occurs via the power bus of the BaseUnits. The valve block only utilizes the "L+" and "M" connections; the "AUX" connection is not used.

Preferably install a light-colored BaseUnit (type code BU...D or BU...D/T) immediately to the left of the valve block (required in combination with SIMATIC ET 200SP HA!). It can be used to split the supply for the valve block. This additionally facilitates adherence to allowable voltage tolerances and permissible maximum currents.

If further BaseUnits of SIMATIC ET 200SP are to be installed to the right of the valve block (not permissible in combination with SIMATIC ET 200SP HA!), the first BaseUnit must be a light-colored BaseUnit (type code BU...D or BU...D/T) to supply the necessary load voltage.

The required steps for electrical connection can be found in the Siemens system manual "Distributed I/O system ET 200SP" or "Distributed I/O system ET 200SP HA".