



## AirLINE SP – electropneumatic automation system

- Direct connection to the I/O systems SIMATIC ET 200SP and SIMATIC ET 200SP HA
- Integration in Siemens PCS7 possible
- Siemens Product Partner for SIMATIC Automation Systems
- Easy diagnostics by LC display
- Safety-related shut-off of valves possible

Product variants described in the data sheet may differ from the product presentation and description.

### Can be combined with

|                                                                                     |                                                                                                                    |   |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|---|
|   | <b>Type 2012</b><br>Pneumatically operated<br>2/2-way globe valve<br>CLASSIC                                       | ▶ |
|  | <b>Type 8692</b><br>Digital electropneumatic<br>positioner for integrated<br>mounting on process control<br>valves | ▶ |
|  | <b>Type 6524</b><br>3/2-way or 2 × 3/2-way<br>solenoid valve for pneumatic<br>applications                         | ▶ |
|  | <b>Type 6525</b><br>5/2-way solenoid valve for<br>pneumatic applications                                           | ▶ |
|  | <b>Type 8614</b><br>Pneumatic control cabinet<br>solutions for hygienic<br>process environments                    | ▶ |

### Type description

The pneumatic valve island Type 8647 AirLINE SP is a modular, electropneumatic automation system consisting of connection and valve modules. It has been especially developed for safe and complete integration into the decentralised peripheral system "SIMATIC ET 200SP" and "SIMATIC ET 200SP HA" from Siemens. Pneumatically operated process valves, pneumatic cylinders or other pneumatic components can be connected to the pneumatic outputs. If the pneumatic components are installed with position feedbacks, the position of the actuated pneumatic components can be displayed on the associated pilot valve. This can save time on start-up and maintenance.

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## 1. General technical data

### 1.1. General data

#### Note:

The general technical data refer to the pilot valves Type 0460, 6524 and 6525. Further information can be found in chapter:

- Type 6524, 6525 ["1.2. Solenoid valves Type 6524 and Type 6525" on page 5](#)
- Type 0460 ["1.3. Solenoid valves Type 0460" on page 6](#)

| Product properties                                             | Type 0460, Type 6524, Type 6525                                                                                                                            |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions                                                     | Further information can be found in chapter <a href="#">"6. Dimensions" on page 12.</a>                                                                    |
| <b>Material</b>                                                |                                                                                                                                                            |
| Body                                                           | PA (polyamide), PC (polycarbonate) (valves: PA (polyamide), PPS (polyphenylene sulfide) or aluminum)                                                       |
| Seal                                                           | NBR (valves: FPM, NBR and PUR)                                                                                                                             |
| Maximum installation width of a valve island                   | Further information can be found in chapter <a href="#">"6. Dimensions" on page 12.</a>                                                                    |
| Width per station                                              | 11 mm                                                                                                                                                      |
| Manual override                                                | Standard                                                                                                                                                   |
| Number of valve slots                                          | For single valves: max. 64<br>For impulse and double valves: max. 32                                                                                       |
| Maximum number of valve functions                              | 64 on one valve block, several valve blocks possible on one station                                                                                        |
| Switching function/Circuit function <sup>1)</sup>              | Further information can be found in chapter <a href="#">"3. Circuit functions" on page 10.</a>                                                             |
| Pneumatic Intermediate feed                                    | Necessary after 24 valve functions<br>For 2 × 3/2-way valve: necessary after 16 valve functions                                                            |
| <b>Performance data</b>                                        |                                                                                                                                                            |
| Pressure data                                                  | Overpressure to atmospheric pressure                                                                                                                       |
| Pressure range                                                 | Vac....10 bar (with UL approval Vac....8 bar)                                                                                                              |
| External supply air (auxiliary pilot air)                      | > 2.5 bar (Type 0460: not possible)                                                                                                                        |
| Flow rate Q <sub>Nn</sub> value air                            | 200...300 l/min <sup>2)</sup> measured at + 20 °C, 6 bar pressure at valve inlet and 1 bar differential pressure                                           |
| Flow rate Q <sub>Nn</sub> value air with integrated P shut-off | Flow reduced by approx. 20 %                                                                                                                               |
| Nominal operating mode                                         | Continuous operation (100 % duty cycle)                                                                                                                    |
| Switching time                                                 | Measured according to ISO 12238                                                                                                                            |
| <b>Electrical data</b>                                         |                                                                                                                                                            |
| Operating voltage                                              | 24 V DC                                                                                                                                                    |
| Voltage tolerance                                              | ± 10 %                                                                                                                                                     |
| Residual ripple (at DC)                                        | 2.4 Vss                                                                                                                                                    |
| Nominal power of each valve                                    | For single valves: 0.8 W<br>For impulse and double valves: 2 × 0.8 W with power reduction                                                                  |
| Nominal current of each valve                                  | 40 mA (28 mA holding current after 120 ms), 20 mA (when using Type 0460)                                                                                   |
| Digital input                                                  | Via cooperation partners                                                                                                                                   |
| Protection class                                               | III according to DIN EN 61140, VDE 0140                                                                                                                    |
| <b>Total current</b>                                           |                                                                                                                                                            |
| With fieldbus connection                                       | Further information can be found in the <b>operating instructions Type 8647</b> ▶.                                                                         |
| Safety-related shut-off                                        | Shut-off of individual valve via second connection<br>Module-based shut-off (EVS function)<br>Block-based shut-off (valve island) via Siemens F-PMe module |
| <b>Medium data</b>                                             |                                                                                                                                                            |
| Operating medium                                               | Oil-free or lubricated compressed dry air (5 µm filter recommended)                                                                                        |
| Compressed air quality                                         | ISO 8573 - 1: 2010, Class 7.4.4                                                                                                                            |
| <b>Approvals and conformities</b>                              |                                                                                                                                                            |
| Degree of protection                                           | IP20, IP65 in closed control cabinets                                                                                                                      |
| Explosion protection                                           | Further information can be found in chapter <a href="#">"4.4. Explosion protection" on page 11</a>                                                         |
| North America (USA/Canada)                                     | Further information can be found in chapter <a href="#">"4.5. North America (USA/Canada)" on page 11</a>                                                   |

**Product connections**

|                         |                                  |
|-------------------------|----------------------------------|
| Working port            | D 6, D ¼, ALQ                    |
| Air supply connection   | G ¼, D ⅜                         |
| Communication module    | Siemens SIMATIC ET 200SP / SP HA |
| Communication interface | PROFIBUS DP, PROFINET IO         |

**Environment and installation**

|                       |                                                      |
|-----------------------|------------------------------------------------------|
| Installation position | As required, preferably with actuator upright        |
| Storage temperature   | - 20 °C...+ 60 °C                                    |
| Ambient temperature   | 0 °C...+ 55 °C (for valve Type 0460: 0 °C...+ 50 °C) |

1.) The maximum flow rate depends on the valve function.

2.) With ET 200SP HA, only one valve block is possible. Further details on maximum station configuration can be found in the **operating instructions Type 8647** ►.

## 1.2. Solenoid valves Type 6524 and Type 6525



- The pilot valve **Type 6524** ▶ (single and double valve) and **Type 6525** ▶ (single valve) consist of a pilot flipper solenoid valve Type 6144 and a pneumatic seat valve.
- The circuit function allows switching of high pressures with low power consumption and short switching times.
- The pilot valves are equipped with a manual override as standard.
- The pneumatic flange pattern of the pilot valves Type 6524 and 6525 (single valves) for Type 8647 REV2 has been standardised. There is a difference to the flange pattern of the pilot valves for Type 8647 REV1. It is therefore imperative to take into account the different article numbers of the pilot valves as described in chapter ["8.3. Ordering chart replacement valves" on page 14](#).
- Further information about ordering information can be found in chapter ["8.3. Ordering chart replacement valves" on page 14](#)
- Further information about further valve options can be found in chapter ["8.4. Ordering chart accessories" on page 17](#).

| Pilot valve Type                             | Type 6524, Type 6525                                                                                                                                          | Type 6524                                                                 |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------|
| Circuit function                             | 3/2 and 5/2-way valve                                                                                                                                         | 2 × 3/2-way valve                                                         |
| Product properties                           |                                                                                                                                                               |                                                                           |
| <b>Material</b>                              |                                                                                                                                                               |                                                                           |
| Body                                         | PA (polyamide)                                                                                                                                                |                                                                           |
| Seal                                         | FKM, NBR and PUR                                                                                                                                              |                                                                           |
| Width per station                            | 11 mm                                                                                                                                                         |                                                                           |
| Manual override                              | Standard                                                                                                                                                      |                                                                           |
| Pneumatic module                             | With plug-in coupling, Ø 6 mm, Ø ¼"                                                                                                                           |                                                                           |
| <b>Performance data</b>                      |                                                                                                                                                               |                                                                           |
| Pressure data                                | Overpressure to atmospheric pressure                                                                                                                          |                                                                           |
| Flow rate Q <sub>Nn</sub> value air          | 300 l/min measured at + 20 °C, 6 bar pressure at valve inlet and 1 bar differential pressure, see <b>"8.3. Ordering chart replacement valves" on page 14.</b> |                                                                           |
| Duty cycle                                   | Continuous operation (100 % duty cycle)                                                                                                                       |                                                                           |
| Switching time                               | Measured according to ISO 12238                                                                                                                               |                                                                           |
| <b>Electrical data</b>                       |                                                                                                                                                               |                                                                           |
| Operating voltage                            | 24 V DC (10 % residual ripple permissible)                                                                                                                    |                                                                           |
| Nominal power of each valve                  | 0.8 W                                                                                                                                                         | 2 × 0.8 W with reduction of power                                         |
| <b>Medium data</b>                           |                                                                                                                                                               |                                                                           |
| Operating medium                             | Oil-free or lubricated compressed dry air, neutral gases (5 µm filter recommended)                                                                            |                                                                           |
| <b>Product connections</b>                   |                                                                                                                                                               |                                                                           |
| Service port 2 (A), 4 (B)                    | Plug-in coupling Ø 6 mm, Ø ¼"                                                                                                                                 |                                                                           |
| Air supply connection<br>1 (P), 3 (R), 5 (S) | G ¼                                                                                                                                                           |                                                                           |
| Electrical connection on valve               | Rectangular plug, 2-pin, grid 5.08 mm<br>Cable with strands <sup>1)</sup>                                                                                     | Rectangular plug, 3-pin, grid 2.54 mm<br>Cable with strands <sup>1)</sup> |
| <b>Environment and installation</b>          |                                                                                                                                                               |                                                                           |
| Installation position                        | As required, preferably with actuator upright                                                                                                                 |                                                                           |
| Mounting condition                           | With 2 screws M2 × 20                                                                                                                                         | With 2 screws M2 × 28                                                     |

1.) Variants with safety-related shutdown.

### 1.3. Solenoid valves Type 0460



- The solenoid valve **Type 0460** ▶ consists of a pneumatic valve body fitted with a double coil pilot valve.
- The principle allows switching of high pressures together with low power consumption and fast switching times.
- All valves are equipped with manual override as a standard.
- Further information about ordering information can be found in chapter ["Solenoid valves Type 0460" on page 15](#).
- Further information about further valve options can be found in chapter ["8.4. Ordering chart accessories" on page 17](#)

|                                           |                                                                                                                                                                         |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pilot valve Type</b>                   | <b>Type 0460</b>                                                                                                                                                        |
| <b>Circuit function</b>                   | <b>5/2-way and 5/3-way bistable</b>                                                                                                                                     |
| <b>Product properties</b>                 |                                                                                                                                                                         |
| <b>Material</b>                           |                                                                                                                                                                         |
| Body                                      | Aluminium                                                                                                                                                               |
| Seal                                      | NBR                                                                                                                                                                     |
| Width per station                         | 11 mm                                                                                                                                                                   |
| Manual override                           | Standard                                                                                                                                                                |
| Pneumatic module                          | With plug-in coupling, Ø 6 mm, Ø ¼"                                                                                                                                     |
| <b>Performance data</b>                   |                                                                                                                                                                         |
| Pressure data                             | Overpressure to atmospheric pressure                                                                                                                                    |
| Flow rate $Q_{Nn}$ value air              | 200 l/min measured at + 20 °C, 6 bar pressure at valve inlet and 1 bar differential pressure, see <a href="#">"8.3. Ordering chart replacement valves" on page 14</a> . |
| Switching time                            | Measured according to ISO 12238                                                                                                                                         |
| <b>Electrical data</b>                    |                                                                                                                                                                         |
| Operating voltage                         | 24 V DC ± 10 %                                                                                                                                                          |
| <b>Medium data</b>                        |                                                                                                                                                                         |
| Operating medium                          | Oil-free or lubricated compressed dry air, neutral gases (5 µm filter recommended)                                                                                      |
| <b>Product connections</b>                |                                                                                                                                                                         |
| Service port 2 (A), 4 (B)                 | Plug-in coupling Ø 6 mm, Ø ¼"                                                                                                                                           |
| Air supply connection 1 (P), 3 (R), 5 (S) | G ¼                                                                                                                                                                     |
| Electrical connection on valve            | Rectangular plug, 3-pin, grid 2.54 mm                                                                                                                                   |
| <b>Environment and installation</b>       |                                                                                                                                                                         |
| Installation position                     | As required, preferably with actuator upright                                                                                                                           |
| Mounting condition                        | With 2 screws M1.7 × 23                                                                                                                                                 |

1.4. AirLINE Quick

**Note:**

The valves of Type 0460 valves cannot be installed with AirLINE Quick due to their size.

AirLINE Quick considerably reduces the use of components in the control cabinet. With the AirLINE Quick Adapter, the valve terminal is adapted directly to the control cabinet floor or control cabinet wall.

**Advantages:**

- Reduced space requirement in the control cabinet
- This makes it possible to use more compact control cabinets
- Reduced installation effort due to hose connections directly at the bottom of the control cabinet

**Product properties**

**Material**

AirLINE Quick Adapter Plate      Stainless steel 1.4301  
Anodised aluminium

Pneumatic Supply / Exhaust      Stainless steel 1.4301  
Nickel-plated brass

Pneumatic working ports      Stainless steel 1.4401  
Nickel-plated brass

Valve slots      4, 8, 12, 16, 24

Valve functions      Up to 48

**Product connections**

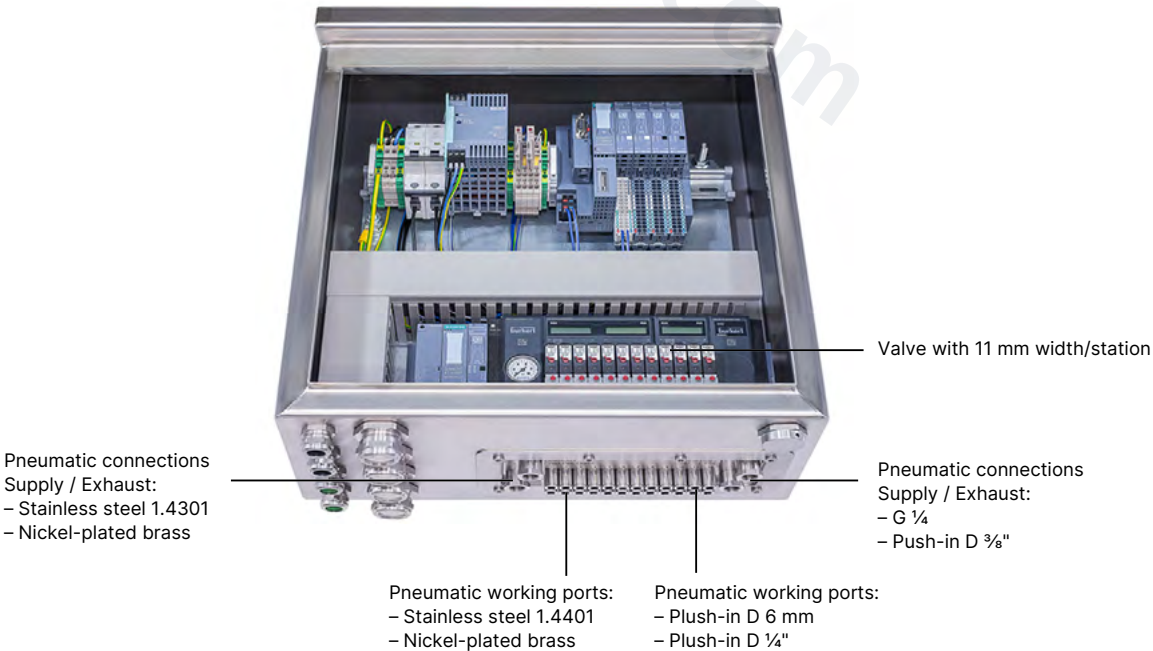
Pneumatic Supply / Exhaust      G 1/4", Push-in D 3/8"

Pneumatic working ports      Push-in D 6 mm, 1/4"

**Environment and installation**

Installation position      Control cabinet wall  
Control cabinet floor

**AirLINE Quick Adapter in stainless steel 1.4301 or anodised aluminium**



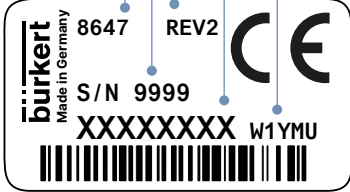
2. Product variants

2.1. Notes on compatibility and revision levels

The single valves Type 6524 and Type 6525, the pneumatic basic and connection modules and as well as the control cabinet base adaptation AirLINE Quick have been optimised.

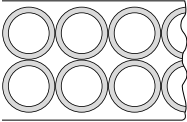
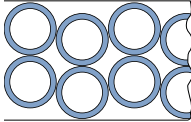
2.2. Distinguishing features

Valve island

| Revision island       | Type 8647 REV1 <sup>1.)</sup>                                                                                                                                                           | Type 8647 REV2 <sup>1.)</sup>                                                                                                                                                                                    |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Visual distinction    |                                                                                                        |                                                                                                                               |
| Marking on type label | <div><p>Valve island Type</p><p>Serial number</p><p>Article number</p><p>Construction date</p></div> | <div><p>Serial number</p><p>Revision marking</p><p>Article number</p><p>Construction date</p><p>Valve island type</p></div> |

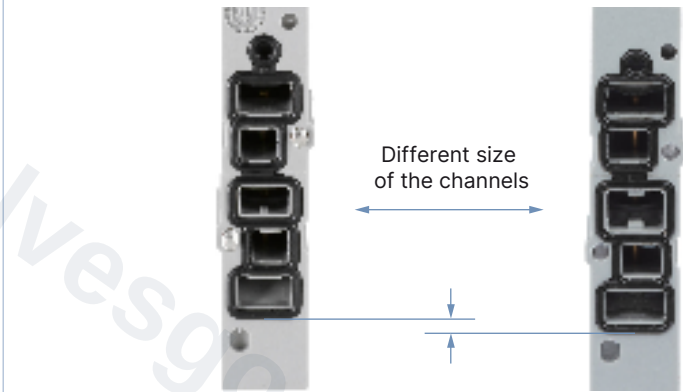
1.) If you have any questions regarding the differences in revisions, please contact your Bürkert sales department.

Module

| Revision island                                | Type 8640 REV1 <sup>1.)</sup>                                                                 | Type 8640 REV2 <sup>1.)</sup>                                                               |
|------------------------------------------------|-----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| Channel arrangement of the working connections | Parallel<br> | Wavy<br> |
| Colour of the release rings (hose connector)   | Black                                                                                         | Blue                                                                                        |
| Flow reduction with integrated P shut-off      | Up to 50 %                                                                                    | Up to 20 %                                                                                  |

1.) If you have any questions regarding the differences in revisions, please contact your Bürkert sales department.

Valves

| Valves Type 6524, Type 6525 | Valve REV1                                                                                                                                            | Valve REV2                                                                      |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|
| Visual distinction          |                                                                    |                                                                                 |
|                             | <b>REV1</b><br>Single valves Type 6524 and Type 6525 with flange interface FM14                                                                       | <b>REV2</b><br>Single valves Type 6524 and Type 6525 with flange interface FM20 |
| Article no.                 | Distinction by Article no., see <b>"8.3. Ordering chart replacement valves" on page 14</b>                                                            |                                                                                 |
| Information label           | There is a information label on the valve which indicates that the valve has been overhauled. This information label must be removed before assembly. |                                                                                 |

Further information can be found in the **operating instructions Type 8647** ►.

### 3. Circuit functions

#### 3.1. Standard functions

| Symbol | Description                                                                                                                                                                                                   |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | <b>Circuit function C (CF C)</b><br>3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally closed                                                                                       |
|        | <b>Circuit function C (CF C)</b><br>2 × 3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally closed                                                                                   |
|        | <b>Circuit function D (CF D)</b><br>3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally open                                                                                         |
|        | <b>Circuit function H (CF H)</b><br>5/2-way solenoid valve<br>Servo-controlled, with manual override<br>Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure.           |
|        | <b>Circuit function L (CF L)</b><br>5/3-way solenoid valve<br>With manual override<br>In middle position all ports locked                                                                                     |
|        | <b>Circuit function N (CF N)</b><br>5/3-way solenoid valve<br>With manual override<br>In middle position ports 2 and 4 exhausted                                                                              |
|        | <b>Circuit function Z (CF Z)</b><br>5/2-way solenoid valve<br>Impulse variant with 2 coils and manual override<br>Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure. |

#### 3.2. SIA variant (for safety-related shut-off)

| Symbol | Description                                                                                           |
|--------|-------------------------------------------------------------------------------------------------------|
|        | <b>Circuit function C (CF C)</b><br>3/2-way solenoid valve<br>Servo-controlled<br>Normally closed     |
|        | <b>Circuit function C (CF C)</b><br>2 × 3/2-way solenoid valve<br>Servo-controlled<br>Normally closed |
|        | <b>Circuit function D (CF D)</b><br>3/2-way solenoid valve<br>Servo-controlled<br>Normally open       |
|        | <b>Circuit function G (CF G)</b><br>4/2-way solenoid valve<br>Servo-controlled                        |

## 4. Approvals and conformities

### 4.1. General notes

- The approvals and conformities listed below must be stated when making enquiries. This is the only way to ensure that the product complies with all required specifications.
- Not all available variants can be supplied with the below mentioned approvals or conformities.

### 4.2. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

### 4.3. Standards

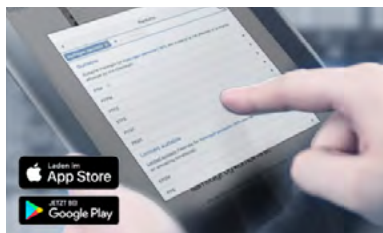
The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

### 4.4. Explosion protection

| Approval                                                                                                                                                                  | Description                                                                                                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <br> | <p><b>Optional: Explosion protection</b><br/>           As a category 3 device suitable for zone 2.</p> <p><b>ATEX:</b><br/>           BVS 18 ATEX E 078 X<br/>           II 3G Ex ec IIC T4 Gc</p> <p><b>IECEx:</b><br/>           IEC Ex BVS 18.0068 X<br/>           Ex ec IIC T4 Gc</p> |

### 4.5. North America (USA/Canada)

| Approval                                                                            | Description                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b>Optional: UL Listed for the USA and Canada</b><br/>           The products are UL Listed for the USA and Canada according to:</p> <ul style="list-style-type: none"> <li>• UL 61010-1 (ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE – Part 1: General Requirements)</li> <li>• CAN/CSA-C22.2 No. 61010-1</li> </ul> |



## 7. Product installation

### 7.1. Installation notes

- External-Valve-Shut-off function (EVS function): the switching contact must be located in the same control cabinet as the valve block.  
The line length must be limited to a maximum of 2 m.
- The Hot Swap function of the individual valves cannot be combined with the ATEX/IECEx-Ex approval.
- The following project planning and commissioning restrictions must be observed:

| Description                                                                | Type 8647 combines with                       |                                                  |
|----------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------|
|                                                                            | ET 200SP                                      | ET 200SP HA                                      |
| Installation with standard file PROFINET IO (GSDML)                        | Yes                                           | Yes                                              |
| Installation with standard file PROFIBUS DP (GSD)                          | Yes                                           | No                                               |
| Full integration in Software STEP 7 Classic (HSP)                          | Yes                                           | No                                               |
| Full integration in Software STEP 7 TIA-Portal (HSP)                       | Yes                                           | No                                               |
| Full integration in Software PCS 7 V9.0 SP2 (HUP)                          | Yes (HF Interface module required)            | Yes                                              |
| Several valve blocks can be arranged in series in one station              | Yes (new power supply necessary)              | No                                               |
| Link to Siemens homepage                                                   | <b>Assembly limits for Siemens ET 200SP ▶</b> | <b>Assembly limits for Siemens ET 200SP HA ▶</b> |
| New power supply (ET 200SP base unit) required upstream of the valve block | Recommended, but not mandatory                | Yes (mandatory)<br>(base unit cover required)    |
| Further ET 200SP modules can be mounted to the right of the valve block    | Yes                                           | No                                               |

## 8. Ordering information

### 8.1. Bürkert eShop



#### Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

### 8.2. Bürkert product filter



#### Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

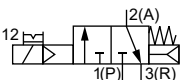
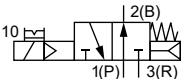
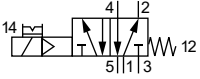
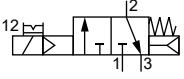
[Try out our product filter](#)

### 8.3. Ordering chart replacement valves

#### Solenoid valves Type 6524 and Type 6525

**Note:**

Further information about this product variant can be found in chapter "1.2. Solenoid valves Type 6524 and Type 6525" on page 5.

| Circuit function                                                                                                                                                                                                                                                               | Nominal diameter | Q <sub>Nn</sub> value<br>air <sup>1.)</sup> | Pres-<br>sure<br>range | Switching times |         | Voltage/<br>Fre-<br>quency | Article no.                            |                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------|------------------------|-----------------|---------|----------------------------|----------------------------------------|----------------------------------------|
|                                                                                                                                                                                                                                                                                |                  |                                             |                        | Opening         | Closing |                            | Valves for<br>8647 REV1 <sup>3.)</sup> | Valves for<br>8647 REV2 <sup>3.)</sup> |
|                                                                                                                                                                                                                                                                                | [mm]             | [l/min]                                     | [bar]                  | [ms]            | [ms]    | [V/Hz]                     |                                        |                                        |
| <b>C (CFC)</b><br>3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally closed<br>                                                                                     | 4.0              | 300                                         | Vac....7               | 15              | 20      | 24 V DC                    | 20029915                               | 20029923                               |
|                                                                                                                                                                                                                                                                                |                  |                                             | 1...10 <sup>2.)</sup>  | 15              | 20      | 24 V DC                    | 20029913                               | 20029921                               |
|                                                                                                                                                                                                                                                                                |                  |                                             | 2.5...10               | 15              | 28      | 24 V DC                    | 20029910                               | 20029918                               |
| <b>D (CFD)</b><br>3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally open<br>                                                                                       | 4.0              | 300                                         | 2.5...10               | 15              | 28      | 24 V DC                    | 20029911                               | 20029919                               |
| <b>H (CFH)</b><br>5/2-way solenoid valve<br>Servo-controlled, with manual override<br>Pressure applied via port (1), therefore<br>one of the two ports (2) or (4) is under<br>pressure.<br> | 4.0              | 300                                         | 1...10 <sup>2.)</sup>  | 15              | 20      | 24 V DC                    | 20029914                               | 20029922                               |
|                                                                                                                                                                                                                                                                                |                  |                                             | 2.5...10               | 20              | 28      | 24 V DC                    | 20029912                               | 20029920                               |
| <b>C (CFC)</b><br>2 × 3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally closed<br>                                                                               | 4.0              | 300                                         | 1...10 <sup>2.)</sup>  | 12              | 20      | 24 V DC                    | 300817                                 |                                        |
|                                                                                                                                                                                                                                                                                |                  |                                             | 2.5...10               | 12              | 20      | 24 V DC                    | 204710                                 |                                        |

1.) With integrated hot swap and/or non-return function, see chapter "2.2. Distinguishing features" on page 8

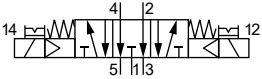
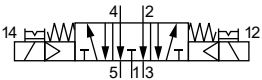
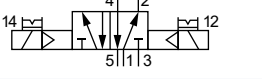
2.) Variant with auxiliary pilot air

3.) If you have any questions about the compatibility of the valve revision, please contact your Bürkert sales office.

## Solenoid valves Type 0460

## Note:

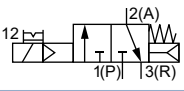
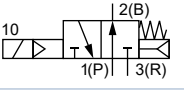
Further information about this product variant can be found in chapter "1.3. Solenoid valves Type 0460" on page 6.

| Circuit function                                                                                                                                                                                                                                                                             | Nominal diameter | Q <sub>Nn</sub> value<br>air <sup>1.)</sup> | Pressure range <sup>2.)</sup> | Switching times |         | Nominal power | Article no.<br>Valve for 8647<br>REV1, REV2                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------------------------|-------------------------------|-----------------|---------|---------------|--------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                              |                  |                                             |                               | Opening         | Closing |               |                                                                                            |
|                                                                                                                                                                                                                                                                                              | [mm]             | [l/min]                                     | [bar]                         | [ms]            | [ms]    | [W]           |                                                                                            |
| <b>L (CF L)</b><br>5/3-way solenoid valve<br>With manual override<br>In middle position ports 2 and 4<br>exhausted<br>                                                                                      | 2.5              | 200                                         | 2...7                         | 15              | 20      | 1             | 154184  |
| <b>N (CF N)</b><br>5/3-way solenoid valve<br>With manual override<br>In middle position ports 2 and 4<br>exhausted<br>                                                                                      | 2.5              | 200                                         | 2...7                         | 15              | 20      | 1             | 154185  |
| <b>Z (CF Z)</b><br>5/2-way solenoid valve<br>Impulse variant with 2 coils and manual<br>override<br>Pressure applied via port (1), therefore<br>one of the two ports (2) or (4) is under<br>pressure.<br> | 2.5              | 200                                         | 2...7                         | 15              | 15      | 0.5           | 154183  |

1.) Measured at +20 °C, 6 bar pressure at valve inlet, 1 bar differential pressure

2.) Pressure indication: overpressure to atmospheric pressure

## 3/2-way solenoid valve without manual override

| Circuit function                                                                                                                                                                               | Nominal diameter | Q <sub>Nn</sub> value air | Pressure range          | Voltage/<br>frequency | Article no.<br>Valve for 8647<br>REV1 | Article no.<br>Valve for 8647<br>REV2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|-------------------------|-----------------------|---------------------------------------|---------------------------------------|
|                                                                                                                                                                                                | [mm]             |                           |                         |                       |                                       |                                       |
| <b>C (CF C)</b><br>3/2-way solenoid valve<br>Servo-controlled, with<br>manual override<br>Normally closed<br> | 4                | 300                       | Vac...10 <sup>3.)</sup> | 24 V DC               | o. r.                                 | o. r.                                 |
|                                                                                                                                                                                                |                  |                           | 1...10                  | 24 V DC               |                                       |                                       |
|                                                                                                                                                                                                |                  |                           | 2.5...10                | 24 V DC               |                                       |                                       |
| <b>D (CF D)</b><br>3/2-way solenoid valve<br>Servo-controlled<br>Normally open<br>                            | 4                | 300                       | 2.5...10                | 24 V DC               | o. r.                                 | o. r.                                 |

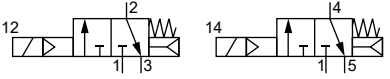
o. r. = on request

1.) Measured at +20 °C, 6 bar pressure at valve inlet and 1 bar differential pressure

2.) Pressure indication: overpressure to atmospheric pressure

3.) Variant with auxiliary pilot air

## 2 × 3/2-way solenoid valve without manual override

| Circuit function                                                                                                                                                            | Nominal diameter | Q <sub>Nn</sub> value air | Pressure range          | Voltage/<br>frequency | Integrated<br>power<br>reduction | Article no.<br>Valve for 8647<br>REV1 / REV2 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|-------------------------|-----------------------|----------------------------------|----------------------------------------------|
|                                                                                                                                                                             | [mm]             |                           |                         |                       |                                  |                                              |
| <b>C (CF C)</b><br>2 × 3/2-way solenoid valve<br>Servo-controlled<br>Normally closed<br> | 4                | 300                       | Vac...10 <sup>3.)</sup> | 24 V DC               | No                               | o. r.                                        |
|                                                                                                                                                                             | —                | —                         | 2.5...10                | 24 V DC               | No                               |                                              |

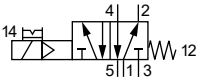
o. r. = on request

1.) Measured at +20 °C, 6 bar pressure at valve inlet and 1 bar differential pressure

2.) Pressure indication: overpressure to atmospheric pressure

3.) Variant with auxiliary pilot air

## 5/2-way solenoid valve without manual override

| Circuit function                                                                                                                                                                                                                                                                   | Nominal diameter | Q <sub>Nn</sub> value air | Pressure range | Switching times |         | Voltage/<br>frequency | Article no.<br>Valve for 8647<br>REV1 | Article no.<br>Valve for 8647<br>REV2 |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|---------------------------|----------------|-----------------|---------|-----------------------|---------------------------------------|---------------------------------------|
|                                                                                                                                                                                                                                                                                    |                  |                           |                | Opening         | Closing |                       |                                       |                                       |
|                                                                                                                                                                                                                                                                                    | [mm]             | [l/min]                   | [bar]          | [ms]            | [ms]    | [V/Hz]                |                                       |                                       |
| <b>H (CF H)</b><br>5/2-way solenoid valve<br>Servo-controlled, with manual<br>override<br>Pressure applied via port (1),<br>therefore one of the two ports<br>(2) or (4) is under pressure.<br> | 4                | 300                       | 2.5...10       | 20              | 28      | 24 V DC               | 20029917 𐀀                            | 20029925 𐀀                            |

8.4. Ordering chart accessories

Cover plate

Note:

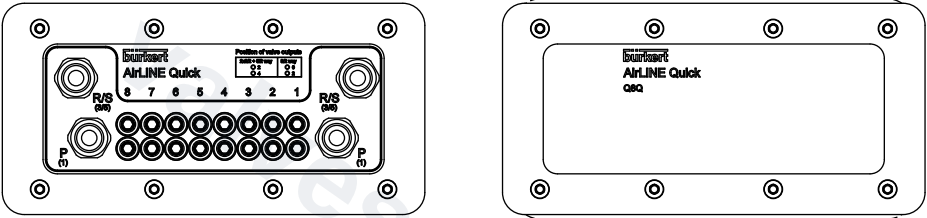
- If not all the valve connections in a basic valve unit module are used, then these connections should be covered by the appropriate cover plate to ensure full efficiency.
- If a valve slot is pneumatically covered with a cover plate, the electrical connection on the electrical base module must also be covered.

| Cover plate                                                | Article no. |
|------------------------------------------------------------|-------------|
| Cover plate for solenoid valves Type 6524/6525 (REV1)      | 650373      |
| Cover plate for solenoid valves Type 6524/6525 (REV2)      | 661092      |
| Cover plate for solenoid valves Type 6524 2× 3/2-way valve | 661092      |
| Cover plate for solenoid valves Type 0460                  | 655069      |
| Cover for electrical connection (all valve types)          | 653670      |

Blind plates AirLINE Quick

Note:

A blind plate is used to cover an existing flange for AirLINE Quick on the cabinet wall or on the cabinet floor.



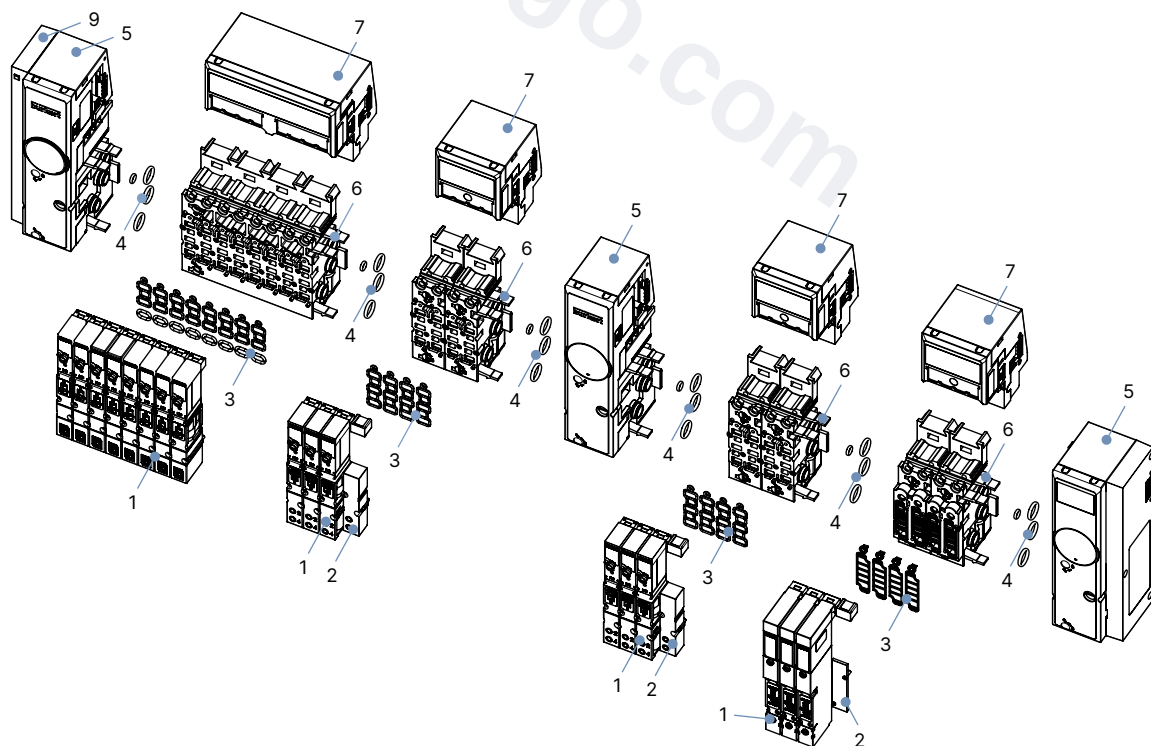
| Description                                                                | Article no. |
|----------------------------------------------------------------------------|-------------|
| Blind plate AirLINE Quick, 4-fold                                          | 20057391    |
| Blind plate AirLINE Quick, 8-fold                                          | 20057390    |
| Blind plate AirLINE Quick, 12-fold                                         | 20057388    |
| Blind plate AirLINE Quick, 16-fold                                         | 20057387    |
| Blind plate AirLINE Quick (valve terminal with Intermediate feed), 16-fold | 20056955    |
| Blind plate AirLINE Quick, 24-fold                                         | 20057392    |
| Blind plate AirLINE Quick (valve terminal with Intermediate feed), 24-fold | 20057394    |

## 8.5. Ordering chart spare parts

Spare parts SVVI for Type 8647, REV1 – Pneumatics 11 mm width per station

| Pos. | Description                                                                       | Content | Article no. |
|------|-----------------------------------------------------------------------------------|---------|-------------|
| 1    | <b>Spare valves</b> see "8.3. Ordering chart replacement valves" on page 14       | –       | –           |
| 2    | <b>Cover plate</b> see "8.4. Ordering chart accessories" on page 17               | –       | –           |
| 3    | <b>Set of valve seals</b>                                                         | –       | –           |
|      | Spare valve seals FM20 for Type 6524, 2 × 3/2-way solenoid valve                  | 12      | 20016305    |
|      | Spare valve seals FM15 for Type 6524, 3/2-way solenoid valve                      | 12      | 20024333    |
|      | Spare valve seats FM14 for Type 6525, 5/2-way solenoid valve                      | 12      | 20024334    |
|      | Spare valve seals FM16 for Type 0460, 3/2-way solenoid valve                      | 12      | 20024330    |
| 4    | <b>Sets of module seals</b>                                                       | –       | –           |
|      | Spare module seals for Type MP11                                                  | 4       | 20040779    |
| 5    | <b>Connection units</b>                                                           | o. r.   | o. r.       |
| 6    | <b>Base modules</b>                                                               | o. r.   | o. r.       |
| 7    | <b>Electronic modules</b>                                                         | –       | –           |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, single valve                 | 1       | 20040548    |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, single valve EVS             | 1       | 20040549    |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, double valve                 | 1       | 20040550    |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, double valve EVS             | 1       | 20040552    |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, single valve                 | 1       | 20040554    |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, single valve EVS             | 1       | 20040555    |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, double valve                 | 1       | 20040556    |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, double valve EVS             | 1       | 20040557    |
| 8    | <b>AirLINE Quick spare parts</b> see "8.4. Ordering chart accessories" on page 17 | –       | –           |
| 9    | <b>Interface module for Type 8647</b>                                             | 1       | 20029826    |

o. r. = on request



## Spare parts SVVI for Type 8647, REV2 – Pneumatics 11 mm width per station

| Pos. | Description                                                                       | Content | Article no.                                                                                    |
|------|-----------------------------------------------------------------------------------|---------|------------------------------------------------------------------------------------------------|
| 1    | <b>Spare valves</b> see "8.3. Ordering chart replacement valves" on page 14       | –       | –                                                                                              |
| 2    | <b>Cover plate</b> see "8.4. Ordering chart accessories" on page 17               | –       | –                                                                                              |
| 3    | <b>Set of valve seals</b>                                                         | –       | –                                                                                              |
|      | Spare valve seals FM20 for Type 6524, 2 × 3/2-way solenoid valve                  | 12      | 20016305    |
|      | Spare valve seals FM24 for Type 6524, 3/2-way solenoid valve                      | 12      | 20024336    |
|      | Spare valve seals FM16 for Type 0460                                              | 12      | 20024330    |
| 4    | <b>Sets of module seals</b>                                                       | –       | –                                                                                              |
|      | Spare module seals for Type MP16                                                  | 4       | 20024339    |
| 5    | <b>Connection units</b>                                                           | –       | –                                                                                              |
|      | Supply unit left for Type 8647, 11 mm, G 1/4, with pressure sensor                | 1       | 20030009    |
|      | Supply unit left for Type 8647, 11 mm, G 1/4, with manometer                      | 1       | 20030059    |
|      | Supply unit right for Type 8647, 11 mm, G 1/4, with manometer                     | 1       | 20030060    |
|      | Intermediate feed for Type 8647, 11 mm, G 1/4, with manometer                     | 1       | 20030061    |
|      | Supply unit left for Type 8647, 11 mm, G 1/4,                                     | 1       | 20030062    |
|      | Intermediate feed for Type 8647, 11 mm, G 1/4,                                    | 1       | 20030063    |
|      | Supply unit right for Type 8647, 11 mm, G 1/4, with manometer                     | 1       | 20030064    |
|      | Supply unit right for Type 8647, 11 mm, G 1/4, with pressure sensor               | 1       | 20030065    |
| 6    | <b>Base modules</b>                                                               | –       | –                                                                                              |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D6, FM20                      | 1       | 20040334    |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D6, FM20, Hot Swap, RSV       | 1       | 20040335    |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D1/4, FM20                    | 1       | 20040337   |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D1/4, FM20, Hot Swap, RSV     | 1       | 20040339  |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D6, FM16                      | 1       | 20040340  |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D6, FM16, RSV                 | 1       | 20040343  |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D1/4, FM16                    | 1       | 20040344  |
|      | Base unit for Type 8640, 8644, 8647, 11 mm, 4-fold, D1/4, FM16, RSV               | 1       | 20040345  |
| 7    | <b>Electronic modules</b>                                                         | –       | –                                                                                              |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, single valve                 | 1       | 20040548  |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, single valve EVS             | 1       | 20040549  |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, double valve                 | 1       | 20040550  |
|      | Electrical base module for Type 8647, 11 mm, 4-fold, double valve EVS             | 1       | 20040552  |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, single valve                 | 1       | 20040554  |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, single valve EVS             | 1       | 20040555  |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, double valve                 | 1       | 20040556  |
|      | Electrical base module for Type 8647, 11 mm, 8-fold, double valve EVS             | 1       | 20040557  |
| 8    | <b>AirLINE Quick spare parts</b> see "8.4. Ordering chart accessories" on page 17 | –       | –                                                                                              |
| 9    | Interface module for Type 8647                                                    | 1       | 20029826  |

