





AirLINE and AirLINE Quick – Electrical/pneumatic Automation System

- Fully compatible with Siemens ET 200S
- Combination of Fieldbus, pilot valves and I/O modules
- Higher flexibility in the control cabinet with AirLINE Quick
- Optionally integrated PLC functionality
- Compact design
- High flow rate value

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

Can be combined with

	Type 2000 ▶ Pneumatically operated 2/2 way angle seat valve CLASSIC
	Type MKRS ▶ Redundancy valve block for safety related shut-off function
	Type 0498 ▶ Double pilot controlled check valve for realising 5/3 way function with all ports blocked
	Type 8614 ▶ Pneumatic control cabinet solutions for hygienic process environments

Type description

The AirLINE System integrates high performance solenoid pilot valves, remote electronic I/O and fieldbus communication into a process actuation and control system that is both compact and extremely flexible. Its modular design allows fully customized, pre-mounted and tested solutions to exactly meet all application needs including the integration of a local Mini PLC. Due to the full electronic and mechanical integration, the valve block can be added without the need of any tools or wiring.

8644 Siemens: available until September 2023

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11 mm width per station	19
16 mm width per station	19

1. General technical data

1.1. General data

Solenoid valves	Type 0460, Type 6524, Type 6525	Type 0461, Type 6526, Type 6527
Product properties		
Dimensions	Detailed information can be found in chapter "4. Dimensions" on page 10.	Detailed information can be found in chapter "4. Dimensions" on page 10.
Width/station	11 mm	16.5 mm
Electrical modules	Siemens ET200S	Siemens ET200S
Fieldbus Type	PROFIBUS DP, PROFINET I/O	PROFIBUS DP, PROFINET I/O
Max. number of modules	Depending on application	Depending on application
Max. number of valves	64 (by use of Type 0460: 32)	32 (by use of Type 0461: 24)
Module Types	4x ^{1.)}	4x
Circuit function ^{2.)}	C (3/2 way) D (3/2 way) H (5/2 way) Z (5/2 way) impulse L (5/3 way) in middle position all ports locked N (5/3 way) in middle position all ports exhausted	C (3/2 way) D (3/2 way) H (5/2 way) Z (5/2 way) impulse L (5/3 way) in middle position all ports open N (5/3 way) in middle position all ports exhausted
Performance data		
Pressure range	Vac. up to 10 bar	Vac. up to 10 bar
Flow (Q _{Nn} value air)	310 l/min ^{1.)}	700 l/min (500 l/min by circuit functions Z, L and N)
Electrical data		
Operating voltage	24 V DC	24 V DC
Nominal power per valve	1 W (0.5 W Nominal power acc. to 120 ms)	2 W (1 W Nominal power acc. to 120 ms)
Rated current per valve	43 mA (28 mA hold current after 120 ms) 41 mA (by use of Type 0460)	85 mA (52 mA hold current after 120 ms) 41 mA (by use of Type 0461)
Residual ripple (at DC)	1 Vss	1 Vss
Voltage tolerance	+20 %/- 15 % (by use of Type 0460: ± 10 %)	+20 %/- 15 % (by use of Type 0461: ± 10 %)
Approvals and Certificates		
Degree of protection	IP20, IP65 in closed field housing	IP20, IP65 in closed field housing
Approvals	ATEX, Zone 2 (BVS 20 ATEX E 031 U) IECEX, Zone 2 (IECEX BVS 20.0024 U)	ATEX, Zone 2 (BVS 20 ATEX E 031 U) IECEX, Zone 2 (IECEX BVS 20.0024 U)
Environment and installation		
Storage temperature	-20...+60 °C	-20...+60 °C
Ambient temperature	0...+55 °C (by use of Type 0460 0460: 0...+50 °C)	0...+55 °C (by use of Type 0460 0461: 0...+50 °C)

1.) Integrated check valve and P-Shut off valve are optional)

2.) Detailed information can be found in chapter "3. Circuit functions" on page 9

1.2. AirLINE Quick technical data

Note:

The valves of Type 0460 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 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 switch cabinet

Product properties

Material: AirLINE Quick Adapter	Stainless steel 1.4301 Aluminium anodized
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Material: pneumatic connection	Stainless steel 1.4301 brass nickel-plated
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Valve positions	4, 8, 12, 16, 24
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Valve functions	Up to 48
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Process/Port connection & communication

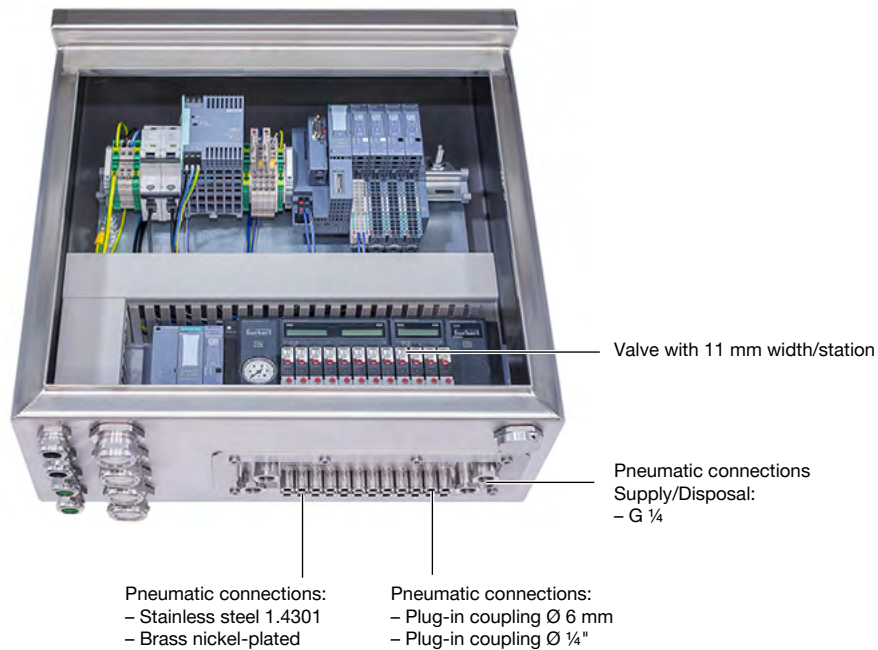
Connection: pneumatic feeding	G ¼
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Connection: pneumatic service ports	Plug-in coupling Ø 6 mm, plug-in coupling Ø ¼"
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Environment and installation

Installation	Wall control cabinet Floor control cabinet
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AirLINE Quick Adapter in stainless steel 1.4301 oder anodized aluminium



2. Product versions

2.1. Solenoid valves Type 6524 and Type 6525



- The solenoid valves of **Type 6524** ▶ (single and double valve) and **Type 6525** ▶ (single valve) consist of a pilot flipper solenoid valve of Type 6144 and a pneumatic seat valve. The operating principle allows switching of high pressures with low power consumption and short switching times. The solenoid valves are equipped with a manual override as standard.
- For detailed information regarding ordering information see [“6.3. Ordering chart replacement valves Type 6524 and Type 6525” on page 15.](#)

Solenoid valve Type	6524 / 6525	6524
Circuit function	3/2 and 5/2 way valve	2 × 3/2 way valve
Product properties		
Materials		
Body	PA (Polyamide)	
Seal	FPM, NBR and PUR	
Width per station	11 mm	
Manual override	Standard	
Pneumatic module	With plug-in coupling, Ø 6 mm, Ø ¼"	
Performance data		
Pressure data	Overpressure to atmospheric pressure	
Flow rate (Q _{Nn} value air)	See “6.3. Ordering chart replacement valves Type 6524 and Type 6525” on page 15 , measured at +20 °C, 6 bar pressure at the valve inlet and 1 bar pressure difference.	
Duty cycle	Continuous operation (100 % ED)	
Switching time	Measured according to ISO 12238	
Electrical data		
Electrical connection at the valve	Rectangular plug 2 pin grid spacing 5.08 mm Cable with leads ^{1.)}	Rectangular plug 3 pin grid spacing 2.54 mm Cable with leads ^{1.)}
Nominal power	0.8 W	2 × 0.8 W
Process/Port connection & communication		
Service port 2 (A), 4 (B)	Plug-in coupling Ø 6 mm, plug-in coupling Ø ¼"	
Supply port connection 1 (P), 3 (R), 5 (S)	G ¼	
Environment and installation		
Installation	As required, preferably with actuator upright	
Mounting condition	With 2 screws M2 × 20	

1.) Versions with safety-related shutdown. 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.

2.2. Solenoid valve Type 0460



- The solenoid valve, **Type 0460** ▶, consists of a pneumatic valve body fitted with a double coil solenoid valve. The principle allows switching of high pressures together with low power consumption and fast response times. All valves are equipped with manual override as a standard.
- For detailed information regarding ordering information see [“6.4. Ordering chart replacement valves Type 0460” on page 16.](#)

Solenoid valve Type	0460
Circuit function	5/2 way and 5/3 way Impulse valve
Product properties	
Materials	
Body	Aluminium
Seal	NBR
Width per station	11 mm
Manual override	Standard
Pneumatic module	With plug-in coupling, Ø 6 mm, Ø ¼
Performance data	
Pressure data	Overpressure to atmospheric pressure
Flow rate (Q _{Nn} value air)	See “6.4. Ordering chart replacement valves Type 0460” on page 16 , measured at +20 °C, 6 bar pressure at the valve inlet and 1 bar pressure difference.
Switching time	Measured according to ISO 12238
Electrical data	
Electrical connection at the valve	Rectangular plug 3 pin grid spacing 2,54 mm
Process/Port connection & communication	
Service port 2 (A), 4 (B)	Plug-in coupling Ø 6 mm, plug-in coupling Ø ¼"
Supply port connection 1 (P), 3 (R), 5 (S)	G ¼
Environment and installation	
Installation	As required, preferably with actuator upright
Mounting condition	With 2 screws M1,7 x 23

2.3. Solenoid valve Types 6526 and Type 6527



- The solenoid valve **Type 6526** ▶ and **Type 6527** ▶ consist of a pneumatic valve body fitted with Type 6106 rocker solenoid valve. The rocker principle allows switching of high pressure at low power consumption and fast response times. The solenoid valves are equipped with manual override as a standard.
- Detailed information about ordering information see [“6.5. Ordering chart replacement valves Type 6526 and Type 6527” on page 17.](#)
- Detailed information about further valve options see [“6.7. Ordering chart accessories” on page 18.](#)

Product properties	
Material	
Body	PA (Polyamide)
Seal	NBR
Width per station	16.5 mm
Manual override	Standard
Pneumatic modules	With plug-in coupling, Ø 8 mm
Performance data	
Pressure data	Overpressure to the atmospheric pressure
Flow (Q_{Nin} value air)	Measured at +20 °C, 6 bar pressure at valve inlet and 1 bar pressure difference
Nominal operating mode	Continuous operation (100 % ED)
Switching time	Measured acc. to ISO 12238
Electrical data	
Operating voltage	24 V DC ± 10 %
Electrical connection	Tag connector acc. to DIN EN 175301 - 803 (previously DIN 43650) form C
Nominal power	2 W, 1 W
Medium data	
Medium	Lubricated and non-lubricated dry air, neutral gases (5 µm filter)
Process/Port connection & communication	
Service port 2 (A), 4 (B)	Plug-in coupling Ø 8 mm
Supply port connection 1 (P), 3 (R), 5 (S)	G 3/8
Environment and installation	
Installation position	As required, preferably with solenoid valve upright
Mounting condition	With 2 screws M3 × 30

2.4. Solenoid valve Type 0461



- The solenoid valves of **Type 0461** ▶ consist of a pilot solenoid valve with double coil and a pneumatic slide valve. The operating principle allows switching of high pressures with low power consumption and short switching times. All valves are equipped with a manual override as standard.
- Detailed information about ordering information see “[6.6. Ordering chart replacement valves Type 0461](#)” on page 18.
- Detailed information about further valve options see “[6.7. Ordering chart accessories](#)” on page 18.

Product properties

Material

Body	Aluminium
Seal	NBR
Width per station	16.5 mm
Manual override	Standard
Pneumatic modules	With plug-in coupling, Ø 8 mm

Performance data

Pressure data	Overpressure to the atmospheric pressure
Flow (Q_{Nn} value air)	Measured at +20 °C, 6 bar pressure at valve inlet and 1 bar pressure difference
Switching time	Measured according to ISO 12238

Electrical data

Operating medium	24 V DC ± 10 %
Electrical connection	Rectangular plug

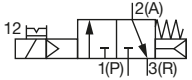
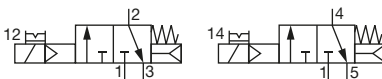
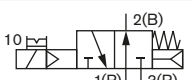
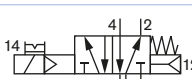
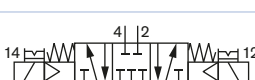


Medium data

Operating medium	Lubricated and non lubricated dry compressed air; neutral gases (5µm filter recommended)
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Process/Port connection & communication

Port connection size	Flange
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3. Circuit functions

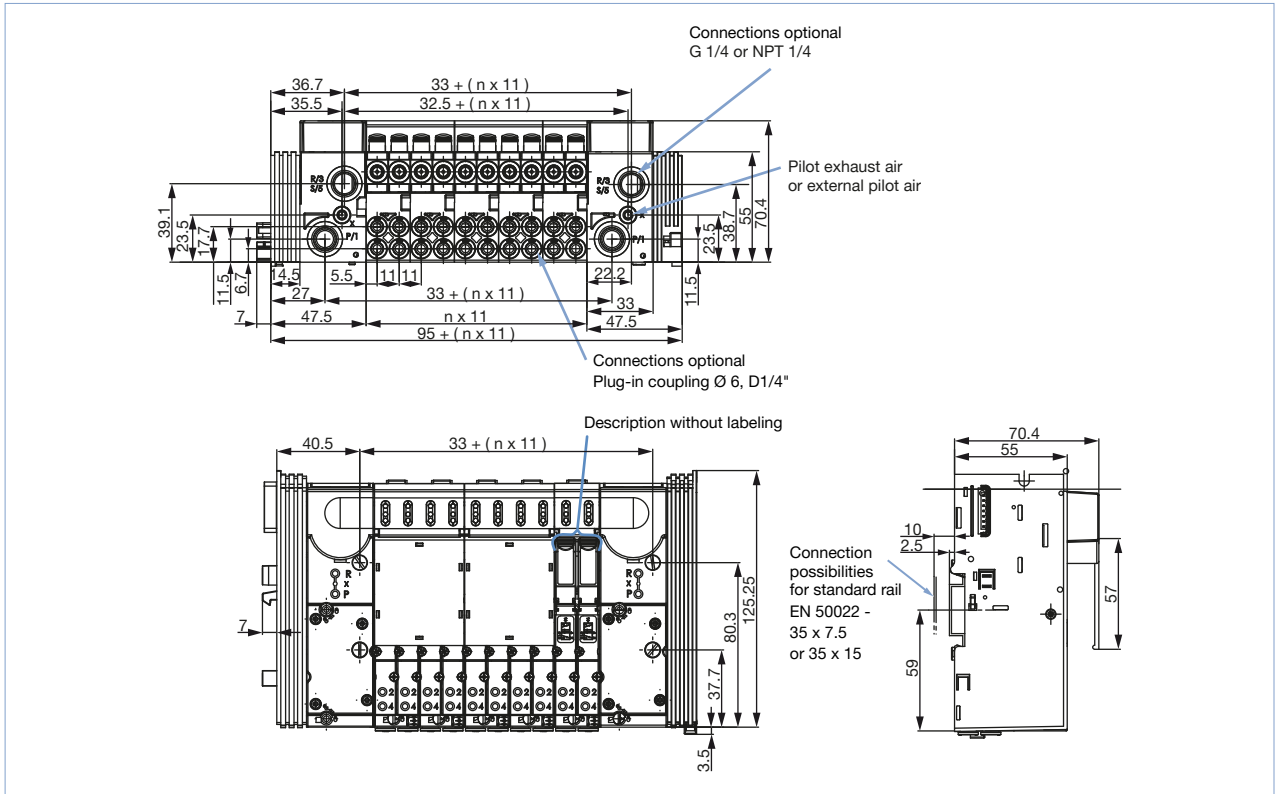
Circuit Function	Description
	Type: C, solenoid valve 3/2 way Servo-controlled, with manual mode Normally closed
	Type: C, solenoid valve 2 x 3/2 way Servo-controlled, with manual mode Normally closed
	Type: D, solenoid valve 3/2 way Servo-controlled, with manual mode Normally open
	Type: H, solenoid valve 5/2 way Servo-controlled, pilot air and manual mode Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure.
	Type: L, solenoid valve 5/3 way With manual mode In middle position all ports locked Normally closed
	Type: N, solenoid valve 5/3 way With manual mode In middle position ports 2 and 4 exhausted There is always one of the two outlet ports (2) or (4) pressurized when coil is activated.
	Type: Z, solenoid valve 5/2 way Impulse version with 2 coils and manual mode Normally open Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure.

4. Dimensions

4.1. Solenoid valve Type 6524 and Type 6525

Note:

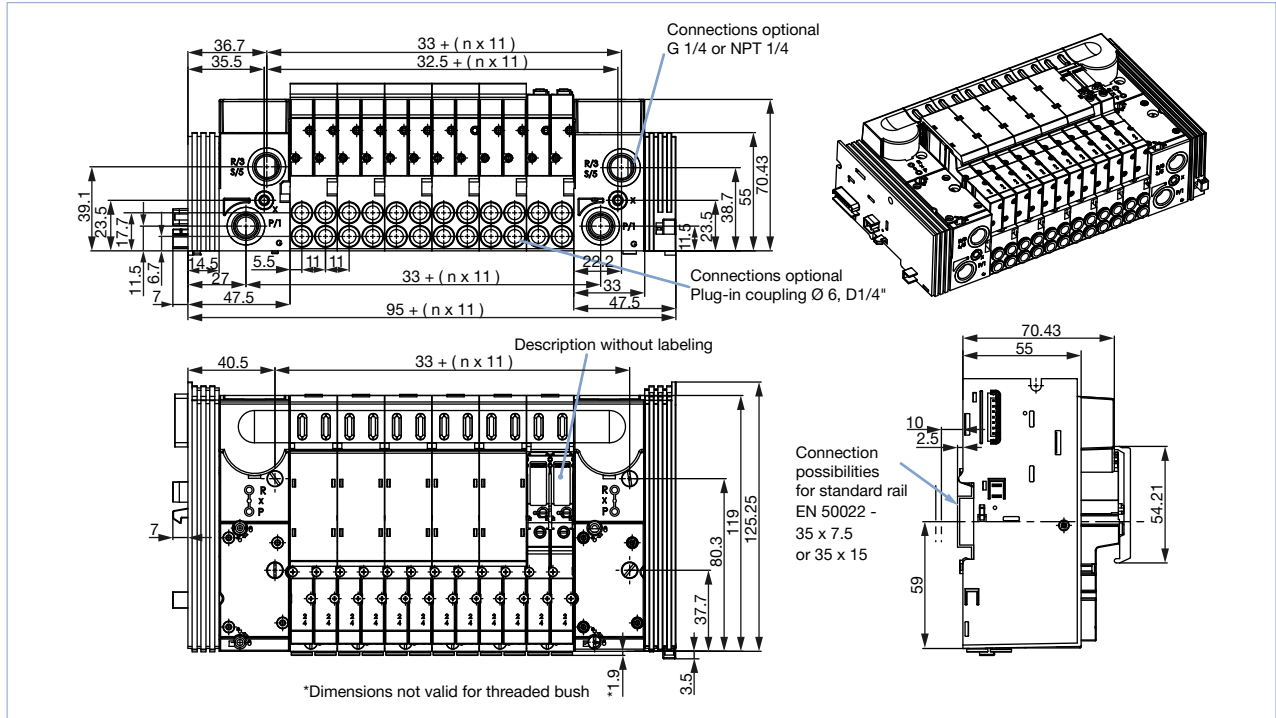
- 11 mm width per station
- Dimensions in mm
- n = number of valves



4.2. Solenoid valve Type 6524 2 x 3/2 way valve

Note:

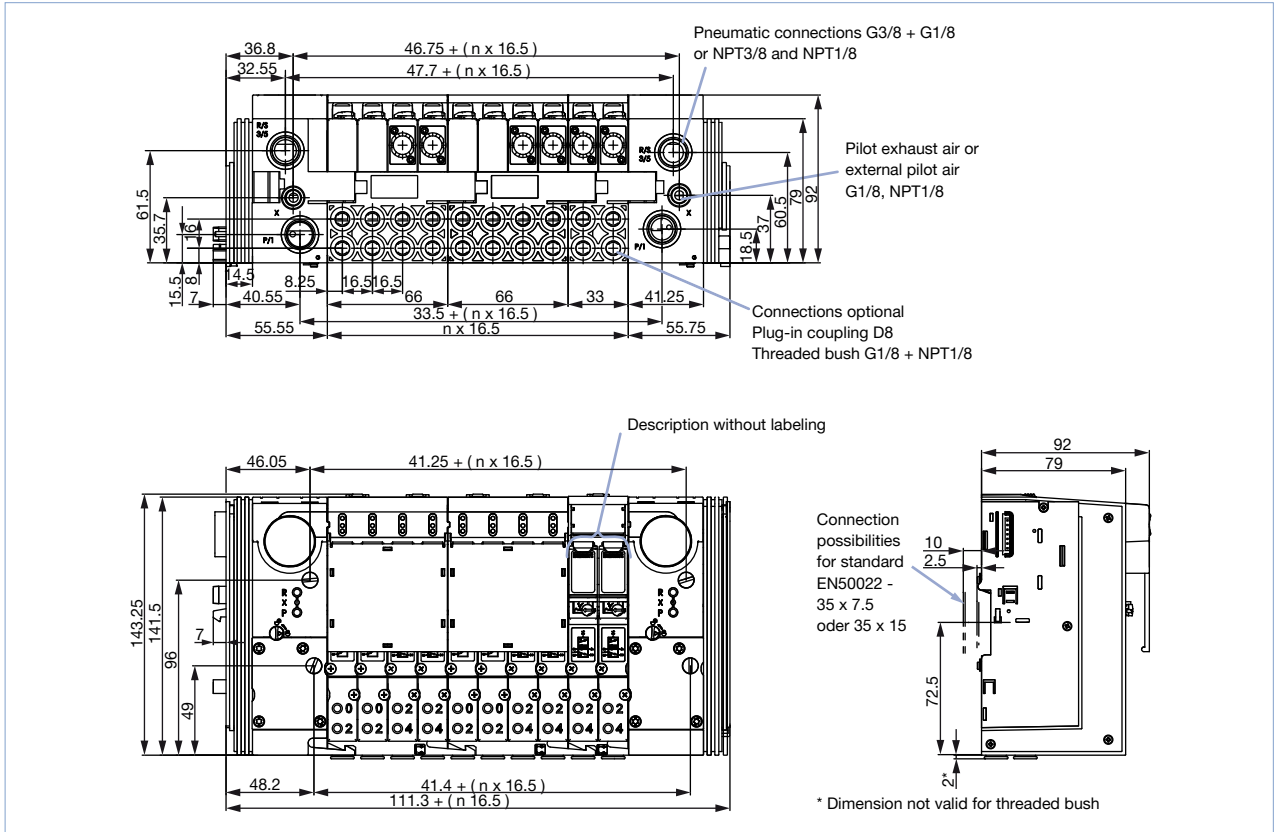
- 11 mm width per station
- Dimensions in mm
- n = number of valves



4.3. Solenoid valve Type 6526 and Type 6527

Note:

- 16.5 mm width per station
- Dimensions in mm
- n = number of valves



5. Product design and assembly

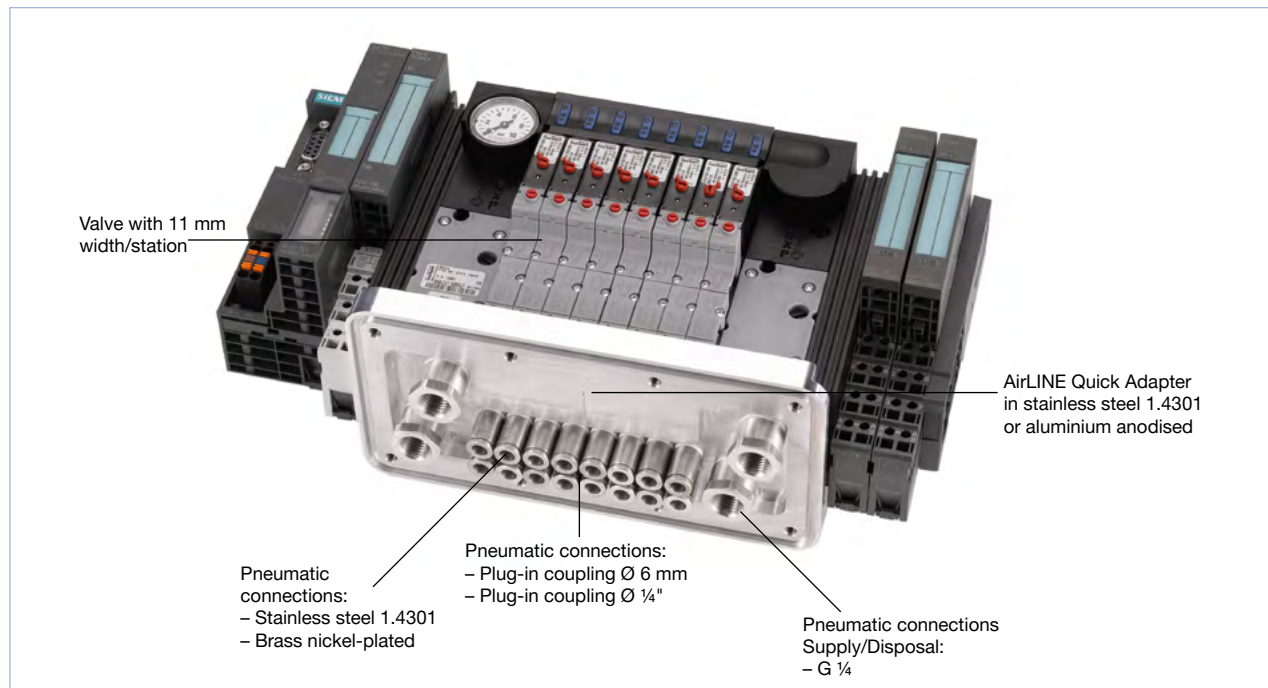
5.1. Product assembly

AirLINE Quick-Adapter

With AirLINE Quick you can reduce the amount of the components in the control cabinet considerably. With the AirLINE Quick Adapter the valve island is directly adapted on the control cabinet floor or wall.

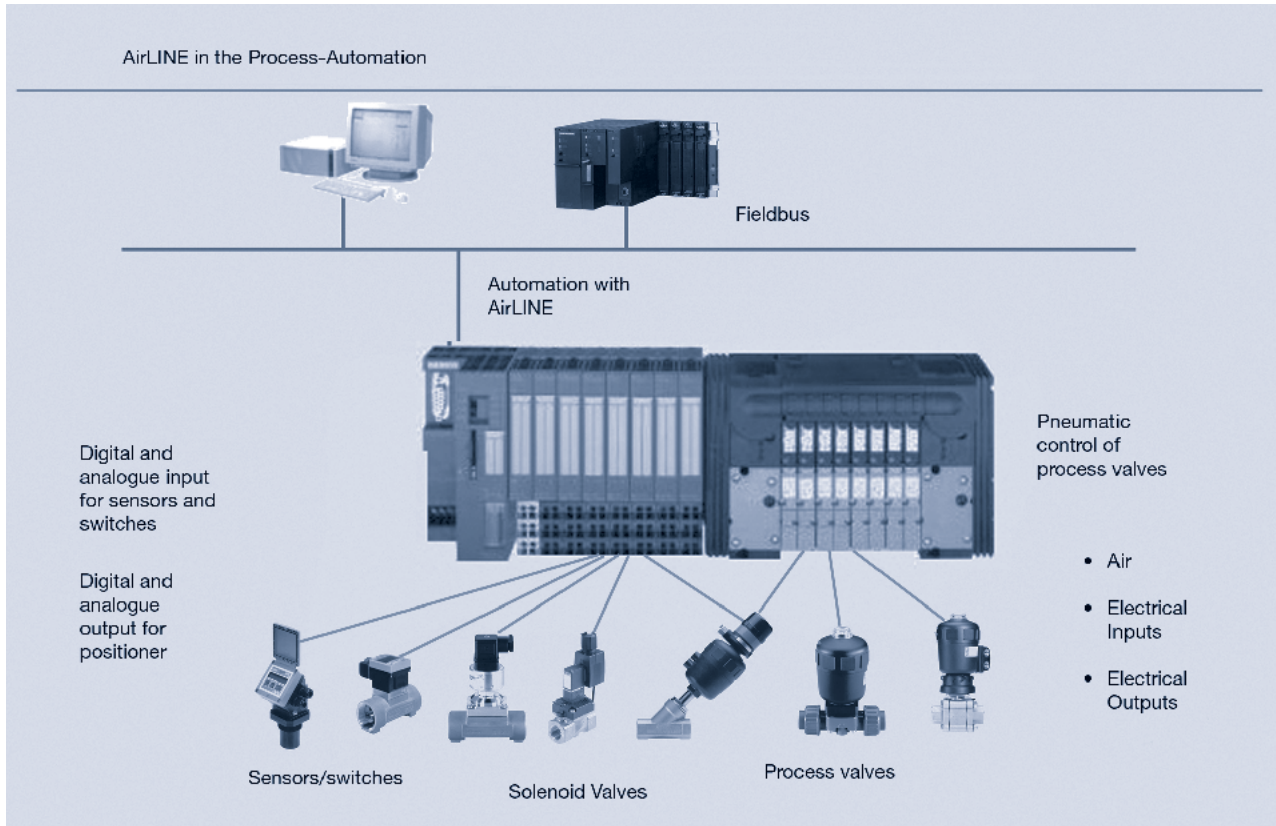
Note:

The valves of Type 0460 can not be installed with AirLINE Quick because of their size.




5.2. Example configuration

AirLINE in the Process-Automation



6. Ordering information

6.1. Bürkert eShop – Easy ordering and quick delivery

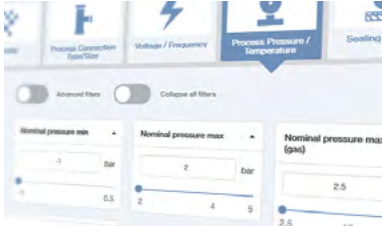


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6.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

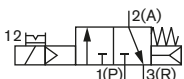



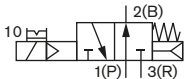

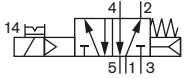


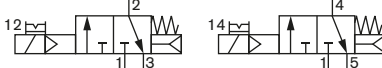


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6.3. Ordering chart replacement valves Type 6524 and Type 6525

Note:

Detailed information about product version see “2.1. Solenoid valves Type 6524 and Type 6525” on page 5.

Circuit function	Orifice	Q _{Nn} -value air ^{1.)}	Pressure range	Switching times		Voltage/ Frequency	Article no.
	[mm]			[l/min]	Opening [ms]		
Type: C, solenoid valve 3/2 way Servo-controlled, with manual mode Normally closed 	4.0	300	Vak...7	15	20	24 V DC	20029915  (186258) ^{3.)}
			1...10 ^{2.)}	15	20	24 V DC	20029913  (186257) ^{3.)}
			2.5...10	15	28	24 V DC	20029910  (184043) ^{3.)}
Type: D, solenoid valve 3/2 way Servo-controlled, with manual mode Normally open 	4.0	300	2.5...10	15	28	24 V DC	20029911  (184400) ^{3.)}
Type: H, solenoid valve 5/2 way Servo-controlled, pilot air and manual mode Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure. 	4.0	300	1...10 ^{2.)}	15	20	24 V DC	20029914  (186271) ^{3.)}
			2.5...10	20	28	24 V DC	20029912  (179938) ^{3.)}
Type: C, solenoid valve 2 x 3/2 way Servo-controlled, with manual mode Normally closed 	4.0	300	1...10 ^{2.)}	12	20	24 V DC	186259 
			2.5...10	12	20	24 V DC	186260 

1.) With integrated HotSwap and/or non-return function, the flow rate is reduced.

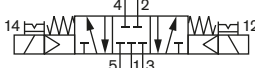



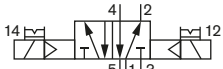

2.) Version with auxiliary control air

3.) The valve article number can no longer be ordered. Please order superior set.

6.4. Ordering chart replacement valves Type 0460

Note:

Detailed information about product version see “2.2. Solenoid valve Type 0460” on page 6.

Circuit function	Orifice	Q _{Nn} -value air	Pressure range	Switching times		Nominal power	Article no.
	[mm]	[l/min]	[bar]	Opening [ms]	Closing [ms]		
<p>Type: L, solenoid valve 5/3 way With manual mode In middle position all ports locked Normally closed</p> 	2.5	200	2...7	15	20	1	154184 
<p>Type: N, solenoid valve 5/3 way With manual mode In middle position ports 2 and 4 exhausted There is always one of the two outlet ports (2) or (4) pressurized when coil is activated.</p> 	2.5	200	2...7	15	20	1	154185 
<p>Type: Z, solenoid valve 5/2 way Impulse version with 2 coils and manual mode Normally open Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure.</p> 	2.5	200	2...7	15	20	1	154183 

6.5. Ordering chart replacement valves Type 6526 and Type 6527

Note:

Detailed information about product version see “2.3. Solenoid valve Types 6526 and Type 6527” on page 7.

Circuit function	Orifice	Q _{Nn} -value ^{1.)} air	Pressure range ^{2.)}	Switching times		Nominal power	Voltage/ Frequency	Article no.
				Opening	Closing			
	[mm]	[l/min]	[bar]	[ms]	[ms]	[W]	[V/Hz]	
Type: C, solenoid valve 3/2 way Servo-controlled, with manual mode Normally closed 	6	700	1.0...10 ^{1.)}	20	12	2	24 V DC	156842
			1.0...10 ^{1.)}	20	12	2	24 V DC	163028
			2.0...10	20	12	2	24 V DC	156318
			2.0...10	20	12	2	24 V DC	158944
			2.0...8.0	20	17	1	24 V DC	156840
			2.0...8.0	20	12	1	24 V DC	158947
Type: D, solenoid valve 3/2 way Servo-controlled, with manual mode Normally open 	6	700	1.0...10 ^{1.)}	20	12	2	24 V DC	163029
			2.0...10	12	20	2	24 V DC	156320
			2.0...10	20	12	2	24 V DC	158946
			2.0...8.0	17	20	1	24 V DC	156841
Type: H, solenoid valve 5/2 way Servo-controlled, pilot air and manual mode Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure. 	6	700	1.0...10 ^{1.)}	20	12	2	24 V DC	156828
			1.0...10 ^{1.)}	20	12	2	24 V DC	163030
			2.0...10	20	12	2	24 V DC	156337
			2.0...10	20	12	2	24 V DC	158942
			2.0...8.0	20	17	1	24 V DC	156827
			2.0...8.0	20	12	1	24 V DC	158943

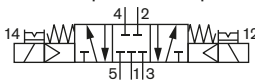
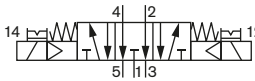
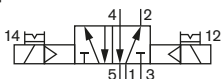
1.) Flow rate (Q_{Nn} value air): Measurement at +20 °C, 6 bar pressure at valve inlet, 1 bar pressure difference

2.) Pressure data: Overpressure to atmospheric pressure

6.6. Ordering chart replacement valves Type 0461

Note:

Detailed information about product version see “2.4. Solenoid valve Type 0461” on page 8.

Circuit function	Orifice [mm]	Q _{Nn} -value air [l/min]	Pressure range [bar]	Switching times		Nominal power [W]	Article no.
				Opening [ms]	Closing [ms]		
Type: L, solenoid valve 5/3 way With manual mode In middle position all ports locked 	6	500	2.5...7	15	50	1	156767
Type: N, solenoid valve 5/3 way With manual mode In middle position ports 2 and 4 exhausted 	6	500	2.5...7	15	50	1	156768
Type: Z, solenoid valve 5/2 way Impulse version with 2 coils and manual mode Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure. 	6	500	2.5...7	20	30	1	156766

6.7. Ordering chart accessories

Covering plates

Note:

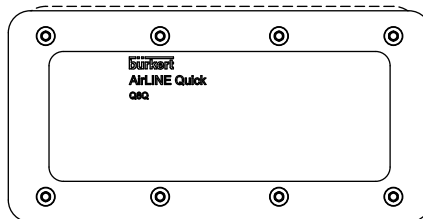
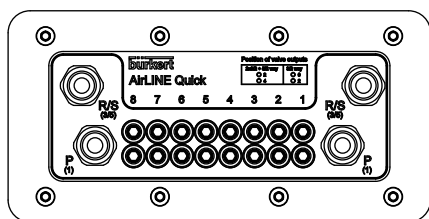
When all the valve connections in a basic valve unit module are not used, then these connections should be covered by the appropriate covering plate for full efficiency.

Covering plates	Article no.
Covering plate for solenoid valve Type 6524/6525	650373
Covering plate for solenoid valve Type 6524 2 × 3/2 way valve	661092
Covering plate for solenoid valve Type 0460	655069
Covering plate for solenoid valve Type 6526/6527	653765

Blind plates

Note:

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



Material	Amount of valve slots	Article no.
Stainless steel 1.4301	8	366244
	12	366245
	16	366246
	16 with intermediate supply	366247
	24	366248
	24 with intermediate supply	366249

6.8. Ordering chart spare parts

11 mm width per station

Description	Content	Article no.
Replacement valves	–	See “6.3. Ordering chart replacement valves Type 6524 and Type 6525” on page 15
Cover plates	–	See “6.7. Ordering chart accessories” on page 18
Set of valve seals		
Profile seal set solenoid valve Type 6524, 2x 3/2 way	12 seals	20016305
Profile seal set solenoid valve Type 6525, REV. 1	12 seals	20024334
Profile seal set solenoid valve Type 6524, 3/2 way, REV. 1	12 seals	20024333
Profile seal set solenoid valve Type 0460	12 seals	20024330

16 mm width per station

Description	Content	Article no.
Replacement valves	–	See “6.5. Ordering chart replacement valves Type 6526 and Type 6527” on page 17
Cover plates	–	See “6.7. Ordering chart accessories” on page 18
Profile seal set solenoid valve Type 6526 and Type 6527	12 seals	20016307

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