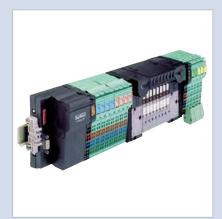
#### **DATA SHEET**

# Type 8644 PHOENIX INLINE





# AirLINE and AirLINE Quick - electrical/pneumatic Automation System

- Fully compatible with PHOENIX INLINE System
- Combination of Fieldbus, pilot valves and I/O modules
- · Higher flexibility in the control cabinet with AirLINE Quick
- 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 Phoenix: available until December 2023



# **Table of contents**

1.	Ger	neral Technical Data	3
	1.1.		4
	1.2.	11 mm-width/station: Pilot valve Type 0460	.5
2.	Circ	cuit functions	5
3.	Dim	nensions	6
	3.1.	11 mm-width/station: Solenoid valve Type 6524 and Type 6525	6
	3.2.	11 mm-width/station: Solenoid valve with Type 6524 2×3/2 way valve	
4.	Ord	lering information	7
	4.1.	Bürkert eShop – Easy ordering and quick delivery	7
	4.2.	Bürkert product filter	7
	4.3.	Ordering chart spare valves	8
		11 mm-width/station: Solenoid valve Type 6524 and Type 6525	
		11 mm-Width/station: Pilot valve Type 0460	
	4.4.	Ordering chart accessories	
		Covering plates	



# 1. General Technical Data

Pilot valves	Type 0460, Type 6524, Type 6525
Product properties	
Dimensions	Detailed information can be found in chapter "3. Dimensions" on page 6.
Width/station	11 mm
Module Types	2x and 8x <sup>1.)</sup>
Max. number of modules	Depending on application
Max. number of valves	64 (by use of Type 0460 and Type 6524: 2×3/2 way-valve: 32)
Fieldbus Type	PROFIBUS DP, INTERBUS, DeviceNet, CANopen, Ethernet, others on request
Electrical modules	PHOENIX INLINE
Circuit function	C (3/2 way) D (3/2 way) H (5/2 way) H (5/2 way) impulse L (5/3 way) in middle position all ports locked N (5/3 way) in middle position all ports exhausted
Electrical data	
Operating voltage	24 V DC
Voltage tolerance	+20%/-15% (by use of Type 0461: ±10%)
Residual ripple (at DC)	1 Vss
Nominal power per valve	2 W (1 W Nominal power acc. to 120 ms)
Rated current per valve	85 mA (52 mA Hold current after 120 ms) 41 mA (by use of Type 0461)
Performance data	
Flow (Q <sub>Nn</sub> value air)	300 l/min <sup>1,)</sup>
Pressure range	Vac. up to 10 bar
Approvals and Certificates	
Approvals	On request
Degree of protection	IP20, IP65 in closed field housing
Environment and installation	
Ambient temperature	0+55 °C (by use of Type 0460: 0+50 °C)
Storage temperature	-20+60 °C

<sup>1.)</sup> Integrated check valve and P-Shut off valve are optional)



## 1.1. 11 mm-width/station: Solenoid valves Type 6524 and Type 6525

#### Note:

- The solenoid valve Types 6524 and 6525 consist of a 6144 flipper pilot valve and a pneumatic seat valve. The principle allows switching of high pressures together with low power consumption and fast response times. The pilot valves are equipped with manual override as a standard.
- Detailed information about ordering information see "11 mm-width/station: Solenoid valve Type 6524 and Type 6525" on page 8.
- Detailed information about further valve options see "4.4. Ordering chart accessories" on page 9.



Circuit function	3/2 way valve	2×3/2 way valve				
Product properties						
Material						
Body	PA (Polyamide)					
Seal	FPM, NBR and PUR					
Manual override	Standard					
Pneumatic modules	Type MP11 with push-in con	nection Diameter 6 mm				
Performance data						
Pressure data	Overpressure with respect to	atmospheric pressure				
Flow (Q <sub>Nn</sub> value air)	Measured at +20 °C, 6 bar pressure at valve inlet and 1 bar pressure difference Pressure values [bar]: Overpressure with respect					
Nominal operating mode	Continuous operation (100 %	ED)				
Switching times	Measured according to ISO 12238					
Electrical data						
Operating voltage	24 V DC (10 % residual ripple allowed)					
Nominal power	0.8 W	2×0.8 W with reduction of power				
Medium data						
Operating medium	Lubricated and non lubricated dry compressed air; neutral gases (5µm filter recommended)					
Process/Port connection & communi						
Port connection size	Flange for MP11					
Electrical connection (on valve)	With 2 screws M2×20	With 2 screws M2×28				
Environment and installation						
Installation position	As required, preferably with actuator upright					
Assembly conditions	With 2 screws M2×20	With 2 screws M2 x 28				

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## 1.2. 11 mm-width/station: Pilot valve Type 0460

#### Note:

- 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 response times. All valves are equipped with manual override as a standard.
- Detailed information about ordering information see "11 mm-Width/station: Pilot valve Type 0460" on page 9.
- Detailed information about further valve options see "4.4. Ordering chart accessories" on page 9.



Product properties						
Material						
Body	Aluminium					
Seal	NBR					
Manual override	Standard					
Pneumatic modules	Type MP11					
Performance data						
Pressure data	Measured as overpressure to the atmospheric pressure					
Flow (Q <sub>Nn</sub> val <sub>ue</sub> air)	Measured at +20 °C, 6 bar pressure at valve inlet and 1 bar pressure difference					
Switching times	Measured according to ISO 12238					
Electrical data						
Operating voltage	24 V DC (10 % residual ripple allowed)					
Medium data						
Operating medium	Lubricated and non lubricated dry compressed air; Neutri gases (5µm filter recommended)					
Process/Port connection & communi	cation					
Port connection size	Flange					
Electrical connection (on valve)	Rectangular plug					
Supply connection 1 (P), 3 (R), 5 (S)	G 1/4					
Working port 2 (A), 4 (B)	Push-in connection Ø 6 mm					

## 2. Circuit functions

Circuit Function	Description
12 M T T W W 1(P)   3(R)	Type: C, solenoid valve 3/2 way Servo-controlled, with manual mode Normally closed
12 14 14 14 15	Type: C, solenoid valve 2 x 3/2 way Servo-controlled, with manual mode Normally closed
10 PM	Type: D, solenoid valve 3/2 way Servo-controlled, with manual mode Normally open
14 PC T T T T T T T T T T T T T T T T T T	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.
14 Y V T T T V T T T T T T T T T T T T T T	Type: L, solenoid valve 5/3 way With manual mode In middle position all ports locked Normally closed
14 PY W T 12 5   11   3	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.

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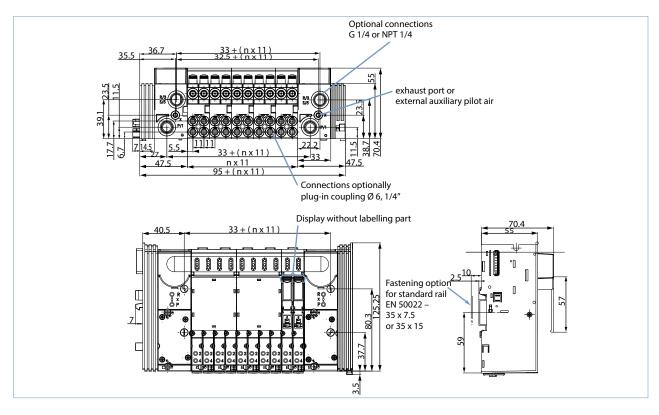
Circuit Function	Description
14 12 12 12 5 11 3	Type: Z, solenoid valve 5/2 way Impulse version with 2 coils and manual mode Normally open Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure.

## 3. Dimensions

## 3.1. 11 mm-width/station: Solenoid valve Type 6524 and Type 6525

#### Note:

- · Dimensions in mm
- n = number of valves

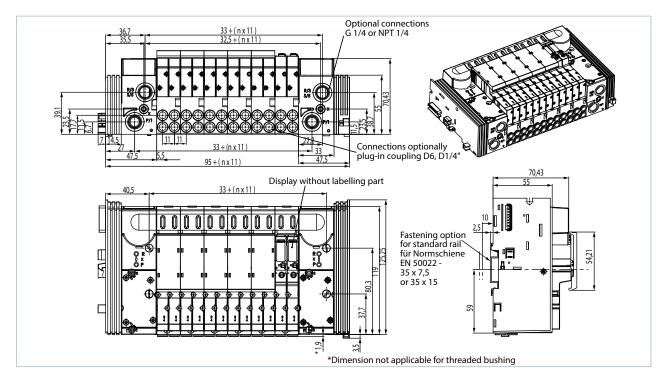




#### 3.2. 11 mm-width/station: Solenoid valve with Type 6524 2 × 3/2 way valve

#### Note:

- Dimensions in mm
- n = number of valves



## 4. Ordering information

### 4.1. Bürkert eShop - Easy ordering and quick delivery



## Bürkert eShop - Easy ordering and fast 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

#### 4.2. 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

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## 4.3. Ordering chart spare valves

## 11 mm-width/station: Solenoid valve Type 6524 and Type 6525

#### Note:

Detailed information about product version see "3.1. 11 mm-width/station: Solenoid valve Type 6524 and Type 6525" on page 6

Circuit function	Nominal diameter/ Orifice	Q <sub>Nn</sub> -value <sup>1.)</sup> air	Pressure range	Switching times		Voltage/ Frequency <sup>3.)</sup>	Article no.
	[mm]	[l/min]	[bar]	Opening [ms]	Closing [ms]	[V/Hz]	
C, solenoid valve	4	300	Vac. 7	15	20	24 V DC	186258 ≒
3/2 way Servo-controlled, with manual mode			110 <sup>2.)</sup>				186257 ≒
Normally closed  12 (A) 1(P) 3(R)			2.510		28		184043 ≒
C, solenoid valve 2 x 3/2 way Servo-controlled, with manual mode Normally closed	4	300	110 <sup>2.)</sup>	12	20	24 V DC	186259 🥦
12 14 1 1 1 5			2.510				186260 🥦
D, solenoid valve 3/2 way Servo-controlled, with manual mode Normally open	-	-	2.510	15	28	24 V DC	184400 ≒
H, solenoid valve	4	300	110 <sup>2.)</sup>	15	20	24 V DC	186271 ≒
Servo-controlled, pilot air and manual mode Pressure applied via port (1), therefore one of the two ports (2) or (4) is under pressure			2.510	20	28		179938 坪

- 1.) With integrated HotSwap and/or non-return function, the flow rate reduces
- 2.) Version with auxiliary control air
- 3.) 10 % residual ripple allowed
- 4.) Version with integrated power reduction



## 11 mm-Width/station: Pilot valve Type 0460

#### Note

Detailed information about product version see "1.2. 11 mm-width/station: Pilot valve Type 0460" on page 5.

Circuit function	Nominal diameter/	Nn · · · · · · · · · · · · · · · · · · ·		Voltage/ Frequency <sup>3.)</sup>	Article no.		
	[mm]	[l/min]	[bar]	Opening [ms]	Closing [ms]	[V/Hz]	
L, solenoid valve 5/3 way With manual mode In middle position all ports locked Normally closed  4   2   14   2   14   2   14   2   14   2   15   11   3   12   12   13   12   14   2   14   2   14   2   14   2   14   2   14   2   14   2   14   2   15   11   3   12   12   13   12   13   13	2.5	200	27	1	15	20	154184 ≒
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.  14   2   14   2   12   12   12   13   13   13   13	2.5	200	27	1	15	20	154184 ≒
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.	2.5	200	27	1	15	20	154185 ≒

## 4.4. 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 0460	655069 📜
Covering plate for solenoid valve Type 6524/6525	650373 ≒
Covering plate for solenoid valve Type 6524 2 × 3/2 way valve	661092 ≒

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