



3/2-way or 2 × 3/2-way solenoid valve for pneumatic applications

- Compact design
- Second connection for shut-off function
- Low power consumption
- Fast switching times

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

Can be combined with



Type 8640

Modular valve island for pneumatics



Type 8644

AirLINE SP electropneumatic automation system



Type MKRS

Redundancy valve block for safety-related shut-off function



Type 8647

AirLINE SP – electropneumatic automation system



Type 2505

10 mm socket for Bürkert small solenoid valves

Type description

Type 6524 consists of a pilot flipper solenoid valve Type 6144 and a pneumatic seat valve. The flipper action system allows the switching of high pressures combined with low power consumption and short switching times. All the valves are equipped with manual override as standard. The 2 × 3/2-way valve variant is a combination of two pilot flipper solenoid valves Type 6144 and one pneumatic seat valve. The valve is also available with a second connection (press-fit cable), which makes a safe shut-off function possible.

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1. General technical data

Product properties		3/2-way valve	2 × 3/2-way valve
Dimensions		Further information can be found in chapter “5. Dimensions” on page 6.	
Material			
Seal		FKM, NBR, PUR	
Body		PPS, polyamide	
Weight		20 g	40 g
Manual override		Standard	
Orifice		DN 4.0	
Pneumatic module		With plug-in coupling, Ø 6 mm, Ø ¼"	
Circuit function		C and D Further information can be found in chapter “2. Circuit functions” on page 4.	
Performance data			
Duty cycle		100 % continuous operation	
Switching frequency		Approx. 1000 c.p.m.	
Switching time ^{1.)}		Opening: < 10 ms Closing: < 10 ms	
Electrical data			
Operating voltage		24 V DC ^{2.)}	
Nominal power		0.8 W	2 × 0.8 W
Voltage tolerance		± 10 %	
Medium data			
Operating medium		Lubricated or oil-free compressed dry air, neutral gases (5 µm filter recommended)	
Medium temperature		- 10 °C...+ 50 °C	
Product connections			
Electrical connection		Rectangular plug with 2 pins, raster 5.08 mm	Rectangular plug with 3, pins raster 2.54 mm
Approvals and conformities			
Degree of protection		IP40 with rectangular cable plug	
Protection class		III according to VDE 0580	
Explosion protection		Further information can be found in chapter “3.4. Explosion protection” on page 5.	
North America (USA/Canada)		Further information can be found in chapter “3.5. North America (USA/Canada)” on page 5.	
Environment and installation			
Installation position		As required, preferably with actuator upright	
Mounting		With 2 screws M2 × 20	With 2 screws M2 × 28
Ambient temperature		- 10 °C...+ 55 °C	

1.) Measurement according to ISO 12238

2.) 10 % residual ripple permissible

2. Circuit functions

Symbol	Description
	Circuit function C (CF C) 3/2-way solenoid valve Servo-controlled, with manual override Normally closed
	Circuit function C (CF C) 2 × 3/2-way solenoid valve Servo-controlled, with manual override Normally closed
	Circuit function C (CF C) 3/2-way solenoid valve Servo-controlled Normally closed
	Circuit function C (CF C) 2 × 3/2-way solenoid valve Servo-controlled Normally closed
	Circuit function D (CF D) 3/2-way solenoid valve Servo-controlled, with manual override Normally open
	Circuit function D (CF D) 3/2-way solenoid valve Servo-controlled Normally open

3. Approvals and conformities

3.1. 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.

3.2. Conformity

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

3.3. 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.

3.4. Explosion protection

Approval	Description
 	Optional: Explosion protection EU type examination certificate: PTB 07 ATEX 2048 X / IECEx PTB 07.0063 X As a category 2 device suitable for zone 1 and zone 2 (optional). ATEX: PTB 07 ATEX 2048 X II 2G Ex ia IIC T6...T4 Gb IECEX: IECEx PTB 07.0063 X Ex ia IIC T6...T4 Gb

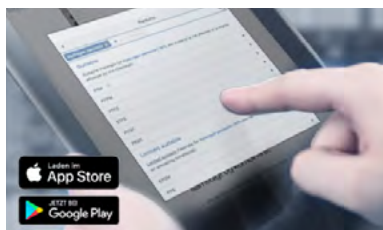
3.5. North America (USA/Canada)

Approval	Description
	Optional (valid for pilot control valve): UL Recognized for the USA and Canada ¹⁾ The pilot control valves are UL Recognized for the USA and Canada according to: • UL 429 (electrically operated valves) • CAN/CSA-C22.2 No. 139

1.) This device is intended to be used with a NEC Class 2 power source or NEC Class 2 transformer in accordance with UL1310 or UL1585.

4. Materials

4.1. Bürkert resistApp



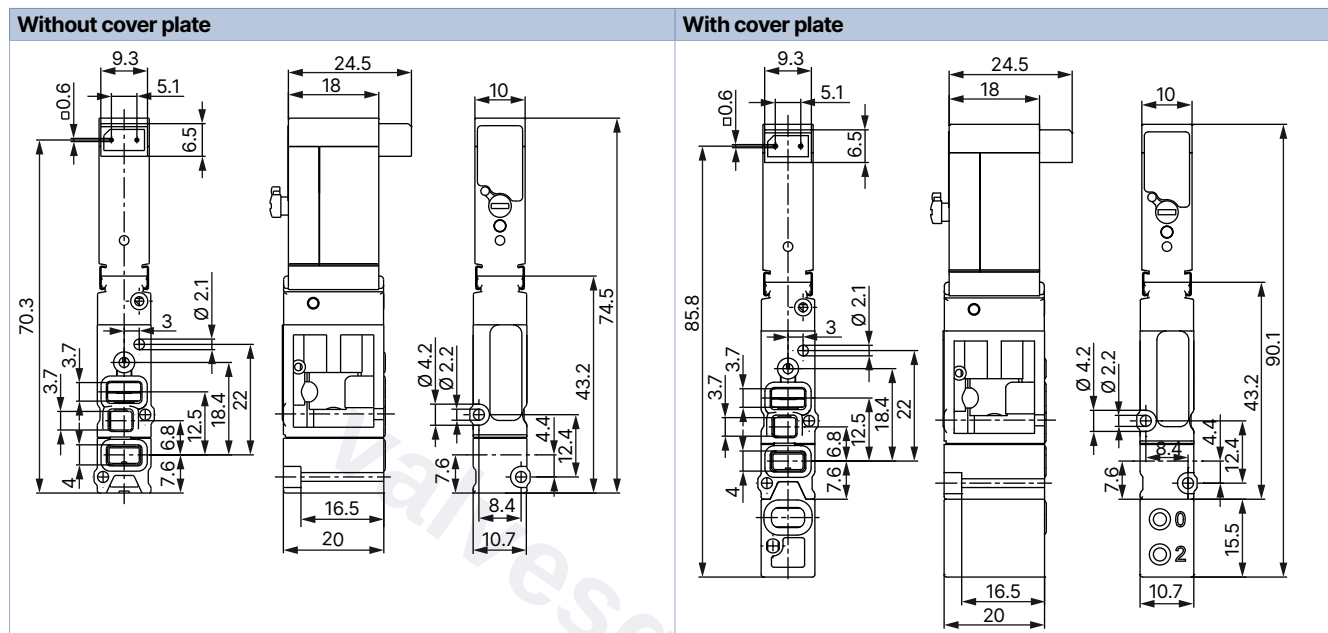
Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

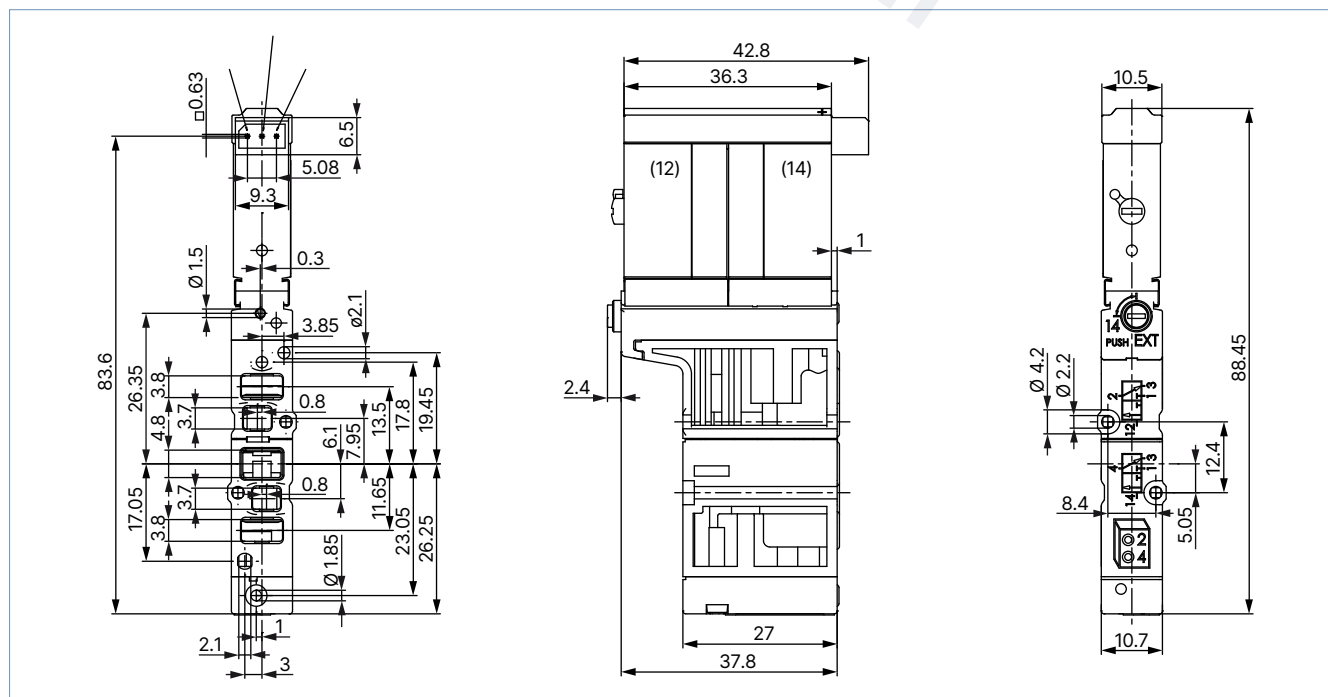
[Start chemical resistance check](#)

5.1. Standard variant 3/2-way

- Dimensions in mm
- The pneumatic flange pattern has been standardised for Type 6524, 3/2-way.
- There is a difference in the flange pattern variants (REV. 1/REV. 2). The external dimensions remain identical.



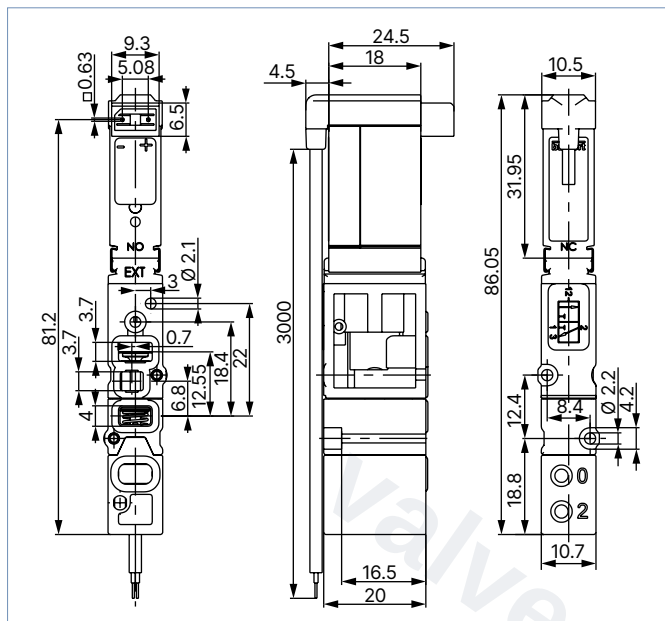
Dimensions in mm



5.3. Second connection for shut-off function 3/2-way

Note:

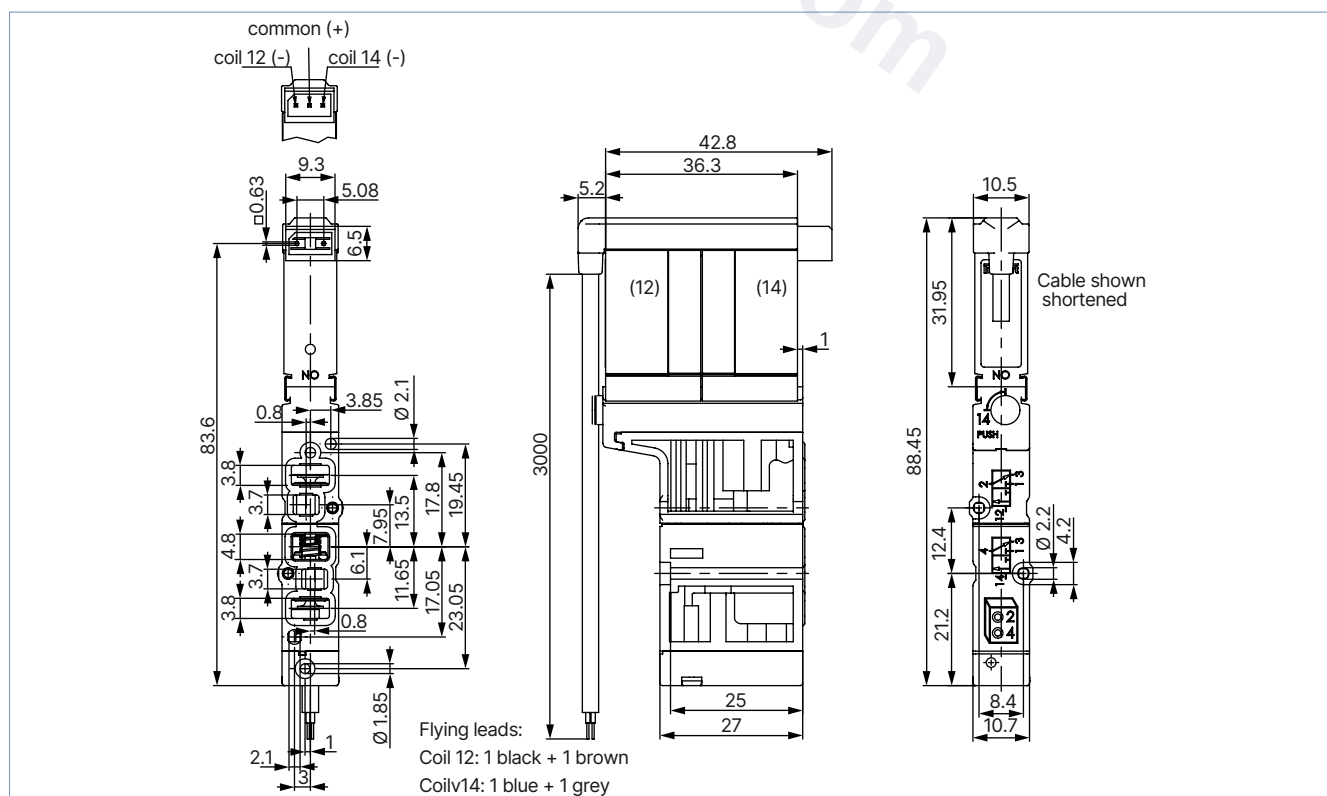
- Dimensions in mm
- The pneumatic flange pattern has been standardised for Type 6524, 3/2-way.
- There is a difference in the flange pattern variants (REV. 1/REV. 2). The external dimensions remain identical.



5.4. Second connection for shut-off function 2 × 3/2-way

Note:

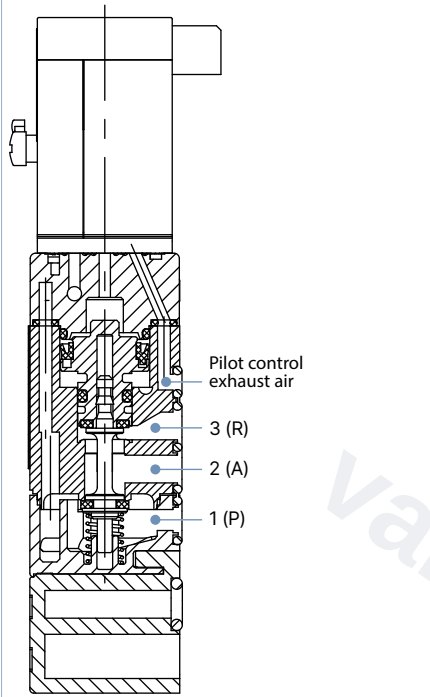
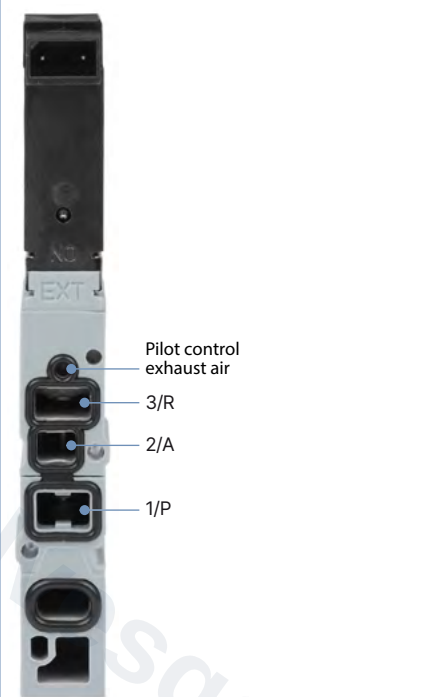
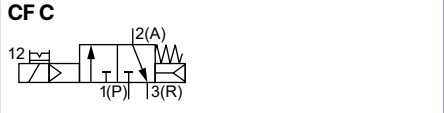
Dimensions in mm



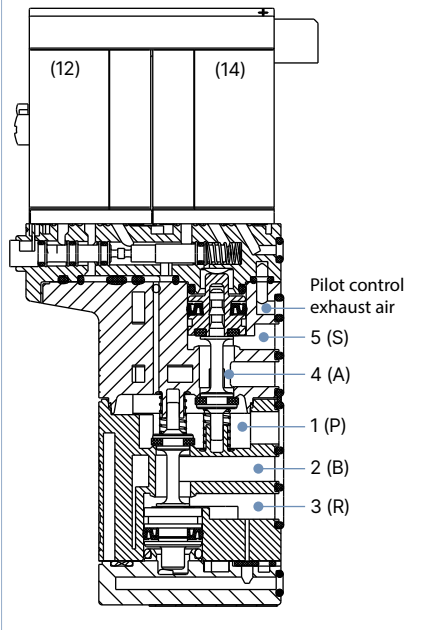
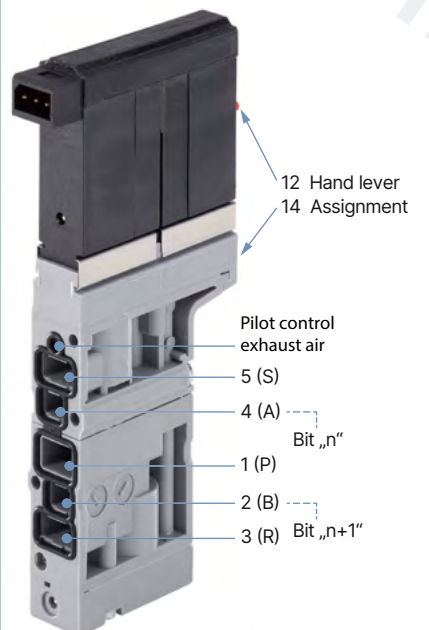
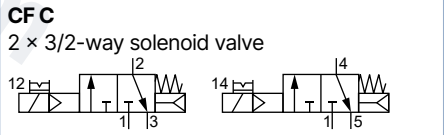
6. Product design and assembly

6.1. Product assembly

Standard variant 3/2-way

Sectional drawing Pilot control Type 6144	Connection overview	Circuit function
 Pilot control exhaust air 3 (R) 2 (A) 1 (P)	 Pilot control exhaust air 3/R 2/A 1/P	CF C  CF D 

Standard variant 2 × 3/2-way

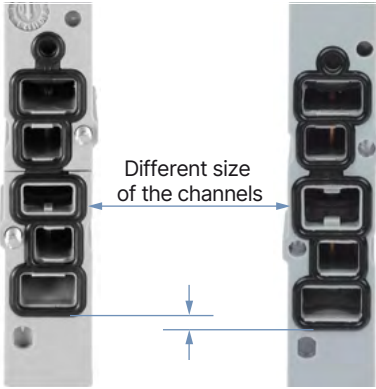
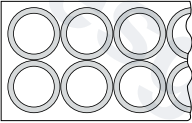
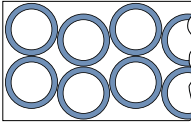
Sectional drawing	Connection overview	Circuit function
 (12) (14) Pilot control exhaust air 5 (S) 4 (A) 1 (P) 2 (B) 3 (R)	 12 Hand lever 14 Assignment Pilot control exhaust air 5 (S) 4 (A) Bit „n“ 1 (P) 2 (B) Bit „n+1“ 3 (R)	CF C 2 × 3/2-way solenoid valve 

6.2. Distinguishing features valve revisions

Note:

- The pneumatic flange pattern has been standardised for Type 6524, 3/2-way.
- There is a difference in the flange pattern variants (REV. 1/REV. 2). The external dimensions remain identical.
- Before the pneumatic installation, the compatibility with the present valve island must be checked (see operating instructions of the corresponding valve island).

The valve revisions can be distinguished by the following features:

Valves Type 6524	Valve REV. 1	Valve REV. 2
Article no.	Distinguishing by Article no. see "7. Ordering information" on page 9	
Visual distinction	 REV. 1 Single valves Type 6524 and Type 6525 with flange interface „FM14“ REV. 2 Single valves Type 6524 and Type 6525 with flange interface „FM20“ Different size of the channels	
Information label	There is a corresponding information label on the relevant valve which indicates that the valve has been overhauled. This information label must be removed before assembly.	
Compatibility with the pneumatic modules of the island by means of the working ports	 black parallel	 blue wavy

7. Ordering information

7.1. 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](#)

7.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

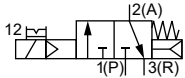
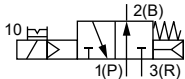
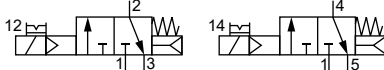
You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

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7.3. Ordering chart standard variant

Hinweis:

- The pneumatic flange pattern has been standardised for Type 6524, 3/2-way.
- There is a difference in the flange pattern variants (REV. 1/REV. 2). The external dimensions remain identical.
- Before the pneumatic installation, the compatibility with the present valve island must be checked (see operating instructions of the corresponding valve island).

Circuit function	Orifice	Q _{Nm} value air	Voltage/ Frequency	Pressure range	Integrated power savings electronics	Article no.	
	[mm]	[l/min] ¹⁾	[V/Hz]	[bar] ²⁾		Valves REV. 1	Valves REV. 2
3/2-way							
CFC 3/2-way solenoid valve Servo-controlled, with manual override Normally closed 	4	300	24 V DC ³⁾	Vac....10 ⁴⁾	–	20029915 ☞ (186258 ☞) ⁶⁾	20029923 ☞ (20013119 ☞) ⁶⁾
			24 V DC ³⁾	1...10	–	20029913 ☞ (186257 ☞) ⁶⁾	20029921 ☞ (20013114 ☞) ⁶⁾
			24 V DC ³⁾	2.5...10	–	20029910 ☞ (184043 ☞) ⁶⁾	20029918 ☞ (365606 ☞) ⁶⁾
CFD 3/2-way solenoid valve Servo-controlled, with manual override Normally open 	4	300	24 V DC ³⁾	2.5...10	–	20029911 ☞ (184400 ☞) ⁶⁾	20029919 ☞ (365609 ☞) ⁶⁾
2 × 3/2-way							
CF C 2 × 3/2-way solenoid valve Servo-controlled, with manual override Normally closed 	4	300	24 V DC ³⁾	1...10 ⁴⁾	Yes ⁵⁾	186259 ☞	
			24 V DC ³⁾	2.5...10	Yes ⁵⁾	186260 ☞	
			24 V DC ³⁾	2.5...10	No	204710 ☞	

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

2.) Pressure data: overpressure to atmospheric pressure

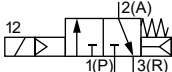
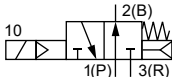
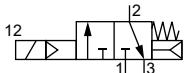
3.) 10 % residual ripple permissible

4.) Variant with auxiliary pilot air

5.) Applicable on valve island Type 8640, AirLINE system Type 8644 or valve blocks

6.) The Article no. can no longer be ordered. Order the superior set instead.

7.4. Ordering chart second connection shut-off function

Circuit function	Orifice	Q _{Nm} value air	Voltage/ Frequency	Pressure range	Integrated power savings electronics	Article no.	
	[mm]	[l/min] ¹⁾	[V/Hz]	[bar] ²⁾		Valves REV. 1	Valves REV. 2
3/2-way, without manual override							
CF C 3/2-way solenoid valve Servo-controlled Normally closed 	4	300	24 V DC ³⁾	Vac...10 ⁴⁾	–	o. r.	o. r.
			24 V DC ³⁾	1...10	–	o. r.	o. r.
			24 V DC ³⁾	2.5...10	–	20029916 ☹ (285545 ☹) ⁶⁾	20029924 ☹ (20013136 ☹) ⁶⁾
CF D 3/2-way solenoid valve Servo-controlled Normally open 	4	300	24 V DC ³⁾	2.5...10	–	o. r.	o. r.
2 × 3/2-way, without manual override							
CF C 2 × 3/2-way solenoid valve Servo-controlled Normally closed 	4	300	24 V DC ³⁾	1...10 ⁴⁾	Yes ⁵⁾	o. r.	
			24 V DC ³⁾	2.5...10	Yes ⁵⁾	285547 ☹	
			24 V DC ³⁾	2.5...10	No	300818 ☹	

o. r. = on request

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

2.) Pressure data: overpressure to atmospheric pressure

3.) 10 % residual ripple permissible

4.) Variant with auxiliary pilot air

5.) Applicable on valve island Type 8640, AirLINE system Type 8644 or valve blocks

6.) The Article no. can no longer be ordered. Order the superior set instead.

7.5. Ordering chart accessories

Description	Article no.
Cable plug 10 mm with cable, 2-pin, rectangular plug, straight, cable length: 3 m (Type 2505)	133486 ☹
Cable plug 10 mm with cable, 2-pin, rectangular plug, straight, cable length: 0.3 m (Type 2505)	644068 ☹
Cable plug 10 mm, 2-pin, rectangular plug, straight (Type 2505)	644067 ☹
Cover plate for solenoid valves Type 6524/6525 (REV. 1) for 5/2-way valve position	650373 ☹
Cover plate for solenoid valves Type 6524/6525 (REV. 2) for 2 × 3/2-way valve position	661092 ☹
Spare valve seals FM20 for Type 6524, 2 × 3/2-way solenoid valve, REV. 1/REV. 2, 12 seals	20016305 ☹
Spare valve seals FM15 for Type 6524, 3/2-way solenoid valve, REV. 1, 12 seals	20024333 ☹
Spare valve seals FM24 for Type 6524, 3/2-way solenoid valve, REV. 2, 12 seals	20024336 ☹