**DATA SHEET**

# Type 6510

## 3/2-way solenoid valve for pneumatic applications

- Compact design
- Fast switching times
- Low power consumption

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

### Can be combined with

**Type 2031**
2/2-way diaphragm valve with pneumatic plastic actuator (Type CLASSIC)

### Type description

Type 6510 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.

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**Visit product website**

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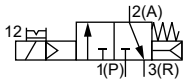
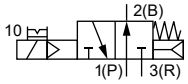
## 1. General technical data

| | |
|---|---|
| **Product properties** | |
| Dimensions | Further information can be found in chapter "5. Dimensions" on page 5. |
| **Material** | |
| Seal | FKM, NBR |
| Body | PPS, Polyamide |
| Manual override | Standard |
| Orifice | DN 2.5 mm |
| Pneumatic module | MP01 |
| Circuit function | C and D<br>Further information can be found in chapter "2. Circuit functions" on page 3. |
| **Performance data** | |
| Duty cycle | 100 % continuous operation |
| Switching time [1.)] | Opening: < 15 ms<br>Closing: < 10 ms |
| **Electrical data** | |
| Operating voltages | 24 V DC |
| Nominal power | 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 | 0 °C...+ 50 °C |
| **Product connections** | |
| Electrical connection | Rectangular plug, 2-pin, with raster 5.08 mm |
| Port connection | Flange for MP01 |
| **Approvals and conformities** | |
| Degree of protection | IP40 |
| Protection class | III according to VDE 0580 |
| Explosion protection | Further information can be found in chapter "3.4. Explosion protection" on page 4. |
| North America (USA/Canada) | Further information can be found in chapter "3.5. North America (USA/Canada)" on page 4. |
| **Environment and installation** | |
| Installation position | As required, preferably with actuator upright |
| Ambient temperature | 0 °C...+ 55 °C |

1.) Measurement according to ISO 12238

## 2. Circuit functions

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

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# 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**<br>EU type examination certificate: PTB 07 ATEX 2048 X / IECEx PTB 07.0063 X<br><br>As a category 2 device suitable for zone 1 and zone 2 (optional).<br><br>**ATEX:**<br>PTB 07 ATEX 2048 X<br>II 2G Ex ia IIC T6...T4 Gb<br><br>**IECEx:**<br>IECEx PTB 07.0063 X<br>Ex ia IIC T6...T4 Gb |

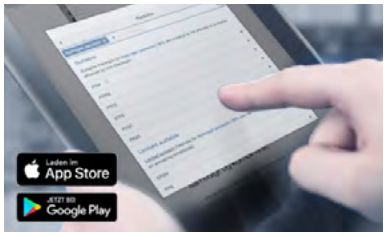
## 3.5. North America (USA/Canada)

| Approval | Description |
|---|---|
| | **Optional (valid for pilot control valve): UL Recognized for the USA and Canada** [1.)]<br>The pilot control valves are UL Recognized for the USA and Canada according to:<br>• UL 429 (electrically operated valves)<br>• 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

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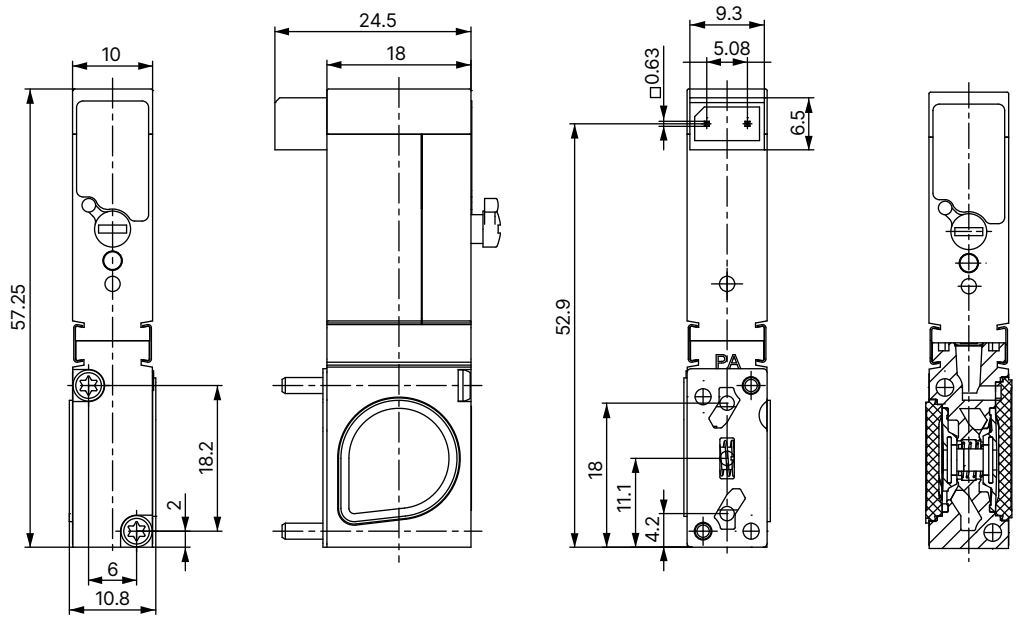
# 5. Dimensions

## 5.1. 3/2-way solenoid valve

**Note:**
Dimensions in mm




# 6. Ordering information

## 6.1. 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

## 6.2. 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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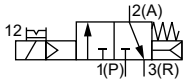
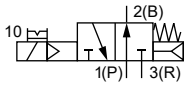
## 6.3. Ordering chart 3/2-way solenoid valve

| Circuit function | Orifice | $Q_{Nn}$ value air [1.] | Voltage/ Frequency | Pressure range [2.] | Manual override | Article no. plug contact at rear [3.] | Article no. plug contact in front [4.] |
|---|---|---|---|---|---|---|---|
| | [mm] | [l/min] | [V/Hz] | [bar] | | | |
| **CF C**<br>3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally closed<br>  | 2.5 | 130 | 24 V DC | 2.5...10 | with | 184041 | 184313 |
| | | | | | none | 184307 | 187605 |
| **CF D**<br>3/2-way solenoid valve<br>Servo-controlled, with manual override<br>Normally open<br>  | 2.5 | 130 | 24 V DC | 2.5...10 | with | – | 184314 |
| | | | | | none | 184309 | – |

– = not available
1.) Measurement at + 20 °C, 6 bar at valve inlet, 1 bar differential pressure
2.) Pressure data: overpressure to atmospheric pressure
3.) At rear: plug connection on flange side
4.) In front: plug connection offset at 180° to flange

## 6.4. Ordering chart accessories

| Description | Article no. |
|---|---|
| Sealing plug for plug-in coupling Ø 4 mm | 781664 |
| Sealing plug G ⅛ | 631019 |
| 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 |

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