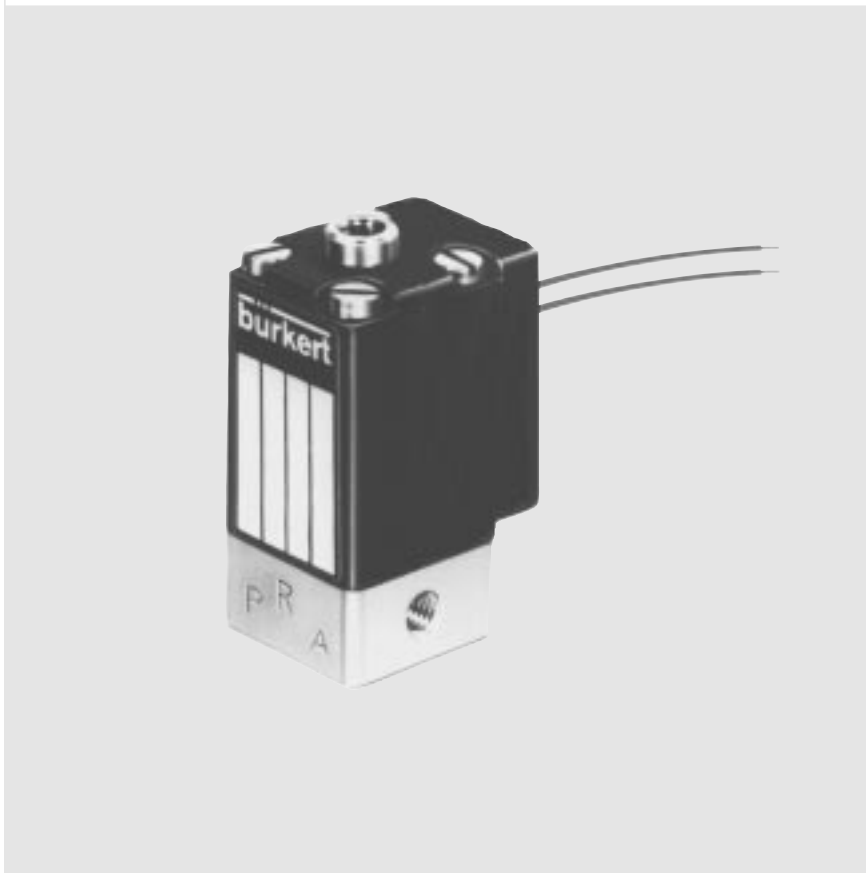


3/2-Way, direct acting, G 1/8



### Advantages/Benefits

- ▶ Compact design
- ▶ Specific testing and cleaning available
- ▶ Short response times
- ▶ Electrical connection: DIN-plug or leads
- ▶ Manual override
- ▶ When de-energized, outlet port exhausted or pressurized, mixer valve
- ▶ Body materials: brass (stainless steel on request)

### Design/Function

Type 300 is a direct-acting plunger-type solenoid valve available in a variety of different circuit functions, to suit the respective application.

When energized, the solenoid armature is drawn against a spring. The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

The valve is available in brass (stainless steel on request). Electrical connections are DIN-plug or leads. Specific testing and cleaning and low power versions are available on request.

### Applications

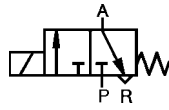
- Neutral gases and liquids
- Pneumatic control equipment
- Vacuum
- Shut-off, dosing, filling and ventilating
- Gas control, welding technology
- Small-scale instruments, laboratory and measuring technology

**burkert**  
Easy Fluid Control Systems

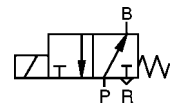
## Technical Data

### Circuit Function

**C** 3/2-way valve, when de-energized, outlet A exhausted (normally closed)



**D** 3/2-way valve, when de-energized, outlet B pressurized (normally open)



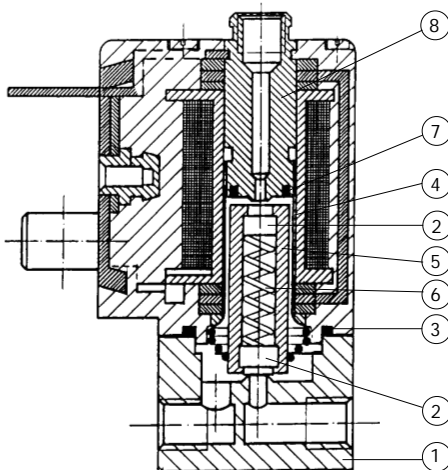
### Operating Data (Valve)

|                          |  |
|--------------------------|--|
| Pressure range max.      | 0-10 bar (see specifications)  |
| Port connection          | Threaded port G 1/8",<br>Subbase on request.   |
| Orifice                  | DN 1.2 - 1.6 mm<br>>DN 1.6 mm on request.  |
| Fluid                    | Neutral gases and liquids,<br>e.g. compressed air, town<br>gas, natural gas, water,<br>hydraulic oil, petrol.<br>Stainless steel version:<br>Slightly aggressive media.<br>Suitable for techn. vacuum. |
| Medium temperature       | -10 to +100 °C   |
| Max. ambient temperature | +55 °C   |
| Max. viscosity           | 21 mm <sup>2</sup> /s  |
| Response times           |  |
| opening                  | 12 ms  |
| closing                  | 8 ms   |
| Installation             | as required, but preferably<br>with solenoid system upright  |

### Operating Data (Actuator)

| Operating voltages                  | AC 24, 110, 230 V/50 Hz,<br>DC 24 V/=   |                   |         |    |      |          |                   |
|-------------------------------------|---|-------------------|---------|----|------|----------|-------------------|
| Voltage tolerance                   | ±10 %   |                   |         |    |      |          |                   |
| Power consumption                   | <table border="1"> <thead> <tr> <th>AC inrush</th> <th>AC hold</th> <th>DC</th> </tr> </thead> <tbody> <tr> <td>9 VA</td> <td>6 VA/4 W</td> <td>4 W<sup>1)</sup></td> </tr> </tbody> </table> | AC inrush         | AC hold | DC | 9 VA | 6 VA/4 W | 4 W <sup>1)</sup> |
| AC inrush                           | AC hold   | DC                |         |    |      |          |                   |
| 9 VA                                | 6 VA/4 W  | 4 W <sup>1)</sup> |         |    |      |          |                   |
|                                     | <sup>1)</sup> Power consumption DC 2 W on request   |                   |         |    |      |          |                   |
| Duty cycle                          | 100% continuously rated<br>60% for manifold mounting<br>(30 min) or use 2W-version<br>(on request)  |                   |         |    |      |          |                   |
| Cycling rate                        | up to 1 000 c.p.m.  |                   |         |    |      |          |                   |
| Protection class with<br>cable plug | IP 65   |                   |         |    |      |          |                   |
| Electr. connection                  | Delivery standard:<br>Cable plug DIN 43 650 B,<br>0-250 V.<br>Flying leads  |                   |         |    |      |          |                   |

## Materials



|                        |                                       |
|------------------------|---------------------------------------|
| 1 Valve body:          | Brass<br>(Stainless steel on request) |
| 2 Plunger-seal:        | FKM                                   |
| 3 O-rings:             | FKM                                   |
| 4 Armature guide tube: | S.Steel 1.4303                        |
| 5 Plunger:             | S.Steel 1.4105                        |
| 6 Spring:              | S.Steel 1.4310                        |
| 7 Shading ring:        | Cu (brass version)                    |
| 8 Stopper:             | 1.4105                                |

## Specifications - Ordering Chart (Other Versions on Request)



### Valve body brass, manual override standard, cable plug DIN 43 650 form B

| Port connection | Orifice [mm] | Kv-Value (water) [m³/h] | Qn <sub>n</sub> (air) [l/min] | Pressure Range |            | Seal material | Weight [kg] | I T E M - No.              |           |           |
|-----------------|--------------|-------------------------|-------------------------------|----------------|------------|---------------|-------------|----------------------------|-----------|-----------|
|                 |              |                         |                               | (AC) [bar]     | (DC) [bar] |               |             | Voltage / Frequency [V/Hz] |           |           |
|                 |              |                         |                               |                |            |               |             | 24/DC                      | 110/50    | 230/50    |
| G 1/8           | 1.2          | 0.045                   | 48                            | 0-10           | 0-10       | FKM           | 0.12        | 136 496 C                  | 136 497 D | 136 498 N |
| G 1/8           | 1.6          | 0.060                   | 65                            | 0- 6           | 0- 6       | FKM           | 0.12        | 136 499 P                  | 136 500 U | 136 501 R |

### Valve body brass, without manual override, cable plug DIN 43 650 form B

|       |     |       |    |      |      |     |      |           |           |           |
|-------|-----|-------|----|------|------|-----|------|-----------|-----------|-----------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | 136 508 Y | 136 509 Z | 136 510 M |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | 136 511 A | 136 512 B | 136 513 C |

### Valve body brass, manual override standard, coil with two flying leads

|       |     |       |    |      |      |     |      |           |      |      |
|-------|-----|-------|----|------|------|-----|------|-----------|------|------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | 136 502 J | ---- | ---- |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | 136 505 M | ---- | ---- |

### Valve body brass, without manual override, coil with two flying leads

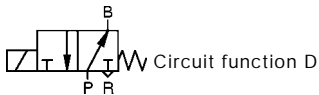
|       |     |       |    |      |      |     |      |           |      |      |
|-------|-----|-------|----|------|------|-----|------|-----------|------|------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | 136 514 D | ---- | ---- |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | 136 517 G | ---- | ---- |

### Valve body brass, manual override standard, coil with three flying leads

|       |     |       |    |      |      |     |      |     |           |           |
|-------|-----|-------|----|------|------|-----|------|-----|-----------|-----------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | --- | 136 503 K | 136 504 L |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | --- | 136 506 N | 146 507 P |

### Valve body brass, without manual override, coil with three flying leads

|       |     |       |    |      |      |     |      |     |           |           |
|-------|-----|-------|----|------|------|-----|------|-----|-----------|-----------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | --- | 136 515 E | 136 516 F |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | --- | 136 518 R | 136 519 J |



### Valve body brass, without manual override, cable plug DIN 43 650 form B

| Port connection | Orifice [mm] | Kv-Value (water) [m³/h] | Qn <sub>n</sub> (air) [l/min] | Pressure Range |            | Seal material | Weight [kg] | I T E M - No.              |           |           |
|-----------------|--------------|-------------------------|-------------------------------|----------------|------------|---------------|-------------|----------------------------|-----------|-----------|
|                 |              |                         |                               | (AC) [bar]     | (DC) [bar] |               |             | Voltage / Frequency [V/Hz] |           |           |
|                 |              |                         |                               |                |            |               |             | 24/DC                      | 110/50    | 230/50    |
| G 1/8           | 1.2          | 0.045                   | 48                            | 0-10           | 0-10       | FKM           | 0.12        | 136 484 G                  | 136 485 H | 136 486 A |
| G 1/8           | 1.6          | 0.060                   | 65                            | 0- 6           | 0- 6       | FKM           | 0.12        | 136 487 B                  | 136 488 L | 136 489 M |

### Valve body brass, without manual override, coil with two flying leads

|       |     |       |    |      |      |     |      |           |      |      |
|-------|-----|-------|----|------|------|-----|------|-----------|------|------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | 136 490 J | ---- | ---- |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | 136 493 H | ---- | ---- |

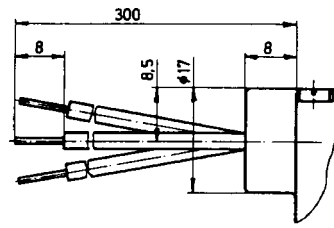
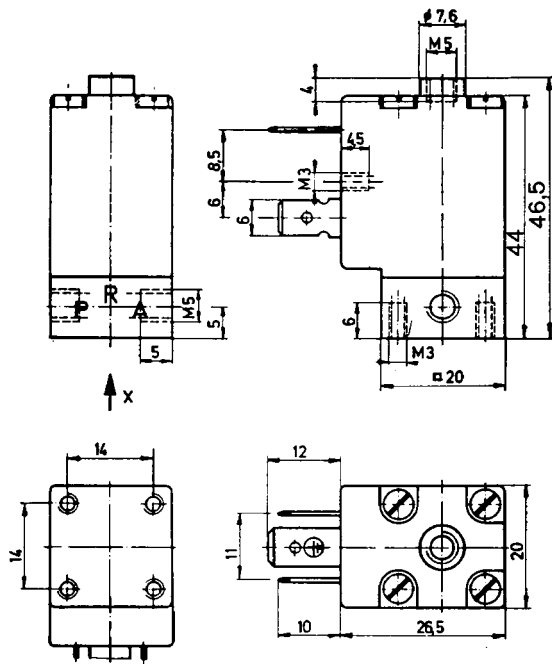
### Valve body brass, without manual override, coil with three flying leads

|       |     |       |    |      |      |     |      |     |           |           |
|-------|-----|-------|----|------|------|-----|------|-----|-----------|-----------|
| G 1/8 | 1.2 | 0.045 | 48 | 0-10 | 0-10 | FKM | 0.12 | --- | 136 491 F | 136 492 G |
| G 1/8 | 1.6 | 0.060 | 65 | 0- 6 | 0- 6 | FKM | 0.12 | --- | 136 494 A | 136 495 B |

## Options

- 2W-version
- Stainless steel body
- Specific testing and cleaning
- Manual override

## Dimensions Solenoid Valve [mm]



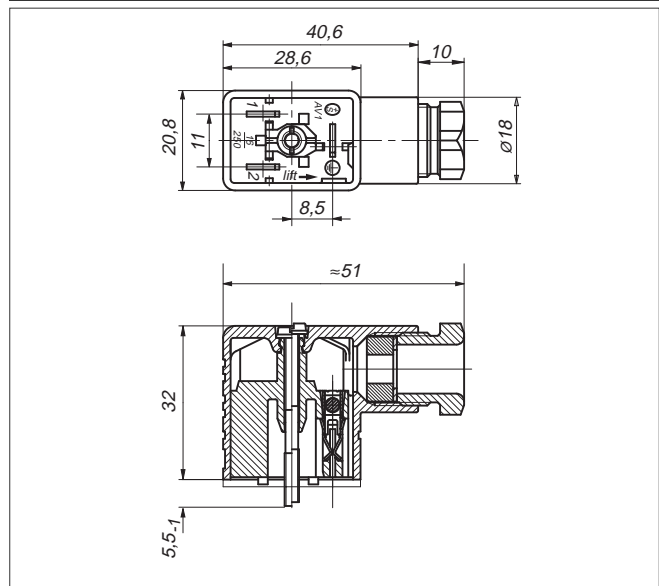
Please note for G 1/8 port connection:

Body length 25 mm, overall height 48 mm, M5 connection is retained at R port

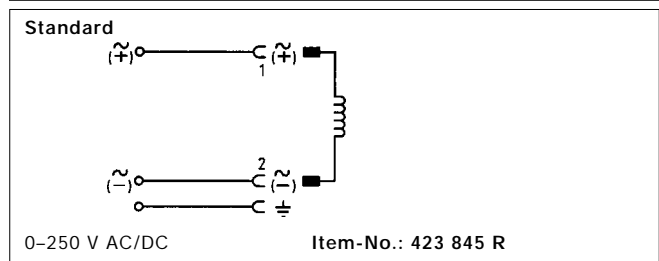
## Technical Data Cable Plug

|                                       |  |
|---------------------------------------|--|
| Body material                         | PA (polyamide)                           |
| Contact material                      | brass, tinned                            |
| Cable outlet                          | vertically to the plug bottom            |
| Isolation between cable plug and coil | gasket (NBR)                             |
| Temperature range                     | -30°C ... +90°C                          |
| Cable diameter                        | 4.5 ... 7 mm                             |
| Electr. connection                    | terminal screws max. 1,5 mm <sup>2</sup> |
| Poles                                 | 2pole + protective earth                 |
| Nominal voltage                       | 0-250 V (Standard)                       |
| Isolation group                       | 3  |
| Rating                                | IP 65                                    |
| Max. continuous current               | 16 A without wiring                      |
| Contact resistance                    | ≤ 4 mΩ                                   |
| Options                               | LED display<br>Rectifier<br>Varistor     |

## Dimensions Cable Plug [mm]



## Wiring Diagrams/Connection Specifications



DTS 1000010922 EN Version: B Status: RL (released) | freigegeben | valide | printed: 09.05.2016