



Direct-acting 2 way standard solenoid control valve

- Excellent range
- Very good response
- Compact valve design
- Orifice sizes 2...9.5 mm
- Optional: Explosion-protected coil



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

Can be combined with

	Type 8605 ▶ PWM Control Electronics for Solenoid Control Valves
	Type 2518 ▶ Cable Plug DIN EN 175301-803 - Form A
	Type 8611 ▶ eCONTROL - Universal controller

Type description

The direct-acting solenoid control valve Type 2875 is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight (integrated shut-off function), up to the DN specific nominal pressure. The plunger of the valve is assembled frictionless, which leads to an extraordinary adjustment characteristic. This valve is particularly suitable for demanding control tasks (high control range, dry gases, etc.).

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1. General Technical Data

Product properties	
Dimensions	Detailed information can be found in chapter “5. Dimensions” on page 5.
Material	
Body	Brass, stainless steel
Seal	FKM, EPDM
Performance data	
Typical values of positioning behaviour ^{1.)}	
Hysteresis	< 5 %
Reproducibility	< 0.5 % of end value ^{2.)}
Response sensitivity	< 0.25 % of end value ^{2.)}
Setting range	1:200
Actuating time (10...90 %)	< 25 ms
Pressure range ^{3.)}	0...25 bar
Nominal operating mode	100 % continuous operation
Electrical data	
Operating voltage	24 V DC (12 V on request)
Power consumption	16 W
Maximum coil current ^{4.)}	750 mA (at 16 W and 24 V coil)
PWM frequency ^{5.)}	900 Hz
Medium data	
Operating medium	Neutral gases, liquids on request
Medium temperature	-10 °C...+90 °C (with FKM) -30 °C...+90 °C (with EPDM)
Viscosity	Maximum 21 mm ² /s (21 cSt)
Process/Port connection & communication	
Port connection size	Sub-base, G ¾, G ½, NPT ¾, NPT ½
Electrical connection	Cable plug Type 2518 acc. to DIN EN 175301-803 form A Detailed information can be found in chapter “Cable plug Type 2518, Form A according to DIN EN 175301-803” on page 13.
Approvals and certificates	
Degree of protection	IP65
Environment and installation	
Installation position	Any, preferably actuator face up
Ambient temperature	Maximum +55 °C

1.) Characteristic data of control behaviour depends on process conditions

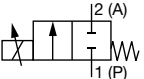
2.) By flow measurement

3.) Pressure data: Overpressure with respect to atmospheric pressure, depending on nominal diameter, tightness seal or nominal pressure

4.) Maximum value: value depends on operating pressure

5.) PWM: pulse width modulation

2. Circuit functions

Circuit functions	Description
	Type: A, proportional control valve 2/2 way Direct-acting Normally closed

3. Approvals

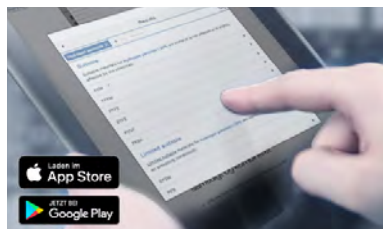
Note:

- The following approvals or conformity certificates must be mentioned in all enquiries. This is the only way to ensure that the product fulfils all the required specifications.
- Not all available device versions can be delivered with the below-mentioned approvals or conformities.

Approvals	Description
	UL recognized
	Conformity of all materials in contact with the medium USP Class VI chapter „87 in vitro“ and „88 in vivo, Implantation“
	Conformity of all materials in contact with the medium FDA – Code of Federal Regulations Title 21 Paragraph 177 (CFR 21 177.2600)
	Conformity of all materials in contact with the medium Regulation (EC) No. 1935/2004 on materials and articles intended to come into contact with food
 	Explosion protection ATEX: II 2 G Ex mb IIC T4 Gb II 2 D Ex mb IIIC T130 °C Db IECEx: Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db

4. Materials

4.1. Chemical Resistance Chart – 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.

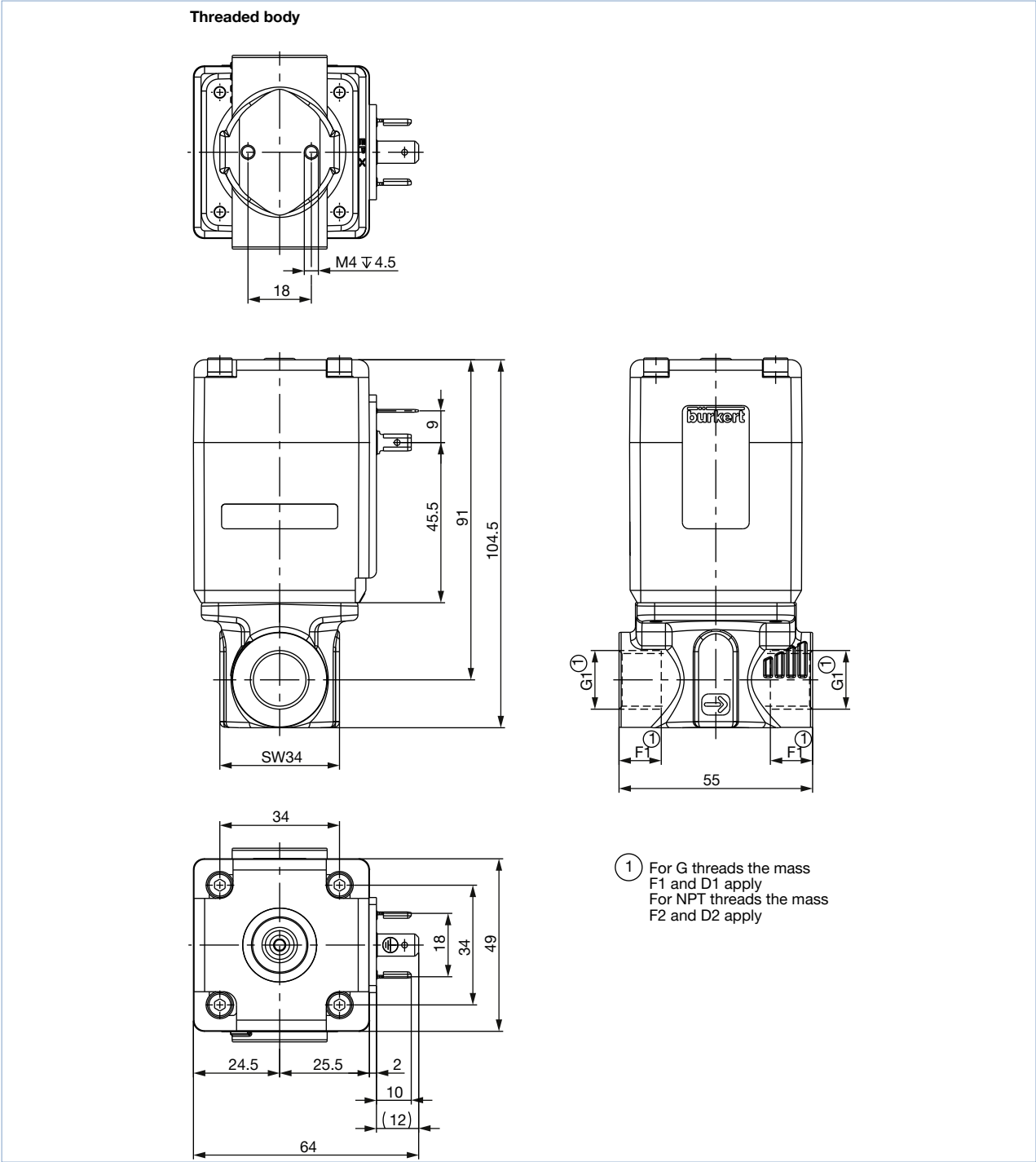
[Start Chemical Resistance Check](#)

5. Dimensions

5.1. Standard version

Threaded body

Note:
Dimensions in mm



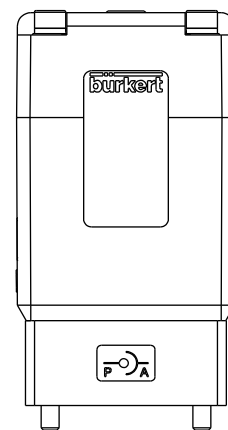
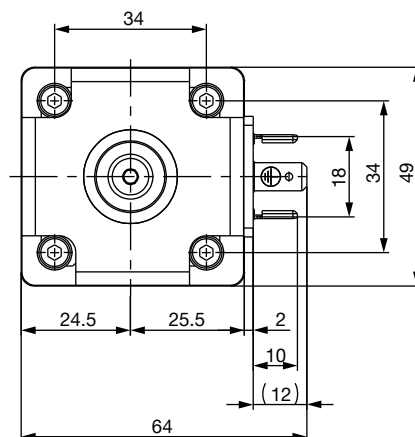
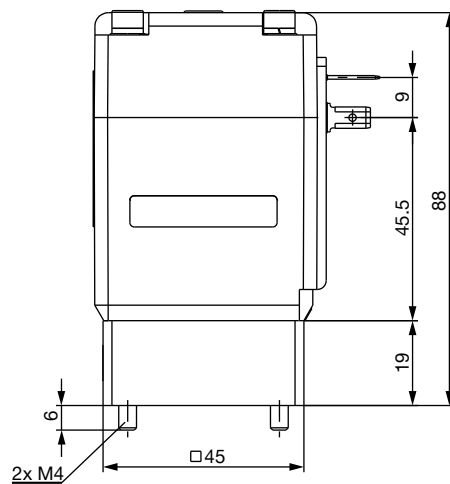
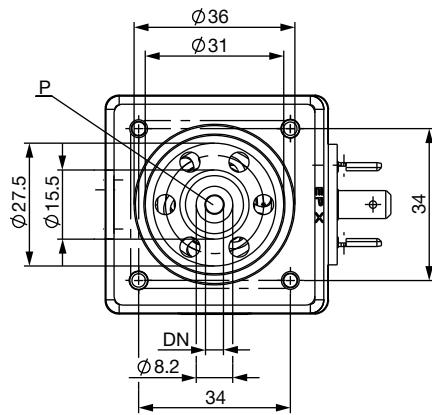
Body version	F1	G1	F2	G2
Threaded body	12	G 3/8	10.3	NPT 3/8
	14	G 1/2	13.7	NPT 1/2

Sub-base body

Note:

Dimensions in mm

Sub-base body

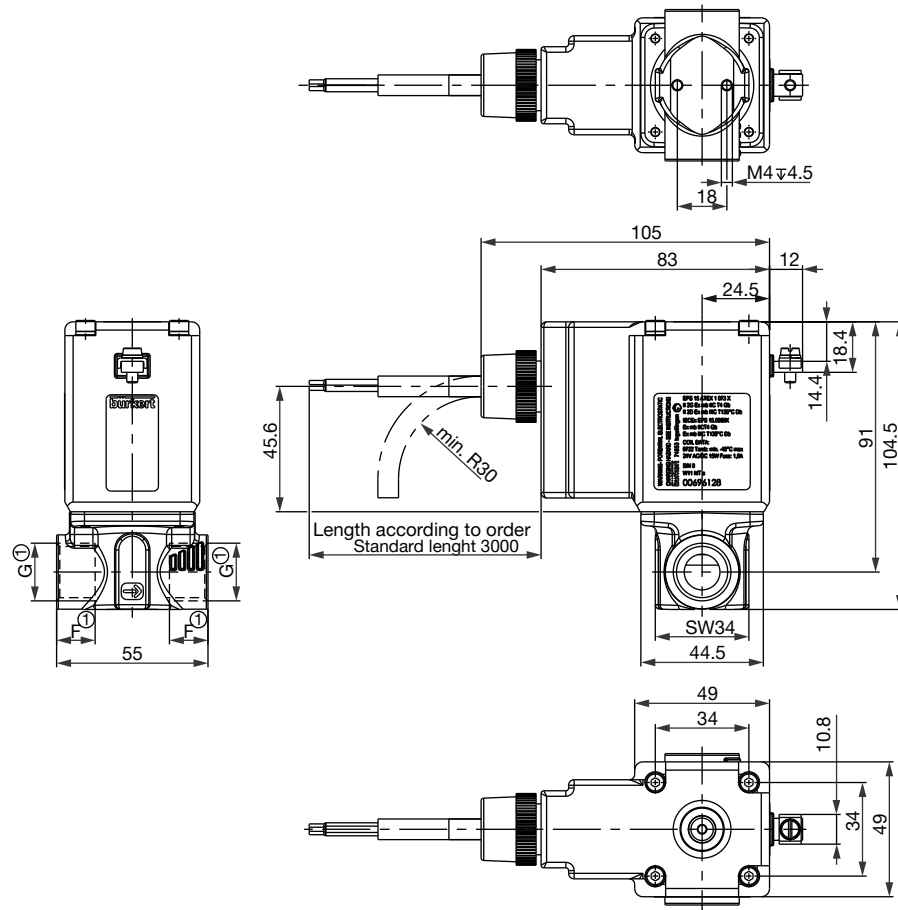


5.2. ATEX version

Threaded body

Note:

Dimensions in mm

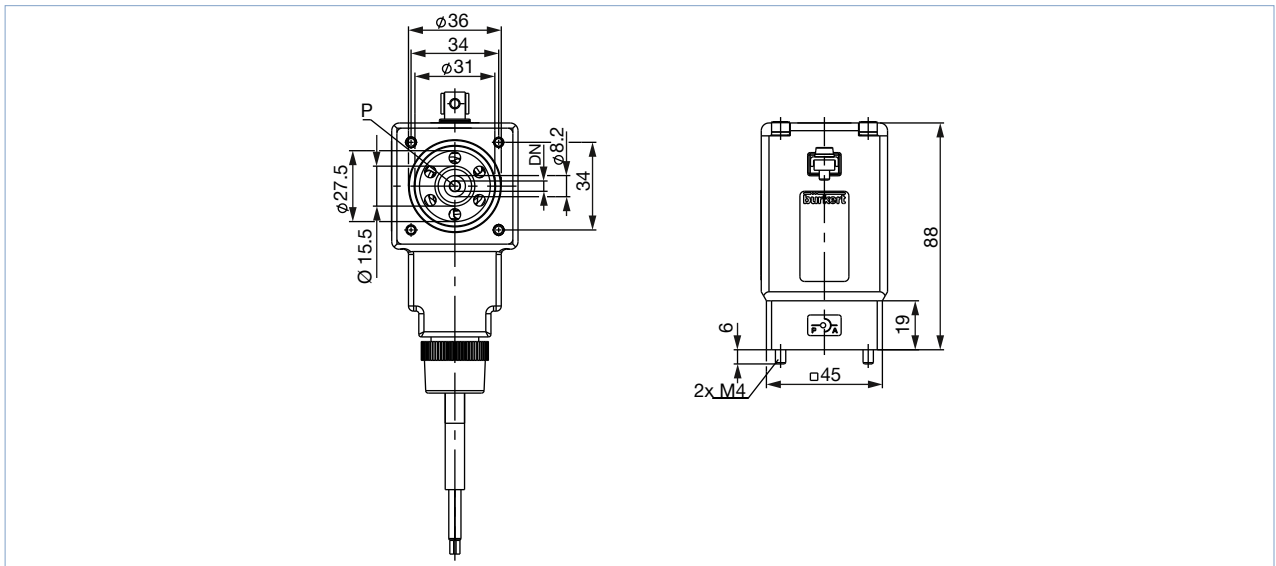


Body version	F1	G1	F2	G2
Threaded body	12	G ¾	10.3	NPT ¾
	14	G ½	13.7	NPT ½

Sub-base body

Note:

Dimensions in mm



6. Performance specifications

6.1. Flow characteristic

Determination of the K_v value

Pressure drop	K_v value for liquids	K_v value for gases
	[m ³ /h]	[m ³ /h]
Sub-critical $p_2 > \frac{p_1}{2}$	$= Q \sqrt{\frac{\rho}{1000 \Delta p}}$	$= \frac{Q_N}{514} \sqrt{\frac{T_1 \rho_N}{p_2 \Delta p}}$
Supercritical $p_2 < \frac{p_1}{2}$	$= Q \sqrt{\frac{\rho}{1000 \Delta p}}$	$= \frac{Q_N}{257 p_1} \sqrt{T_1 \rho_N}$

K_v	Flow coefficient	[m ³ /h] ^{1.)}
Q_N	Standard flow rate	[m ³ /h] ^{2.)}
p_1	Inlet pressure	[bar] ^{3.)}
p_2	Outlet pressure	[bar] ^{3.)}
Δp	Differential pressure $p_1 \dots p_2$	[bar]
ρ	Density	[kg/m ³]
ρ_N	Standard density	[kg/m ³]
T_1	Medium temperature	[(273+t)K]

1.) Measured for water, $\Delta p = 1$ bar, over the valve

2.) At reference conditions 1.013 bar and 0 °C (273 K)

3.) Absolute pressure