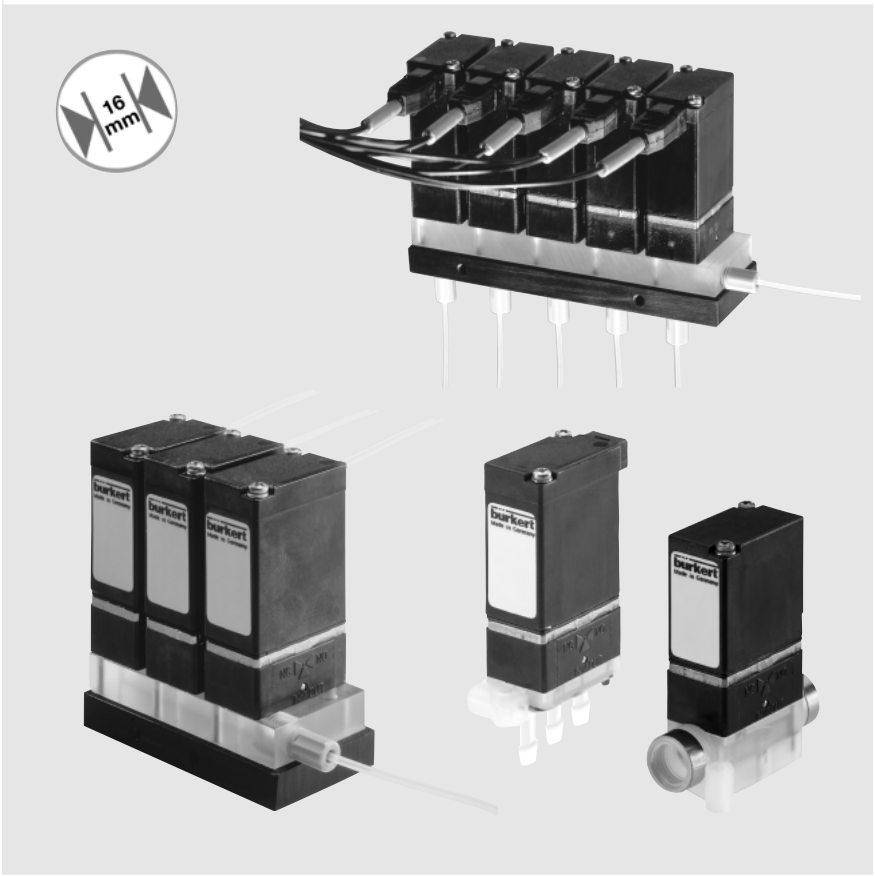
16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Aanalytical Applications

Type 6605/6606
(2/2- 3/2-way)

G 1/8, NPT 1/8, UNF 1/4-28, sub-base, tube



Advantages/Benefits

- **Dead volume free designs**
- **Hermetic isolation of fluid from the actuator**
- **Body materials: PEEK, PVDF, ETFE**
- **High back-pressure rating**
- **Normally closed, normally opened and 3-way universal functions**
- **Five different body connections: G1/8, NPT 1/8, UNF 1/4-28, push-on tube and manifold mounting**
- **Three different electrical connections: leads, cable- and rectangular plug**

Design/Function

A unique rocker designed actuating mechanism operates an isolating diaphragm that separates the actuator itself and the coil from the fluid.
The actuator is hermetically isolated from the coil by a stainless steel plate and the coil can be rotated or replaced without disturbing the process.

No friction, no risk of sticking and a strong and rugged diaphragm provide a high reliability and long service life.
The valve has a minimal internal volume that is easily purged.
No cross-contamination occurs and the control of critical fluids are possible.

Heat transfer is virtually eliminated as the coil is not directly in contact with the diaphragm.
A high accuracy and the control of critical fluids are possible.

The valves are ideal for manifold mounting and are available with a simplified common wiring system.
Custom manifolds are available to satisfy specific application requirements, including dead volume free designs.

Applications

- Medical technolgy
- Bio technology
- Analytical instruments
- Disinfectants and solvents
- Strong acids and bases, oxidizing solutions

bürkert
Easy Fluid Control Systems

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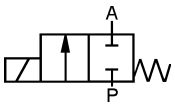
(2/2- 3/2-way)

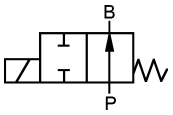
Technical Data — type 6605: 2/2-Way — type 6606: 3/2-Way

Circuit Function

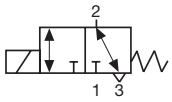
A 2/2-way valve, normally closed



B 2/2-way valve, normally open



T 3/2-way valve, direct acting, universal function, any flow direction



Valve specification

Pressure range max.	Vacuum - 2 bar (see specifications)
Body material	PEEK for sub-base body PVDF for G1/8-, NPT1/8 and tube connection body ETFE for UNF body
Seal material	FFKM (SIMRIZ Perfluorelastomer)
Isolating plate body/coil	Stainless steel 1.4310
Fluids	Aromatics, ethers, esters, ketones, solvents (PEEK body only)
Fluid temperature	0 to +50 °C
Ambient temperature	max. +55 °C
Max. viscosity	approx. 21 mm^2/s
Response time	approx. 25 ms
Internal volume:	
G1/8, NPT1/8	85 µl
Sub-base	68 µl
UNF 1/4-28	30 µl (2/2), 55 µl (3/2),
On request	<5 µl

Solenoid specification

Nominal voltages	DC: 12, 24 V/= AC (50Hz) and DC: 230-240 V
Voltage tolerance	±10 %
Power consumption	3.4 W at 12 and 24 V/DC 4 W at 110-120 V/DC 4 W at 230-240 V/DC
Cycling rate	approx. 300/min.
Duty cycle	100% continuously rated
Protection class	IP 65 with leads or cable plug 2506, IP 20 without cable plug

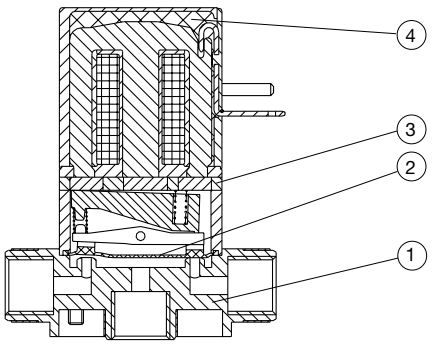
Installation / Accessories

Installation	as required, but preferably with solenoid system upright.
Fixation	M3 from the the top or sheet metal screw (ø3.9) from below
Electrical connection	• side or top tag connector to DIN 43 650 • rectangular connector • flying leads
Cable plug	Type 2506, DIN 43650, form C (standard delivery with valve) Type 2505, rectangular plug (as accessory, separate to order)

Manifolds

Manifolds according to specific application demands are available including dead volume free valves and manifolds.

Materials

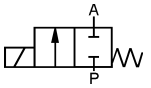


1	Valve body:	PEEK, PVDF or ETFE
2	Diaphragm:	FFKM (Simriz)
3	Isolating plate:	Stainless steel 1.4310
4	Coil body:	PA (Polyamide)

16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Aanalytical Applications

Type 6605/6606
(2/2- 3/2-way)

Specifications - Ordering Chart (Other Versions on Request)



2/2-Way, direct acting,
normally closed

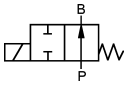
PVDF valve body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	Q_{Nn} (air) [l/min]	Pressure Range [bar]	Back-pressure [bar]	Seal Material	Electrical Connection	Weight [kg]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
G 1/8	1.6	0.060	65	Vac.-2.0	2.0	FFKM	leads 500 mm	0.062	--- ---	137 749 H	--- ---
G 1/8	1.6	0.060	65	Vac.-2.0	2.0	FFKM	rect. plug	0.062	--- ---	139 146 X	--- ---
G 1/8	1.6	0.060	65	Vac.-2.0	2.0	FFKM	cab.plug 2506	0.062	--- ---	137 746 W	137 748 G
Tube	1.6	0.039	42	Vac.-2.0	1.0	FFKM	leads 500 mm	0.057	137 763 X	137 764 Y	--- ---
Tube	1.6	0.039	42	Vac.-2.0	1.0	FFKM	rect. plug	0.057	--- ---	139 147 Y	--- ---
Tube	1.6	0.039	42	Vac.-2.0	1.0	FFKM	cab.plug 2506	0.057	137 762 W	137 760 G	--- ---

PEEK valve body

Sub-base	1.6	0.039	42	Vac.-2.0	2.0	FFKM	leads 500 mm	0.053	137 744 U	137 745 V	--- ---
Sub-base	1.6	0.039	42	Vac.-2.0	2.0	FFKM	rect. plug	0.053	--- ---	139 145 W	--- ---
Sub-base	1.6	0.039	42	Vac.-2.0	2.0	FFKM	cab.plug 2506	0.053	137 743 T	137 741 Z	--- ---

[1] Side tag connector, [2] Top tag connector, universal coil (AC/DC) with integrated rectifier.



2/2-Way, direct acting,
normally open

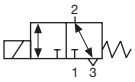
PVDF valve body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	Q_{Nn} (air) [l/min]	Pressure Range [bar]	Back-pressure [bar]	Seal Material	Electrical Connection	Weight [kg]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
G 1/8	1.6	0.060	65	Vac.-2.0	2.0	FFKM	cab.plug 2506	0.062	--- ---	137 747 X	--- ---
Tube	1.6	0.039	42	Vac.-2.0	1.0	FFKM	cab.plug 2506	0.057	--- ---	137 761 V	--- ---

PEEK valve body

Sub-base	1.6	0.039	42	Vac.-2.0	2.0	FFKM	cab.plug 2506	0.053	--- ---	137 742 S	--- ---

[1] Side tag connector, [2] Top tag connector, universal coil (AC/DC) with integrated rectifier.



3/2-Way, direct acting
universal functions, any flow direction

PVDF valve body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	Q_{Nn} (air) [l/min]	Pressure Range [bar]	Back-pressure [bar]	Seal Material	Electrical Connection	Weight [kg]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
G 1/8	1.6	0.047	51	Vac.-2.0	2.0	FFKM	leads 500 mm	0.062	--- ---	137 771 X	--- ---
G 1/8	1.6	0.047	51	Vac.-2.0	2.0	FFKM	rect. plug	0.062	--- ---	139 149 A	--- ---
G 1/8	1.6	0.047	51	Vac.-2.0	2.0	FFKM	cab.plug 2506	0.062	--- ---	137 769 D	137 770 A
Tube	1.6	0.025	27	Vac.-2.0	1.0	FFKM	leads 500 mm	0.057	137 782 K	137 783 L	--- ---
Tube	1.6	0.025	27	Vac.-2.0	1.0	FFKM	rect. plug	0.057	--- ---	139 150 F	--- ---
Tube	1.6	0.025	27	Vac.-2.0	1.0	FFKM	cab.plug 2506	0.057	137 781 J	137 780 V	--- ---

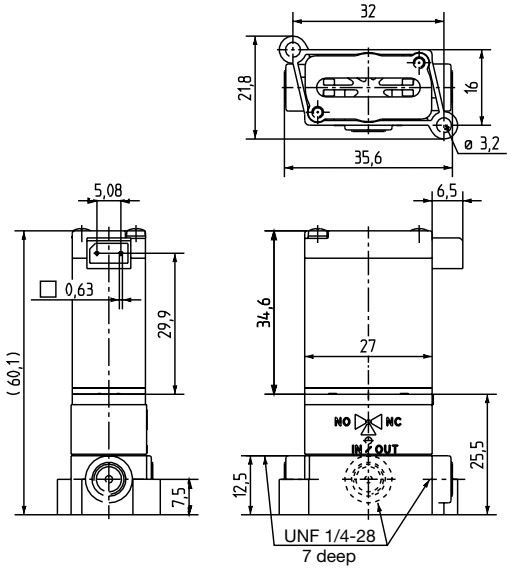
PEEK valve body

Sub-base	1.6	0.032	34	Vac.-2.0	2.0	FFKM	leads	0.053	137 767 T	137 768 C	--- ---
Sub-base	1.6	0.032	34	Vac.-2.0	2.0	FFKM	rect. plug	0.053	--- ---	139 148 H	--- ---
Sub-base	1.6	0.032	34	Vac.-2.0	2.0	FFKM	cab.plug 2506	0.053	137 766 S	137 765 Z	--- ---

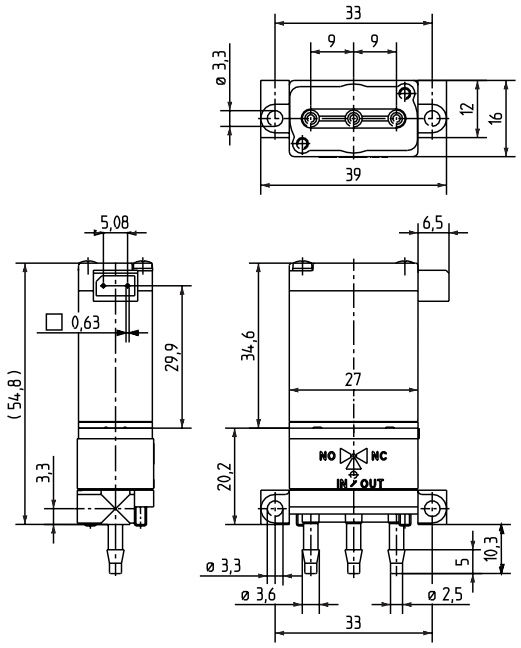
[1] Side tag connector, [2] Top tag connector, universal coil (AC/DC) with integrated rectifier.

Coil with rectangular plug 2505 - Dimensions [mm]

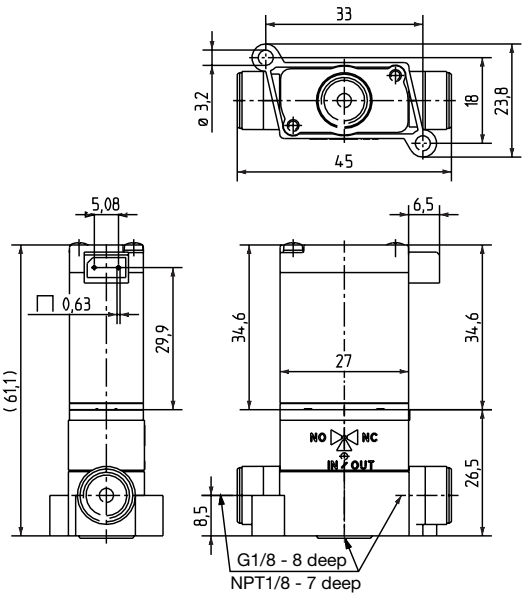
UNF 1/4-28



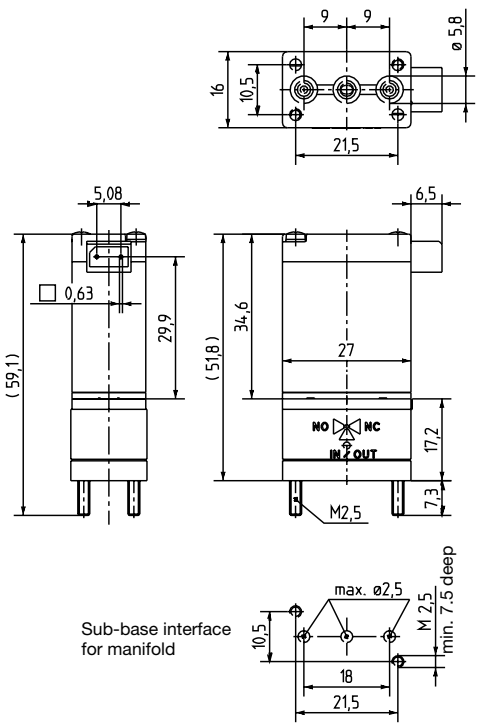
Tube connection



Thread connection

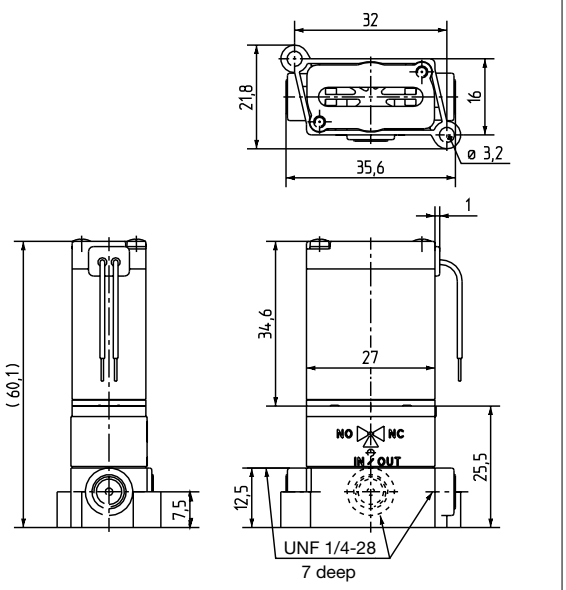


Sub-base connection

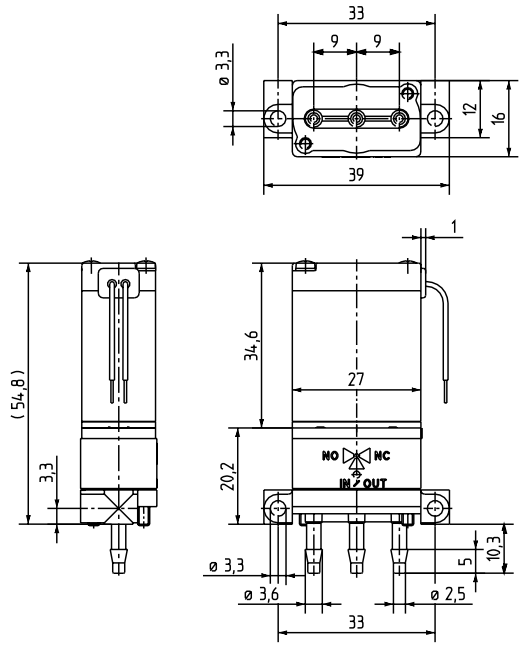


Coil with flying leads - Dimensions [mm]

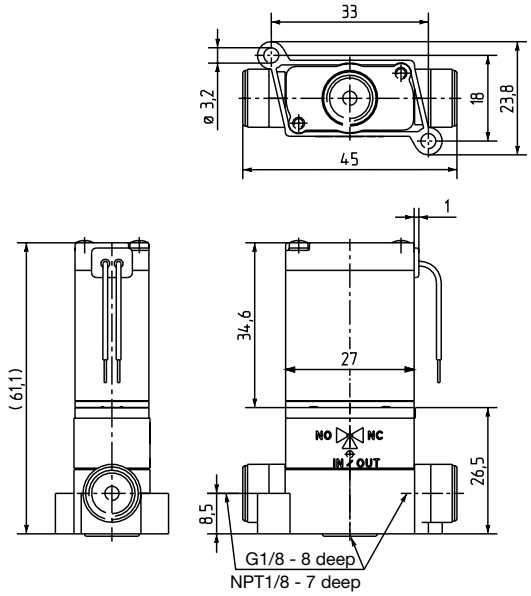
UNF 1/4-28



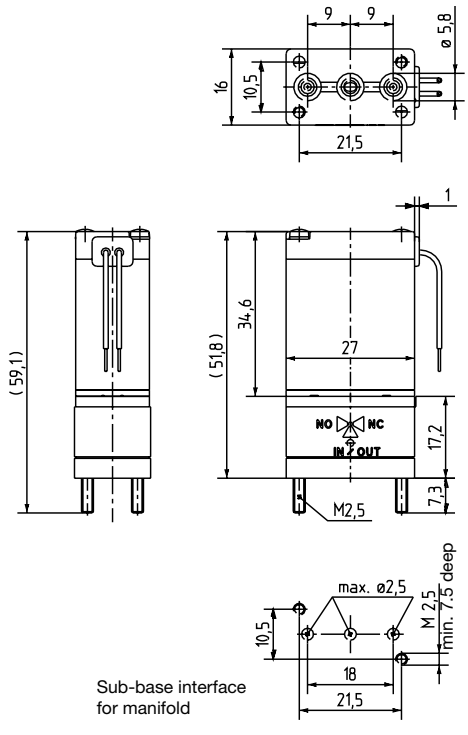
Tube connection



Thread connection

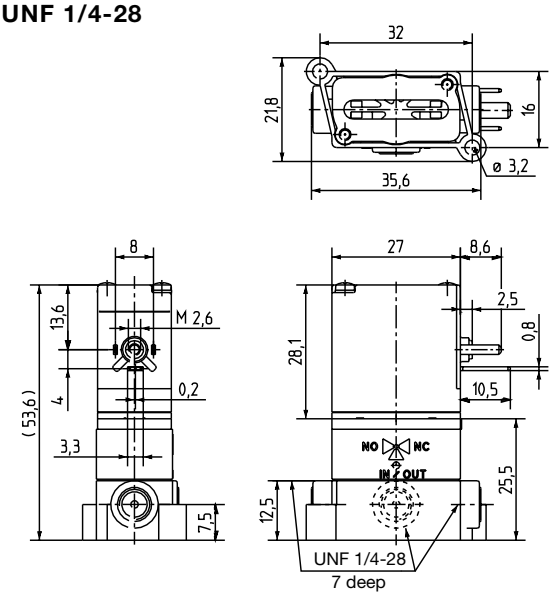


Sub-base connection

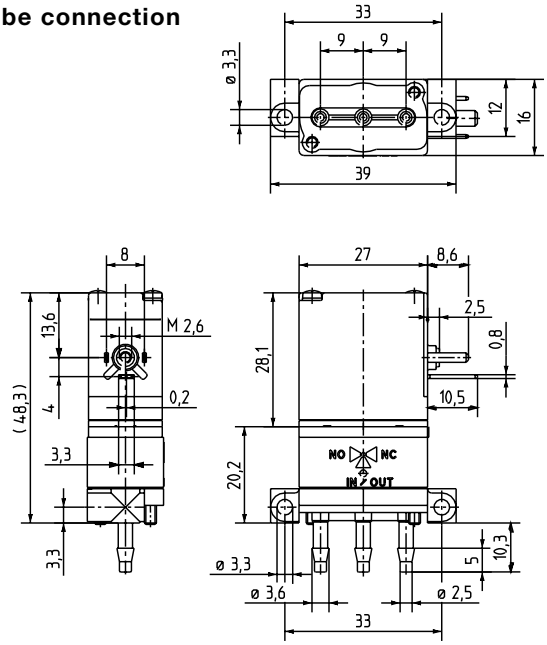


Coil with side plug 2506 - Dimensions [mm]

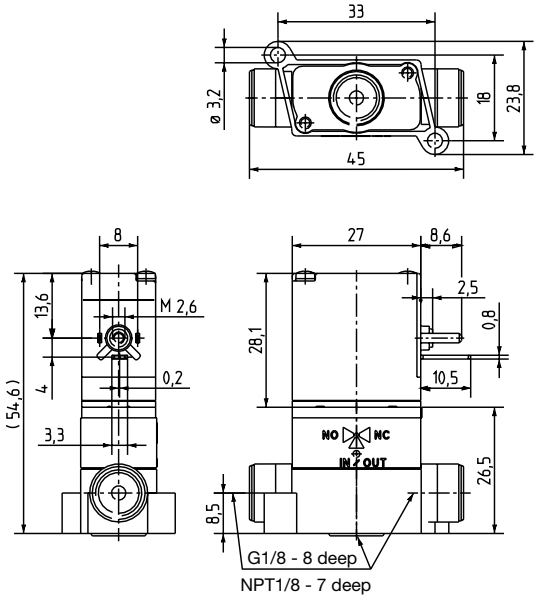
UNF 1/4-28



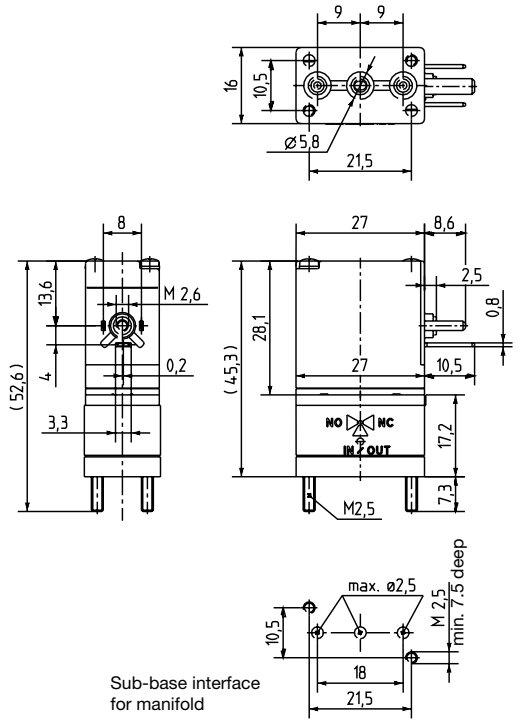
Tube connection



Thread connection

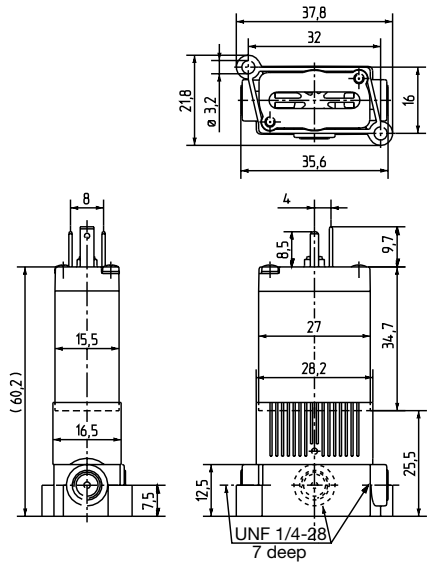


Sub-base connection

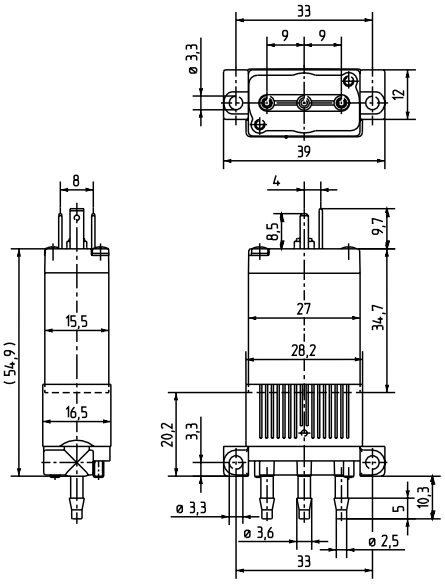


Coil with top plug 2506 - Dimensions [mm]

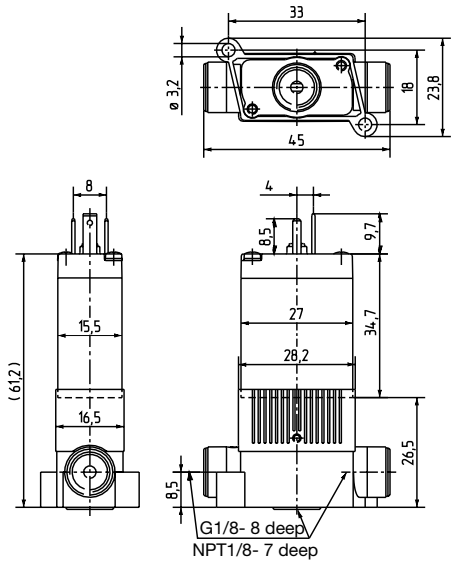
UNF 1/4-28



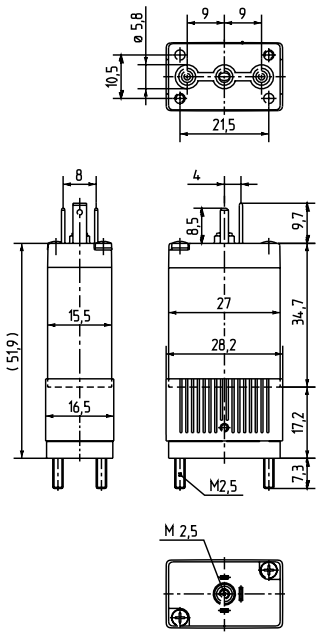
Tube connection



Thread connection



Sub-base connection



16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Aanalytical Applications

Type 6605/6606
(2/2- 3/2-way)

Type 2505 - Rectangular cable plug

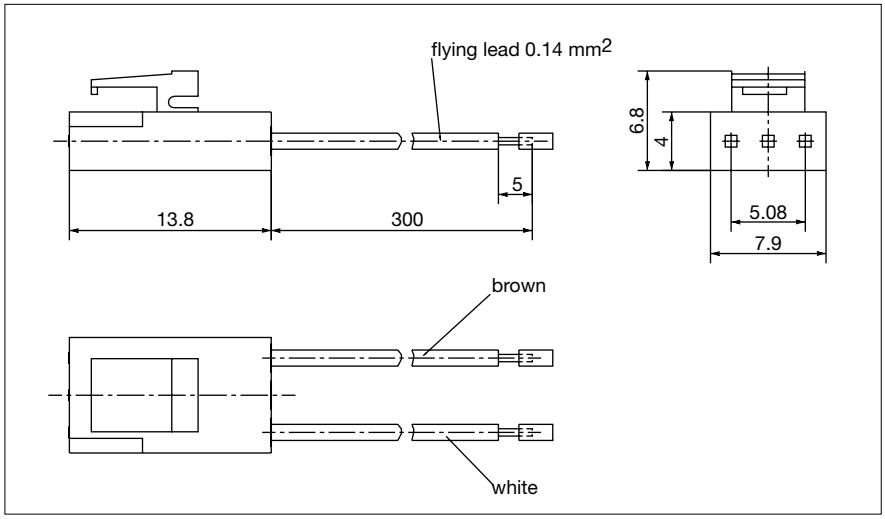
Technical Data

Protection class	IP 20
Operating voltage	24 V
Power consumption	3 W
Operating temperature	0-50 °C

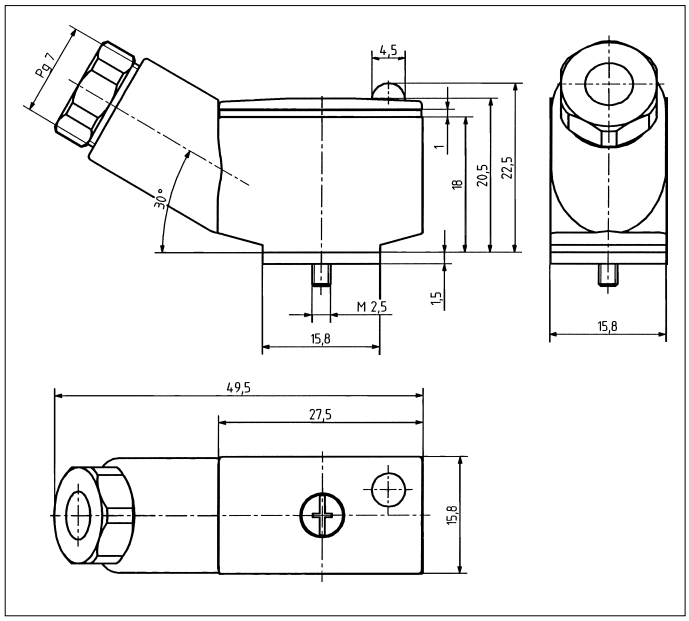
Ordering[1)]	Item-No.
cable length 300 mm	644 068 N
cable length 3 m	133 486 F

[1)] Please order separately (no standard delivery)

Dimensions [mm]



Type 2506 - Cable plug DIN 43650, Form C



Technical Data

Body material	PA (polyamide)
Contact material	brass, electro-silverplated
Isolation between cable plug and coil	gasket 1.5 mm
Continuous limit temp.	+125 °C
Cable diameter	5–6 mm
Electr. connection	terminal screws max. 0.75 mm²
Poles	2-pole + protective earth
Nominal voltage	0–250 V

Ordering	Item-No.
Cable plug 2506	008 353 P [2)]

[2)] Standard delivery with the valve

Diagnosis valve (available on request)

- Flow / low flow signal with adjustable level
- Valve position signal
- LED´s and binary outputs
- for 2/2-way and 3/2-way valves