

# HERION 24010 SERIES

## 3/2 Direct solenoid actuated poppet valves

G1/4, 1/4 NPT or Connection hole pattern NAMUR



TÜV-approval based on IEC 61508, DIN V 19 251 Approvals: DIN EN 161/3394 DVGW, group Rm and EN 13611 Valves for safety systems to SIL 4 or AK 7

Solenoid valve also suitable for low power consumption in non hazardous areas without barrier

Solenoid: Category II2GD, Type of Protection EEx ia IIC T5/T6, IP66, T95°C, Suitable for zones 1, 2 (gases) and 21, 22 (dusts)

Working from 0 bar up

High operational reliability even after long periods of inoperation

Suitable for control and instrument-quality air

Also suitable for open-air installation with appropriate solenoid variant

**NAMUR FLANGE:**

With integrated exhaust air recirculation

### TECHNICAL DATA

#### Medium:

For neutral, not flammable, gaseous and liquid fluids\*

\*With contaminated fluids, upstream installation of a dirt trap is recommended.

#### Flow direction:

Optional

#### Mounting position:

Any, but preferably with solenoid vertical

#### Connection:

G1/4, 1/4 NPT

#### Operating pressure:

0 ... 10 bar

#### Ambient temperature:

-25°C\* ... +60°C

\*Please consult our technical service for use below +2°C. If installed in the open protect all connections against the penetration of moisture!

### MATERIALS

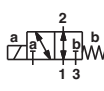
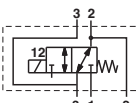
Housing: Brass, hard-anodized aluminium

Seals: NBR (Perbunan)

Internal parts: Stainless steel, brass

Solenoid housing: Aluminium, anodized

### Switching function: Pressure connection 1, 2 or 3

Symbol	Port size	Operating <sup>*1)</sup> pressure (bar)	kv-value [Cv(US) ▼ kv x 1,2]	Material housing	Seal	Drawing no.	MODELS
	G1/4	0 ... 10	0,340	Brass	NBR	1	2401088.2003
	1/4 NPT	0 ... 10	0,340	Brass	NBR	1	2401087.2003
	G1/4	0 ... 10	0,340	St. st.	NBR	1	2401086.2003
	1/4 NPT	0 ... 10	0,340	St. st.	NBR	1	2401012.2003
	G1/4 NAMUR	0 ... 10	0,340	Aluminium <sup>*2)</sup>	NBR	2	2401091.2003
	1/4 NPT NAMUR	0 ... 10	0,340	Aluminium <sup>*2)</sup>	NBR	2	2401090.2003
	G1/4 NAMUR <sup>*3)</sup>	0 ... 10	0,340	Aluminium <sup>*2)</sup>	NBR	3	2401009.2003


<sup>\*1)</sup> With gaseous and liquid fluids up to 40 mm<sup>2</sup>/s.

<sup>\*2)</sup> Hard-anodized.


<sup>\*3)</sup> P port in flange interface.

Note: At an ambient temperature of -20°C, higher leakage values may be experienced for short periods.

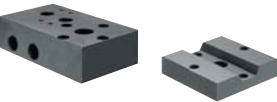


## Solenoid parameters for use in intrinsically safe circuits

	Switch-on voltage (V)	max. allowed current I <sub>i</sub>	Holding current	Holding voltage	Pick-up delay typical (s)	Categorie, type of protection	Temperature ambient/fluid °C	Solenoid codes
	22 ... 28 V	110 mA	min 40 mA	5 V	0,3 - 5	II2G EEx ia IIC T6 II2G EEx ia IIC T5 II2D IP66 T95°C	-40 ... +55 -40 ... +70 -40 ... +70	2003

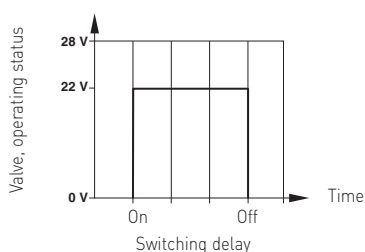
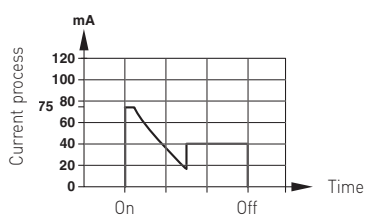
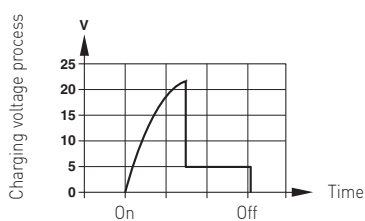
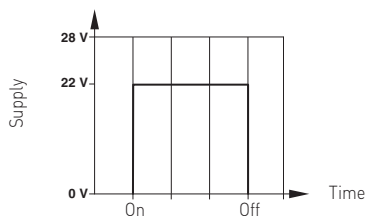
## Solenoid parameters for use in non hazardous locations

	Switch-on voltage (V)	max. current (limited)	Holding current	Holding voltage	Pick-up delay typical (s)	Categorie, type of protection	Temperature ambient/fluid °C	Solenoid codes
	22 ... 26,4 V	75 mA	min 40 mA	1,8 W at 24V	0,3 - 2 s	IP 66	-40 ... +80	2003

## ACCESSORIES

Flange plate	Yoke	Silencer
 <p>0612790 (NAMUR single connection plate) 0612791 (NAMUR-rip use in combination with 0612790, Alu)</p>	 <p>0540593 M/S2, G1/4</p>	 <p>C/S2, 1/4 NPT</p>

## Operating sequence



**Current supply units:**  
Intrinsically safe power supply units can be chosen in a list of compatibility in [www.norgren.com](http://www.norgren.com)

When selecting an intrinsically safe power supply, it is important to observe the maximum permissible values acc. to the EC-Type-Examination Certificate PTB 04 ATEX 2010  
U0 28 V, L0 110 mA, P0 1,5 W  
The effective internal capacities C<sub>i</sub>; and inductivities L<sub>i</sub> of the solenoid are negligibly low.

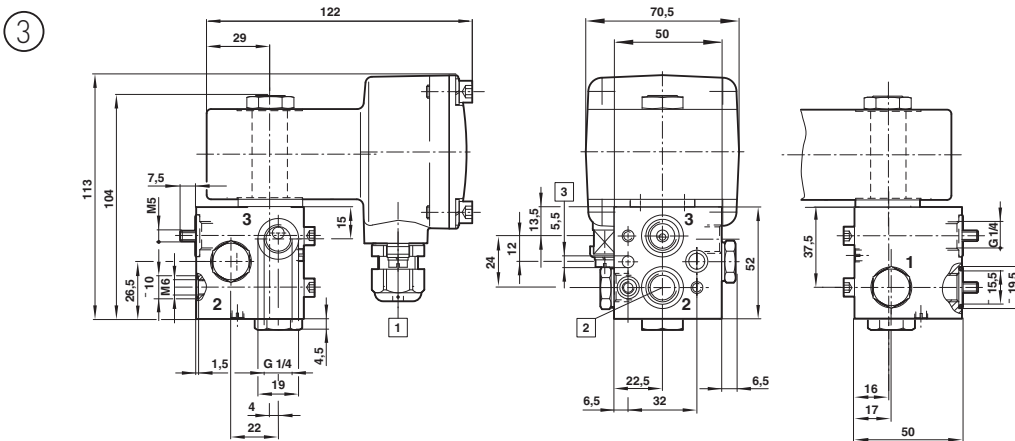
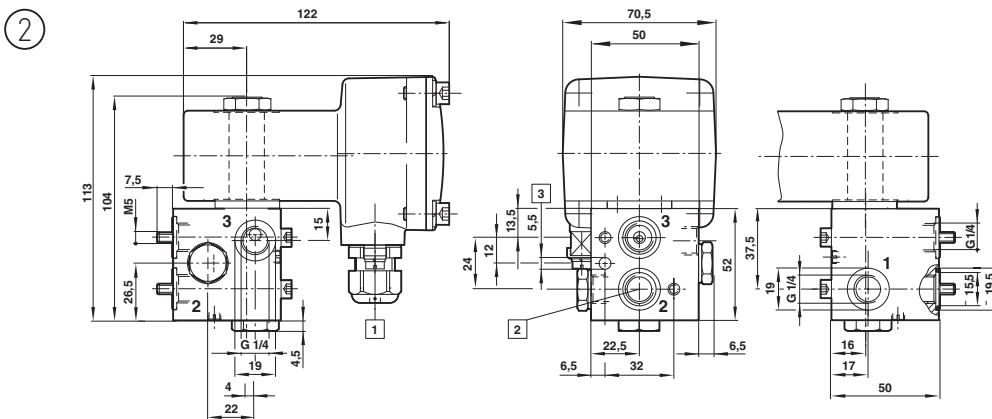
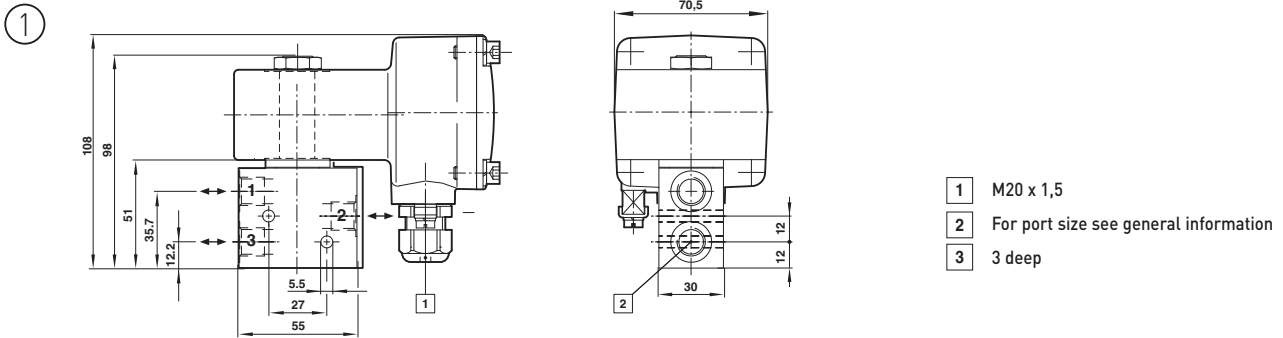
### Function of solenoid drive

To switch the direct operated valve, a certain energy is required. This energy is stored in a condenser. The charging voltage is 22 V. The higher the supply voltage, the shorter the charging time. As soon as the charging voltage has been reached, the valve switches. The small current now flowing through the coil is sufficient to hold the valve in the open position. At least 40 mA are required for this.

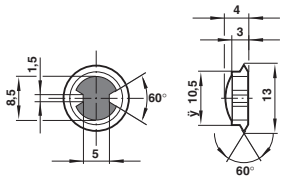
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## DIMENSIONS

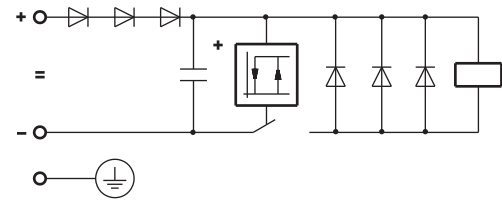


**Filter cartridge** (for threads G1/4 and 1/4 NPT)  
Type: 0681173

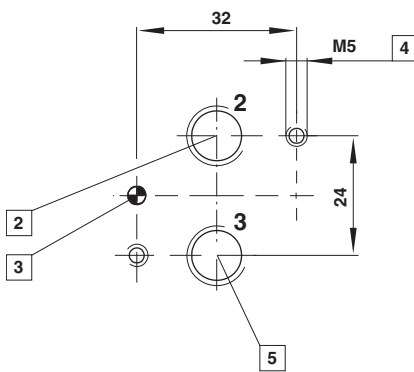


Thread pitch diameter  
max. 11,85 mm

**Circuit diagrams**



**NAMUR hole pattern**



- 2 Port 2 (A)
- 3 Coding stud threaded
- 4 M5 (10 deep)
- 5 Port 3 (R)