HERION 98025 SERIES

Indirect solenoid actuated poppet valves with NAMUR interface

3/2 - Internal thread G1/2, 1/2 NPT or flanged

Main application: single operated actuators

TÜV-approval based on IEC 61 508,DIN V 19 251

Valves suitable for safety systems to SIL 4 or AK 7

Add-on manual override and/or inductive limit switches

Solenoids are applicable to protection class EEx me, EEx md, EEx m, EEx ia for zones 1, 2 (gas), 21 und 22 (dust) ATEX cat.II 2 GD.

Additional protection class (FM, CSA): XP, IS, NI

Rest position in the event of power failure provided by mechanical return spring

Suitable for outdoor installation if equipped with corresponding solenoid

TECHNICAL DATA

Medium:
Filtered, non-lubricated and dried compressed air, instrument air, nitrogen and or other non-flammable neutral, dry fluids

Operation:
Solenoid operated, directly controlled

Flow direction:
Fixed

Port size:
G1/2, 1/2 NPT, NAMUR interface

Orifice:
ND 8

Operating pressure:
2 ... 8 bar

Flow rate:
1000 l/min (1 bar pressure differential)

Temperature range:
Fluid: -40°C ... +60°C, SNBR (special perbunan)

Ambient: -40°C ... +60°C (dependent on solenoid)

Consult our Technical Service for use below +2°C.

Mounting:
Optional, preferably vertical

MATERIALS

Body: stainless steel 1.4404/316,brass 2.0401, black aluminium 3.0615 anodized

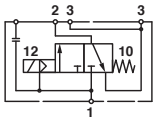
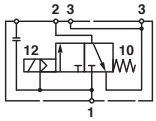
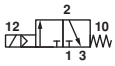
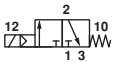
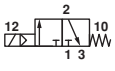
Seat seal: SNBR (Special perbunan)

Inner parts: stainless steel, brass

Protect all connections against the penetration of moisture

Follow the mounting and operating instruction 7503476

3/2 valves

Symbol	Port size 1, 3	Port size 2, (3)	Operating pressure (bar)	Material	Drawing no.	MODELS
	G1/4, G1/2	NAMUR G1/4	2 ... 8	Aluminium	1	**9802505xxxx*****
	G1/4, G1/2	NAMUR G1/4	2 ... 8	Stainless steel	1	**9802705xxxx*****
	G1/2	G1/2	2 ... 8	Aluminium	2	**9802555xxxx*****
	G1/2	G1/2	2 ... 8	Stainless steel	2	**9802755xxxx*****
	G1/2	G1/2	2 ... 8	Brass	2	**9802655xxxx*****

xxxx Insert solenoid codes from table opposite. ***** Insert voltage codes from table opposite.

OPTIONS SELECTOR

9802★★5.★★★★.★★★.★★

Material	Substitute
Aluminium	5
Brass	6
Stainless steel	7

Voltage	Substitute
12V d.c.	02400
230V a.c.	23050

Solenoids
See table below

Port size	Substitute
NAMUR, G1/4	0
NAMUR, 1/4 NPT	1
G1/2	5
1/2 NPT	6

ORDERING INFORMATION

3/2 directional control valve, aluminium anodized, solenoid 24 V DC, with NAMUR interface
Type: 9802505.4200.024.00
TÜV-single approval: on request

Solenoid actuators

	Power consumption 24V DC (W)	230V AC (VA)	Rated current 24V DC (mA)	230V AC (mA)	Protection class	Temperature ambient/fluid °C	Electrical connection	Drawing no.	Circuit diagram no.	Solenoid codes
	1,9	2,1 *5]	78	–	IP00 w/o connector *5] IP65 with connector *5]	-25 ... +60	DIN EN175 301-803 Form A	6	1	**0763** *7]
	3,2	–	135	–	EEx m II T4 *1] IP66 T110°C	-20 ... +70	3 m Cable	7	4	**0298** *8]
	–	4,6	–	18	EEx m II T4 *1] IP66 T110°C	-20 ... +70	3 m Cable	7	7	**0299** *8]
	0,8	–	33	–	EEx me II T5/T6 *2] IP66 T130°C	-40 ... +80 (T5) -40 ... +70 (T6)	M20x1,5 *6]	8	4	**4200** *8]
	–	1,3	–	26	EEx me II T4/T6 *2] IP66 T130°C	-40 ... +80 (T4) -40 ... +55 (T6)	M20x1,5 *6]	8	7	**4201** *8]
	0,8	–	33	–	EEx me IIC T5/T6 *3] EEx md II T5/T6 *3]	-40 ... +80 (T5) -40 ... +70 (T6)	1/2 NPT *6]	9	4	**4600** *8]
	0,8	–	33	–	IP66 T130°C		M20x1,5 *6]			**4602** *8]
	–	1,3	–	26	EEx me IIC T5/T6 *3] EEx md II T5/T6 *3]	-40 ... +80 (T5) -40 ... +70 (T6)	1/2 NPT *6]	9	7	**4601** *8]
	–	1,3	–	26	IP66 T130°C		M20x1,5 *6]			**4603** *8]
Stainless steel										
	0,8	–	33	–	Ex mb d IIC T4/T6 or	Cat. II 2G (gas) -40 ... +80 (T4) -40 ... +70 (T6)		18	12	**4802**
	–	1,3	–	26	Ex mb e II T5/T6 Ex mbD 21 tDA21 IP66	Cat. II 2D (dust) T100°C		18	7	**4803**
	1,4	–	59	–	XP NEMA *4] 4, 4X, 6, 6P, 7, 9	-20 ... +60	Flying leads 450 mm long	10	1	**3720**

Standard voltages 24 V DC, 230 V AC. other voltages on request. Design acc. to VDE 0580, EN 50014/50028.100% duty cycle
Stainless steel solenoid operators on request.
*1] Categorie II 2 GD, EC-Type-Examination-Certificate KEMA 02 ATEX 1347X.
*2] Categorie II 2 GD, EC-Type-Examination-Certificate KEMA 98 ATEX 4452 X.
*3] Categorie II 2 GD, EC-Type-Examination-Certificate PTB 02 ATEX 2085 X.
*4] CSA-LR 57643-6, FM approved, for hazardous locations: Div. 1 and 2, Class I, II, III.
*5] Required connector for DC: type 0570275. Valves can be operated with DC only.
For 230V AC application please use 200V DC coil, plus plug with rectifier.
*6] Cable gland is not included in delivery.
*7] IP65 according to DIN 40050/IEC 529 and DIN EN 600068-2-38.
*8] This solenoid has a fuse with an appropirate rating.

Solenoid actuators for intrinsically-safe circuits, protection class EEx ia IIC T5/T6, cat.II G, II 2 D, IP66, T90°C, EC type examin. certificate KEMA 03 ATEX 1051X

	Nominal resist. RN coil (Ω)	Min. required switching current (mA)	Resistance Rw 60 coil * (Ω)	Required voltage at terminal ($R_{w\,60}$)	Temperature ambient/fluid °C T5	T6	Drawing no.	Circuit diagram no.	Solenoid codes
	200	33	240	8	-40 ... +80	-40 ... +70	8	10	**2050**
	391	24	470	11	-40 ... +80	-40 ... +70	8	10	**2051**
	736	17	880	15	-40 ... +80	-40 ... +70	8	10	**2052**
	1220	13	1460	19	-40 ... +80	-40 ... +70	8	10	**2053**

Cable gland is included in delivery.
When selecting an intrinsically safe power supply, the permissible maximum values according to the Certificate of Conformity should be taken into acount.
The low effective inductivity and capacity can be ignored.

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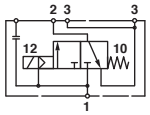
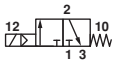
ACCESSORIES

Silencer	Cable gland	Manual override	Connectors	Flange plate	Yoke
					
0014800 (G1/2) *1)	0588819 EEx e (for solenoid 42xx / 46xx M20 x 1,5)	0553886 (without detent) *2)	0570275	0612790 single connection plate	0540593
	0588851 EEx d (for solenoid 46xx M20 x 1,5)	0553887 (with detent) *2)	0663303 (with rectifier)	0612791 NAMUR-Rib use in combination with 0612790 (Alu)	
	0588925 EEx d, EEx e (for solenoid 46xx 1/2-14 NPT)				
	0589387 II 2 G/D EEx d IIC (for solenoid 48xx M20x1,5; Ø 10 ... 14 mm)				
	0589385 II 2 G/D EEx e II (for solenoid 48xx M20x1,5; Ø 9 ... 13 mm)				

*1) For indoors use

*2) Useable only with 98025 valves

3/2 Valves with pilot 23,2 mW/ 6,3 mW

Actuation	Port size 1, 3	Port size 2, (3)	Operating pressure (bar)	Material	Drawing no.	MODELS
	G1/4	NAMUR	2 ... 8	Aluminium	3	**9802509xxxx*****
	G1/2	G1/2	2 ... 8	Aluminium	4	**9802559xxxx*****

xxxx Insert solenoid codes from table below. ***** Insert voltage codes from table below.

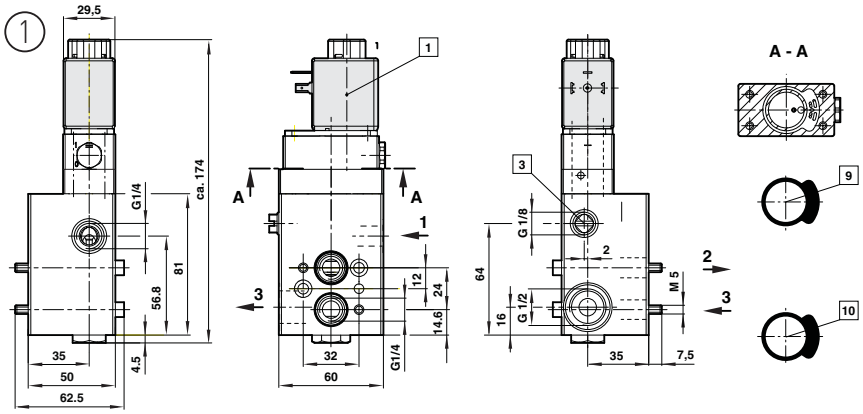
Solenoid actuators protection class EEx ia II C T4/T6

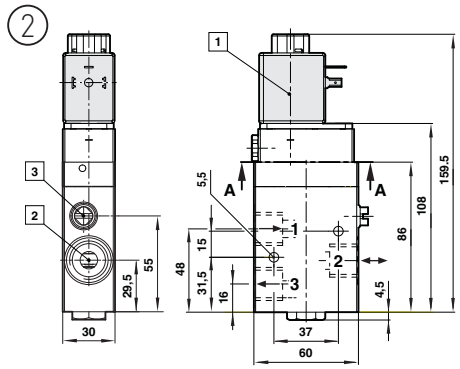
	Power P (+20°C)	Switch-on voltage Uon (+20°C)	Uon (+80°C)	Switch-off voltage Uoff (+20°C)	Uoff (-25°C)	Rated current Iein	Resistance coil R (+20°C)	max. values EEx i Ui	Ii	Pi	Type of protection*4)	Ambient temperature	Circuit diagram no.	Solenoid codes
								25 V	150 mA	250 mW				
								27 V	125 mA	250 mW				
	6,3 mW	≥4,3 V	≥5,2 V	≤1,44 V	≤1,2 V	≥1,45 mA	2800 Ω	28 V	115 mA	250 mW	EEx ia IIC T4	-40 ...+80 C	11	**2085**
	23,2 mW	≥16 V	≤16,8 V	≤5,4 V	≤4,7 V	≥1,45 mA	10900 Ω	30 V	100 mA	250 mW	EEx ia IIC T6	-40 ... +80 C	11	**2086**
								32 V	85 mA	250 mW				

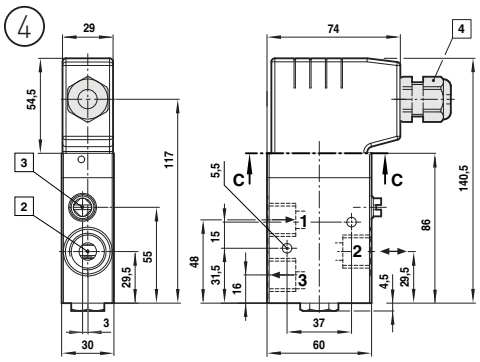
*4) Categorie II2G, EC-Examinaon certificate no. PTB 06 ATEX 2001U

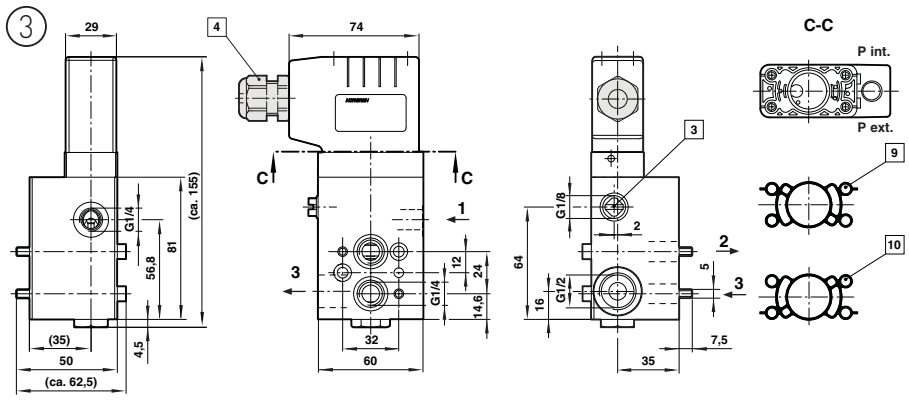
Air consumption: home position ≤ 60 l/h, operating position ≤ 15 l/h

VALVE DIMENSIONS



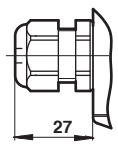






Electrical connection

005



1. Turnable optional solenoid
2. Working port G1/2 or 1/2 NPT
3. External control pressure connection G1/8 or 1/8 NPT
4. Electrical connection selectable version 005

3. Position of gasket internal pilot air
4. Position of gasket external pilot air

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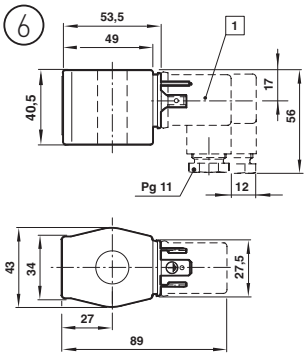
SOLENOID DIMENSIONS

⑥



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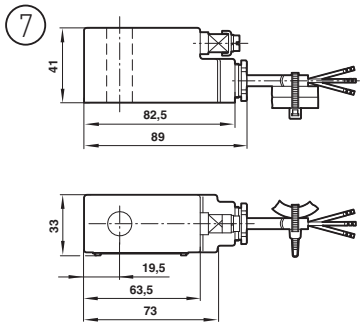
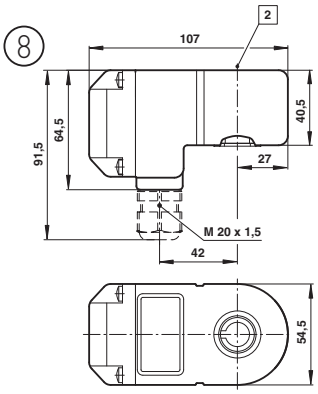


⑧



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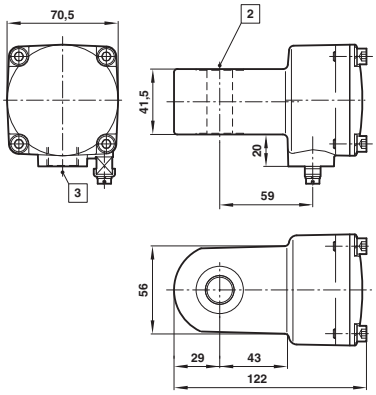

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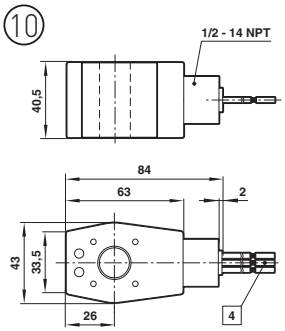

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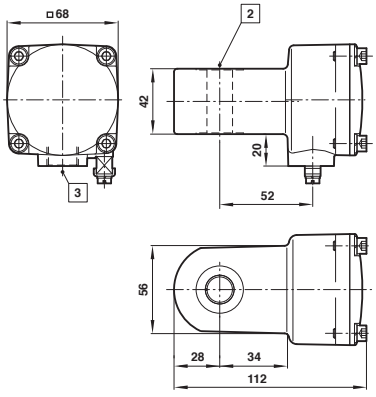

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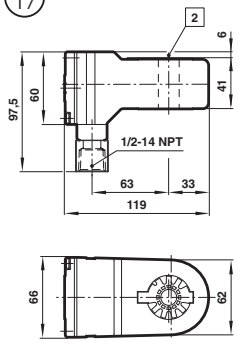
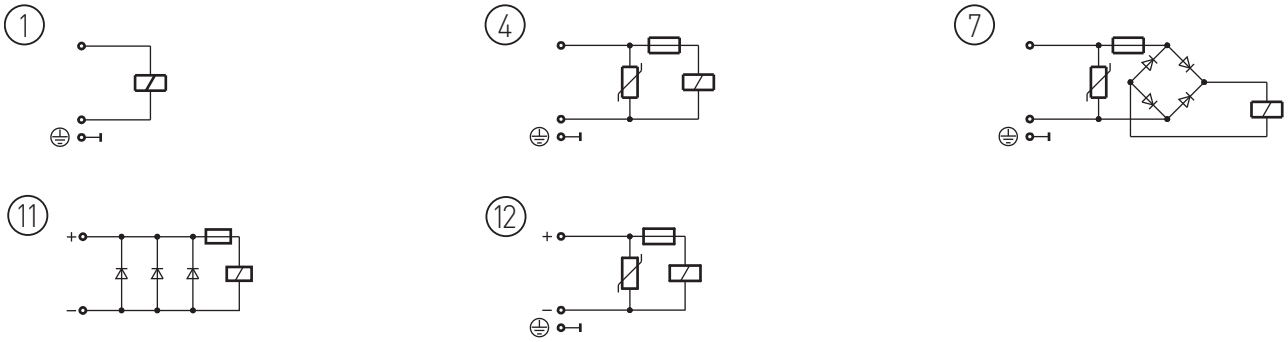
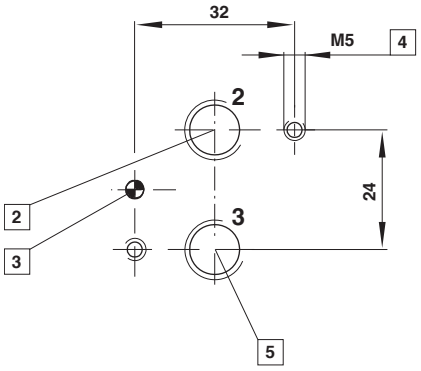


1	Conector can be indexed by 4 x 90°
2	16 or 13 (with spacer tube)
3	M20 1,5 or 1/2 - 14 NPT
4	Flying leads AWG 18 (450 mm long)

Circuit diagrams



NAMUR hole pattern



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