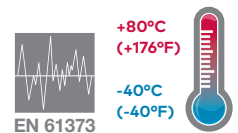


VR96 series, 3/2

Direct solenoid actuated poppet valve



- > **Port size: 1/4"**
(ISO G or NPT)
- > **Working from 0 bar up**
- > **Short switching times**
- > **Suited for fine vacuum**
down to $1,33 \times 10^{-2}$ mbar
- > **Wide temperature range**
- > **Shock vibration tested**
to EN 61373, Category 1,
class A and B
- > **Fire & Smoke (F&S)**
tested to EN 45545-2
HL3 (optional versions)



Technical features

Medium:

For neutral gaseous and liquid fluids (with contaminated fluids, upstream installation of a dirt trap is recommended)

Operation:

Direct solenoid operated poppet valve

Operating pressure:

0 ... 10 bar (0 ... 145 psi)
Details see table below

Orifice:

3 & 4 mm

Port size:

G1/4, 1/4 NPT

Flow:

200 & 350 l/min

Mounting position:

Optional, preferably with solenoid on top

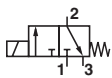
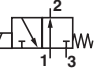
Ambient/Media temperature:

-40 ... +80°C (-40 ... +176°F)
depending on solenoid system.
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Material:

Housing: brass
Seals: EPDM
Inner parts: steel 1.4104 (430 F), brass

Technical data

Symbol	Port size	Orifice (mm)	Flow (l/min)	Operating pressure (bar)	Material		Temperature *2) (°C)	Weight (kg)	Dimension No.	Solenoid group	Model *1)
					Seat seal	Housing					
	G 1/4	3	200	0 ... 10	EPDM	brass	-40 ... +80	0,32	1	0700, 5220 or 9398 (F&S)	VR96B4613-01XXP
	1/4 NPT	3	200	0 ... 10	EPDM	brass	-40 ... +80	0,32	1	0700, 5220 or 9398 (F&S)	VR96R4613-01XXP
	G 1/4	4	350	9 ... 11	EPDM	brass	-40 ... +80	0,32	1	0800, 5270 or 9318 (F&S)	VR96B4614-01XXP
	1/4 NPT	4	350	9 ... 11	EPDM	brass	-40 ... +80	0,32	1	0800, 5270 or 9318 (F&S)	VR96R4614-01XXP
	G 1/4	3	200	0 ... 9	EPDM	brass	-40 ... +80	0,50	2	0700, 5220 or 9398 (F&S)	VR96B3613-91XXP
	1/4 NPT	3	200	0 ... 9	EPDM	brass	-40 ... +80	0,50	2	0700, 5220 or 9398 (F&S)	VR96R3613-91XXP

*1) xx = Insert solenoid code on 13th digit and voltage code on 14th digit, see below!

*2) Depending on solenoid system, see page 2





Option selector

VR96★ ★61★ -★1★ ★P

Port size	Substitute	Voltage	Substitute
G 1/4	B	24 V d.c.	3
1/4 NPT	R	36 V d.c.	4
Function	Substitute	72 V d.c.	A
NO	3	110 V d.c.	7
NC	4	Solenoids	Substitute
Orifice (mm)	Substitute	5220, for orifice 3 mm only	1
3	3	5270, for orifice 4 mm only	2
4 (NC only)	4	0700, for orifice 3 mm only	3
		0800, for orifice 4 mm only	4
		9398 for orifice 3 mm only (F&S)	7
		9318 for orifice 4 mm only (F&S)	8
		Operating pressure	
		See table	

Additional versions on request

Solenoid parameters

	Power consumption 24 V d.c. (W)	Rated current 24 V d.c. (mA)	Temperature range (°C)	Voltage tolerance (%)	Protection class *7)	Electrical connection	Weight (kg)	Dimension No.	Circuit diagram No.	Model	Code
	16,9	703 (24 V d.c.) 425 (36 V d.c.) *10) 193 (72 V d.c.) *10) 139 (110 V d.c.)	-25 ... +40 -25 ... +60	+20/-30 (+15/-32) *9) +10/-30 (+6/-32) *9) () for 37,5 & 74 V d.c. only	IP 65 (with Connector) *5)	Connector DIN EN 175301- 803 Form A *6)	0,26	3	1	0700	3
	16,9	703 (24 V d.c.) 425 (36 V d.c.) *10) 193 (72 V d.c.) *10) 139 (110 V d.c.)	-25 ... +40 -25 ... +60	+20/-30 (+15/-32) *9) +10/-30 (+6/-32) *9) () for 37,5 & 74 V d.c. only	IP 65 (with Connector) *5)	Connector DIN EN 175301- 803 Form A *6)	0,26	3	1	0800	4
	8,9	369 (24 V d.c.) 222 (36 V d.c.) *10) 120 (72 V d.c.) *10) 69 (110 V d.c.)	-40 ... +80 -40 ... +80	+30/-15 (+25/-32) +30/-10 (+25/-12) *11) () for 37,5 & 74 V d.c. only	IP 65	M20 x 1,5 *6)	0,500	6	4	5220 *8)	1
	8,9	369 (24 V d.c.) 222 (36 V d.c.) *10) 120 (72 V d.c.) *10) 69 (110 V d.c.)	-40 ... +80	+30 (+25/-32) () for 37,5 & 74 V d.c. only	IP 65	M20 x 1,5 *6)	0,500	6	4	5270 *8)	2
	14	1165 (12 V d.c.) 584 (24 V d.c.) 389 (36 V d.c.) 194 (72 V d.c.) 165 (85 V d.c.) 127 (110 V d.c.)	-40 ... +70	+/- 30%	IP 65	Connector DIN EN 175301- 803 Form A *11)	0,41	7	1	9398 9318	7 8

*5) Required connector: type 0570275

*6) Connector cable gland not supplied, see table »Accessories«

*7) IP-Protection class according to EN60529



*8) Suitable for outdoor installation



*9) Working pressure applied to port 3: -16%


*10) Voltage range: 36 ... 37,5 d.c. and 72 ... 74 V d.c.

*11) Fire & Smoke tested to EN 45545-2 HL3

Spare coils

	Voltage	Power consumption	Model
	24 V d.c.	16,9 W	0000000.0700.0240R
	36 V d.c.	16,9 W	0000000.0700.0360R
	72 V d.c.	16,9 W	0000000.0700.0720R
	110 V d.c.	16,9 W	0000000.0700.1100R
	24 V d.c.	16,9 W	0000000.0800.0240R
	36 V d.c.	16,9 W	0000000.0800.0360R
	72 V d.c.	16,9 W	0000000.0800.0720R
	110 V d.c.	16,9 W	0000000.0800.1100R

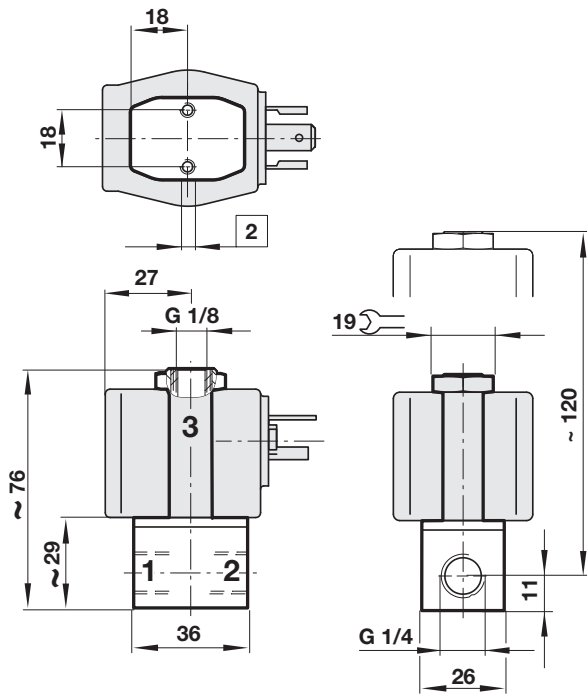
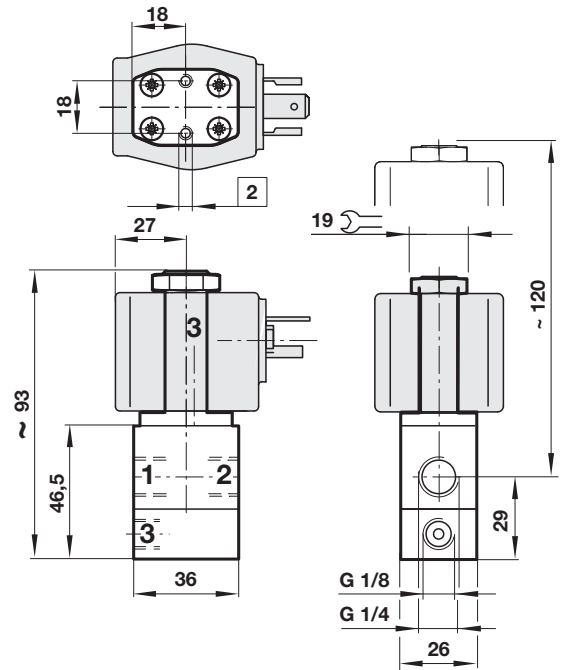
	Voltage	Power consumption	Model
	24 V d.c.	8,9 W	0000000.5220.0240R
	36 V d.c.	8,9 W	0000000.5220.0360R
	72 V d.c.	8,9 W	0000000.5220.0720R
	110 V d.c.	8,9 W	0000000.5220.1100R
	24 V d.c.	8,9 W	0000000.5270.0240R
	36 V d.c.	8,9 W	0000000.5270.0360R
	72 V d.c.	8,9 W	0000000.5270.0720R
	110 V d.c.	8,9 W	0000000.5270.1100R

	Voltage	Power consumption	Model	Model
	24 V d.c.	14,0 W	0000000.9398.0240R	0000000.9318.0240R
	36 V d.c.	14,0 W	0000000.9398.0360R	0000000.9318.0360R
	72 V d.c.	14,0 W	0000000.9398.0720R	0000000.9318.0720R
	110 V d.c.	14,0 W	0000000.9398.1100R	0000000.9318.1100R

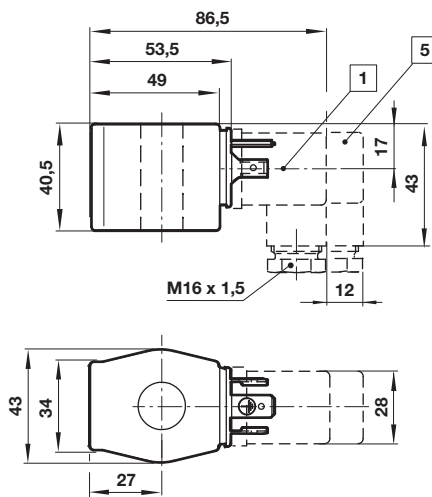
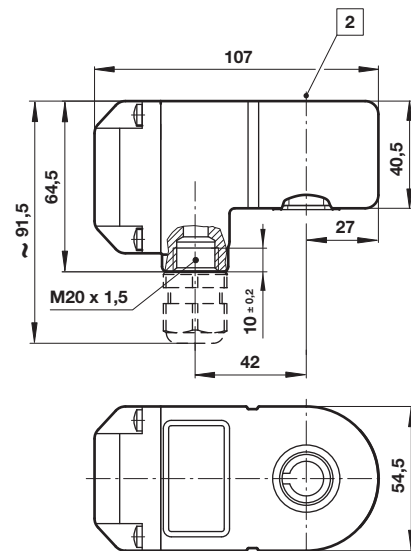
Accessories

Cable gland				Connector DIN EN 175301-803	
Page 4 Thread	Cable Ø	Material	Model		
M 20x1,5	5,0...9,0 mm	PA, UL94 VO	0110854	0570275 (form A)	
M 20x1,5	6,0...12 mm	PA, UL94 VO	0110855	SPC/991500/5 (form A, F&S*1))	
				SPC/991500/12 (form A, F&S*1), with anti-surge diode)	

*1) Fire & Smoke tested according to EN 45545-2

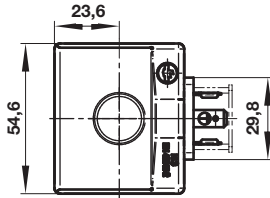
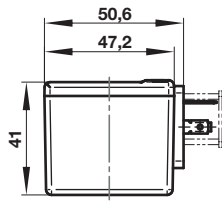
Valves
1

2

 Dimensions in mm
 Projection/First angle

2 M4 x 6 mm deep

Solenoids
3

6


- 1** Connector can be indexed by 4x90°
- 2** Ø 16 or 13 (with spacer tube)
- 5** With cable gland, Pg 13,5

7

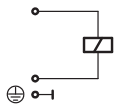


Dimensions in mm
Projection/First angle

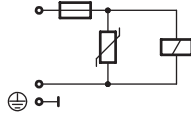


Circuit diagrams

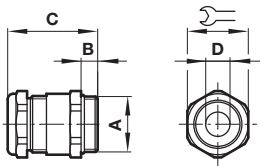
1




4



Cable gland



For cable Ø	A	B	C		Model
5 ... 9	M20 x 1,5	9	36	24	0110854
6 ... 12	M20 x 1,5	9	36	24	0110855

Warning

These products are intended for use in industrial compressed air and rail transport systems only. Do not use these products where pressures and temperatures can exceed those listed under

»Technical features/data«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.