

PROPORTIONAL PRESSURE CONTROL VALVE

VP10 G1/4

- Air piloted proportional pressure valve
- Reliable, rugged design
- Excellent accuracy
- IP 65 environmental protection in normal position

Technical Data

Medium:

Compressed air, filtered to 5 µm, dry and oil free

Flow capacity:

Up to 300 l/min

Air consumption:

Up to 1 bar: 2,8Nl/min,
up to 2 bar: 4,0Nl/min,
up to 4 bar: 7,5Nl/min,
up to 8 bar: 9,0Nl/min

Supply Pressure:

At least 0,7 bar above max.
required output pressure.
Up to 2bar instruments: max 5bar,
up to 8bar instruments: max 10 bar

Ambient temperature:

-40°C ... +85°C

Air supply must be dry enough to avoid ice formation
at temperatures below +2°C

Response time:

< 0,35 seconds for 10 ... 90% or
90 ... 10% of output pressure into a
10cc load (1 bar range instruments)

Supply sensitivity:

> 0,075% span output change
per % supply pressure change

Linearity:

≤ 0,5% of span

Hysteresis:

≤ 0,5% of span

Materials

Body:

Passivated zinc die-casting,
epoxy painted

Cover:

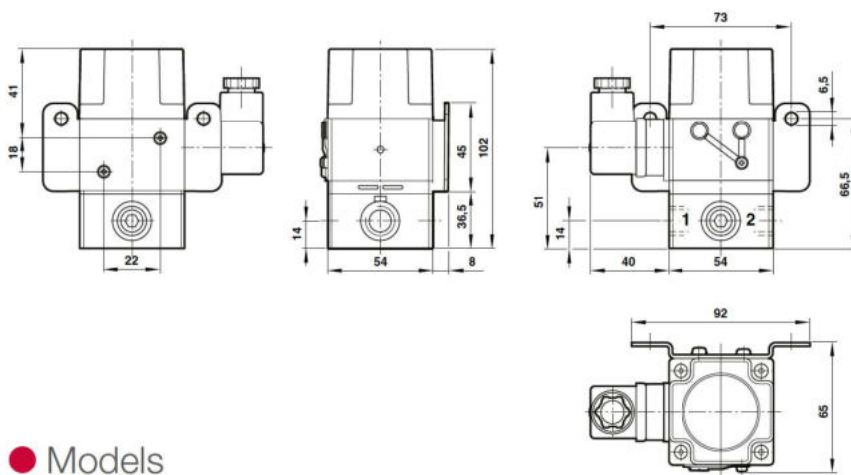
Glass reinforced PA

Diaphragms:

NBR



Dimensions



Models

Model	Port size	Flow (l/min)	Operating pressure (bar)	Control signal	Straight fitting	Elbow fitting
	G1/4	300	0,2 ... 1	4 ... 20 mA	C02250828	C02470828
VP1006BJ401A00	G1/4	300	0,2 ... 6	4 ... 20 mA	C02250828	C02470828
VP1008BJ401A00	G1/4	300	0,2 ... 8	4 ... 20 mA	C02250828	C02470828

Accessories



MINIATURE PROPORTIONAL PRESSURE CONTROL VALVE

VP12 G1/8

- Compact and flexible design
- Reliable, rugged, open-loop device
- Low power consumption

Technical Data

Medium:
Compressed air filtered to 5 µm, oil free and dry air

Supply pressure:
At least 1,5 bar above maximum required output pressure

Degree of protection:
IP20

Ambient temperature:
0°C ... +60°C
Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Linearity:
< 1,5% of span

Hysteresis and deadband:
< 1% of span

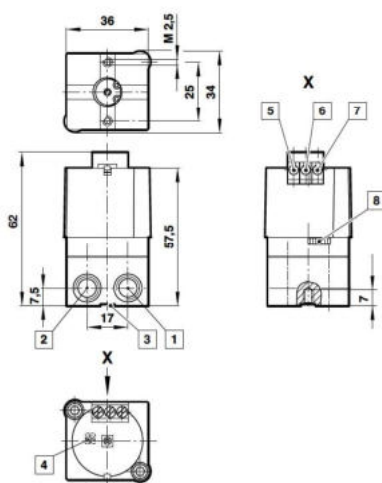
Materials

Body:
Zinc casting & nylon

Diaphragms:
NBR



Dimensions



- [1] Inlet port (G1/8 or 1/8 NPT)
- [2] Outlet port (G1/8 or 1/8 NPT)
- [3] Exhaust, do not obstruct
- [4] Span adjust pot (under lid)
- [5] Power (3 wire units only)
- [6] Signal (2 & 3 wire units)
- [7] Common (2 & 3 wire units)
- [8] Adjust zero

Models

Accessories

Model	Port size	Flow (l/min)	Operating pressure (bar)	Control signal	Straight fitting	Elbow fitting
						
VP1202BG101Q00	G1/8"	200	0 ... 2bar	0 ... 10v	C02250618	C02470618
VP1204BG101Q00	G1/8"	200	0 ... 4bar	0 ... 10v	C02250618	C02470618
VP1206BG101Q00	G1/8"	200	0 ... 6bar	0 ... 10v	C02250618	C02470618
VP1208BG101Q00	G1/8"	200	0 ... 8bar	0 ... 10v	C02250618	C02470618
VP1202BG401Q00	G1/8"	200	0 ... 2bar	4 ... 20mA	C02250618	C02470618
VP1204BG401Q00	G1/8"	200	0 ... 4bar	4 ... 20mA	C02250618	C02470618
VP1206BG401Q00	G1/8"	200	0 ... 6bar	4 ... 20mA	C02250618	C02470618
VP1208BG401Q00	G1/8"	200	0 ... 8bar	4 ... 20mA	C02250618	C02470618

Options

- Manifold version
- PSI settings

PROPORTIONAL PRESSURE CONTROL VALVE

VP50 G1/4

- Port size: 1/4" (ISO G or NPT) or manifold
- Closed-loop air piloted proportional pressure control valve
- High flow
- Excellent performance characteristics
- Fast response time with pressure output display
- Adjustable gain and pressure range
- Low power consumption
- Feedback signal
- Manifold mountable

Technical Data

Medium:

Compressed air, filtered to 5 µm, dry and oil free

Operation:

Air piloted spool valve with integrated electronic pressure control

Supply pressure:

Minimum 2 bar above maximum output required, 12 bar max.

Air Supply sensitivity:

Better than 0,75% span output change per bar supply pressure change

Flow:

Up to 1400 N l/min

Air consumption:

< 5 N l/min

Ambient temperature:

0°C ... +50°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Linearity:

< 1%

Hysteresis and deadband:

< 1%

Materials

Body:

Aluminium

Lid:

Zinc die cast

Front cover:

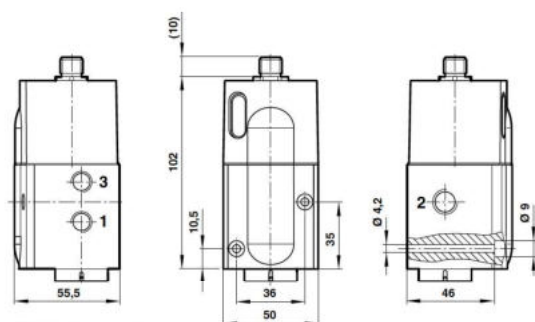
Grivory

End cap:

PA



Dimensions



Models

Model	Port Size	Flow (l/min)	Operating pressure (bar)	Control signal	Straight fitting	Elbow fitting	Silencer	Connector with 5m moulded cable
								
VP5002BJ111H00	G1/4	1400	0 ... 2	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5002BJ411H00	G1/4	1400	0 ... 2	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000
VP5006BJ111H00	G1/4	1400	0 ... 6	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5006BJ411H00	G1/4	1400	0 ... 6	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000
VP5008BJ111H00	G1/4	1400	0 ... 8	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5008BJ411H00	G1/4	1400	0 ... 8	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000
VP5010BJ111H00	G1/4	1400	0 ... 10	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5010BJ411H00	G1/4	1400	0 ... 10	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000

Electrical Information

Electromagnetic compatibility	CE marked: conforms to EC requirements EN 50081-2 (1994) and EN 50082-2 (1995)
Electrical input signal	4 ... 20 mA or 0 ... 10 V factory set
Electrical power input	24 V d.c. ±25% (power consumption <1 W)
Output pressure feedback signal	0 ... 10 V full range
Connections	M12 5 pin

Pin configuration



1	+24 V d.c. supply
2	0 ... 10V feedback
3	Control signal (+ve)
4	Common (DC supply signal and feedback return)
5	Chassis

PROPORTIONAL PRESSURE CONTROL VALVE

VP50S G1/4

- Closed loop air pilot operated proportional pressure control valve with pressure output display
- Fast response time
- High flow
- Excellent performance characteristics
- Adjustable gain
- Adjustable pressure range
- Low power consumption
- Feedback signal
- Manifold mountable

Technical Data

Medium:

Compressed air, filtered to 5 µm, dry and oil free

Operation:

Air piloted spool valve with integrated electronic pressure control

Supply pressure:

Minimum 2 bar above maximum output required, 12 bar max.

Supply sensitivity:

Better than 0,75% span output change per bar supply pressure change

Flow:

Standard units up to 1400 N l/min (see characteristic curves)

Air consumption:

<5 N l/min

Ambient temperature:

0°C ... +50°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Linearity:

< 1%

Hysteresis and deadband:

< 1%

Materials

Body:

Aluminium

Lid:

Nylon

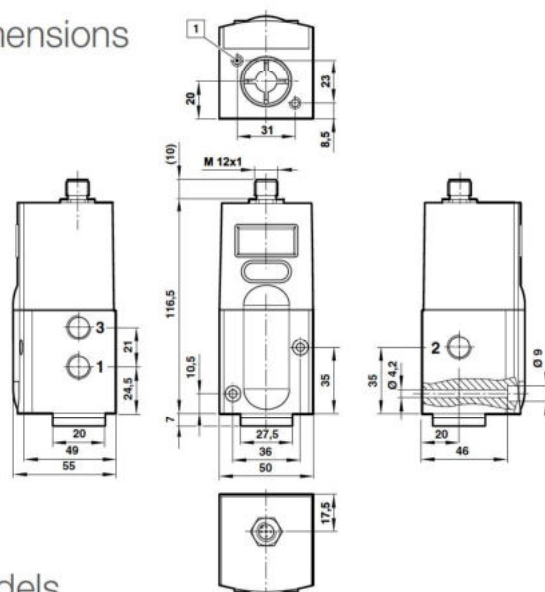
Front cover and End cap:

Nylon

EXPRESS



Dimensions



Electrical Information

Electromagnetic compatibility	CE marked: conforms to EC requirements EN 50081-2 (1994) and EN 50082-2 (1995)
Electrical input signal	4 ... 20 mA or 0 ... 10 V factory set
Electrical power input	24 V d.c. ±25% (power consumption <1 W)
Output pressure feedback signal	0 ... 10 V full range, <±1% Accuracy
Connections	M12x1, 5 pin

Pin configuration

1	+24 V d.c. supply
2	0 ... 10V feedback
3	Control signal (+VE)
4	Common (supply signal and feedback return)
5	Chassis

Models

Model	Port size	Flow (l/min)	Output pressure (bar)	Control signal	Straight fitting	Elbow fitting	Silencer	Connector with 5m moulded cable
VP5002SBJ111H00	G1/4	1400	0 ... 2	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5002SBJ411H00	G1/4	1400	0 ... 2	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000
VP5006SBJ111H00	G1/4	1400	0 ... 6	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5006SBJ411H00	G1/4	1400	0 ... 6	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000
VP5010SBJ111H00	G1/4	1400	0 ... 10	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5010SBJ411H00	G1/4	1400	0 ... 10	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000

Accessories



PROPORTIONAL PRESSURE CONTROL VALVE

VP51 Programmable G1/4

- Closed loop air pilot digital proportional control valve
- Fully programmable with on-board diagnostics
- Ability to set up offline
- Multi-language menu option
- Password protection option at first level functionality
- Instant LED warning functions
- Pressure output display; no gauge necessary
- High speed response

Technical Data

Medium:

Compressed air, filtered to 5 µm, dry and oil free

Output pressure:

User adjustable up to 10 bar

Supply pressure:

Minimum 2 bar above maximum output required, 12 bar max

Ambient temperature:

0°C ... +50°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Air Supply sensitivity:

Better than 0,75% span output change per bar supply pressure change

Flow:

Standard units up to 1400 N l/min (see characteristic curves)

Air consumption:

< 5 N l/min

Linearity:

< 1%

Hysteresis and deadband:

< 1%

Materials

Body:

Aluminium

Lid:

Zinc die cast

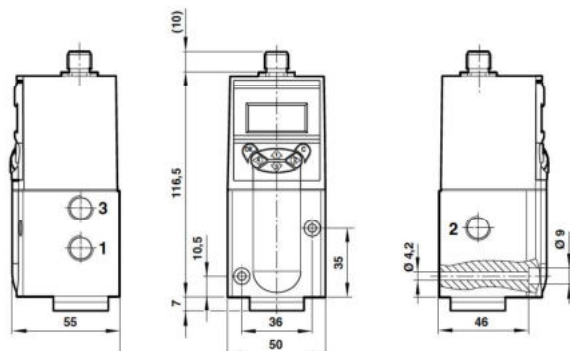
Front cover:

Nylon

EXPRESS



Dimensions



Models

Model	Port size	Max. flow (l/min)	Output pressure (bar)	Control signal	Straight fitting	Elbow fitting	Silencer	Connector with 5 m moulded cable
VP5110BJ111H00	G1/4	1400	0 ... 10	0 ... 10 V	C02250828	C02470828	T40C2800	0250081000000000
VP5110BJ411H00	G1/4	1400	0 ... 10	4 ... 20 mA	C02250828	C02470828	T40C2800	0250081000000000

Accessories



Electrical Information

Electromagnetic compatibility	CE marked: conforms to EC requirements EN 50081-2 (1994) and EN 50082-2 (1995)
Electrical input signal	4 ... 20 mA or 0 ... 10 V factory set
Electrical power input	24 V d.c. ±25% (power consumption <1 W)
Output pressure feedback signal	0 ... 10 V full range or user-configurable switched output
Connections	M12 5 pin

Pin configuration



1	+24 V d.c. supply
2	0 ... 10 V feedback
3	Control signal (+ve)
4	Common (DC supply signal and feedback return)
5	Chassis

CURRENT TO PRESSURE (I/P) ELECTRONIC CONVERTER

140 Failsafe G1/4 or 1/4 NPT

- Excellent accuracy
- Jack Socket for on-site monitoring
- Fail-Safe
- Weatherproof (IP66 or Type 4X)
- Fast response and minimal temperature effect
- High flow

Technical Data

Medium:

Oil free, dry air, min filtered to 50 µm;
internal in-built air filter

Output pressure:

0,2 ... 1 bar

Supply pressure:

1,2 ... 10,3 bar

Response time:

< 1 second (from 0 ... 90% or
90 ... 10% of output pressure into
a 0,5 litre load)

Temperature sensitivity:

Typically < 0,06% span/°C
between -40°C ... +85°C

Supply sensitivity:

< 0,1% of span for full
supply pressure range

Ambient temperature:

-40°C ... +85°C

Air supply must be dry enough to avoid ice formation
at temperatures below +2°C

I.P. Rating:

IP66, NEMA Type 4X

Linearity independent:

Mean < 0,1% of span

Hysteresis & deadband:

Mean < 0,1% of span

Materials

Body:

Aluminium and zinc diecasting

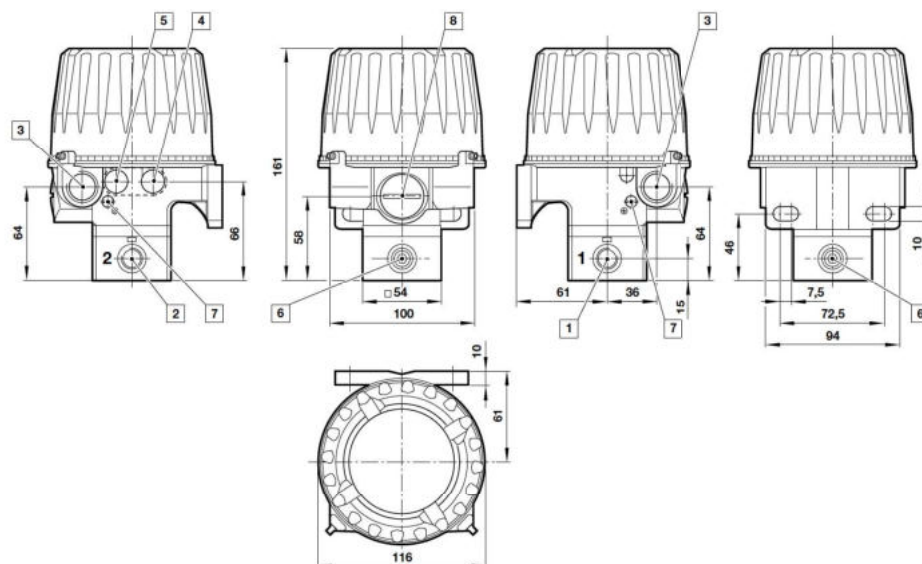
Diaphragms:

NBR

Black epoxy powder coating standard



Dimensions



- 1 Inlet port
- 2 Outlet port
- 3 Conduit entry (1/2 NPT standard)
- 4 Enclosed bleed port (1/8 NPT)
- 5 Exhaust port
- 6 1/4" Gauge port
- 7 External earth
- 8 Air filter

Models

Model	Certification	Port size	Output pressure	Conduit Entry
Multi certified units only – IS/Type N/Exd				
EX14001B141E2	Cenelec only	G1/4	0,2 ... 1 bar	M 20 x 1,5
EX14001BK4EE1	ATEX: Ex ia, Exd, Exn FM/CSA: I.S., N.I.	1/4 NPT	0,2 ... 1 bar	1/2 NPT

Options available: Output pressure monitoring gauge.

Electrical parameters

Input Signal	4 ... 20 mA (two wire) Terminal voltage < 6,5 V at 20 mA
Failure Mode	Pressure falls to below 15 mbar (0,2 psi) in < 2 sec when input signal fails
Overload Protection	100 mA max overload current
Connections	1/2" NPT or M20; internal terminal block with capacity up to 2,5 mm² conductor

CURRENT TO PRESSURE (I/P) ELECTRONIC CONVERTER

422 Fail Freeze 1/4 NPT

- Fail freeze operation
- Minimum vibration effects
- IP 65 environmental protection in normal position

Technical Data

Medium:

Oil free, dry air, filtered to 5 µm

Supply pressure:

at least 0,7 bar above maximum required output pressure maximum 3 bar gauge

Flow capacity:

Up to 300NL/min

Response time:

< 8 sec (typically < 3 sec) from 10% ... 90% of output pressure into a 0,5 litre volume

< 8 sec (typically < 3 sec) from 90% ... 10% of output pressure into a 0,5 litre volume

Temperature sensitivity:

Typically < 0,034% span/°C between -10°C ... +60°C

Supply sensitivity:

< 0,1% of span for full supply pressure range

Ambient temperature:

-20°C ... +70°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Linearity:

≤ 0,5% of span

Hysteresis:

≤ 0,5% of span

Materials

Body:

Zinc diecasting passivated and epoxy painted

Cover:

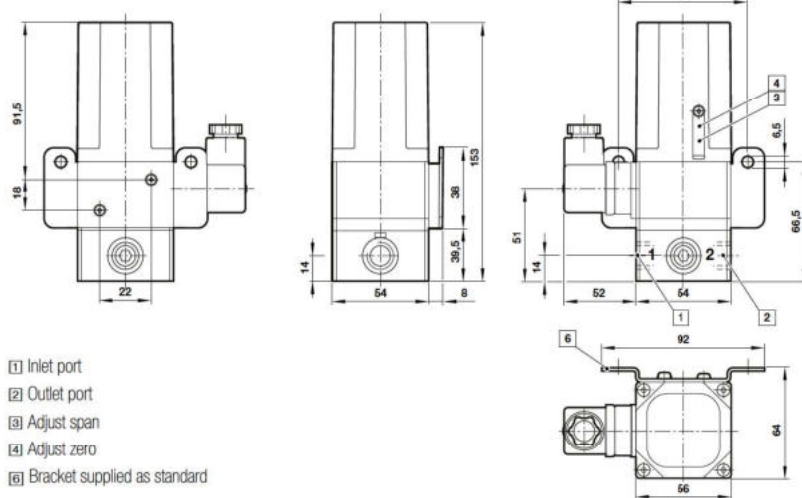
Glass reinforced PA

Diaphragms:

NBR



Dimensions



- [1] Inlet port
- [2] Outlet port
- [3] Adjust span
- [4] Adjust zero
- [5] Bracket supplied as standard

Models

Model	Port	Output pressure
AC2100	1/4 NPT	0,2-1 bar
AC0100	1/4 NPT	3-15 psi
AC0138X	1/4 NPT	0,2 - 1,0 Kg/cm ²

For other port sizes or options please contact your sales representative.

Electrical parameters

Input Signal	4-20 mA (two wire). Terminal voltage typically 7,5 V at 20 mA
Failure Mode	Output pressure held at previous value when input signal fails; drift rate 0,02% in 30 seconds
Overload Protection	100 mA max. overload current. Unit unaffected by short duration reverse current
Connections	30 mm square connector provided (DIN 43650, form A) mountable in 4 directions
Span/Zero	Independently adjustable up to 20% output range

CURRENT TO PRESSURE (I/P) CONVERTER

422 IS Fail Freeze G1/4 or 1/4 NPT

- ATEX I.S. I/P Converter
- Fail freeze operation
- Minimum vibration effects
- Excellent accuracy

Technical Data

Medium:

Oil free, dry air, filtered to 5 µm

Output pressure:

0,2 ... 1 bar

Supply pressure:

at least 0,7 bar above maximum required output pressure maximum 4 bar gauge

Flow capacity:

Up to 250 NI/min

I.P. Rating:

IP65 with piped exhaust

EMC Compatibility:

Compliant and CE marked in accordance with the EC Directive 2004/108/EC tested to BS EN 61000-6-2:2005 BS EN 61000-6-4:2007+ A11:2011

Ambient temperature:

-10°C ... +70°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C

Linearity:

≤ 0,5% of span

Hysteresis:

Typically ≤ 0,5% of span

Materials

Body:

Zinc diecasting passivated and epoxy painted

Cover:

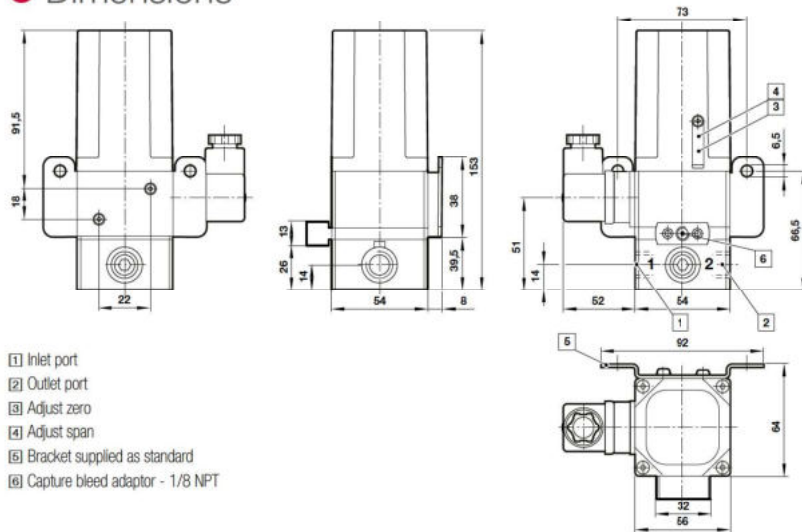
Glass reinforced PA

Diaphragms:

NBR



Dimensions



- [1] Inlet port
- [2] Outlet port
- [3] Adjust zero
- [4] Adjust span
- [5] Bracket supplied as standard
- [6] Capture bleed adaptor - 1/8 NPT

Models

Model	Port size	Output pressure
AC301PJ1	G1/4	3 ... 15 psi
AC301PK1	1/4 NPT	3 ... 15 psi
AC301BJ1	G1/4	0,2 ... 1 bar
AC301BK1	1/4 NPT	0,2 ... 1 bar

Certification

Certification Agency	ATEX Intrinsically safe	IECEX Intrinsically safe
Sira	1/4 NPT Sira 03ATEX2007X	IECEX SIR 11.0095X
	Ex ia IIC T4 Ga (Ta = -40 ... +80°C)	Ex ia IIC T4 Ga (Ta = -40 ... +80°C)
	Ui = 28 V d.c. Ii = 110 mA Pi = 0,8 W Ci = 5 nF Li = 0,24 mH	Ui = 28 V d.c. Ii = 110 mA Pi = 0,8 W Ci = 5 nF Li = 0,24 mH
	1G	

Electrical parameters

Input Signal	4 ... 20 mA (two wire). Terminal voltage typically < 11 V at 20 mA
Failure Mode	Output pressure held at previous value when input signal fails; drift rate ≤ 0,2% of span in 5 minutes
Overload Protection	30 mA max. overload current. Unit unaffected by reverse current
Connections	30 mm square connector provided (DIN 43650, form A) mountable in 4 directions
Span/Zero	Independently adjustable up to 15% output range

PROPORTIONAL FLOW CONTROL VALVE

VP60 G1/4

- High flow rate, low pressure loss
- Calibrated, linear flow characteristic with zero crossover
- Choice of setpoint input: 4 ... 20 mA, ± 5 V, 0 ... 10 V, fixed value, function generator, optional Profibus DP
- Silicon-free to test spec P-VW 3.10.7/01.92
- Fast dynamic response
- Diagnostic function
- CE compliant 89/336/EEC

Technical Data

Medium:

ISO8573-1 Class: 2-3-1, filtered, dried, oil-free

The dynamic performance and service life of the valve may be significantly reduced if using unfiltered air containing water and oil!

Operation:

Directly-controlled spool valve with fast dynamic response

Flow:

1200 N l/min at $p_1 = 6$ bar, $p_2 = 5$ bar

Ambient/Media temperature:

Ambient: $0^\circ\text{C} \dots +60^\circ\text{C}$

Media: $5^\circ\text{C} \dots +60^\circ\text{C}$

Air supply must be dry enough to avoid ice formation at temperatures below $+2^\circ\text{C}$

Leakage:

Typical value: 8 N l/min
($p_1 = 10$ bar and $p_2/4 = 0$ bar)

Degree of protection:

IP65

Service life:

>250 million full-travel operations with recommended air quality

Response sensitivity:

$\pm 0,5$ (% max. Q)*

Hysteresis:

$\pm 0,5$ (% max. Q)*

Repeat accuracy:

$\pm 1,0$ (% max. Q)*

Linearity:

$\pm 3,0$ (% max. Q)*

* Values related to 20°C

Dynamic values stated relate 24 V d.c. power supply

Materials

Electronic enclosure:

PAA

Valve housing and internal parts:

Anodised aluminium

Other static seals:

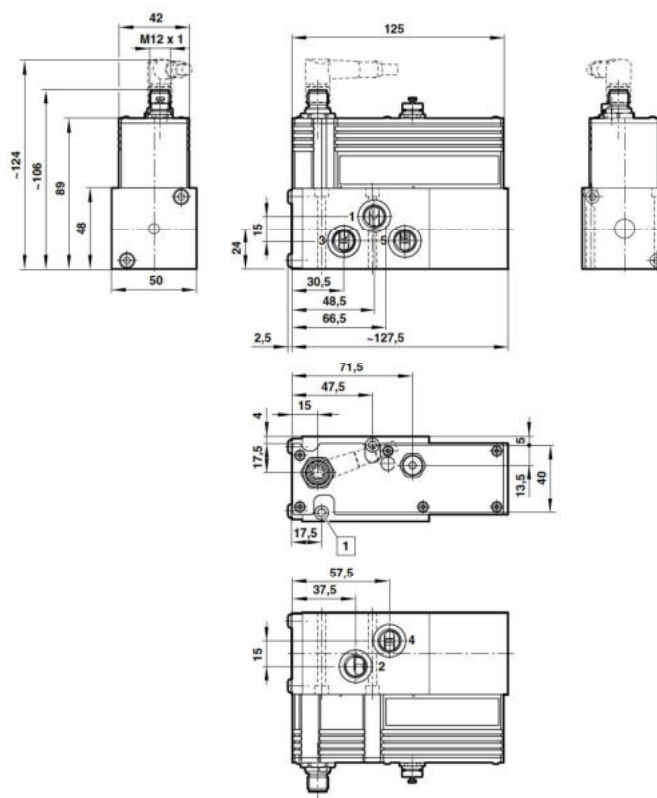
NBR

Actuator magnet:

Fe, surface refined



Dimensions



Models

Model	Orifice (mm)	Output pressure (bar)	Set point	Actual value	Straight fitting	Elbow fitting	Silencer	Straight connector M 12 x 1	Elbow connector M 12 x 1
VP6010LJ461MB200	8	-1 ... 16	4 ... 20 mA	0 ... 10 V/4 ... 20 mA	C02250828	C02470828	T40C2800	0250811000000000	0250813000000000
VP6010LJ661MB200	8	-1 ... 16	-5 V ... +5 V	0 ... 10 V/4 ... 20 mA	C02250828	C02470828	T40C2800	0250811000000000	0250813000000000
VP6010LJ761MB200	8	-1 ... 16	0 ... 10 V	0 ... 10 V/4 ... 20 mA	C02250828	C02470828	T40C2800	0250811000000000	0250813000000000

Accessories

