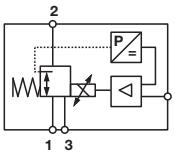
VP50 3 way proportional pressure control valve

- 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
- Adjustable gain and pressure range
- Low power consumption
- Feedback signal
- Manifold mountable



Technical features

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

Operation:
Air piloted spool valve with integrated electronic pressure control

Output (nominal) pressure:
Standard units:
0 ... 2 bar, (0 ... 30 psi);
0 ... 4 bar, (0 ... 60 psi);
0 ... 6 bar, (0 ... 90 psi);
0 ... 8 bar, (0 ... 120 psi);
0 ... 10 bar, (0 ... 150 psi)
Vacuum units:
-1 ... 1 bar (-15 ... 15 psi)

Supply pressure:
Minimum 2 bar (29 psi) above maximum output required.
Standard units: 12 bar max. (174 psi)
Vacuum units: 6 bar max. (90 psi)

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)
Vacuum units up to 300 N l/min

Air consumption:
< 5 N l/min

Ambient/Media temperature:
0 ... +50°C (+32 ... 122°F)
Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F)

Temperature Sensitivity:
Typically better than 0,03% span/°C

Degree of protection:
IP65 in normal operation [exhaust and baffle protected from water ingress at temperatures <+5°C (+41°F)]

Linearity:
< 1%

Hysteresis and deadband:
< 1%

Response Time:
< 80 ms (from 10 ... 90% of output pressure into a 0,1 litre load).

Vibration & shock immunity:
< 3% span
0,75 m/s^2, 5 ... 150Hz,
1 m/s^2, 5 ... 150Hz

Weight:
0,55 kg

Materials:
Compliant to RoHS2 Directive 2011/65/EU
Body: Aluminium
Lid: Zinc die cast,
Front cover: Grivory
End cap: PA

Maintenance:
No maintenace required
Calibration:
Gain, Span, Zero

Electrical details

Electromagnetic compatibility	Conforms to EMC 2014/30/EU EN 50121-3-2:2016 EN 61000-6-2:2005 EN 61000-6-4:2007+A1:2011
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

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Standard proportional valves
Option selector

VP50★★★★★11H00

Output pressure	Substitute
0 ... 2 bar/30 psi	02
0 ... 4 bar/60 psi	04
0 ... 6 bar/90 psi	06
0 ... 8 bar/120 psi	08
0 ... 10 bar/150 psi	10
Unit for pressure	**Substitute**
bar	B
psi	P

Input signal	Substitute
0 ... 10 V	1
4 ... 20 mA	4
Port size	**Substitute**
G 1/4	J
NPT 1/4	K
Manifold	X

For options not shown and any specific requirements please contact the Norgren technical department via; www.norgren.com/ws

Vacuum proportional valves - 1 ... 1 bar (-15 ... 15 psi)

Option selector

VP50★★★★★11HV1

Absolute pressure range	Substitute
0 ... 2 bar/30 psi	02
Unit for pressure	**Substitute**
bar	B
psi	P

Input signal	Substitute
0 ... 10 V	1
4 ... 20 mA	4
Port size	**Substitute**
G 1/4	J
NPT 1/4	K
Manifold	X

Connecting plugs

Elbow connector M12 x 1

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Manifold mount assembly to ISO 2 sub base

Single manifold

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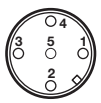
ZZ5M00

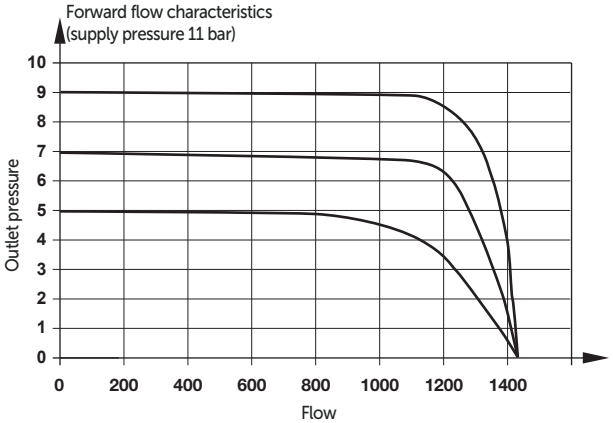
O-rings, flat seal and screws are included

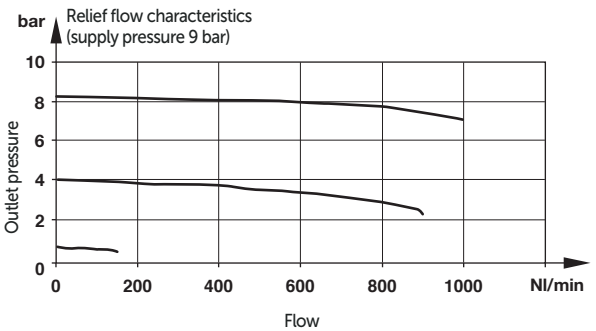
Electrical connector pin looking into the end of the instrument



Pin-No.	Function
1	+24 V d.c. supply
2	0 ... 10 V feedback
3	Control signal (+VE)
4	Common (supply signal and feedback return)
5	Chassis

Characteristic curves (standard units)





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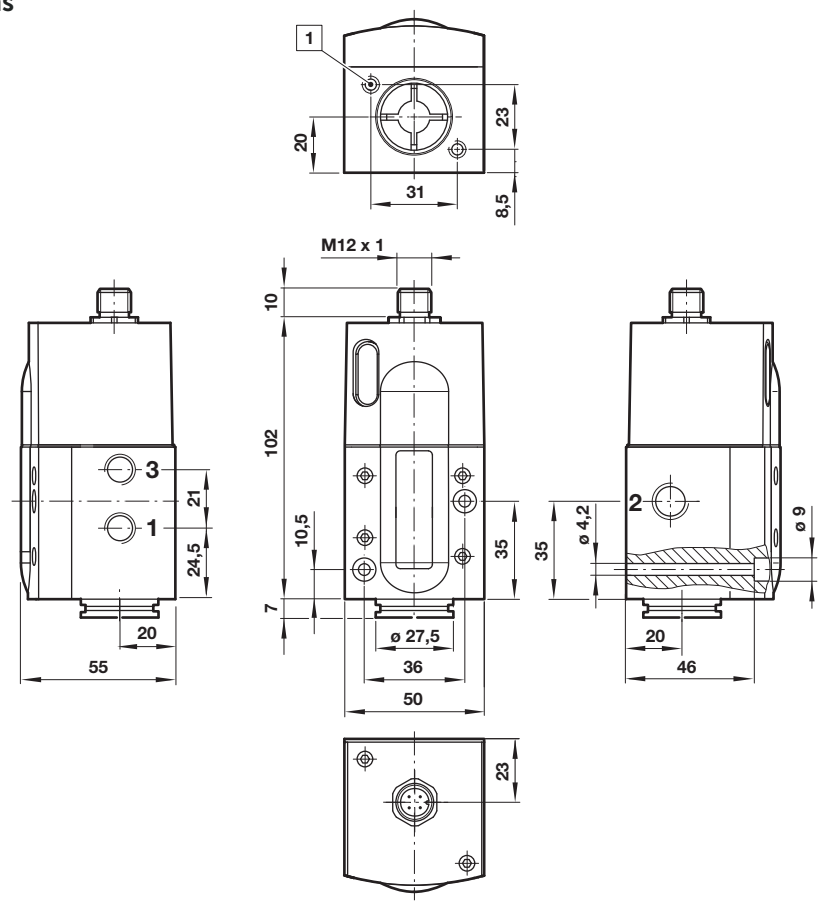
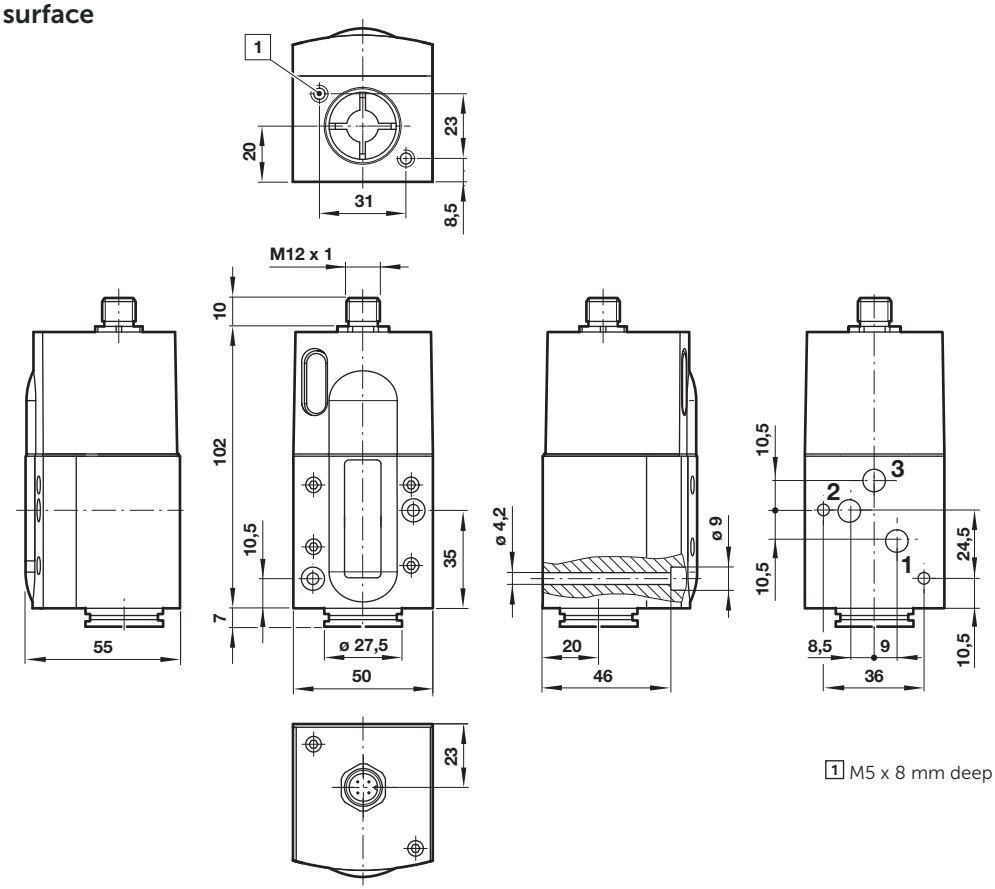
Basic dimensions

Dimensions in mm
Projection/First angle



1 M5 x 8 mm deep

VP50 with manifold surface



1 M5 x 8 mm deep

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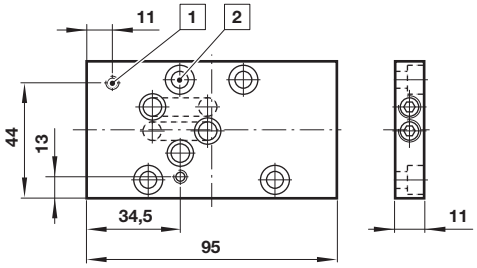
Manifold mount assembly to ISO 2 sub base included all seals and screws

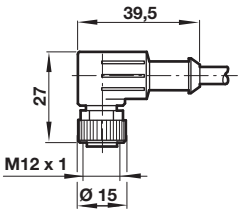


1 Two screws M4 x 50 mm deep to mount the VP50 onto the manifold
2 Four screws M6x16 mm deep to mount the manifold onto the iso subbase

Connector

Model: 0250081

Dimensions in mm
Projection/First angle



Connector, 90°
M12 x 1, 5 pin, female,
5 m cable length, A coded

Warning

These products are intended for use in industrial compressed air 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 Norgren Ltd.

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.

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