



VPFlowScope dP

- > Extreme resistance to pollution and water drops
- > Mass Flow, Pressure & Temperature
- > Display/data logger module for easy recording of data

VPFlowScope dP

The VPFlowScope DP is designed for wet air¹. When properly applied, it can be used in the discharge of the compressor. The VPFlowScope DP is fully compatible with the standard VPFlowScope, which means that it is easy to install and operate without additional training.

Typical applications

- > Wet air, untreated compressed air¹
- > High temperature up to 200 °C (392 °F)
- > High velocity applications (undersized pipes)

¹ The VPFlowScope DP can be used up to a high water content (saturated air). However, as it's based on the Pitot principle, some limitations apply: The rangeability is smaller, no vertical lines, no overflowing with water. See user manual for details.

Specifications

VPFlowScope dP

Flow sensor

Measuring principle	Differential pressure
Flow range	20 ... 200 m _n /sec 65 ... 650 sfps Bi-directional option (calibrated in positive direction only).
Accuracy	2% of reading over 1:10 range, under calibration conditions; Please refer to the user's manual for details. Recommended pipe diameter: 50 mm (2 inch) and up.
Reference temperature	0 degrees Celsius
Gases	Wet compressed air, Dry compressed air, Nitrogen and Inert gases.

Pressure sensor

Pressure sensor range	0 ... 16 barg 0 ... 250 psig
Accuracy	+/- 0.1% Full scale Temperature compensated

Temperature sensor

Temperature sensor range	-40 ... +150 °C -40 ... +302 °F. Icing should be avoided
Accuracy	+/- 1 °C 1.8 °F

Data outputs

Digital	RS485, MODBUS RTU protocol
Analog	4 ... 20 mA output, selectable via software to indicate flow, pressure or temperature

Display/data logger

Technology	Liquid Crystal (LCD)
Back light	Blue, with auto power save
Data logger	500,000 points

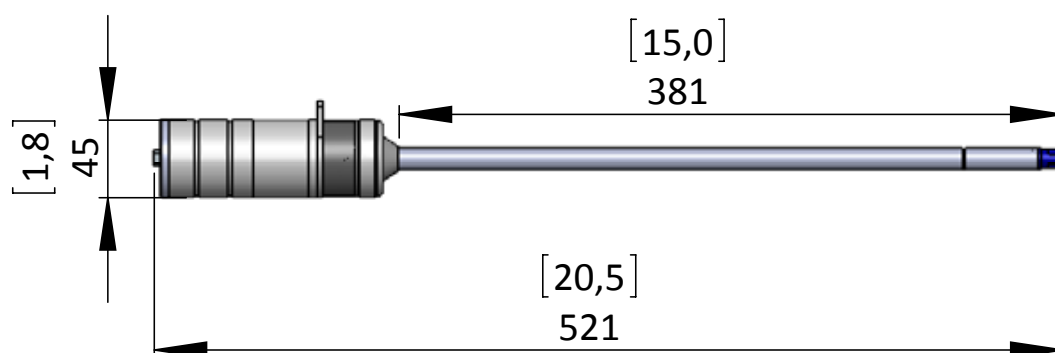
Mechanical & environmental

Probe lengths	400 mm 15 inch (other lengths on request)
Process connection	Compression fitting, 0,5 inch
Pressure rating	PN20, higher pressure on request
Protection grade	IP52 NEMA 5 when mated to display module IP63 NEMA 3 when mated to connector cap
Ambient temperature range	-10 ... +50 °C 14 ... 122 °F

Electrical

Connection type	M12, 5 pin connector, female
Power supply	12 ... 24 VDC +/- 10 % Class 2 (UL)
Power consumption	1 Watt 50 mA @24VDC
UL/ CUL	14 AZ, Industrial Control Equipment
CE	EN 61326-1, EN 50082-1

Technical drawings



Order codes

Flow meters

VPS.R200.P4DP.KIT

VPFlowScope DP start kit, for audits, complete with software

VPS.R200.P4DP.D1

VPFlowScope DP with data logger display module, for auditors and permanent installation (stand-alone)

VPS.R200.P4DP.D2

VPFlowScope DP with connector cap. For Modbus networks

Other probe lengths

The standard P400 probe will do for most air audits and installations. We offer P300 and P600 probes on request.

Accessories

VPA.5000.005

Cable, M12, 5 pole, for permanent connection

VPA.5001.105

Interface box JB5 with 5 m/ 16.4 ft cable + 12 VDC power supply

VPA.5001.900

Connector cap with M12 socket for VPFlowScope sensor module

VPS.R200.P4DP flow range table

SCHEDULE 40 STANDARD SEAMLESS CARBON STEEL PIPE								SCHEDULE 10 STANDARD SEAMLESS CARBON STEEL PIPE					
Size (inch)	DN	ID (inch)	ID (mm)	Min flow (scfm)	Max flow (scfm)	Min flow (m ³ _n /hr)	Max flow (m ³ _n /hr)	ID (inch)	ID (mm)	Min flow (scfm)	Max flow (scfm)	Min flow (m ³ _n /hr)	Max flow (m ³ _n /hr)
2	50	2.1	52.5	92	917	156	1559	2.2	54.8	100	999	170	1697
3	80	3.1	77.9	202	2021	343	3434	3.3	82.8	228	2282	388	3877
4	100	4.0	102.3	348	3481	591	5913	4.3	108.2	390	3897	662	6621
6	150	6.1	154.1	790	7899	1342	13420	6.4	161.5	868	8678	1474	14743
8	200	8.0	202.7	1368	13678	2324	23238	8.3	211.6	1490	14897	2531	25309
10	250	10.2	259.1	2234	22341	3796	37957	10.4	264.7	2332	23316	3961	39612
12	300	11.9	303.2	3060	30604	5199	51994	12.4	314.7	3296	32965	5601	56006
16	400	15.0	381.0	4832	48316	8209	82087	15.6	396.8	5242	52420	8906	89058
20	500	18.8	477.8	7599	75994	12911	129110	19.6	496.9	8219	82191	13964	139638

The ranges apply only to compressed air and nitrogen. Contact us for other gases. The field accuracy of an insertion probe is typically +/- 5% due to installation conditions. Insertion probes may not be used for official compressor testing.