

Positive displacement flow sensors

Series VZAL

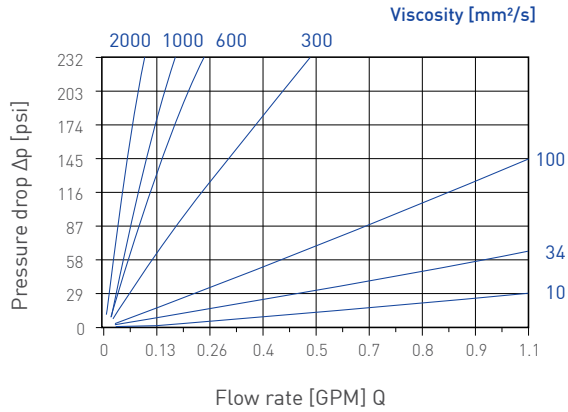


Technical data				
Type	VZ 0.04AL	VZ0.2AL	VZ2AL	VZ5AL
Size	0.04	0.2	2	5
Measuring range [GPM]*	0.005...1.06	0.04...4.23	0.26...17.2	0.26...52.8
Viscosity of medium	20...4000 mm ² /s	1...3000 mm ² /s	20...4000 mm ² /s	20...4000 mm ² /s
Measuring accuracy **	±2 % of reading	±1 % of reading	±2.5 % of reading	±1 % of reading
Repeatability	Up to 0.5 % under same conditions			
Pressure rating [psi]	Max. 2901	Max. 2321	Max. 2321	Max. 1160
Pressure peaks [psi]	Max. 3481	Max. 2901	Max. 2901	Max. 1450
Medium temperature range	14...176 °F integrated preamplifier 32...140 °F without preamplifier (for TD8250)			
Thread connection	G¼	G¾	G¾	G 1
Weight [lb]	1.1	1.5	4.2	13.2
Volume per pulse [cm ³]	0.04	0.245	2	5.222
Number of output channels	1	2	1	1
Output signal				
→ Signal shape	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 %	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 %	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 %	Square wave, pulse signal, PNP, pulse duty ratio 1:1 ±15 %
→ Pulse rate	94 636.00 pulses/gallon	15 450.77 pulses/gallon	1892,72 pulses/gallon	724.90 pulses/gallon
→ Resolution	0.04 ml/pulse	0.245 ml/pulse	2 ml/pulse	5.222 ml/pulse
Indication	Cable socket with one LED for pulse signal	Cable socket with two LED for pulse signal (two channels)	Cable socket with one LED for pulse signal	Cable socket with one LED for pulse signal
Electrical connection	Plug connector incl. cable socket			
Power supply	12...30 V DC reverse polarity protection			
Power input	0.6 W short circuit proof	0.9 W short circuit proof	0.6 W short circuit proof	0.6 W short circuit proof
Degree of protection EN 60529	IP65			

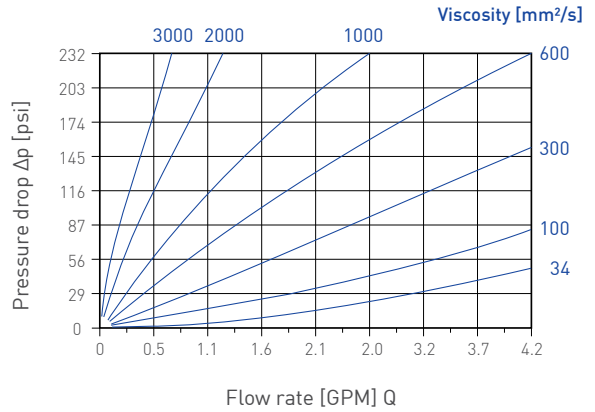
* For media with high viscosity the measuring range is reduced.
The max. pressure drop shouldn't exceeded 232 psi (see pressure drop diagrams).

** at 20 cSt

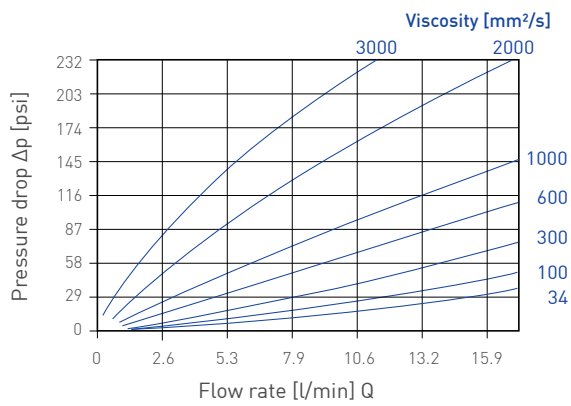
Typical pressure drop VZ0.04AL



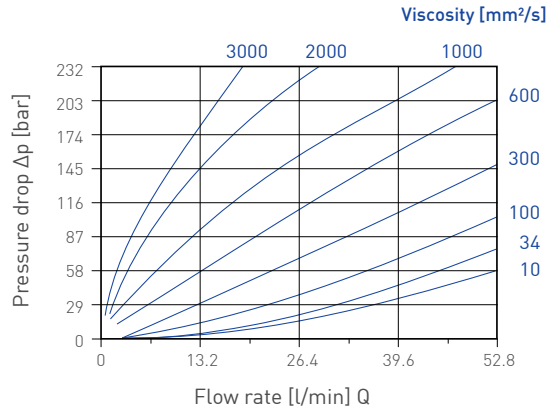
Typical pressure drop VZ0.2AL



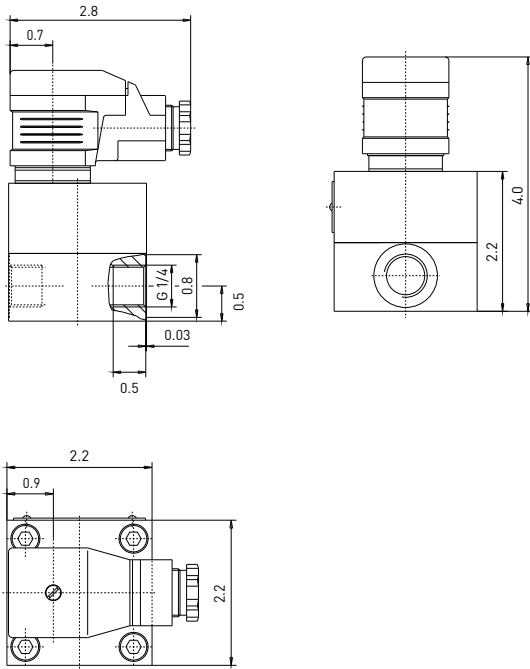
Typical pressure drop VZ2AL



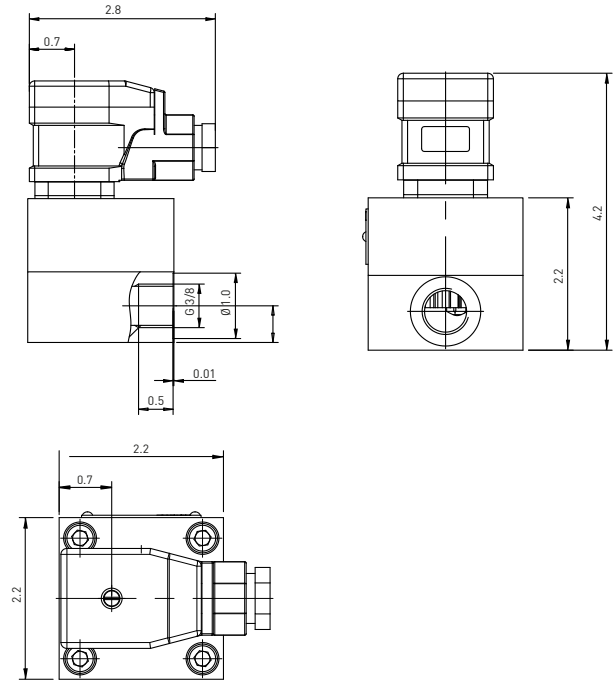
Typical pressure drop VZ5AL



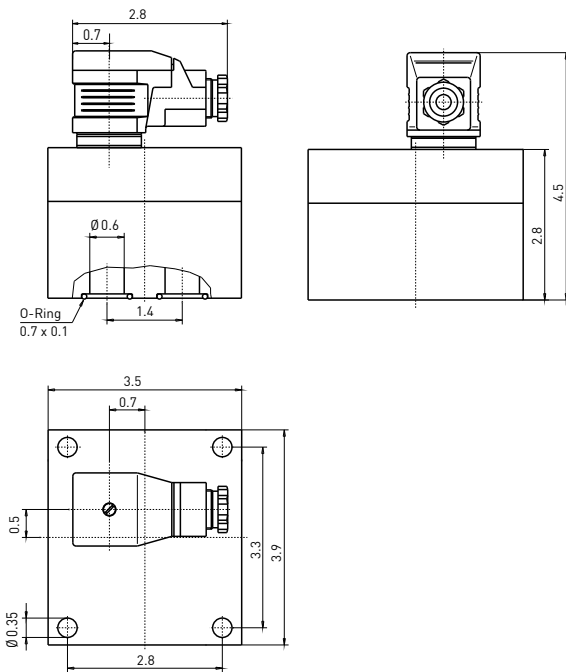
VZ0.04AL



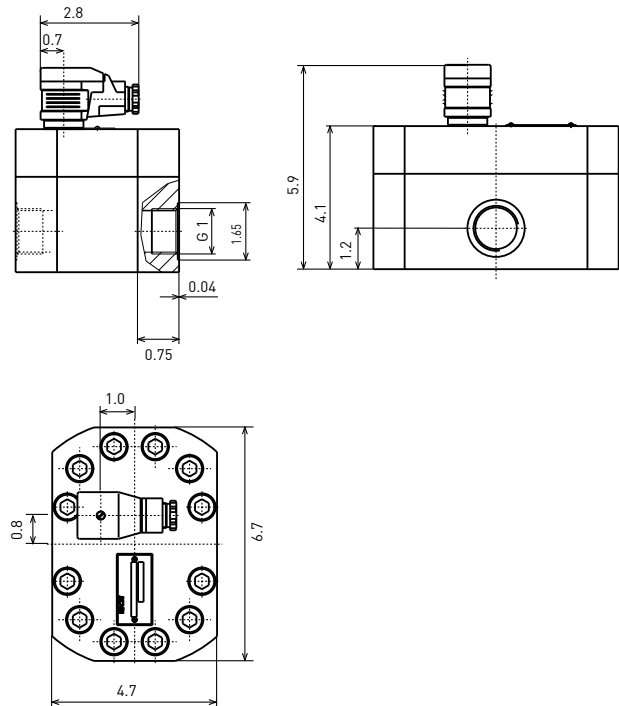
VZ0.2AL



VZ2AL



VZ5AL



Material				
Type	VZ0.04AL	VZ0.2AL	VZ2AL	VZ5AL
Housing	Aluminium, gold-color anodized	Aluminium, gold-color anodized	Aluminium AlMgSi F30 (hard coated)	Aluminium AlMgSi F30 (hard coated)
Gear wheels	Stainless steel 1.4462	Steel 1.7139	Steel 1.7139	Steel 1.7139
Bearings	Ball bearings	Ball bearings stainless steel	Sleeve bearings (P10)	Ball bearings
Seals	FKM	FKM	FKM	FKM

Order code			Example → VZ004ALV31	I00U
Type	Size			
VZ0.04AL	0,04		VZ004ALV31	
VZ0.2AL	0,2		VZ020ALV31	
VZ2AL	2		VZ200ALV31	
VZ5AL	5		VZ500ALV31	
Preamplifier				
Integrated				I00U
Without preamplifier (for TD8250)				K00U

Local displays, series TD8250

The local display TD8250 is simply fitted between the plug connector plug and the cable socket of VZGG, VZVA or VZAL positive displacement flow sensors. It is programmable via two buttons which are located behind the front panel. It can be set to display either the actual flow rate or the total volume (counter function), as required. The TD8250 is available in three different output signal versions:

- Pulse output (2-channel, depending on flow sensor)
- Analog output 0(4)...20 mA
- Two alarm contacts

It is also easy to retrofit onto existing flow sensors. To do this, merely remove the amplifier board from the cable socket.

Technical data	
Signal input	Pulse signal from flow sensor
Programming	Via 2 buttons, data retention on power off
Display	Four-digit LED display, red, 7.6 mm high
Power supply	19...28 VDC, optional 10...19 VDC
Current consumption	Max. 120 mA
Ambient temperature	32...140 °F
Storage temperature	-13...185 °F
Output signals	Pulse output (2-channel, depending on flow sensor) or analog output 0(4)...20 mA or 2 alarm contacts max. 24 VDC / 1 A
Housing [inch]	Aluminium, 2.36 x 1.38 x 2.36 (W x H x D) without plug connector
Weight [lb]	Approx. 0.26
Degree of protection EN 60529	IP65
Electrical connection	Plug connector DIN EN 175301-803-A, 4 pin



Order code	Example → ED825F	60
Output signals		
Pulse output	ED825F	
Analog output 0(4)...20 mA	ED825A	
Two alarm contacts	ED825R	
Power supply		
19...28 VDC (standard)		60
10...19 VDC (option)		50