

VVX

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VVX20

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VVX20 QuickFasten

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Your advantages

Series	VVX
	<ul style="list-style-type: none"> • No mechanical wear → Flow sensor for liquids with no moving parts • Highest strength and performance → Rugged glass fibre reinforced plastic • Completely encapsulated piezoceramic sensor to detect the vortices → No direct contact with the medium • Wide measuring span (up to 1:21), integrated temperature sensor, high interference resistance, • wetted parts metal-free, traceability by serial number, thread connection or QuickFasten

Technical data	VVX15	VVX20	VVX25
Nominal diameter	DN 15	DN 20	DN 25
Process connection	G¾-ISO 228 male, incl. O-rings	QuickFasten or G1-ISO 228 male, incl. O-rings	G 1¼-ISO 228 male, incl. O-rings
Inner diameter	Ø 13 mm	Ø 19 mm	Ø 25 mm
Flow range	2...40 l/min	5...80 l/min	7...150 l/min
Accuracy	±2 % of range*, deviations with high viscous media		
Repeatability	±0,5 % or ±1 %, see temperature ranges ambient		
Medium	Water and aqueous solution		
Pressure rating	PN 10		
Degree of protection EN 60529	IP65*** and IP67***		
Temperature ranges			
Medium	5...90 °C, -20...90 °C**		
Ambient	5...70 °C → Repeatability ±0,5 %, -20...5 °C → Repeatability ±1 %		
Electrical data			
Electrical connection	5-pin plug connector M12 x 1		
Power supply	8...30 V DC or 5 V DC (±5 %) or 12...24 VDC****		
Current consumption	< 15 mA		
Approvals			
	WRAS pending		
Option			
	Recognized component ETL according to UL und CSA Standards		

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Three different versions available:

- Frequency output (1)
- Analogue 0.5...3.5 V and frequency output (2)
- Analogue 0...10 V or 4...20 mA and frequency output (3)

Frequency output (1)	VVX15	VVX20	VVX25
Output signal flow	Frequency signal, square wave, pulse duty ratio 50:50, signal current max. 20 mA		
Pulse rate	500 1/l (optional 3...1000 1/l)	200 1/l (optional 2...800 1/l)	100 1/l (optional 1...500 1/l)
Output signal temperature	Pt1000 2 wire, class B or NTC 10.74k, B 0/100 3450 or none		

Analogue output (2)	VVX15	VVX20	VVX25
Output signal flow	0.5...3.5 V		
Scaling	2...40 l/min	5...80 l/min	7...150 l/min
Voltage rate → 0.5...3.5 V	0.07895 V / l/min	0.04000 V / l/min	0.02098 V / l/min
Output signal temperature	Voltage signal 0.5...3.5 V corresponds to 0...90 °C or Pt1000 2 wire, class B or NTC 10.74k, B 0/100 3450 or none		

Analogue output (3)	VVX15	VVX20	VVX25
Output signal flow	0...10 V or 4...20 mA		
Scaling	0...40 l/min	0...80 l/min	0...150 l/min
Voltage rate → 0...10 V	0.25000 V / l/min	0.12500 V / l/min	0.06667 V / l/min
Current rate → 4...20 mA	0.40000 mA / l/min	0.20000 mA / l/min	0.10667 mA / l/min

* Test conditions:

- Test medium water
- Media temperature 20...30 °C
- Inlet pressure 7...10 bar
- Defined inlet and outlet pipes (see operating manual)

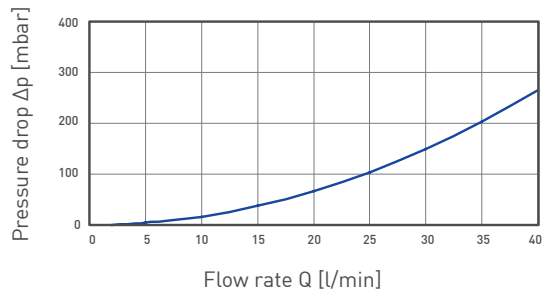
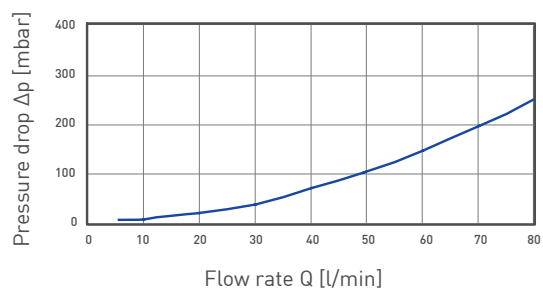
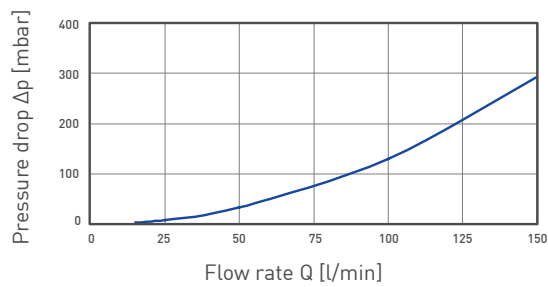
*** With attached cable socket only

**** Only available for output signal flow 4...20 mA and 0...10 V

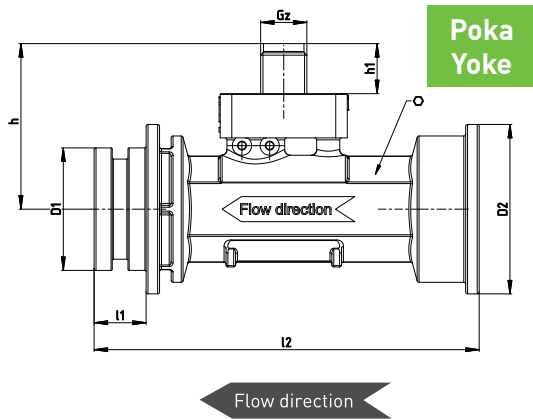
** Temperature cycle test: -20 °C / 70 °C, 0 % rH, cycle time 1.5 h, temperature gradient approx. 2.5 K/min, hold time at -20 °C and 70 °C 10 min each, 90 cycles: no failures

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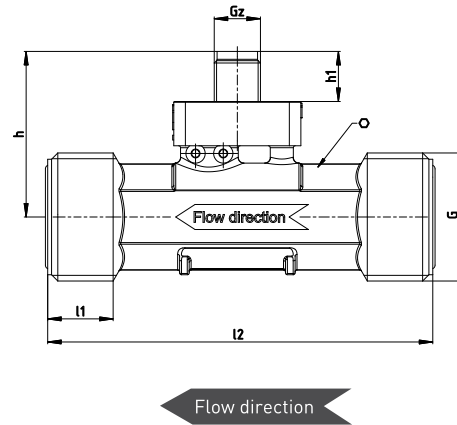
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Typical pressure drop VVX15**Typical pressure drop VVX20****Typical pressure drop VVX25**

VVX20 QuickFasten



VVX threaded versions



Dimensions [mm]	h	h1	D1	D2	l1	l2	G	Gz	○ Width across flats
Threaded version									
VVX15	40	13			16,5	80	G ¾	M12 x 1	19
VVX20	43	13			16.5	100	G 1	M12 x 1	24
VVX25	46	13			16.5	95	G 1¼	M12 x 1	30
Quickfasten									
VVX20	43	13	31.8	44	13.5	100		M12 x 1	24

Materials in contact with media	
VVX15, VVX20, VVX25	
Body /tube	PPS Fortron® 40 % glass fibre reinforced
Sensor	ETFE Tefzel®
O-rings	EPDM

Version frequency output

Order code						
Nominal diameter						
DN 15	VXA1S		A			514
DN 20 QuickFasten	WXC9S		B			52P
DN 20 G1	WXC9S		B			527
DN 25	WXB2S		B			516
Power supply						
8...30 V DC		G			1	
5 V DC		P			2	
Output signal temperature						
Pt1000				RRRP		
NTC 10.74K				RRRN		
None				0000		
Example order number						
	VXA1S	G	A	RRRP	1	514

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Type		Order number				
VVX15	DN 15, power supply 8...30 VDC, output signal temperature Pt1000	VXA1S	G	A	RRRP	1 514
VVX20	DN 20 G1, power supply 5 VDC, without output signal temperature	WXC9S	P	B	0000	2 527
VVX25	DN 25, power supply 8...30 VDC, output signal temperature Pt1000	WXB2S	G	B	RRRP	1 516

Version analogue output (0.5...3.5 V) and frequency output

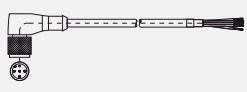
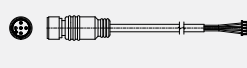












Order code						
Nominal diameter						
DN 15	VXA1SNA	U1				514
DN 20 QuickFasten	WXC9SNB	UC				52P
DN 20 G1	WXC9SNB	UC				527
DN 25	WXB2SNB	U2				516
Output signal temperature						
0.5...3.5 V*				U1		
Pt1000*				RP		
NTC 10.74K*				RN		
none				00		
Power supply						
8...30 V DC					1	
5 V DC					2	
Example order number						
	VXA1SNA	U1	U1		1	514

Version analogue output (0...10 V or 4...20 mA) and frequency output

Order code		
Nominal diameter		
DN 15	VVXA1SGA	K003514
DN 20 QuickFasten	VVXC9SGB	N00352P
DN 20 G1	VVXC9SGB	N003527
DN 25	VVXB2SGB	L003516
Output signal flow		
0...10 V	V	
4...20 mA	A	
Example order number	VVXA1SGA v	K003514

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Type		Order number
VVX15	DN 15, output signal flow 4...20 mA	VVXA1SGA A K003514
VVX20	DN 20 G1, output signal flow 4...20 mA	VVXC9SGB A N003527
VVX25	DN 25, output signal flow 4...20 mA	VVXB2SGB A L003516

Order code				
Type	Accessories		Length	Order number
V VX15 V VX20 V VX25		Connection cable with 5 pin cable socket M12 x 1, angle type molded lead 5 x 0.34 mm², sheathing material PVC (Tmax = 80 °C)*	1 m	XVWX040
			2 m	XVWX051
			3 m	XVWX039
			5 m	XVWX041
			10 m	XVWX042
		Connection cable with 5 pin cable socket M12 x 1, molded lead 5 x 0.34 mm², sheathing material PVC, 4 pin Molex MicroBlade wire-to-board housing, (Tmax = 80 °C)	1.5 m	XVWX065
Type	Accessories		Order number**	
V VX15		Screw coupling G 1/2, brass	BVWX1007	
		Soldering coupling Ø 15 mm, brass	BVWX1008	
V VX20		O-ring for QuickFasten, EPDM	XVWX061	
		Joint clip QuickFasten, stainless steel	XVWX052	
		Soldering coupling for QuickFasten, inlet side	BVWX1012	
		Soldering coupling for QuickFasten, outlet side	BVWX1011	
		Screw coupling G 1***, brass, compatibility type	BVWX1021	
V VX25		Screw coupling R1, brass	BVWX1003	
		Soldering coupling Ø 28 mm, brass	BVWX1004	
		Bonding coupling Ø 25 mm, PVC	BVWX1005	
		Screw coupling G 1, stainless steel 1.4571	BVWX1006	
		Screw coupling G 1 1/4***, brass, compatibility type	BVWX1022	

* Connection cable with UL approval on request

** Supplied piecewise

*** Two pieces are required for the assembly

