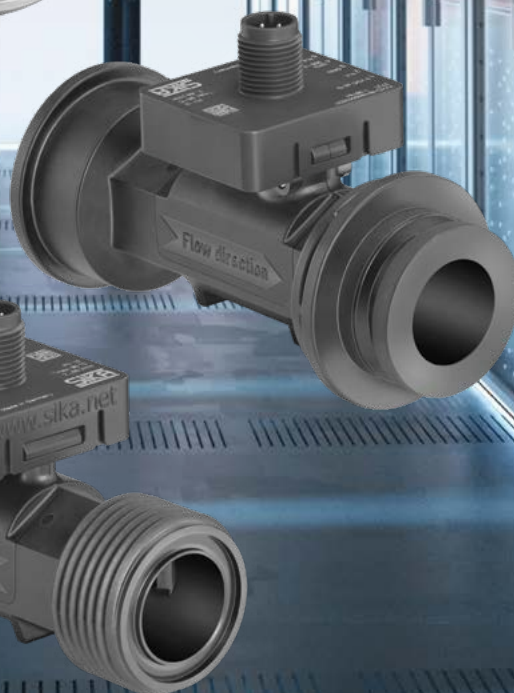


DN 15 - DN 20 - DN 25 - DN 32 - DN 40

Stainless steel - Brass - Plastic

Multi-sensors - flow and temperature



Vortex flow sensors

for flow measuring

**MADE
IN
GERMANY**

Technical data

Common Technical data	
Medium	Water and aqueous solution
Degree of protection EN 60529 with attached cable socket	IP65 and IP67
Electrical data	
Electrical connection	4- or 5-pin plug connector M12 x 1
Power supply for output signal → Push Pull or NPN → NPN → 4...20 mA or 0...10 V → IO-Link with Push Pull	8...30 V DC 5 V DC (±5 %) 12...24 V DC (±10 %) 24 V DC (±10 %)
Current consumption	< 15 mA
Temperature ranges	
Medium	-20...90 °C 100 °C @ max. 80 % Qmax and 60 °C ambient (V VX 15/20/25 stainless steel only)
Ambient	-22...70 °C (-30 °C with medium min. +3.5 °C for max. 24 h over the product life)
Storage	-30...70 °C
Approvals	
	
	 • Conforms to ANSI UL Std.61010-1 • Cert. to CAN/CSA C22.2 No.61010-1

V VX 15 // V VX 20 // V VX 25 // Plastic

Technical data	VVX15	VVX20	VVX20 LowFlow	VVX20 Low Delta p	VVX25
Nominal diameter	DN 15	DN 20			DN 25
Process connection	G¾-ISO 228 male, incl. O-rings	G1-ISO 228 male, incl. O-rings or QuickFasten without O-rings			G 1¼-ISO 228 male, incl. O-rings
Pressure rating	PN 10				
Inner diameter [mm]	Ø 13	Ø 19			Ø 25
Flow measuring					
Flow range*	2...40 l/min	5...80 l/min	2...65 l/min	2.5...85 l/min	7...150 l/min
Accuracy* → at < 50 % of range	±2 % of range	±0.75 % of range	±(1 % of range + 0.5 % of reading)	±0.8 % of range	±2 % of range
→ at > 50 % of range	±2 % of range	±1.5 % of reading	±(1 % of range + 0.5 % of reading)	±1.6 % of reading	±2 % of range
Repeatability	±1 % at -20...5 °C ambient temperature, ±0.5 % at 5...70 °C ambient temperature				
Pulse rate [1/l]	500 (optional 3...1000)	200 (optional 2...800)			200 (optional 1...500)
Frequency output					
Temperature measuring					
Measuring range	-20...90 °C				
Accuracy	±1 k				
Response time	t ₅₀ : approx. 10 s, t ₉₀ : approx. 21 s				
Materials in contact with media					
Body /tube	PPS GF40				
Sensor	ETFE or PFA (VVX20 LowFlow and VVX20 Low Delta p)				
O-rings	EPDM				

VVX15 // VVX20 // VVX25 // Stainless steel

Technical data	VVX15	VVX20	VVX25
Nominal diameter	DN 15	DN 20	DN 25
Process connection	G¾-ISO 228 male	G1-ISO 228 male	G 1¼-ISO 228 male
Inner diameter [mm]	Ø 13	Ø 19	Ø 25
Pressure rating	PN 16		
Flow measuring			
Flow measuring range*	1.5...35 l/min	3.5...85 l/min	6...145 l/min
Accuracy* → at < 50 % of range → at > 50 % of range	±1 % of range ±2 % of reading		
Repeatability	±0.5 % or ±1 %		
Pulse rate [1/l] Frequency output	500	200	200
Temperature measuring			
Measuring range	0...100 °C		
Accuracy	±1 k		
Response time	t ₅₀ : approx. 1 s, t ₉₀ : approx. 3 s		
Materials in contact with media			
Body / tube	Stainless steel 1.4404		
Sensor	PFA		
O-rings	EPDM		
Immersion sleeve	Stainless steel 1.4571		
Bluff body	PPS GF40		

VVX32 // VVX40 // Brass // Stainless steel

Technical Data	VVX32	VVX40
Nominal diameter	DN 32	DN 40
Process connection	G 1½-ISO 228 male, incl. O-rings	G 2-ISO 228 male, incl. O-rings
Inner diameter [mm]	Ø 32	Ø 40
Pressure rating	PN 16	
Flow measuring		
Flow range*	12...250 l/min	22...400 l/min
Accuracy*	±2 % of range	
Repeatability	±1 % at -20...5 °C ambient temperature, ±0.5 % at 5...70 °C ambient temperature	
Pulse rate [1/l] Frequency output	100	50
Temperature measuring		
Measuring range	0...90 °C	
Accuracy	±1 k	
Response time	t ₅₀ : approx. 1 s, t ₉₀ : approx. 3 s	
Materials in contact with media		
Body / tube	Brass CW617N-DW or stainless steel 1.4581	
Sensor	ETFE	
O-rings	EPDM	
Immersion sleeve	Brass CW724R or stainless steel 1.4571	
Bluff body	PPS GF40	

- * Test conditions:
 → Test medium water
 → Media temperature 20...30 °C
 → Defined inlet and outlet pipes (see operating manual)
 Deviations with media of higher viscosity

VVX Model selection form

Nominal Diameter	Material	Process Connection
☐ DN15 (2-40 l/min)	☐ PPS-GF40	☐ G¾ male thread, including O-rings
☐ DN15 (1.5-35 l/min)	☐ Stainless Steel	
☐ DN20 (5-80 l/min)	☐ PPS-GF40	☐ G1 male thread, including O-rings ☐ Quickfasten without O-rings
☐ DN20 (2-65 l/min)		
☐ DN20 (2.5-85 l/min)		
☐ DN20 (3.5-85 l/min)	☐ Stainless Steel	☐ G1 male thread, including O-rings
☐ DN25 (7-150 l/min)	☐ PPS-GF40	☐ G1¼ male thread, including O-rings
☐ DN25 (6-145 l/min)	☐ Stainless Steel	
☐ DN32 (12-250 l/min)	☐ Brass ☐ Stainless Steel	☐ G1½ male thread, including O-rings
☐ DN40 (22-400 l/min)	☐ Brass ☐ Stainless Steel	☐ G2 male thread, including O-rings

Four different variants available

- Variant I: Frequency output (1)
- Variant II: Analogue 0.5...3.5 V and frequency output (1 + 2)
- Variant III: Analogue 0...10 V or 4...20 mA and frequency output (1 + 3)
- Variant IV: Frequency output with IO-Link (1 + 4)

	☐ Variant I (1)	☐ Variant II (1+2)	☐ Variant III (1+3)	☐ Variant IV (1+4)
Flow output signal	Frequency output 1	0.5...3.5V 2 Frequency NPN 1	☐ 4...20mA 3 + Frequency Push-pull 1 ☐ 0...10V 3 + Frequency Push-pull 1	IO-Link 4 Frequency Push-pull 1
Temperature output signal	☐ Pt 1000* ☐ NTC 10.74K* ☐ None	☐ 0.5...3.5V* ☐ None	☐ None	☐ IO-Link
Power supply	☐ 8...30VDC, output Push-pull ☐ 5VDC, output NPN	☐ 8...30VDC ☐ 5VDC	☐ 12...24VDC	☐ 24VDC
Version	☐ Standard version ☐ ETL-approval version	☐ Standard version ☐ ETL-approval version	☐ Standard version ☐ ETL-approval version	☐ Standard version ☐ ETL-approval version

* Not available for VVX20 QuickFasten and VVX20 LowFlow