

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
Ambient	-20...70 °C
Storage	-20...70 °C
Approvals	
	
	 <ul style="list-style-type: none"> • Conforms to ANSI UL Std.61010-1 • Cert. to CAN/CSA C22.2 No.61010-1

VVX15 // VVX20 // VVX25 // 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	G $\frac{3}{4}$ -ISO 228 male	G1-ISO 228 male	G 1 $\frac{1}{4}$ -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 1.4581		
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 1 $\frac{1}{2}$ -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
<input type="checkbox"/> DN15 (2-40 l/min)	<input type="checkbox"/> PPS-GF40	<input type="checkbox"/> G¾ male thread, including O-rings
<input type="checkbox"/> DN15 (1.5-35 l/min)	<input type="checkbox"/> Stainless Steel	
<input type="checkbox"/> DN20 (5-80 l/min)	<input type="checkbox"/> PPS-GF40	<input type="checkbox"/> G1 male thread, including O-rings <input type="checkbox"/> Quickfasten without O-rings
<input type="checkbox"/> DN20 (2-65 l/min)		
<input type="checkbox"/> DN20 (2.5-85 l/min)		
<input type="checkbox"/> DN20 (3.5-85 l/min)	<input type="checkbox"/> Stainless Steel	<input type="checkbox"/> G1 male thread, including O-rings
<input type="checkbox"/> DN25 (7-150 l/min)	<input type="checkbox"/> PPS-GF40	<input type="checkbox"/> G1¼ male thread, including O-rings
<input type="checkbox"/> DN25 (6-145 l/min)	<input type="checkbox"/> Stainless Steel	
<input type="checkbox"/> DN32 (12-250 l/min)	<input type="checkbox"/> Brass <input type="checkbox"/> Stainless Steel	<input type="checkbox"/> G1½ male thread, including O-rings
<input type="checkbox"/> DN40 (22-400 l/min)	<input type="checkbox"/> Brass <input type="checkbox"/> Stainless Steel	<input type="checkbox"/> 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)

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

* Not available for VVX20 QuickFasten and VVX20 LowFlow