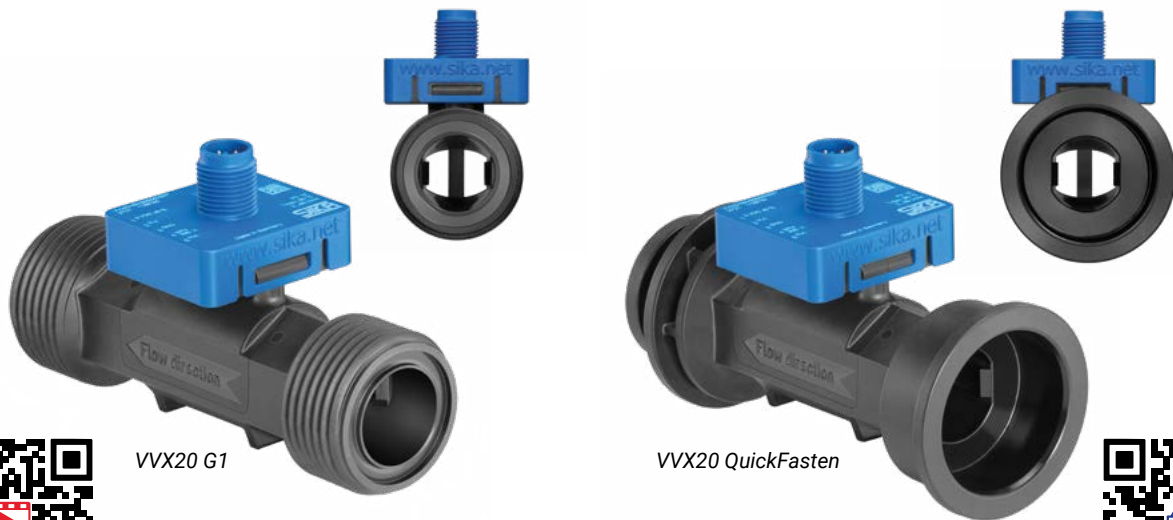


Vortex flow sensors // VVX 20 LowFlow

for fluids



VVX20 G1

VVX20 QuickFasten



Highlights

- Increased efficiency of the heat pump by controlling even at low flow rates
- The low pressure drop of the sensor can help to reduce the power consumption of the pump
- The compact design allows the use even if only little space is available

Technical Data

Nominal diameter	DN 20	
Process connection	G1-ISO 228 male, incl. O-rings or QuickFasten without O-rings	
Process connection	¾" NPT or QuickFasten without O-rings	
Inner diameter	Ø 19 mm	0.75"
Flow measuring range	2...65 l/min*	0.53...17.2 US gpm*
Accuracy	±(1% of range + 0.5% of reading)*, deviations with high viscous media	
Medium	Water and aqueous solutions	
Pressure rating	PN 10	
Degree of protection EN 60529 with attached cable socket	IP65 and IP67	
Temperature ranges		
Medium	-20...90 °C (non-freezing)	-4...194 °F (non-freezing)
Ambient and storage temperature	-20...70 °C	-4...158 °F
Electrical data		
Electrical connection	4-pin plug connector M12 x 1	
Power supply	5 V DC (±5 %)	
Current consumption	< 15 mA	
Pending drinking water approvals		
	WRAS pending	

- * Test conditions:
 → Test medium water
 → Media temperature 20...30 °C / 68...86 °F
 → Defined inlet and outlet pipes (see operating manual)

Output signals

Frequency output and analog output 0.5...3.5 V

Frequency output

Output signal flow Frequency signal, square wave, pulse duty ratio 50:50, signal current max. 20 mA
NPN open collector

Pulsrate [1/l] 200 (optional 2...800)

Pulse rate [pulses/US Gallon] 750 (optional 8...3000)

Analogue output

Output signal flow 0.5...3.5 V

Scaling [l/min] 2...65

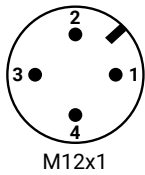
Scaling [US gpm] 0.53...17.2

Voltage rate [V / l/min]
→ 0.5...3.5 V 0.04762

Voltage rate [V / US gpm]
→ 0.5...3.5 V 0.17996

Wiring

Pin assignment

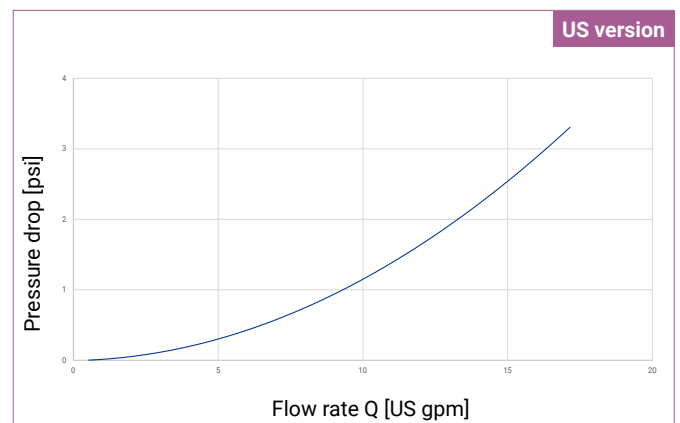
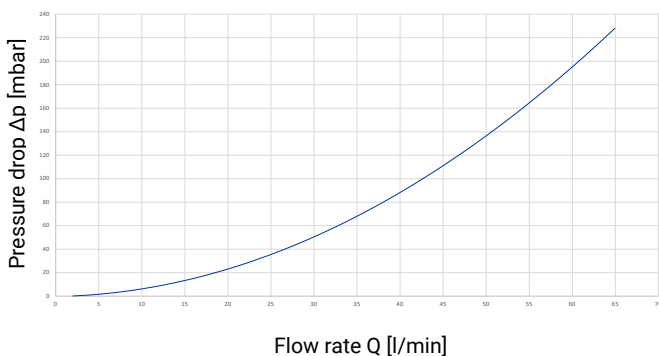


- Pin 1: **+U_B**
- Pin 2: Analog output
- Pin 3: **GND**
- Pin 4: Frequency output

Wire the connecting cable according to the pin assignments shown on the type plate.

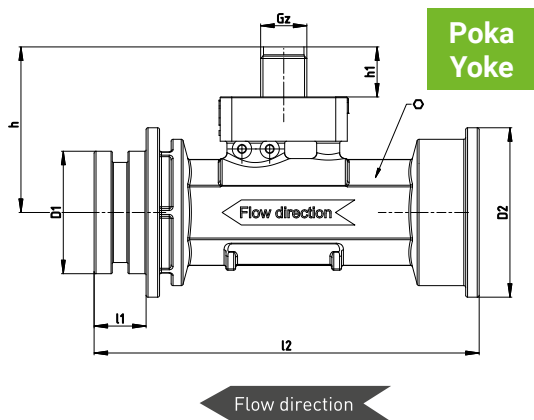
Typical pressure drop

Typical pressure drop VVX20

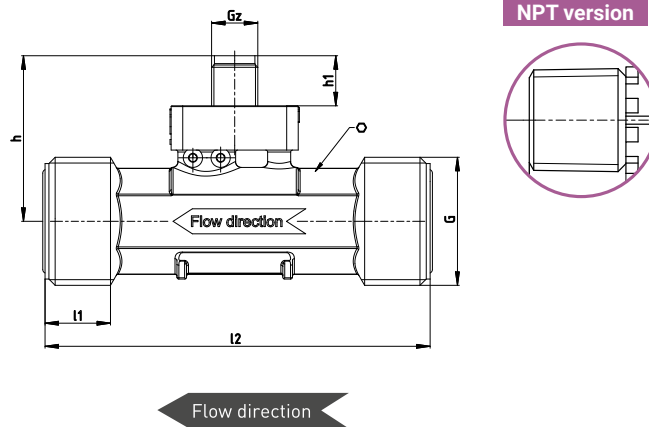


Technical drawings

VVX20 QuickFasten



VVX 20 threaded version



Dimensions

Dimensions [mm]	h	h1	D1	D2	l1	l2	G	Gz	○ Width across flats
Threaded version									
	43	13			16.5	100	G 1	M12 x 1	24
QuickFasten									
	43	13	31.8	44	13.5	100		M12 x 1	24
Dimensions [inch]									
Threaded version									
	1.69	0.51			0.81	3.94	3/4 - 14 NPT	M12 x 1	9.45 and 1 1/8"
QuickFasten									
	1.81	0.51	1.25	1.73	0.94	3.94			

Materials

Materials in contact with media	
Body / tube	PPS
Sensor	PFA
O-rings	EPDM

Article numbers for OEM Versions

OEM Version frequency output NPN open collector, 5 V DC, without temperature signal

Order code			
Nominal diameter, flow range			
VVX20, DN 20 QuickFasten, 2...65 l/min (120...3,900 l/h)	VVXCH	S	NB0000242P
VVX20, DN 20 G1, 2...65 l/min (120...3,900 l/h)	VVXCH	S	NB00002427
Nominal pipe size, flow range			
VVX20, ¾" QuickFasten, 0.53...17.2 GPM (31.8...1,032 US gph)	VVXCK	S	NK0000242P
VVX20, ¾" NPT, 0.53...17.2 GPM (31.8...1,032 US gph)	VVXCK	S	NK00002428

OEM Version analogue output (0.5...3.5 V) and frequency output NPN open collector, 5 V DC, without temperature signal

Order code			
Nominal diameter, flow range			
VVX20, DN 20 QuickFasten, 2...65 l/min (120...3,900 l/h)	VVXCH	S	NBBB00242P
VVX20, DN 20 G1, 2...65 l/min (120...3,900 l/h)	VVXCH	S	NBBB002427
Nominal pipe size, flow range			
VVX20, ¾" QuickFasten, 0.53...17.2 GPM (31.8...1,032 US gph)	VVXCK	S	NKBD00242P
VVX20, ¾" NPT, 0.53...17.2 GPM (31.8...1,032 US gph)	VVXCK	S	NKBD002428