

# Turbine flow sensors // VTY20

## US version available

**Note:** The US versions are separate products.  
The units are not converted, but pre-configured at the factory for the respective variants.



VTY20



### Highlights

- Low wear and extremely long durability due to high quality bearing
- Practically no deviation in mass production due to fixed pulse rate, wide measuring span (up to 1:60),
- High measuring accuracy, mostly independent of fitting position due to integrated flow straightener

### Technical data

<b>Material pipe section</b>	Brass	Stainless steel
<b>Flow range</b>	1...60 l/min (60...3.600 l/h)	
<b>Flow range</b>	0.26...16 US gpm (15.9...951 US gph)	
<b>Accuracy</b>	±1 % of range ±1 % of reading	
<b>Repeatability</b>	±1 %	
<b>Signal output</b>	From 0.8 l/min (48 l/h)	
<b>Signal output</b>	From 0.21 US gpm (12.7 US gph)	
<b>Medium temperature</b>	0...90 °C (non-freezing)	
<b>Medium temperature</b>	32...194 °F (non-freezing)	
<b>Ambient temperature</b>	0...70 °C	
<b>Ambient temperature</b>	32...158 °F	
<b>Pressure rating</b>	PN 16	
<b>Pressure rating</b>	Max. 232 psi	
<b>Nominal diameter</b>	DN 20	
<b>Nominal pipe size</b>	¾"	
<b>Process connection</b>	G 1 male thread	
<b>Process connection</b>	1" NPT male thread	
<b>Sensor</b>	Hall effect sensor	
<b>Output signal</b>	Square wave - frequency signal, NPN open collector	

# Technical data

Technical data		
<b>Material pipe section</b>	Brass	Stainless steel
<b>Pulse duty ratio</b>	50:50	
<b>Pulse rate / K-factor</b>	119 pulses/l	122 pulses/l
<b>Pulse rate / K-factor</b>	450 pulses/gallon	462 pulses/gallon
<b>Electrical connection</b>	80 mm single wire with Molex Mini-Fit® Jr. plug connector (part number 39-01-4036) optional: 0.5 m PVC cable	2 m PVC cable
<b>Electrical connection</b>	3.2" single wire with Molex Mini-Fit® Jr. plug connector (part number 39-01-4036) optional: 19.7" PVC cable	78.7" PVC cable
<b>Power supply</b>	4.5...24 VDC	

## Approvals

### Drinking water approvals

**KTW-BWGL\***: Product hygiene suitability for drinking water according to the 1+ system with external monitoring, [Certificate no. Z-346843-21-Hy112\\_Rev.01](#)

**WRAS\*** (approved product), [Certificate no. 2206802](#)

**ACS\*\*** (Attestation de conformité sanitaire), [Certificate no. 22 ACC LY 578](#)

**Kiwa Regulation 4\*** (KUKreg4) Certification, [Certificate no. 2203738 \(1\)](#)

\* not available for process connection NPT and stainless steel version

\*\* not available for stainless steel version



**NSF/ANSI 372**, [Certificate no. 8492](#)

**NSF/ANSI 61**, [Certificate no. N-8491](#)

Available for:

VY2060MKHNX1N5

VY2060MKHN05N5

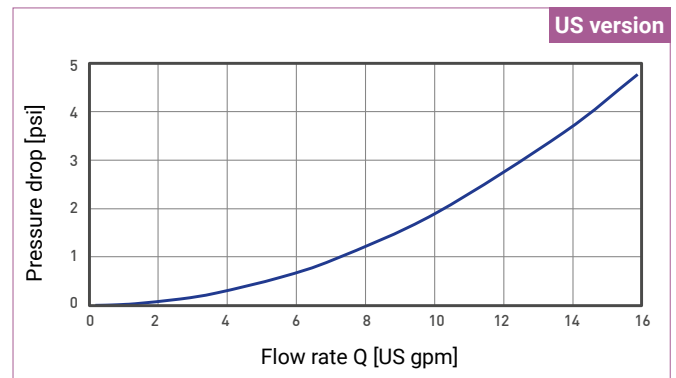
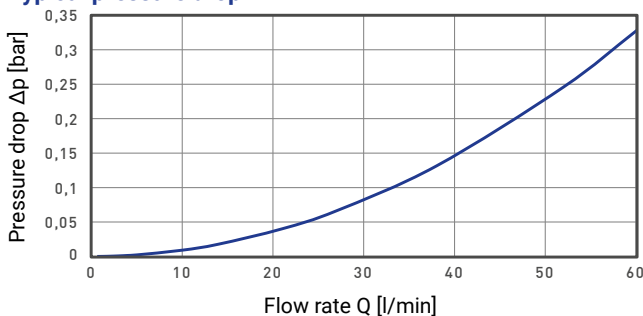
Version with G-thread on request

NSF/ANSI 372  
NSF/ANSI 61



## Typical pressure drop

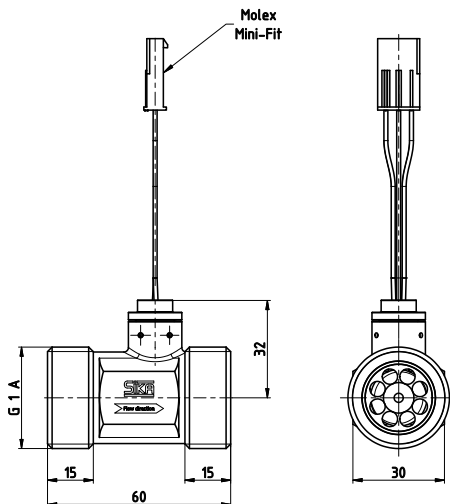
### Typical pressure drop



# Technical drawings

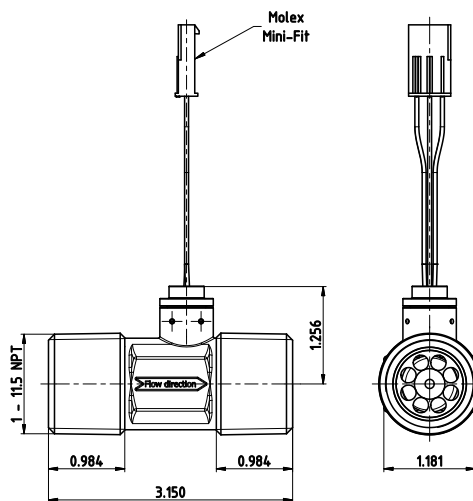
## Threaded version

All Dimensions in mm

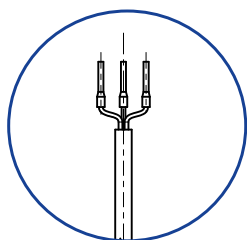


## NPT version

All Dimensions in inch



## Alternative electrical connection

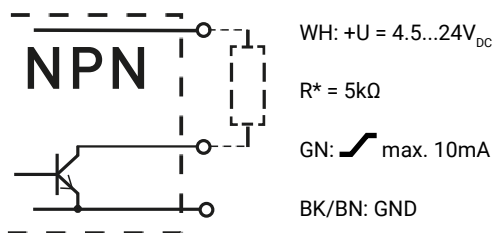


# Materials

Materials in contact with fluid			
VTU20	Stainless steel	G thread, brass	NPT thread, brass
Pipe section	Stainless steel 1.4308	Brass CW617N	Brass CW724R
Turbine cage	PPE+PS Noryl™ 30 % glass fibre reinforced		
Rotor	PPE+PS Noryl™ 30 % glass fibre reinforced		
Magnet	Hard ferrite		
Shaft	Stainless steel / hard metal		
Axial bearing	Sapphire		
Radial bearing	PEEK		
O-ring	EPDM		

# Wiring // Pin assignment

## Wiring

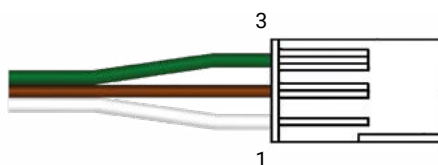
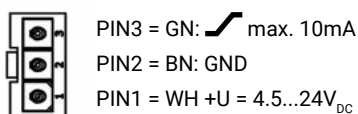


## Colour code

WH = white  
 GN = green  
 BK = black (single wire)  
 BN = brown (PVC cable / Molex)  
 R = resistance

\* Recommended pull-up resistance R ~ 5kΩ

## Pin assignment Molex Mini-Fit® plug



# Article numbers

Order code		
Type		
VTY20, brass	VY2060MAHN	
VTY20, stainless steel	VY2060VAHN	
Electrical connection		
80 mm single wire with Molex Mini-Fit® Jr. plug connector		X1A5
0.5 m PVC cable		05A5
2 m PVC cable		20A5
Example order number	<b>VY2060MAHN</b>	<b>X1A5</b>

Note minimum order quantities.

# Article numbers // US versions

Order code		
Type		
VTY20, brass	VY2060MKHN	
VTY20, stainless steel	VY2060VAHN	
Electrical connection		
3.2" single wire with Molex Mini-Fit® Jr. plug connector		X1N5
19.7" PVC cable		05N5
78.7" PVC cable		20N5
Example order number	<b>VY2060MKHN</b>	<b>X1N5</b>

Note minimum order quantities.