

# Smart Vortex Flow Meter



Smart Building, Smart City, Smart Facility, Smart Utilities, Smart Factory, Smart Energy

SKU: SVF128

## SMART VORTEX FLOW METER SVF128

### Wireless Connectivities



### Wire Output

4 - 20mA

RS485/Modbus RTU

Pulse



SVF128-H1.PNG



SVF128 Vortex flow meter is a smart vortex flow meter utilizing "Kármán vortex" theory to measure the velocity of fluid then calculate the flow rate in volume or mass. VFM128 is to use for various fluids such as gas, steam and liquid. The flow meter come with local or remote display and different type output such as 4-20mA, pulse, RS485 Modbus RTU, Hart for easily integrate into any PLC, SCADA, DCS system. The flow meter can be upgraded with latest wireless connectivity such as Sub-GHz, LoRaWAN, Sigfox, NB-IoT, 3G/4G... allow it to connect to any IoT platform such as Globiots, Azure, AWS...

**Typical Applications:** Saturated Steam, Super-heated Steam, Compressed Air, Liquid, Industrial Gases: Nitrogen, Oxygen... or Fuel Gas: Natural Gas...

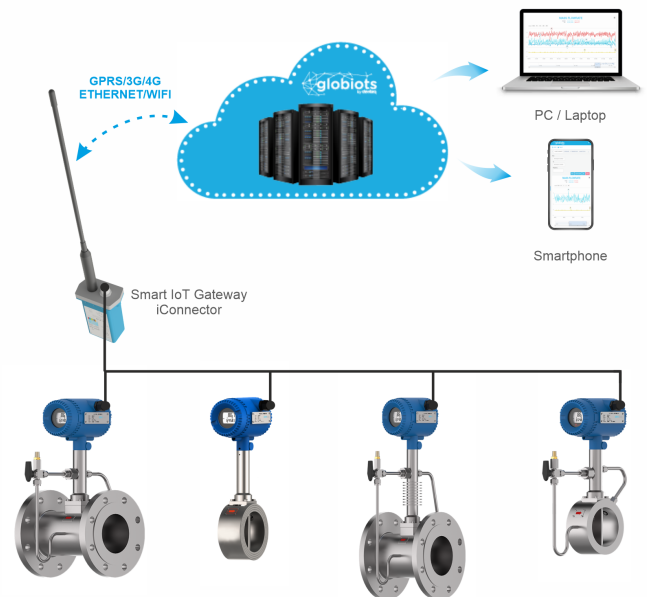
### Applications

Energy Monitoring, Facility Monitoring, Utility Monitoring, Process Monitoring, Flow Monitoring,

### Notes For Applications

- ✓ **High turn down ratio**  
Super low flow measurement down to 2m/s
- ✓ **Anti-vibration**  
Unique and patented sensor design to eliminate vibration
- ✓ **Multi-variable Measurement**  
Volumetric flow, pressure, temperature and mass flow
- ✓ **No moving parts**  
not worry about mechanical wear parts

## CONNECT SMART VORTEX FLOW METER TO GLOBIOTS Platform



SVF128-H2.PNG

## DAVITEQ TECHNOLOGIES INC

Ho Chi Minh City, VN | Koblenz, DE | Melbourne, AU | Zurich, CH

+84.28.6268.2523 / 6268.2524

info@daviteq.com

www.iot.daviteq.com

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## Specification

Process Fluids	Liquid, Gas, Steam, Compressed Air
Process connection	Flange or Wafer for size DN15~DN300 or 0.5 inch to 12 inch
Local Display	Standard integral LCD display. Optional Remote display with 10m cable
Measurable Parameters of standard version	Volumetric flow rates and totalizer, velocity.
Measurable Parameters of Multi-variables version	Mass flow rate, volumetric flow rate, temperature, pressure, velocity.
Output	Pulse, 4~20mA (HART V5, V7 @4~20mA), ModbusRTU RS485
Process Pressure	1.6MPa (232 psiG),2.5MPa (362 psiG),4.0MPa (580 psiG),6.3Mpa (913 psiG) for option
Process Temperature	Standard type: -40~150°C or -40~302°F Medium type: -40~250°C or -40~482°F High temperature type: -40~350°C or -40~662°F
Gas flow Turndown	DN15, DN20: Turndown ratio 10:1 DN25, DN32: Turndown ratio 15:1 DN40~DN300: Turndown ratio 30:1
Steam flow Turndown	DN15, DN20: Turndown ratio 11.6:1 DN25, DN32: Turndown ratio 17.5:1 DN40~DN300: Turndown ratio 35:1
Liquid flow Turndown	23:1
Accuracy	Gas/ Steam: $\pm 1\%$ RD ( $Re \geq 20000$ ), $\pm 2\%$ RD( $10000 < Re < 20000$ ) Liquid: $\pm 0.75\%$ RD ( $Re \geq 20000$ ), $\pm 2\%$ RD ( $10000 < Re < 20000$ )
Repeatability	$\pm 0.3\%$ of flow reading, $\pm 0.05^\circ\text{C}$ for temperature, $\pm 0.05\%$ FS of pressure
Upstream/ Downstream required	15D/ 5D
Viscosity allowance	DN15 or 0.5 inch $\leq 4\text{mPas}$ DN25 or 1 inch $\leq 5\text{mPas}$ DN40~DN300 or 1.5~12 inch $\leq 7\text{mPas}$
Anti-vibration (both punch and fixed freq)	0.5g
Power Supply	15.5~42VDC

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STANDARD VERSION SVF128-N



SVF128-H3.PNG

MULTI-VARIABLES VERSION SVF128-MV



SVF128-H4.PNG

HIGH TEMP. MULTI-VARIABLES VERSION SVF128-MV



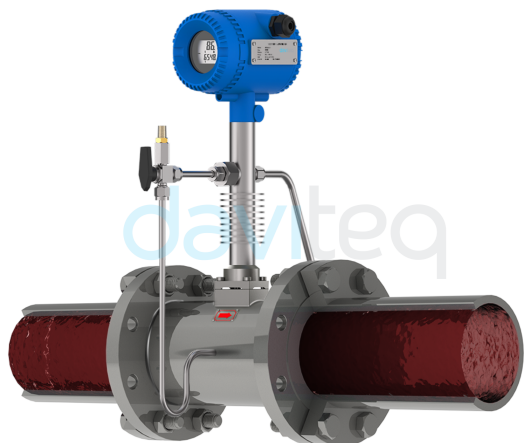
SVF128-H5.PNG

VORTEX TO MEASURE SATURATED STEAM



SVF128-H6.PNG

VORTEX TO MEASURE SUPER-HEATED STEAM



SVF128-H7.PNG

VORTEX TO MEASURE COMPRESSED AIR



SVF128-H8.PNG

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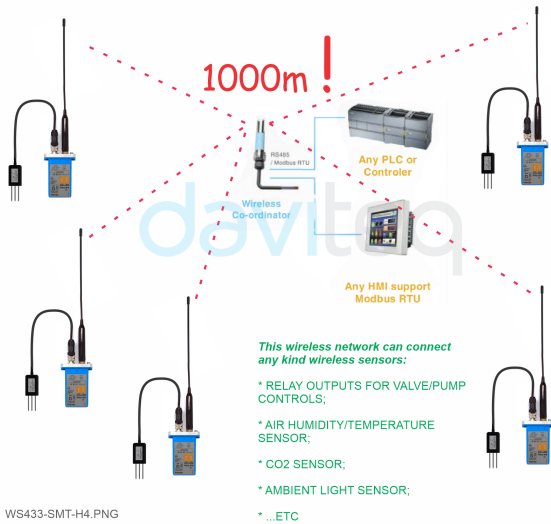
SOIL MOISTURE SENSOR INSTALLATION



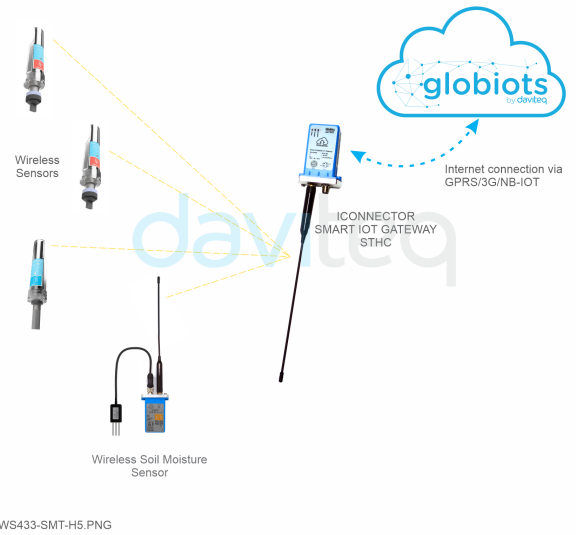
INSTALLATION FOR MULTI-LAYER MEASUREMENT



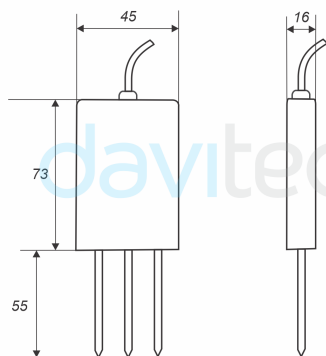
40 WIRELESS SENSORS CONNECT TO ONE CO-ORDINATOR



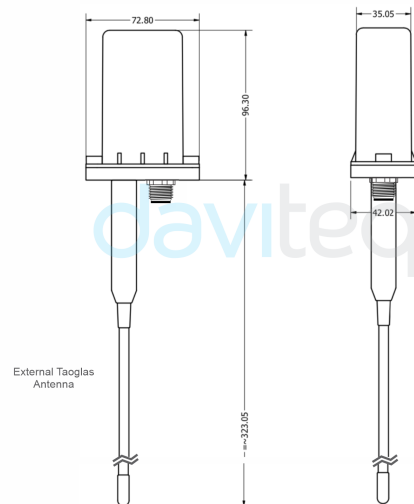
CONNECT WIRELESS SENSORS TO GLOBIOTS Platform



DIMENSION DRAWINGS OF SENSOR (Unit: mm)



DIMENSION DRAWINGS OF WIRELESS SENSOR (Unit: mm)



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## Ordering Information

ITEM CODE	DESCRIPTIONS
Select Vortex Type	
SVF128-N	Smart Vortex Flow meter, Standard version, NO temperature and pressure compensation
SVF128-MV	Smart Vortex Flow meter, Standard version, WITH temperature and pressure compensation
Fluid type	
-1 or -2 or -3	-1 for Liquid, -2 for Gas, -3 for Steam
Process Connection	
-WC	Wafer with carbon steel flanges up to 16 barG (232 psiG) (DN15~DN300)
-D1	Flanged DIN PN16 up to 16 barG (232 psiG) (DN15~DN300)
-D2	Flanged DIN PN25 up to 25 barG (362 psiG) (DN15~DN300)
-D3	Flanged DIN PN40 up to 40 barG (580 psiG) (DN15~DN300)
-D4	Flanged DIN PN63 up to 63 barG (913 psiG) (DN15~DN300)
-C1	Flanged ANSI CL150 up to 16 barG (232 psiG) (0.5~12 inch)
-C2	Flanged ANSI CL300 up to 40 barG (580 psiG) (0.5~12 inch)
-C3	Flanged ANSI CL400 up to 63 barG (913 psiG) (0.5~12 inch)
-J1	JIS 10K up to 16 barG (232 psiG) (DN15~DN300)
-J2	JIS 20K up to 40 barG (580 psiG) (DN15~DN300)
-J3	JIS 30K up to 63 barG (913 psiG) (DN15~DN300)
Wetted Part Materials	
-1 or -2	-1 for 304SS, -2 for 316SS
Degreased	
- N or -D	-N for None, -D for Degreased for Oxygen Measurement
Medium Temperature	
-N or -S or -H	-N ≤ 150°C, -S ≤ 250°C, -H ≤ 350°C
Transmitter	
-ML1	Integral transmitter, multi-variable, RS485, pulse
-ML3	Integral transmitter, multi-variable, RS485, pulse, 4 wire 4~20mA
-MR2	Remote transmitter (dual display), multi-variable, RS485, pulse, 4 wire 4~20mA, 10m cable
-NL1	Integral transmitter, RS485, pulse
-NL3	Integral transmitter, RS485, pulse, 4 wire 4~20mA
-NR3	Remote transmitter (dual display), RS485, pulse, 4 wire 4~20mA, 10m cable
Cable Gland	
-M	M20 x 1.5
-N	1/2" NPT
Other codes	
-N	No Ex-proof
-XXX	Select size XXX = 015, 020, 025, 032, 040, 050, 065, 080, 100, 125, 150, 200, 250, 300
Optional Wireless Connectivities	Please specify: LoRaWAN, Sigfox, NB-IoT, 3G, 4G Cat 1, Sub-GHz
Example	SVF128-MV-3-D1-1-N-S-MR2-M-N-080 <b>AND</b> provide us the process conditions for sizing to verify the flow meter size meet the process conditions. * Fluid type: * Flow min/normal/max: * Pressure min/normal/max: * Temperature min/normal/max: * Fluid viscosity:

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