

SensorLinx™

Flow, Pressure and Temperature Meter Technical Data Sheet



The SensorLinx™ Sensor System is designed to measure the energy used or transferred in a liquid heating application including HVAC, Solar thermal heating and Geothermal. SensorLinx™ is a customizable sensor solution incorporating the **WFS Sensor** (Wi-Fi Flow & Temperature Sensor) and **WPS Sensor** (Wi-Fi Pressure & Temperature Sensor). The sensors can be used individually to track many system parameter configurations to record daily, monthly, and yearly totalized usage in real time using the HBX Sensorlinx™ App. When the Sensorlinx™ sensors are used in conjunction within your liquid system, the system allows for accurate BTU measurement.



Figure 1
(Wi-Fi Pressure & Temperature Sensor)



Figure 2:
(Wi-Fi Flow and Temperature Sensor)

Features and Benefits:

- *Wi-Fi enabled with the HBX Sensorlinx App*
- *Graphs calculated BTU's based on hour, day, week, and month*
- *Accurate calculations in glycol, methanol, and water at any concentration*
- *Compact and robust design with low profile*
- *Suitable for a wide range of applications*
- *Measurement principle with no moving parts resulting in no wear and tear*
- *Measure System pressure, flow, and temperature for easy and cost-efficient installation*
- *Triac output for relay operation*
- *Hydronic system balancing*

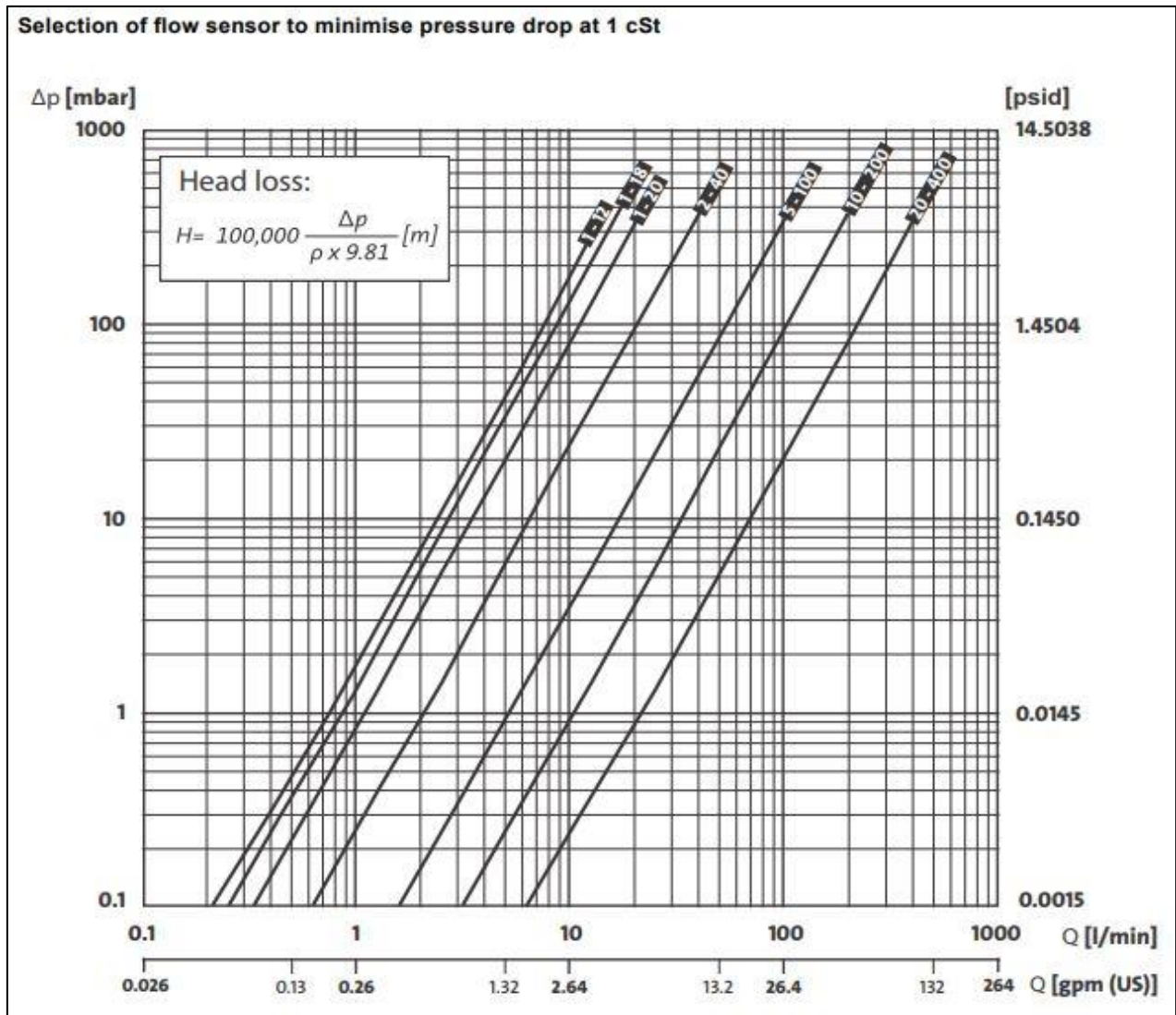


WFS Sensors (Wi-Fi Flow and Temperature Sensor)

The WFS Sensor is a combined flow and temperature sensor (two-in-one). The sensor is fully compatible with wet, aggressive liquids. The sensor is based on the principle of vortex shedding behind a bluff body. The sensor is based on MEMS sensing technology in combination with the corrosion-resistant Silicoat® coating technology on the sensor chip. The sensors are supplied with a Stainless steel or composite flow pipe.

Measuring Range

Flow(l/Min)	Union Pipe Configuration	HBX Part #
1-18 (0.26-4.75 GPM)	3/4"	WFS-0200-18
2-40 (0.52-10.6 GPM)	3/4"	WFS-0200-40
5-100 (1.32-26.4 GPM)	1"	WFS-0200-100
10-200 (2.64-52.8 GPM)	1 1/4"	WFS-0200-200



Specifications

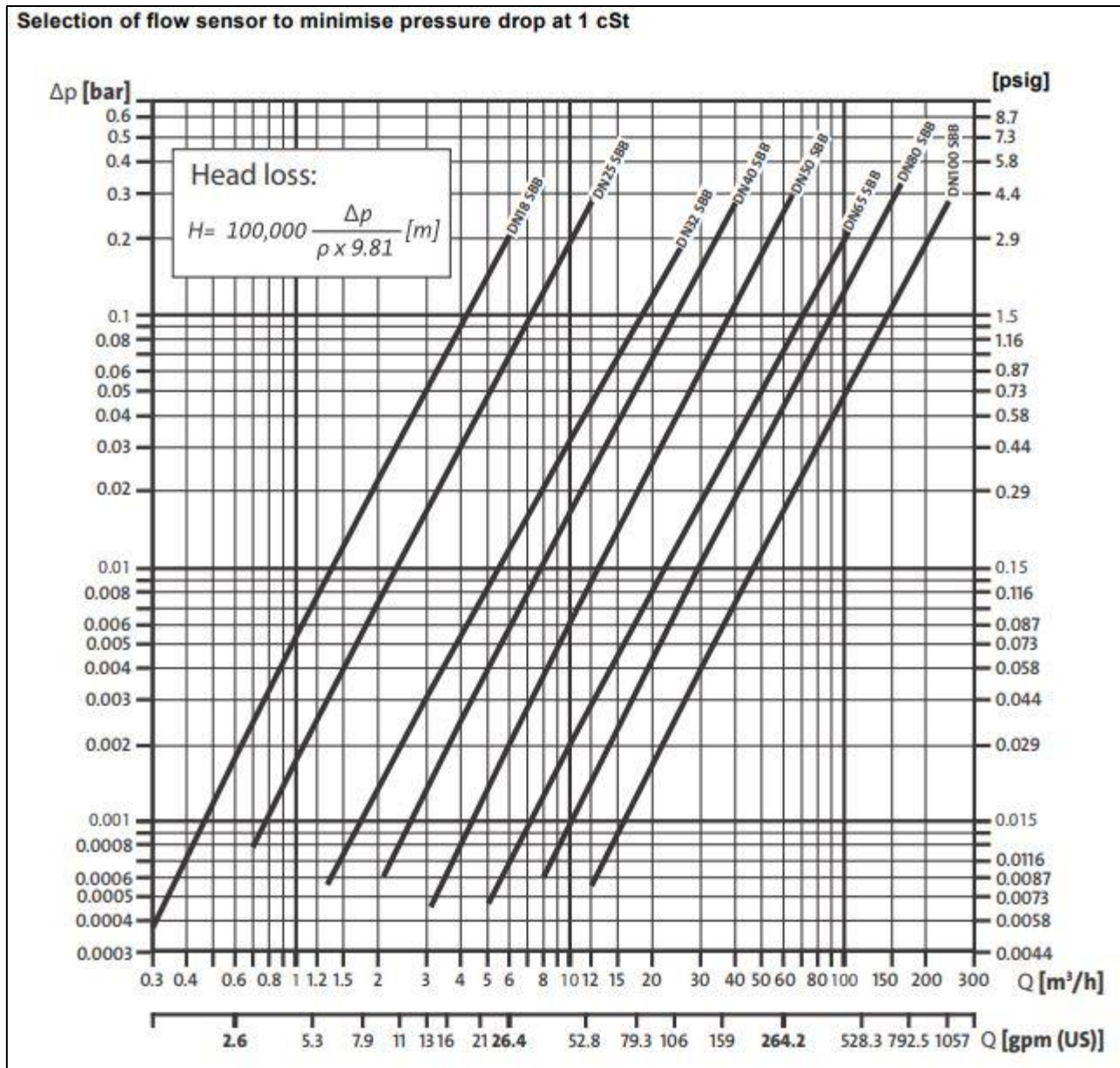
Flow	
Measuring Range	1-18L (0.34-4.75 GPM), 2-40L (0.53-10.57 GPM), 5-100L (1.32-26.42 GPM), 10-200L (2.64-52.83 GPM), 20-400L (5.28-105.67) *Composite only
Accuracy ($\pm 1 \sigma$) in water, 0-100 °C (32-212 °F)	± 1 % FS
Response time (63.2 %)	Less than 1 s
Maximum range	105 GPM
Temperature	
Measuring Range	0-120 °C (32°F -248°F) *Water additives in potable water -25°C-120°C (-13°F – 248°F)
Accuracy ($\pm 1 \sigma$), 15-90 °C (59-194 °F)	± 0.5 K
Accuracy ($\pm 1 \sigma$), 0-120 °C (32-248 °F)	± 1 K
Response time (63.2 % at 50 % FS flow)	250 ms
Resolution	0.006 K
System Conditions and Environment	
Liquid Types	Aqueous media compatible with wetted materials. Kinematic viscosity less than or equal to 2 mm ² /s (cSt)
Liquid temperature, operation	Water: 0-100 °C (32-212 °F)
Maximum System Pressure	24 bar (348 psig) Composite, 30 bar (435 psig) Stainless
Burst Pressure	30 bar (435 psig) Composite, 40 bar (580 psig) Stainless
Materials	
Sensing element	Silicon-based MEMS
Sealing	EPDM O-rings, FKM O-rings or EPDM sealing cap with FKM O-rings
Housing	Composite (PPS, PA66),
Flow pipe	Stainless steel AISI 316 EN 1.4408, PPA 40-GF
Piping connection	dual unions, tailpieces - NPT, sweat, press
Wetted materials	Corrosion-resistant coating, EPDM or FKM, PPS, PPA 40-GF
Electrical	
Power Supply	24 VAC
Triac Output	24 VAC
Certification	
Certification	NSF 61, 372



Wi-Fi Pressure and Temperature Sensor

The WPS sensor is a combined pressure and temperature sensor (two-in-one). The sensor is fully compatible with wet, aggressive liquids. The sensor is based on the principle of vortex shedding behind a bluff body. The sensor is based on MEMS sensing technology in combination with the corrosion-resistant Silicoat® coating technology on the sensor chip.

Pressure Bar (PSI)	HBX Part #
0-10 (0-145)	WPS-0200



Specifications

Pressure	
Measuring Range	0-10 bar (0-145 psig)
Accuracy ($\pm 1 \sigma$), 15-90°C (59-194°F)	± 1.5 % FS
Accuracy ($\pm 1 \sigma$), 0-120 °C (32-248 °F)	± 2 % FS
Response time	Less than 1 s
Resolution	0.6 mbar (0.009 psig)
Temperature	
Measuring Range	0-120 °C (32-248 °F)
Accuracy ($\pm 1 \sigma$), 15-90 °C (59-194 °F)	± 0.5 K
Accuracy ($\pm 1 \sigma$), 0-120 °C (32-248 °F)	± 1 K
Response time (63.2 % at 50 % FS flow)	250 ms
Resolution	0.008 K
Materials	
Sensor	Silicon-based MEMS
Sealing	EPDM O-rings, FKM O-rings or EPDM sealing cap with FKM O-rings
Housing	Composite (PPS)
Piping connection	½" union
Wetted materials	Corrosion-resistant coating, PPS, EPDM or FKM Adapter ISO 7/1 - R1/2" and NPT 1/ 2" EN 1.4408 (AISI 316)
Electrical	
Power Supply	24 VAC
Triac output	24 VAC

