

## VIR-832M+UF INSRT- Insertion Type Ultrasonic Flow & Heat Meter

*Smart. Built for Precision.*

The VIR-832M is a high-performance ultrasonic transit-time flow and energy meter engineered for accurate measurement of liquid flow and thermal energy in HVAC and industrial systems. Whether you need cooling energy monitoring, hydronic system optimization, or reliable flow measurement in large pipelines, the VIR-832M delivers precision without disruption.

Available in insertion sensor configurations, the VIR-832M adapts to

your system — from new installations to challenging retrofits — with minimal downtime.



### WITH Insertion detectors?

- Just drill the pipe, hot tapping with Isolation valve, water contact for precision measurement
- Ideal for large-diameter and critical infrastructure pipelines
- Accurate flow and thermal energy measurement for HVAC optimization
- Reliable performance in demanding industrial and commercial environments

### Seamless System Integration

- Modbus RTU
- Modbus TCP/IP
- BACnet/IP

### Key Advantages

- Wide bi-directional flow measurement range
- Measures both flow and heating/cooling energy
- Insertion installation flexibility
- Integrated data logging for performance tracking
- Backlit LCD display
- Advanced temperature compensation for higher accuracy
- Designed for harsh mechanical room

### Flow Measurement

- Chilled and hot water systems
- Cooling towers and condenser loops
- Water-glycol mixtures
- Process water and compatible industrial liquids
- District cooling and heating

**Product Data Sheet**
**VIR 832-M+UF-INSRT: Ultrasonic Insertion Type: Flow & Heat Meter**

	Accuracy	$\pm 1\%$ , $\pm 0.5\%$ $\pm 0.2\%$ $\pm 0.025$ ft/s ( $0.008$ m/s)
	Repeatability	Better than 0.2%
	Principle	Transit-time measuring principle
	Measurement Period	500ms
	Display	LCD with backlight, display accumulated flow/heat, instantaneous flow/heat, velocity, time etc. Analog output: 4-20mA or 0-20mA current output. Impedance 0.1kw. Accuracy 0.1%
	Output	OCT output: Frequency signal (1-9999HZ) Relay output: Programmable (no signal, reverse flow etc.)
<b>Main Unit</b>	RS 485 serial port	
	Input	Three analog input
	RTD For Heat Meter only	Two 2-wire, 3-wire Pt100/Pt1000/Pt 500 RTD 12-bit inputs; Range of $-40\ldots 200^\circ C$ ; Clamp-on resistor kits available
	Other functions	Automatically record the totaliser data up to 5 years and 16 years Option
	Energy total (Heat Meters)	British Thermal Unit (Btu), KWH
	Heat/cooling rate (Heat Meters)	Btu/hour, Kilowatts
	Power loss mode	The power-on time and corresponding flow rate of the last 64 power on and off events. Allow manual or automatic flow loss compensation
	Material	Steel, Stainless steel, Cast iron, Cement pipe, Copper, PVC, Aluminium, FRP etc. Liner is allowed
	Size	15-6000mm
<b>Pipe</b>	Straight pipe section	In the upstream it must be beyond 10D, in the downstream it must be beyond 5D. In the upstream the length must be beyond 30D from the access of the pump. (D Stands for pipe diameter)
	Types	Water, sea water, industrial sewage, acid and alkali liquid, alcohol, beer, all kinds of oils which can transmit ultrasonic single uniform liquid
	Temperature	Standard : $-10^\circ C \ldots 160^\circ C$
<b>Liquid</b>	Turbidity	Less than 10000ppm, with a little bubble
	Flow Direction	Bi-directional measuring, net flow/heat measuring
	Ambient Temperature	Main Unit: $-4\ldots 140^\circ F$ ( $-20\ldots 60^\circ C$ )
<b>Environment</b>	Altitude Restriction	Up to 2000 m (6561 ft)
	Humidity	Main Units: 0...85%, non-condensing Transducer : water-immersible, water depth less than 3m
	Cable	Twisted pair line, standard length of 20m, can be extended to 500m (not recommended); Contact the manufacturer for longer cable requirement. RS-485 interface, transmission distance up to 1000m
<b>Power Supply</b>	DC24V	
<b>Power</b>	Less than 1.5W	
<b>Protocols</b>	MODBUS-RTU Protocol Standard. Option of BACnet -IP .	

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