

Clamp-On Ultrasonic Flow Meters

U Series wall-mount · X3 / X3M split & high-temperature · U20 portable handheld



SEGMENT sensor clamp-on ultrasonic flow meters measure single-phase liquids in DN15–DN6000 pipes from outside the pipe wall—no cutting, no process shutdown. Transit-time dual-path measurement gives ±1 % of reading accuracy and ±0.2 % repeatability from ±0.01 to ±15 m/s, with 4–20 mA, RS485 Modbus RTU, pulse, M-BUS and SD-card logging, for chilled water, data-centre CDU loops, water treatment and thermal energy metering.

DN15–DN6000

±1 % of reading

No pipe cutting

4–20 mA · Modbus · M-BUS

Fixed & portable

to +160 °C

TECHNICAL SPECIFICATIONS

Parameter	U Series wall-mount	X3 / X3M split & high-temp	U20 portable
Measurement principle	Transit-time, dual-path	Transit-time, dual-path	Transit-time, dual-path
Pipe size	DN15–DN6000	DN25–DN6000 (X3M: DN32–DN6000)	DN15–DN6000
Accuracy	±1 % (U10) / ±2 % (U12) / <3 % FS (U13)	±1 % of reading	±1 % of reading
Repeatability	±0.2 %	±0.2 %	±0.2 %
Velocity range	±0.01 to ±15 m/s	±0.01 to ±15 m/s	±0.01 to ±15 m/s
Liquid temperature	–40 °C to +90 °C	–40 °C to +160 °C	–40 °C to +90 °C
Pipe materials	Steel, SS, copper, cast iron, PVC, PE, most plastics	same	same
Outputs	4–20 mA, RS485 Modbus RTU, pulse, relay	4–20 mA, RS485 Modbus RTU, pulse, M-BUS (X3M)	4–20 mA, RS232, USB, SD-card logger
Display	OLED colour, flow + totaliser	LCD (X3) / OLED (X3M)	Large backlit LCD, multi-language
Power supply	85–265 V AC or 10–36 V DC	85–265 V AC or 10–36 V DC	Rechargeable Li-ion 3000 mAh
Protection rating	IP67	IP67 / IP68 transducers	IP54
Certifications	CE, RoHS, ISO 9001	CE, RoHS, ISO 9001	CE, RoHS

TYPICAL APPLICATIONS

- Data-centre CDU cooling
 - HVAC chilled water
 - Water treatment plants
 - Thermal energy (BTU) metering
- Industrial cooling loops
 - Chemical process
 - Building management
 - Pharma & food processing

OEM OPTIONS

Pipe range DN9–DN6000 · outputs 4–20 mA / RS485 / M-BUS / pulse / BACnet · high-temperature transducers to +160 °C · 316L anti-corrosion housing · private label · CE declaration and calibration certificate

SELECTION FAQ

Does it work on plastic pipes?
Yes—PVC, PE and most plastics are supported; the transducer set is selected by pipe outer diameter and wall thickness.

How long must the straight pipe run be?
Typically 10 D upstream and 5 D downstream of the transducers for ±1 % accuracy; we advise on non-ideal installations.

Request a quote or samples — we reply within 24 hours

- Emailinfo@segmentensor.com
- Online formwww.segmentensor.com/contact.html
- Product pagewww.segmentensor.com/products/ultrasonic-flowmeter.html
- OrderingMOQ 10 pcs · samples 1–5 pcs in 5–7 days · production 3–5 weeks



Scan for full specifications