CLAMP-ON ULTRASONIC FLOW METER

PCE-TDS 200+ S

- **Measuring range ±32 m/s**
- **USB-C interface for data transfer**
- **Optional software for analysing the measured values**
- **Reproducibility ±0.5 % of measured value**
- **Heat quantity measurement**
- **Data memory for 10 million measuring points**
- **individually adjustable alarm limits**
- **optionally with ISO or DAkkS calibration certificate**

The ultrasonic flowmeter has a measuring range of ±32 m/s. With an accuracy of ±1.5 % f.s. for a pipe diameter of DN ≥50, ±3.5 % f.s. for a pipe diameter of DN <50 and a reproducibility of ±0.5 % f.s., the ultrasonic flow meter is a particularly precise measuring device. An installation aid is available for installing the sensors of the ultrasonic flow meter. The installation aid graphically displays the signal quality of the ultrasonic flow meter. In addition, it is graphically displayed whether the sensors of the ultrasonic flow meter are positioned at the correct distance from each other. To carry out flow measurements with the ultrasonic flow meter, the flow velocity, the volume flow and the volume are displayed after entering the pipe and medium specifications. The ultrasonic flow meter displays the measured values in a wide range of units. For example: m^3, l, gal, igl, mgl, cf, bal, ib and ob.
During a measurement, it is possible to record the measured values via the data logger function of the ultrasonic flow meter. Start and stop conditions and the storage interval can be set from 1 second to 12 hours for the ultrasonic flow meter. A memory point of the ultrasonic flow meter contains all measured values once. The measured values are stored on the 32 GB built-in memory of the ultrasonic flow meter.

Specification

Speed	
Measuring range	-32 ... +32 m/s
Resolution	0.001 m/s
Accuracy	DN ≥50 mm: ±1.5 % of Rd for velocities >0.3 m/s / DN <50 mm: ±3.5 % of Rd for velocities >0.3 m/s
Type K temperature	
Measuring range	-100 ... +1370 °C
Resolution	0,1 °C
Accuracy	±0.4 %
Temperature J-type	
Measuring range	-100 ... +1150 °C
Resolution	0,1 °C
Accuracy	±0.4 %
Temperature S-type	
Measuring range	0 ... 1500 °C
Resolution	0,1 °C
Accuracy	±0.5%
Temperature R-type	
Measuring range	0 ... 1700 °C
Resolution	0,1 °C
Accuracy	±0.5%
Temperature E-type	
Measuring range	-100 ... +900 °C
Resolution	0,1 °C
Accuracy	±0.4 %
Temperature T-type	
Measuring range	-100 ... +400 °C
Resolution	0,1 °C
Accuracy	±0.4 %
Temperature N-type	
Measuring range	-100 ... +1150 °C
Resolution	0,1 °C
Accuracy	±0.4 %
Temperature B-type	
Measuring range	600 ... 1800 °C
Resolution	0,1 °C
Accuracy	±0.5%
Ultrasonic sensor	
Designation	PCE-TDS 200 S SENSOR

General technical data	
Measuring functions	Flow velocity, Volume flow, Volume, Temperature, Heat output, Heat quantity
Units	metric, imperial
Units additional information	Dimensions: mm, in Flow velocity: m/s, ft/s Temperature: °C/°F Heat quantity: K, kJ, MJ, Wh, kWh, MWh, Btu, kBtu, MBtu Heat output: W, kW, MW, J/h, kJ/h MJ/h, Btu/h, kBtu/h, MBtu/h Volume flow: m^3, l, gal, igl, mgl, cf, bal, ib, ob Volume: m^3, l, gal, igl, mgl, cf, bal, ib, ob Time specification: seconds, minutes, hours, days Cost display: EUR, GBP, USD, Turkish Lira, Zloty, Yen
Display size	2,8 Inch
Storage medium	Internal memory
Storage capacity	32 GB
Storage interval from	1 s
Storage interval to	12 h
Interface	USB-C
Pipe material	Steel, Cast iron, Stainless steel, Aluminium, Brass, Copper, PVC, Iron, Nickel, Titanium, Zinc, Acrylic, Polyethylene, Polypropylene, Nylon, User-defined (manual entry of the transversal sound velocity of the pipe material)
Pipe material additional information	Inner lining of the pipe: - No lining - Epoxy resin - Rubber - Mortar - Polystyrene - Polyethylene - Polytetrafluoroethylene - Polyurethane - Polypropylene - Customised (manual entry of the longitudinal sound velocity of the inner lining of the pipe)
Measured medium	Water, Seawater, Oil, Crude oil, Methanol, Ethanol, Diesel, Petrol, Petroleum, User-defined (manual entry of the sound velocity of the medium)
Operating time	10 h
Automatic power-off from...to	1 ... 15 min.
Measuring method	Z, V, N, W
Alarm	optical, Acoustic
Alarm modes	Undercut, overflow, within, beyond
Reproducibility	±0.5%
Menu language	Turkish, English, Polish, Spanish, German, Chinese, Russian, Japanese, French, Danish, Italian, Dutch, Portuguese
Protection class (device)	IP52
Power supply	USB 5 V DC, 500 mA
Connector type	Device-europlug
(Rechargeable) battery	1 x 3,7 V LP785060 , Lithium polymer battery
Capacity	2500 mAh
Performance	9,25 Wh
Operating conditions	-20 ... 65 °C , 10 ... 95 % RH
Storage conditions	-20 ... 65 °C , 10 ... 95 % RH
Dimensions (L x W x H)	165 x 85 x 32 mm

PCE Instruments UK Ltd.
Chester Rd, Old Trafford Suite 1N-B, Trafford House, M32 0RS Manchester
Great Britain

Phone: +44 (0) 161 4649020
info@pce-instruments.co.uk

Pipe diameter	DN 15 ... 100 mm / Ø 20 ... 108 mm
Dimension	45 x 30 x 30 mm
Battery type	Ultrasound
Frequency	1 MHz
Operating temperature	-30 ... 160 °C
Sensor cable length	5 m

Weight	263,5 g