

ULTRA 4

**ULTRASONIC
FLOWMETER FOR OPEN
CHANNELS**



APPLICATIONS

WWTP (open channel flow and level, storage tank level)
Sewer networks monitoring
Stormwater overflows (self-monitoring)
Aquaculture (discharge)
Specific to radar sensors: difficult environments (high temperatures, foam, steam, atmospheric changes, etc.)

ADVANTAGES



- Level & flow measurements, volume and pump control
- Waterproof wall or fascia mounting versions
- MicroSD card 8GB included
- 4 relay outputs, 1 4-20mA output
- 1 ultrasonic sensor input
- Integrated rate conversion

THE ULTRA 4 FLOWMETER / LINIMETER IS A STATIONARY ULTRASONIC FLOWMETER

Compact and easy to install, it provides reliable flow measurement of your venturi flumes and other weirs. The Ultra 4 can be programmed either by the integrated keypad (supplied as standard on all wall or built-in units), via the SD card slot, or by PC via the RJ11 serial interface.

All parameters are stored in non-volatile memory and are therefore retained in the event of a power failure. Programming is simple thanks to its integrated height-flow conversion tables for standard or non-standard structures. Equipped with an integrated micro SD card slot as standard, for quick and easy access to data storage and analysis (.csv format).

The Ultra 4 can measure

- From zero (blanking distance) to 40m from the face of the controller to the measured surface, depending on the associated sensor chosen.
- From 77mm (low deadband) to 16 m depending on the radar sensor selected

Relays can be programmed to activate alarms, pump starts or other control equipment. Equipped with an isolated 4-20mA output, it can be connected to a recorder or a RTU.

The backlit graphic display of the box allows you to display:

- Level / flow rate and filling percentage
- Hourly, daily and total volumes sold
- Level trend graph
- Echo profiles

PHYSICAL

Mounting options	Standard Wall Mount or fascia mount
Dimensions	- Wall mount : 150 mm x 130 mm x 63.5 mm - Fascia mount : 160 mm x 180 mm x 63 mm
Weight	700g
Enclosure Material	Polycarbonate, flame resistant to UL94-V0

ENVIRONMENTAL

IP rating	IP 65 (wall mount) et IP 64 (fascia mount)
Max. & Min. Temperature (Electronics)	-20 °C to +50 °C
Power supply	100-240 V AC 50/60 Hz. DC 10-28 V
Power consumption	AC = 20 VA MAX, DC = 10 W max
Certification	CE
UV rating	UL746C F1

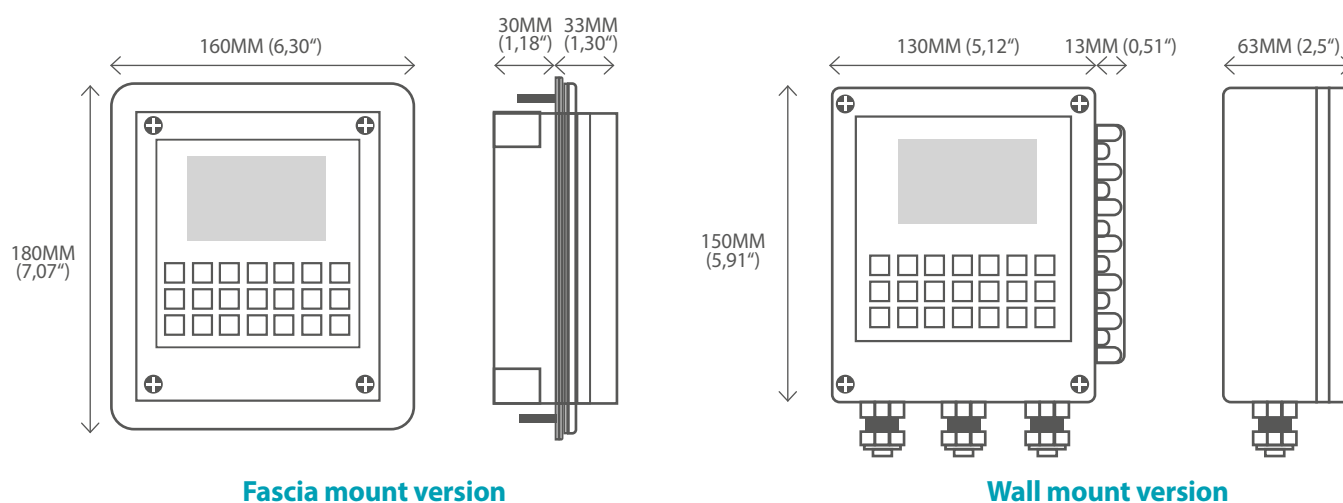
PERFORMANCES

Accuracy	0.25% of the measured range or 6mm (whichever is greater)
Resolution	0.1% of the measured range or 2mm (whichever is greater)
Input	1 ultrasonic doppler echo sensor 125 KHz
Analog output	1 4-20 mA isolated
Digital output	1 half-duplex RS232
UV rating	4 configurable for pulse proportional to the flow rate or thresholds

PROGRAMMING

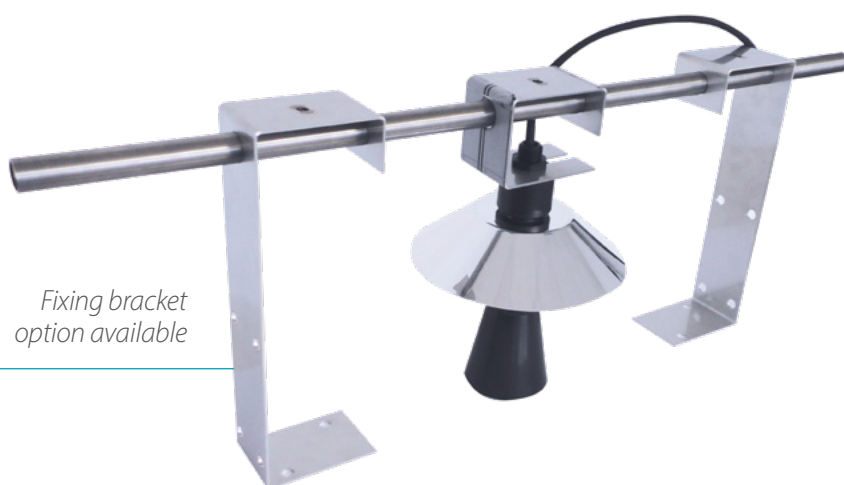
On-board Programming	Via Integral Keypad
PC Programming	Via Integral Via RJ11 port on unit, or via SD Card slot
Programming security	Via passcode (user selectable and adjustable)
Programmed storage	Via non-volatile RAM, plus backup
Data Logging and Removable Storage	Via Micro SD card slot or internal 10-day totaliser logs (flow only)
Storage temperature	-40° to +80°C

DIMENSIONED DRAWINGS



SENSOR

Technology	Ultrasonic doppler echo
Temperature Compensation	Yes, built-in to sensor
Accuracy / half angle of emission / Frequency	1 mm / 6° / 125 kHz
Distance min	0,00 m
Operating temperature	- 40 °C to + 90 °C
Dist cable (standard, max)	5 m / 1000 m • Diametr 8 mm
Weight / Dimensions	0,7 Kg • 75 mm x 184 mm + sunscreen 180 mm diameter
Fixing	Boss M20 or 1" NPT, max thickness 8 mm



*Fixing bracket
option available*

*High-precision ultrasonic sensor for open channels.
Sunshield included with every sensor*

STANDARD ULTRASONIC SENSORS

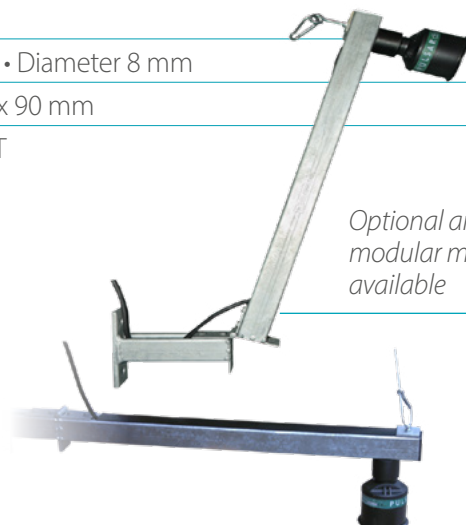
Technology	Doppler echo ultrasound
Temperature compensation	Yes, integrated into the sensor
Frequency	125 kHz
Measurement ranges	0-3m, 0-6m, 0-10m, 0-15m, 0-20m, 0-25m, 0-40m
Precision	0.25 % of measured range or 6 mm (whichever is greater)
Resolution	0.1 % of measured range or 2 mm (whichever is greater)
Min. distance	From 125mm to 1.2m depending on the measurement range
Operating temperature	- 40 °C to + 90 °C
Cable distance (standard, max) Cable distance (standard, max)	5 m / 150 m • Diameter 8 mm
Weight/Size	1.2 kg up to the 0-25m range, 6 kg for the 0-40m range
Fixation	M20 or 1" NPT boss, max. thickness 8 mm, on optional flange



Standard ultrasonic sensors
Ranges 0-3m to 0-40m
Optional mounting brackets available

RADAR SENSORS

Measurement principle	FMCW Radar
Sensitivity	Insensitive to gas, pressure, vapour, mist or temperature variations
Frequency	63 GHz / V-Band
Min. distance	0.077mm
Measurement ranges	0,077 - 8 m or 0,077 - 16 m
Operating temperature	- 40 °C to + 90 °C
Measurement accuracy	± 2 mm
Resolution	± 1 mm
Cable distance (standard, max)	5 m / 100 m • Diameter 8 mm
Weight/Size	1,1 Kg • 130 x 90 mm
Fixation	1" BSP or NPT



Optional articulated
modular mounting bracket
available