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 mouting versions
- MicroSD car 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.
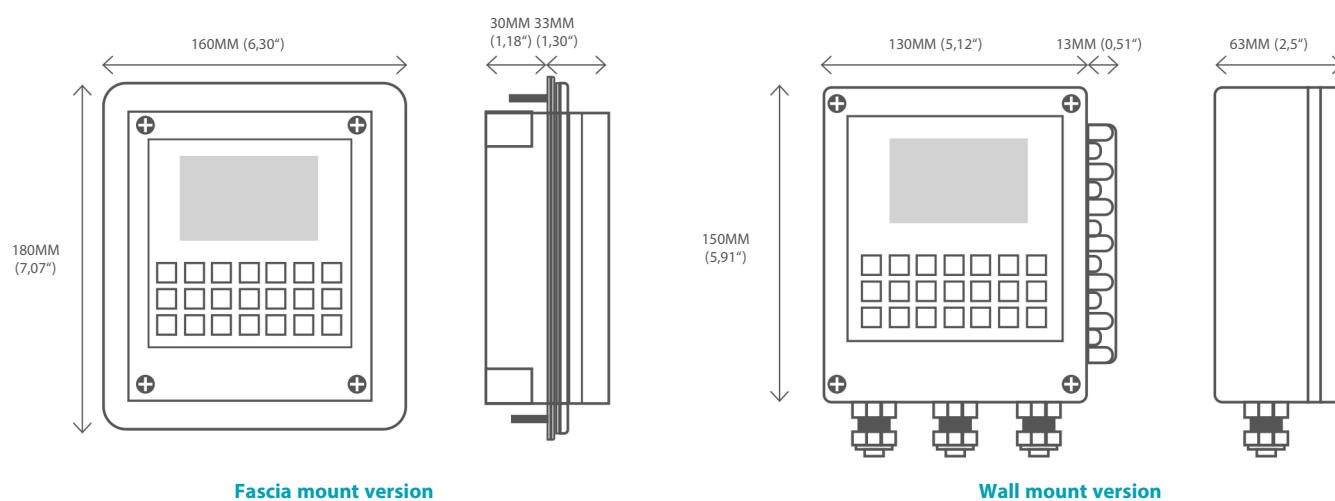
Equipped with an integrated micro SD card slot as standard, for quick and easy access to data storage and analysis (.csv format).

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
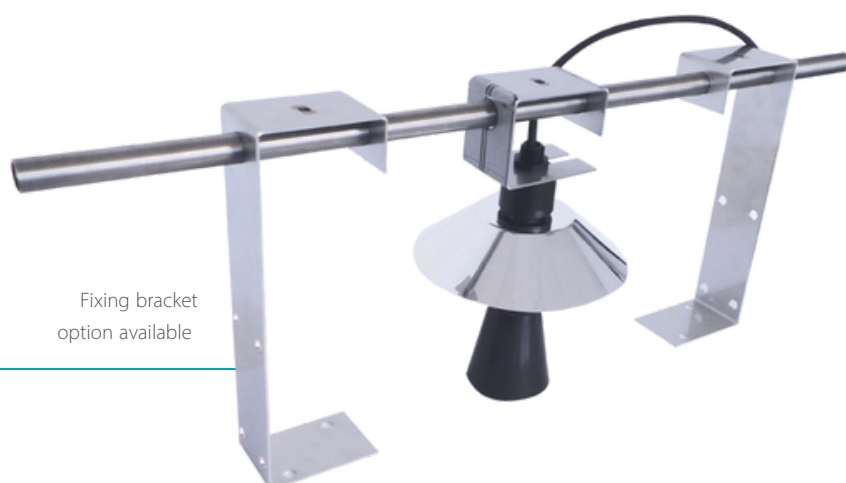
PHYSICAL	
Mountingoptions	Standard Wall Mount or fascia mount - Wall mount : 150
Dimensions	mm x 130 mm x 63.5 mm - Fascia mount : 160 mm x 180 mm x 63 mm
Weight	700g
EnclosureMaterial	Polycarbonate, flame resistant to UL94-V0
ENVIRONMENTAL	
IP rating	IP 65 (wall mount) et IP 64 (fascia mount)
Max. & Min. Temperature (Electronics)	-20 ºC to +50 ºC
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 sensor125 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-boardProgramming	Via Integral Keypad
PC Programming	Via IntegralVia 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

160MM (6,30")

180MM (7,07")

30MM 33MM (1,18") (1,30")

Fascia mount version

130MM (5,12")   13MM (0,51")

150MM (5,91")

63MM (2,5")

Wall mount version

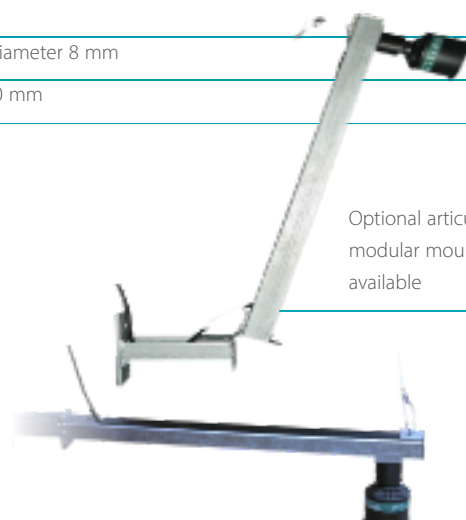| SENSOR	
Technology	Ultrasonic doppler echo
Temperature Compensation	Yes, built-in to sensor
Accuracy / half angle of emission / Frequency	1 mm / 6° / 125 kHz
Distance min	0,00 m
Operating temperature	- 40 ℃ to + 90 ℃
Dist cable (standard, max)	5 m / 1000 m • Diametrt 8 mm
Weight / Dimensions	0,7 Kg • 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 ℃ to + 90 ℃
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 Insensitive to gas, pressure,
Sensitivity	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 ℃ to + 90 ℃
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