

# ULTRA 4

## Technical Specifications:

Ultra 4 offers the sophistication and advanced features of the rest of the Ultra range in a compact, cost-effective package and useful new features that make it even easier to set up and fine-tune. The Ultra 4 can be programmed for level, volume, open channel flow, and pump control applications. It also features 4 relay outputs, programmable for alarm or control, and a multifunctional display. Setup and configuration is easy with the integral keyboard or local connection to a PC.



### PHYSICAL: MOUNTING OPTION SPECIFIC

Mounting Option:	Standard Wall Mount:	Fascia Mount:
<b>Controller Body Dimensions:</b>	150 mm x 130 mm x 64 mm (5.9 in x 5.1 in x 2.5 in)	160 mm x 180 mm x 64 mm (6.3 in x 7.1 in x 2.5 in)
<b>Weight:</b>	Nominal 700 g (1.5 lb)	Nominal 700 g (1.5 lb)
<b>Enclosure Material / Description:</b>	Polycarbonate, flame resistant to UL94-V0	Polycarbonate, flame resistant to UL94-V0
<b>Cable Entry Detail:</b>	3 x M20 glands	
<b>Transducer Cable Extensions:</b>	2-core screened (minimum)	
<b>Maximum Separation:</b>	1,000 m (3,280 ft), 500 m (1,640 ft) for dBR16 & dBR8	

### ENVIRONMENTAL

<b>IP Rating:</b>	IP67/NEMA 4X (Standard), IP64 (Fascia)
<b>Max. &amp; Min. Temperature (Electronics):</b>	-20 °C to +45 °C (-4 °F to +113 °F)
<b>Flammable Atmosphere Approval:</b>	For installation in non-flammable area only. Most compatible transducers suitable for flammable atmospheres. See sensor / transducer datasheet or brochure.
<b>UV Rating:</b>	UL746C F1
<b>CE Approval:</b>	See EU Declaration of Conformity
<b>UL Approval:</b>	UL 61010-1. cULus listed. Certificate number E257330.

### PERFORMANCE

<b>Accuracy:</b>	0.25% of the measured range or 6 mm (0.2 in), whichever is greater. 2 mm (0.01 in) for dBR16 mmWAVE RADAR.
<b>Resolution:</b>	0.1% of the measured range or 2 mm (0.08 in), whichever is greater
<b>Max Range:</b>	Dependent on application and transducer (maximum 40 m (131.2 ft) dB40)
<b>Min Range:</b>	Dependent on application and transducer (minimum zero dBMACH 3)
<b>Rate Response:</b>	Fully Adjustable

### PROGRAMMING

<b>Onboard Programming:</b>	By integral keypad
<b>PC Programming:</b>	Via Integral RJ11 port on the unit, or via Micro SD. Also via HART DTM (HART option required).
<b>Programming Security:</b>	Via passcode (user selectable and adjustable)
<b>Programmed Storage:</b>	Via non-volatile memory
<b>Data Logging &amp; Removable Storage:</b>	Via Micro SD card slot or internal 10-day totalizer logs (flow only)
<b>SD Card Memory (Included):</b>	32 GB

## ECHO PROCESSING

**Description:** DATEM (Digital Adaptive Tracking of Echo Movement)

**Technologies:** Ultrasonic and FMCW RADAR

## OUTPUTS

**Analog Output:** Isolated (floating output (to 150 V) of 4-20mA or 0-20mA into 1 k $\Omega$  (user-programmable and adjustable)

**Digital Output:** Full Duplex RS232

**Volt-free Contacts, Number, & Rating:** 3 x SPCO isolated relays, rated at 5A at 250 V AC and 1 Solid-state SPNO isolated relay, rated 30 V at 100 mA, suitable for pulse counter applications

**Display:** Monochrome graphical dot-matrix, 160 x 240 pixels. Fully programmable display options with an integral keypad with menu navigation keys.

## SUPPLY

**Power Supply:** 100-240 V AC 50/60 Hz. DC 10-28 V

**Power Consumption:** AC = 20 VA MAX, DC = 10 W max

**Fuses, Mains:** 1A T' 20 mm (0.8 in) ceramic 1500A breaking

**Fuses, Transducer:** 100 mA barrier type, 4000A breaking

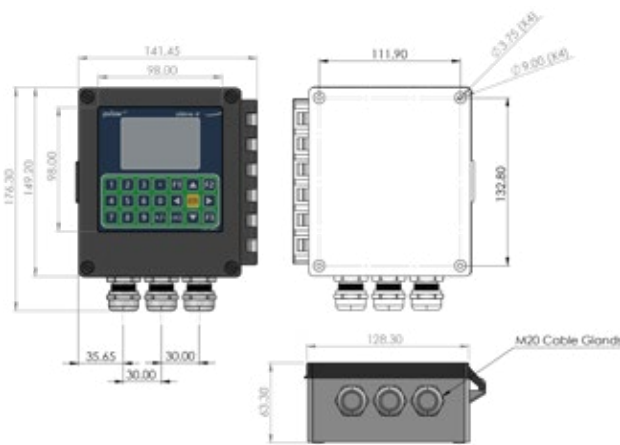
## COMMUNICATIONS (OPTIONAL)

**Modbus RTU / ASCII:** Isolated RS485

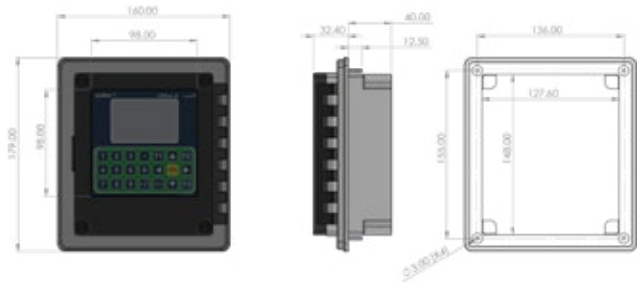
**Profibus DPV1:** Isolated RS485

**HART:** Additional, isolated 4-20mA output. DTM available for level and volume applications. Open channel flow and pump control applications not currently supported.

Ultra 4 wall-mount dimensions



Ultra 4 fascia-mount dimensions



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