

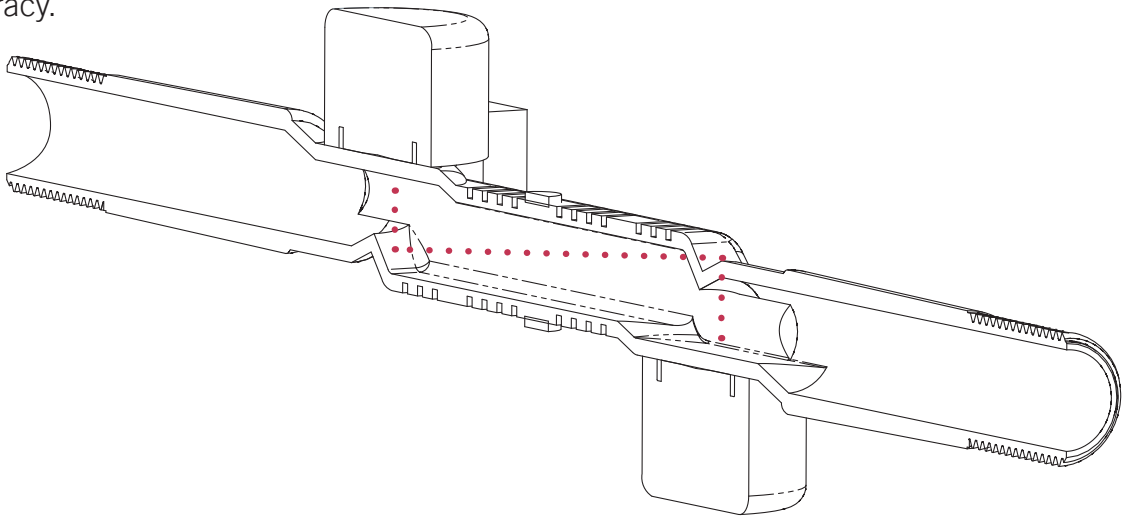
ULTRASONIC FLOW SENSOR

Challenge

Today's technical standards for flow sensors require measurements to be performed non-invasively and through a straight tube for easy cleaning, thereby avoiding both pollution of the fluid and sensor damage. Moreover, demanding flow metering and monitoring applications require both a short response time and high flow-measurement accuracy.

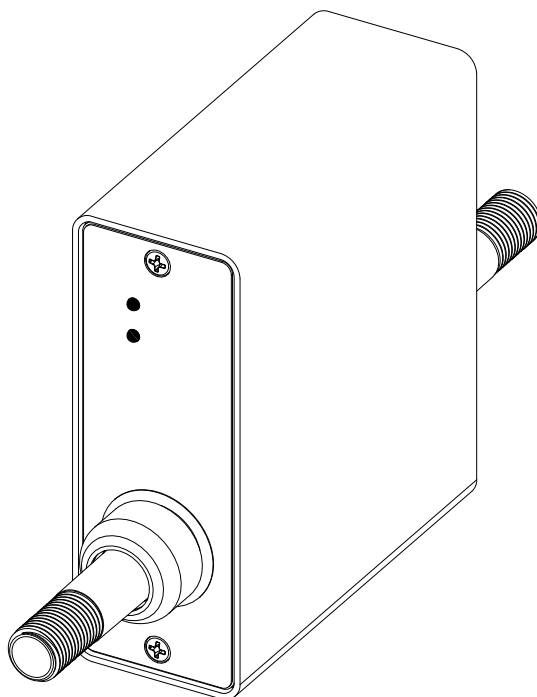
Innovation

This challenge in mind, Digmesa developed an innovative new measurement device for liquid flow, respecting strict fluid purity and flow metering requirements. Digmesa has interpreted the well known Ultrasonic Time of Flight technology in a new way and introduced it in the new Ultrasonic Flow Sensor.



Applications

Thanks to its technology and its measurement concept, the new Digmesa Ultrasonic Flow Sensor is perfectly suited for handling high-purity liquids in the semiconductor or chemical industries. The almost straight tube, available in selected materials makes the device also a perfect choice for the food and beverage market.

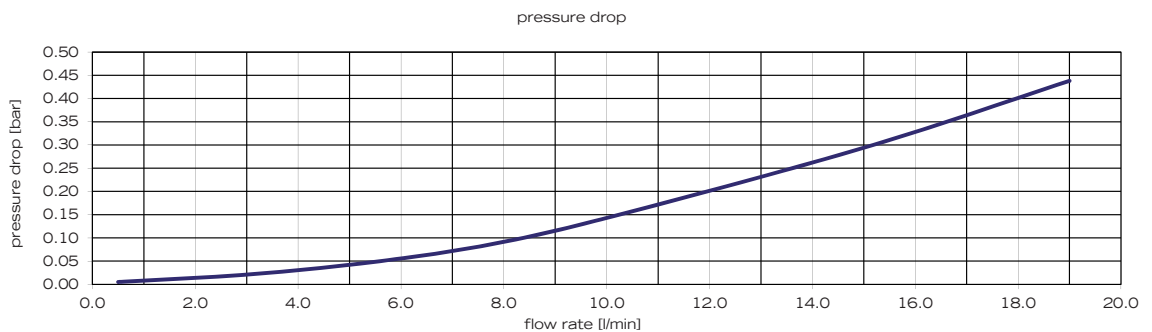
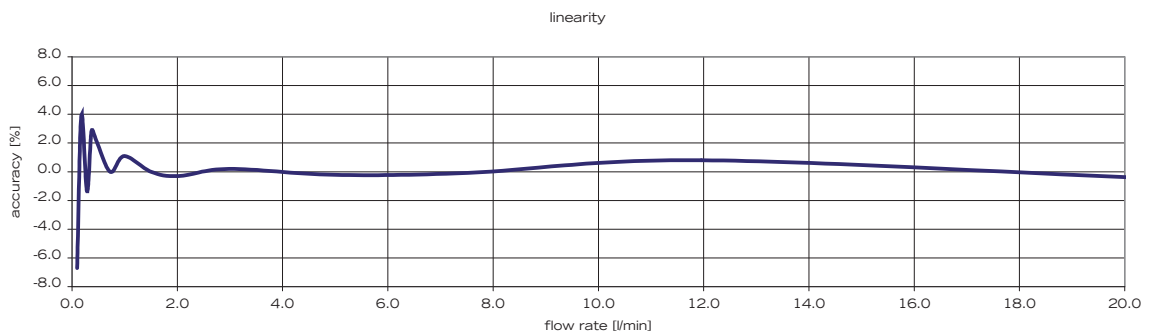


Key Features

The Digmesa ultrasonic approach impresses with an easy cleanable, almost straight measurement tube. The tube is out of one piece and therefore no dead ends are present and particle deposits are avoided. Despite all these mechanical advantages the Digmesa Ultrasonic devices have no restrictions in the measurement properties: a huge dynamic range is given as well as excellent accuracy.

Technical Specification

Process connection:	2 x male threads 1/4" (straight) 2 x tube ends Ø 12mm 2 x hose nipple Ø 13mm
Measuring fluid:	Water with no bubbles
Measuring principle:	Time of Flight (Transit Time Difference)
Measurement range:	0.3 - 20.0 l/min
Temperature range:	0 - 50 °C
Pressure range :	0 - 5 bar
Calibration fluid:	Water 25°C
Response time:	~50ms
Accuracy:	± 2.0% of reading (0.5 - 20.0 l/min)



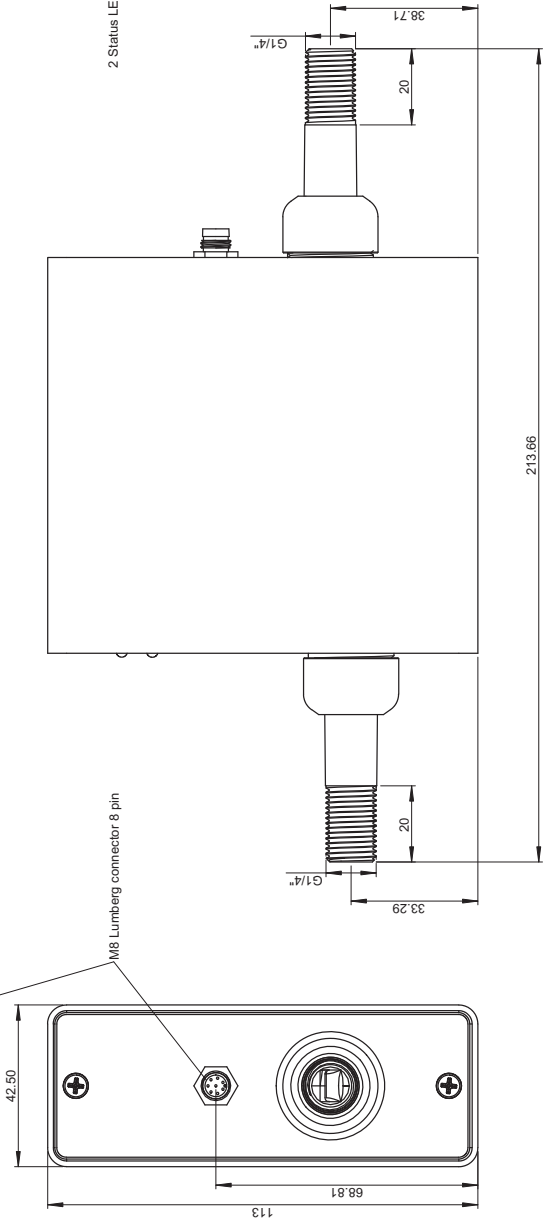
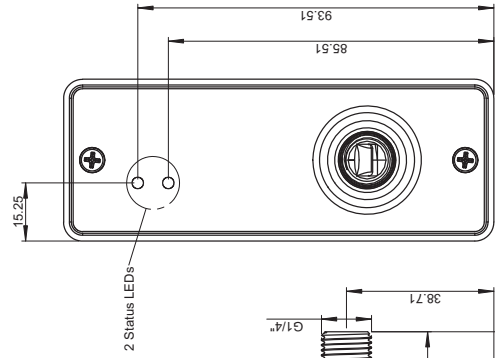
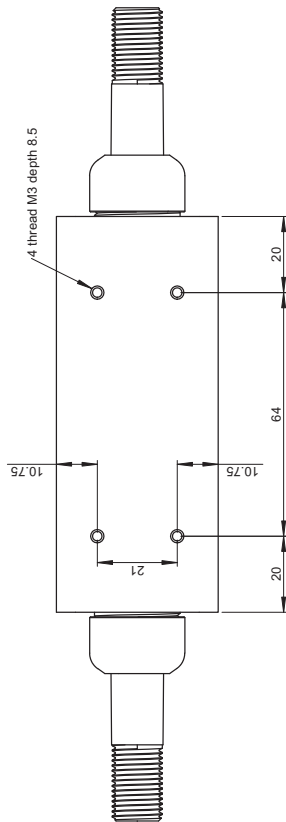
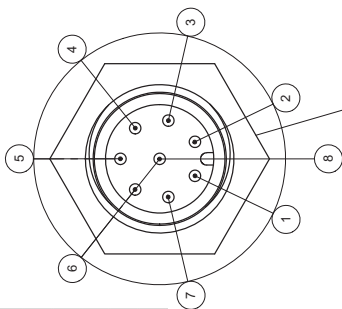
Electrical Specification

Power supply:	+ 24 VDC
Consumption:	max. 100 mA
Analog output:	4 - 20 mA (max. load resistance R=500Ω) factory setting: 0 l/min = 4 mA 10 l/min = 20 mA
Pulse output:	Open Collector, 1000 pulses per liter, NPN (max. 24V, 60mA)

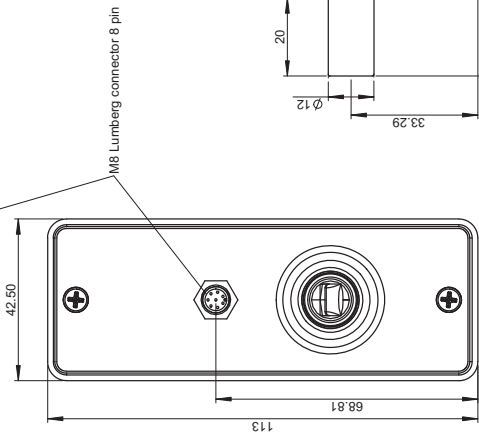
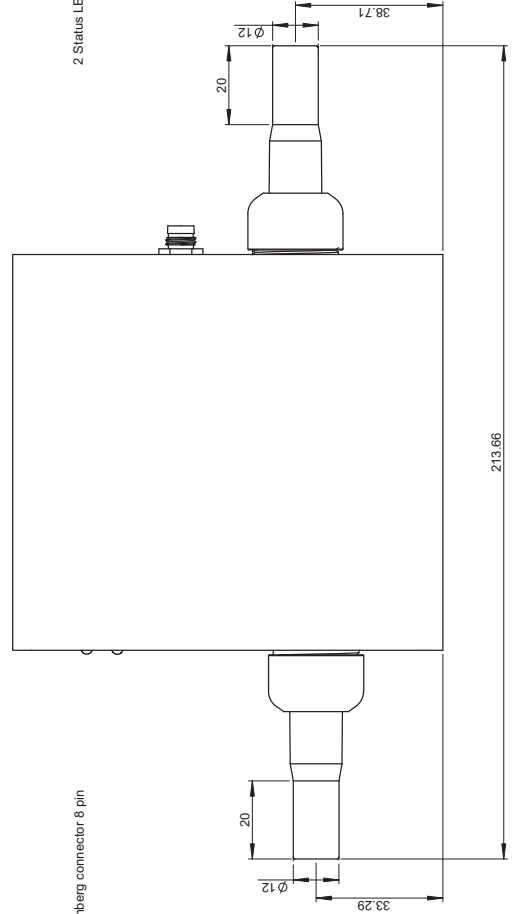
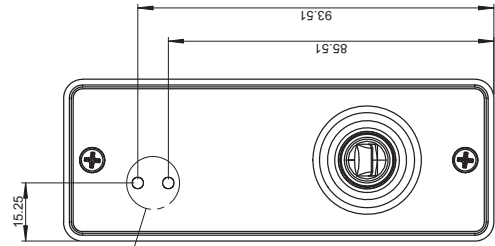
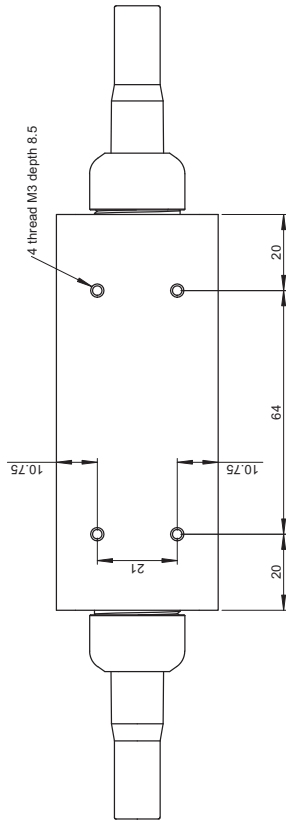
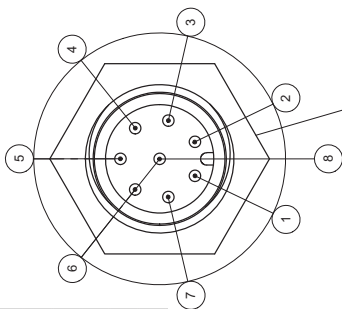
Material Specification

Wetted parts (tube):	PEEK (Viktrex Peek 90G)
Weight:	460 gram
Housing:	Aluminum, black anodized
Housing cover:	PC / ABS with seal FKM
Screw nut:	Inox 1.4305 (AISI 303)
Seal:	FPM

Pin number	Color	Description
1	white	GND
2	brown	+24 VDC
3	green	
4	yellow	4-20 mA
5	grey	Pulse output
6	pink	
7	blue	
8	red	



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