

Digison Ultrasonic Sensors



- High Accuracy
- Intelligence Built In
- IP68 Rating/NEMA 6P
- 3m-20m Range
- Temperature Compensation
- Narrow Beam Angle
- Encapsulated Sensor
- Unique Radial Ultrasonic Crystal
- Excellent Chemical Resistance

The Digison range of intelligent ultrasonic sensors manufactured by Smart Storm range from high accuracy, high resolution devices for precision flow measurement, to robust high power devices for liquid and solid level measurement. Manufactured in HDPE or PTFE, the sensors are resistant to most chemicals and hostile environments.

Intelligence: All Digison sensors contain powerful Field Programmable Gate Array (FPGA) processors which are renowned for robust performance and excellent durability. Unique to the Digison range of sensors is the ability to return a real time ultrasonic echo direct to the USI controller for viewing and setup. The user has direct control over the sensor via the USI screen rather than through a laptop or oscilloscope. Programmable options allow:

- Tank mapping
- Echo tracking
- Echo cancellation and discrimination from false echoes
- Noise suppression
- Digital filtering
- Variable echo transmit and return power

High Resolution and data speed: The Digison 3 & 6 offer resolution of less than a millimetre and data capture of less than 1 second which means for flow applications both instantaneous flow rate and daily totalised flow are truly representative and highly accurate.

Narrow Beam Angle: All Digison sensors generate a beam angle of only 6 degrees meaning narrow vessels and apertures can be used meaning the risk of false echoes from tank walls, seams and welds and other interfering objects such as internal ladders are reduced.

Integral Temperature compensation: All Digison 3 have integral temperature compensation to allow for ultrasonic time of flight variations due to temperature (~0.7% per degree centigrade). Changes in time of flight are automatically compensated for in the sensor electronics so the distance measured is always the true distance. The Digison 3 is available with a reflective plate which enables even higher accuracy for flow measurement.

Fittings: The transducers are available in 1" NPT thread or blind flanged in ANSI or DIN patterns. Submersion hood, angled brackets and aiming kits are also available.

Sensor Type	Max Range(metres)	Range Min	Frequency (KHz)	Standard Cable Length (m)
Digison 3	3m	150mm	150KHz	5m
Digison 6	6m	250mm	80KHz	10m
Digison 10	10m	300mm	60KHz	12m
Digison 20	20m	500mm	40KHz	20m

Maximum Cable length: Cable length can be up to a maximum of 500m from the instrument.
IP Rating: Digison 6,10 &20 - IP68: Digison 3 – IP65 (IP68 on request)
Operating Temperature: -30 degrees Centigrade to + 60 degrees Centigrade
Standard Thread: 1" BSP (other threads available on request).
Range: The above ranges relate to liquids at ambient temperatures only. High temperatures, dust, solids, steam will all reduce the operational range. Consult Smart Storm for advice.

