

# DUET

## Technical Specifications:

DUET is a unique twin-transducer design which provides the highest accuracy, non-contacting, ultrasonic flow measurement system available in the world (MCERTs Class 1 — 0.044% accuracy). DUET's two transducers fire together and continuously monitor the phase difference of the two echoes. As the distance between the transducer faces is known and constant, the speed of sound is continuously updated in real-time. The resulting accuracy and stability is exceptional and offers a unique, patented approach to the issue of accuracy when temperature and echo reflection time varies.



### PHYSICAL

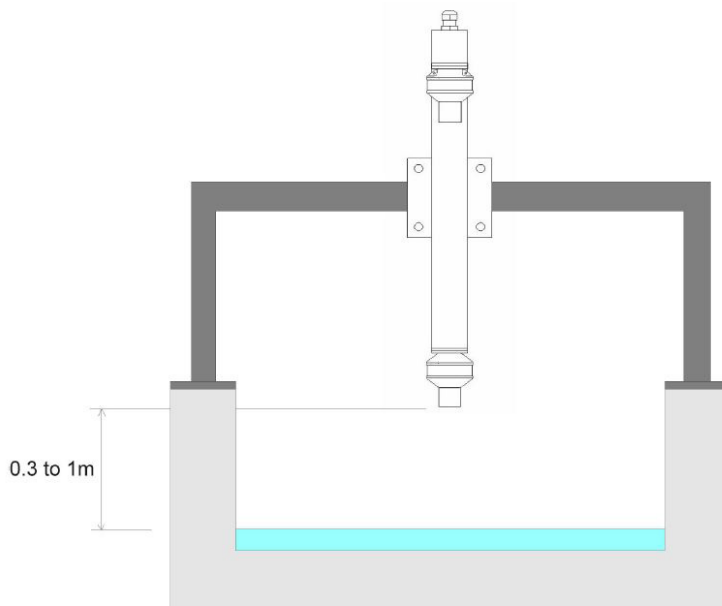
|                             |   |
|-----------------------------|---|
| <b>Dimensions:</b>          | Nominal 205 mm W x 640 mm H (8.07 in x 25.19 in)  |
| <b>Weight:</b>              | Nominal 4.7 kg (10.4 lb)  |
| <b>Materials:</b>           | <ul style="list-style-type: none"> <li>• Transducers: Valox 357 U and syntactic foam face</li> <li>• Bracket: 304 stainless steel</li> </ul>            |
| <b>Cable Lengths:</b>       | Standard = 5 m, 10 m, 20 m, or 30 m (16.4 ft, 32.8 ft, 65.6 ft, or 98.4 ft). Optional: up to 150 m (492 ft) maximum (increments of 10 m (32.8 ft) only) |
| <b>Maximum Separation:</b>  | 500 m (1,640 ft)  |
| <b>Mounting Connection:</b> | BSP or 1" NPT   |

### ENVIRONMENTAL

|   |  |
|---|--|
| <b>IP Rating:</b>                                 | IP68 / NEMA 6P   |
| <b>Max. &amp; Min. Temperature (Electronics):</b> | -40 °C to +90 °C (-40 °F to +194 °F)   |
| <b>Mcerts Certification:</b>                      | 0.044% combined accuracy — MCERTS Class 1 — Sira MC090154/00   |
| <b>CE Approval:</b>                               | 2014/30/EU — EMC & 2014/34/EU ATEX Directives. Standards applied: EN 60079-0:2012+A11:2013/ EN 60079-11:2012 / EN 60079-18:2009 / EN 60079-26:2007 / EN 61326-1:2013 |
| <b>ATEX Approval:</b>                             | ATEX EEx m II T6 standard. FM/FMC approval available   |

### PERFORMANCE

|                                  |  |
|----------------------------------|--|
| <b>Measurement Range:</b>        | 0.3 m to 2 m (0.98 ft to 6.56 ft) from the face of lower transducer (1.5 m (4.9 ft) max. for MCERTS certification) |
| <b>Frequency:</b>                | 125 kHz  |
| <b>Beam Angle:</b>               | <10°   |
| <b>Controller Compatibility:</b> | FlowCERT only  |



DUET Drawing

## Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of reps and distributors all offer full support and training. Our facilities in Malvern, UK and Largo, USA are home to technical support teams who are always available to answer your call or attend your site when required. Our global presence, with direct offices in the UK, USA, Canada, and Malaysia allow us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

By taking a step forward in echo processing technology, Pulsar Measurement addresses applications previously thought to be beyond the scope of ultrasonic measurement. This technology improves signal processing at the transducer head which has made it possible to increase resistance to electrical noise, enabling the transducer to 'zone in' on the true echo.

For more information, please visit our website:

[www.pulsarmeasurement.com](http://www.pulsarmeasurement.com)



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Rev 1.0