

## IMP+ I.S.

Self-contained, ultrasonic, level measurement without compromise — Intrinsically Safe version.

**The IMP series is a range of compact, low-profile, self-contained units with the benefit of digital echo processing.**

The IMP+ I.S. is a combined transducer and controller in one self-contained unit and is I.S. certified to ATEX EEx ia IIC T4 and IECEx.

There is an IMP unit to suit your application. 3 m (9.8 ft), 6 m (19.7 ft), and 10 m (32.8 ft) range versions are available and each can be wired for 2-wire or 3-wire operation. The IMP+ I.S. features an LCD display and digital temperature measurement and compensation with 2 relay outputs as standard.

### **Where Can I Use the IMP+ I.S.?**

The IMP+ I.S. can be used wherever you need a reliable, non-contacting level measurement, and digital echo processing means IMP+ I.S. is perfect for solids or liquids. It can be installed in sumps, tanks, silos, or anywhere you need a display telling you the level, or analog output to interface with your site control system or drive a display.

### **Battery Power**

When used on battery power for intermittent (wake-up) applications, the IMP+ I.S. features a high-speed boot up of around circa 3 seconds which maximizes battery life. For example, if an IMP were switched on every 15 minutes for a 3-second reading, the average current is a mere 40µA.



## THE RIGHT METER FOR

- Tank Level Applications
- Chemical Dosing
- Simple Level Indication
- Open & Closed Vessel Level Requirements
- Solids Level Indication

### **System Integration**

Active and passive (sourcing and sinking) analog outputs assist with system integration, especially when retrofitting into older installations.

### **Simple to Install**

The compact IMP+ I.S. is only 175 mm (6 in) high with a 130 mm (5 in) diameter. Cable glands are provided and IMP+ I.S. can be simply screwed into a 1.5" or 2" universal fitting (a 1.5" or 2" adapter is available). High transducer power and tight beam

angles, together with Pulsar Measurement’s digital echo processing, make the IMP+ I.S. ideal for many “difficult” applications such as dusty or foamy environments, or where a tank has unavoidable intrusions.

The integral display makes programming IMP+ I.S. extremely straightforward. IMP+ I.S. can be completely set up, without compromising the IP rating, using the integral keypad alone with no need for a PC. Optional IMP PC software makes it easy to fine-tune IMP’s performance and clone any number of IMP units to the same settings if, for example, they are being used on a tank farm.

### IMP+ I.S. PC Software

IMP PC is optional software that extends the capabilities of the IMP+ and allows a user to:

- **Download, analyze, and store echo profiles.** A great way to see exactly what is happening in the application. Fine-tuning for ultimate performance.
- **Set Up IMP Lite.** All programming parameters are instantly visible in the IMP PC programming screens. Program the IMP unit on a desktop before installation, or clone several IMPs to save valuable time.
- **Updates.** Future-proof your IMP+ I.S.! Pulsar Measurement’s policy of continual improvement means that we never stop developing our products. IMP PC allows new firmware to be installed into your IMP units, without even removing them from the application.
- **Flow Measurement.** A flow curve may be added within IMP PC to configure for simple level to flow linearization.



Inside the lid of an IMP+ I.S.



Optional mounting bracket for IMP sensors

### Service & Installation

Our award-winning products are favored worldwide due to their reliability and easy menu-driven setup, our product range is designed to provide a full range of alternatives from a single measurement point right through to multi-point applications with digital communications.

All products from Pulsar Measurement are designed to be easily installed and set up, but if you are unsure of your installation our service engineers are ready to assist you. From telephone and web support, through to on-site commissioning and on / off-site product training. We will ensure that you get the most out of your product and sales experience with Pulsar Measurement.

If you are unsure of your application requirements or which product is right for you, our sales, service, and technical teams are available to discuss your application and technology requirements, ensuring you receive expert advice.

For more information on our service offerings, please visit the website or contact one of our head offices.

## Technical Specifications

### PHYSICAL

<b>Controller Body Dimensions:</b>	186 mm H x 133 mm D (5.2 in x 7.3 in)
<b>Weight:</b>	Nominal 1 kg (2.2 lb)
<b>Cable Entry Detail:</b>	2 off cable glands 4.5 mm to 10 mm (0.18 in to 0.4 in); <i>Torque to 2 NM</i>
<b>Mounting:</b>	1.5" BSP/NPT (IMP3 & IMP6), 2" BSP/NPT (IMP10)

### ENVIRONMENTAL

<b>IP Rating:</b>	IP67
<b>Temp. Range (Process):</b>	-40 °C to +80 °C (-40° F to +176 °F)
<b>Temp. Range (Ambient):</b>	-20 °C to +65 °C (-4 °F to +149 °F)

### IMP3

<b>Beam Angle (-3dB Half Power):</b>	<10° inclusive
<b>Operating Frequency:</b>	125 kHz
<b>Measurement Range:</b>	200 mm to 3 m (7.9 in to 9.8 ft)

### IMP6

<b>Beam Angle (-3dB Half Power):</b>	<10° inclusive
<b>Operating Frequency:</b>	75 kHz
<b>Measurement Range:</b>	300 mm to 6 m (11.8 in to 19.7 ft)

### IMP10

<b>Beam Angle (-3dB Half Power):</b>	<10° inclusive
<b>Operating Frequency:</b>	41 kHz
<b>Measurement Range:</b>	300 mm to 10 m (11.8 in to 32.8 ft)

### APPROVALS

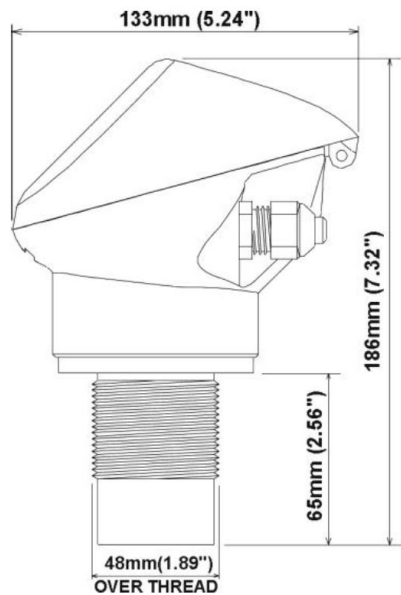
<b>CE Approval:</b>	Listed in the Certificate of Conformity within the manual
<b>ATEX Approval:</b>	Ex II 1G EEx ia IIC T4 (Tamb = -40 °C to +80 °C)

### PERFORMANCE

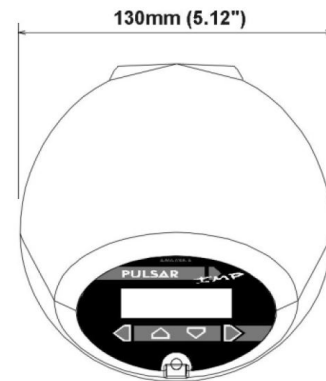
<b>Input Voltage:</b>	11-30 V, 3.5-22mA
<b>Accuracy:</b>	± 0.25% or 6 mm (0.2 in), <i>whichever is greater</i>
<b>Resolution:</b>	± 0.1% or 2 mm (0.2 in), <i>whichever is greater</i>
<b>4-20mA Outputs:</b>	Resolution 5 µA (both active and passive outputs)
<b>Temperature Compensation:</b>	Via internal temperature sensor (±0.5 °C (32.9 °F) accuracy). Level and volume conversions are installed allowing linearization for tank shapes
<b>PC Interface-PC Suite:</b>	All parameters can be accessed and changed through PC Suite software. Echo traces may be viewed on-screen.

### 2 WIRE CONFIGURATION FEATURES

- 4-digit LCD display
- 4 button keypad for parameter entry



IMP drawing side



IMP drawing top

## Delivering the Measure of Possibility

Pulsar Measurement offers worldwide professional support for all of our products, and our network of global partners 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, allows us to create close relationships with our customers and provide service, support, training, and information throughout the lifetime of your product.

For more information, please visit our website:

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



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