

# TETRAPULSE ESENSE 300

## Electric detection and classification

TETRAPULSE ESENSE 300 is the world's most compact subsea electric sensor. Its patented technology CEDAR® (*Controlled Electric Detection And Ranging*) is bio-inspired from the active electrolocation perception mode of some tropical fishes. It measures simultaneously the apparent complex electrical impedance via active and passive dipoles simultaneously, for the detection, the localisation and the classification of subsea targets.



### FEATURES

- Modular and light weight (up to 4 electrodes)
- Buried object detection up to 1-2m
- Low power consumption (70W peak)
- Selective EM field frequency (100Hz-25kHz)
- Adaptive electrodes array
- Ultra-high sensitivity
- Real time data processing

### MMI

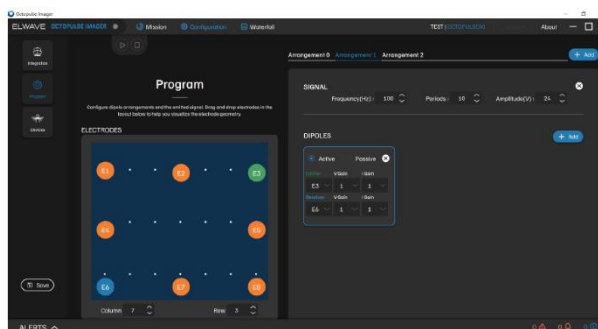
- Sensor configuration
- Real time data visualisation
- Real time data output to 3<sup>rd</sup> party survey software
- Data export to 3<sup>rd</sup> party post processing and GIS software

### BENEFITS

- Suitable for a wide range of subsea platforms (AUV, ROV, ROTV, trencher, crawler, fixed frame...)
- Detection of non-ferrous targets
- Detection of non-metallic targets
- Detection of buried targets
- Robust against noisy environment
- Stealth

### APPLICATIONS

- Cable and pipeline survey
- UXO survey
- Seabed Warfare
- Mine hunting
- Critical marine infrastructure
- Marine archeology
- Environmental survey
- Fisheries
- Seabed minerals



## TECHNICAL SPECIFICATIONS

Array configuration	2 to 4 electrodes
Operational frequency range	100Hz-25kHz
Maximum emitted signal	2 Amps / 24V

## MECHANICAL SPECIFICATIONS

POD dimensions	450mm * $\varnothing$ 145mm
POD weight in air / water	6Kg / 1 Kg
Electrode dimensions	120mm * $\varnothing$ 90mm
Electrode weight in air / water	0.85Kg / 0.35Kg
POD to electrode cable length options	1.5 to 7m on demand
Material	Aluminium
Electrode's connectors options (all SubConn)	Straight or right angle
Depth rating	300m

## INTERFACES SPECIFICATIONS

Serial	RS232
Ethernet	10/100 Mbits, UDP/TCP (client / server)
Ctrl/Cmd	MINI1 protocol
Maximum data acquisition rate	100Hz
Real time data output	NMEA UDP for 3 <sup>rd</sup> party georeferenced data visualisation
Internal data storage	SD card
Power supply / consumption	20 - 48 VDC / < 70 W

## RESULTS

