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| **Immersed System BehaviourS3AP**3-way Accelerometer - Pressure **MEASUREMENT CHARACTERISTICS** Depth channel: Piezoresistive pressure sensor with Hastelloy membrane. Range: 0 to 6000m. Accuracy: < ± 0.5%, i.e. ± 30m. Maximum resolution: 3m. Overload rating: 6600 dBars. 3 channels for measurement of Acceleration: 3 piezoresistive accelerometers with various ranges can be used: ±2g, ±20g or ±100g Accuracy: 1% Mechanical aspect: Limited to 400G for the ±2g and ±20g sensors Limited to 2000G for the ±100g sensor **DATA LOGGER** Energy: Lithium batteries (factory replacement recommended). Autonomy: > 50 days at a sampling rate of 10s, 5 days at a sampling rate lower or equal to 1s. Sampling frequency: 200Hz maximum, which corresponds to a sampling rate of 5ms max. 1Mb memory capacity (4Mb optional). **MECHANICAL CHARACTERISTICS** Body in titanium and plastic. Dimensions: diameter 40mm, length 235mm. **Applications**S3AP allows to measure of accelerations along the axes of its housing or along 3 orthogonal axes, in various ranges (±2g, ±20g and/or ±100g). It also measures the depth of immersion, down to 6000 metres. It is used to monitor the behaviour of immersed systems (shocks sustained by the systems when they are deployed), but also to measure the penetration of corers in sediment.  |  |

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| **SF strain gauge**2 Ton, 5 Ton or 10 Ton Force data logger **Characteristics**Sensor of the type Traction in S Measuring cell: temperature compensated measurement bridge Overload: 1.5 times the nominal load without recalibration 2 times the nominal load with recalibration 4 times the nominal load at failure Material: entirely stainless steel Max. operating depth: 300m 2-ton range - Accuracy: 10kg, resolution: 0.9kg 5-ton range - Accuracy: 25kg, resolution: 2.2kg Approx. weight in air: 4kg Approx. weight in water: 3kg Dimensions (mm): 214 x 85 x 60 10-ton range - Accuracy: 50kg, resolution: 4.5kg Approx. weight in air: 5Kg Approx. weight in water: 4Kg Dimensions (mm): 249 x 85 x 60 1Mb Flash-type memory with data compression (possible extension) Sampling: from 0.01s to 99hrs Power: overmoulded lithium batteries, average battery life : 3 years (depending on usage) Programmable starting: manual, by threshold detection, timed (15 On/Off modes available) Mode of storage of measurements: NORMAL, MINIMUM, MAXIMUM, AVERAGE ApplicationsMeasure tractive stress on a stowing of gillnets, on buoy anchoring or on any structure held in place by cables (aquacultural cages...). For depths down to 50 meters, reading can be performed under water using a waterproof Data Pencil, in which case the SF data logger can remain in station. Available in a ±2.5 ton tractive and compressive stress data logger version.  |  |

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| **S2IP**300m or 6000m Pressure & Tilt data logger **Characteristics**Tilt range: ± 85° Resolution: < 0.1° at 30° Accuracy: ±0.3° at +20° and -20° Tilt sensor: Accelerometer ±2g Pressure sensor: Piezoresistive (case and diaphragm made of Hastelloy) Response time of sensors: 10 ms 300m Depth range (S2IP300) Accuracy: 0.9m, Resolution : < 0.15m 6000m Depth range (S2IP6000) Accuracy: 18m, Resolution : < 3m Weight (in air): 600g Length: 235 mm Diameter: 40 mm Material: Titanium and Ketron Sampling rate: Programmable from 0.05 s to 99 hrs Programmable starting: immediate, delayed, timed or set threshold (depth or tilt) Memory capacity (\*): 1Mb (with data compression) (\*) the recording autonomy depends on the resolution and the sampling rate. **Applications**S2IP measures and records the pressure and the tilt of immersed instruments such as the particle collectors or trawl panels. The measurements of tilt are made along 2 perpendicular axes. S2IP can have an autonomy in excess of one year depending on the settings and the sampling rate |   |

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