BATTERY AND DISPLAY UNIT (BDU)

STAND ALONE, BATTERY POWERED FLOW MEASUREMENT AND INDICATING SYSTEM

ROV installable BDU *Surface mateable connector BDU*

DESCRIPTION

The system provides accurate flow and or pressure metering totalizing with visual indication for use on pipelines, ROV tooling skids and well intervention systems. The Battery and Display Unit (BDU) is a stand alone unit, powered by rechargeable batteries and is designed to be readable via an ROV camera at 4m distance. The turbine flow meters or pressure transducers (1 or 2) give electrical signals to the BDU with frequencies corresponding to the current flow rate or pressure. The BDU is capable of taking electrical signals from 1 or 2 pressure transmitter devices and calculates various parameters that can be displayed such as, totalized volume flow, actual flow rate, average flow rate, actual pressure, highest pressure and battery charge level.

KEY FEATURES

- The system has been qualified in accordance with ISO 13628-6
- The flow or pressure devices are connected via ROV mateable connectors or surface mateable connectors placed on the BDU
- When devices are connected the BDU will automatically be activated. Equally, it will power down as soon as it is disengaged
- When the BDU is not connected to the devices, the connector in the receptacle shall be protected by protective caps (dummy BDU when hooked up subsea)
- Main components of the system:
  - Flow meters (1 or 2)
  - Pressure transmitters
  - Cable Harness
  - Receptacle for BDU, with connector
  - BDU
  - Dummy BDU
  - Parking receptacle for BDU
  - Battery charger
- The device, harness and receptacle is delivered as one unit

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SPECIFICATIONS

· Design life:	30 years (with battery service - dependent on use)
· Design water depth:	2,000m and 3,000m versions
· Internal design pressure, flow meters:	375 bar (higher pressure ratings available)
· Totalized Flow Accuracy	0.5% (with known fluid and viscosity)
· Flow capacities:	Large range of flow meters available
· Pressure transmitter:	Large range of transmitters available
· Battery capacity, continuous operation:	7 days
· Operating temperature, sea:	-5°C to +30°C
· Operating temperature, land:	-5°C to +50°C
· Storage temperature:	-20°C to +60°C
· Diameter:	118mm (2,000m depth rated option)
· Length surface mateable option:	400mm
· Length ROV option:	Dependent on connector and ROV handle
· Weight in water (ROV option, Titanium Grade 2):	10kg (Surface mateable option is lighter)
· Weight in air (ROV option, Titanium Grade 2):	14kg (Surface mateable option is lighter)
· Device materials:	AISI 316SS or Hastalloy
· BDU material:	Titanium Grade 2 or AISI 316SS
· Surface mateable electrical connector option for BDU:	12 contact socket plug, SEACON
· ROV electrical connector option for BDU:	12 contact socket plug, SEACON or Tronic
· Electrical connector for battery charger:	12 contact receptacle pin, matching BDU
· Jumper - flow meter to BDU connector:	Oil filled pressure compensated or cable

System with two flowmeters and receptacle

ROV installable BDU's in storage container

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