

**CLASS LEADING PRODUCTS
PROVEN TO MEET THE MOST
DEMANDING INDUSTRY
SPECIFICATIONS, DELIVERED
ON TIME, EVERY TIME.**



**INTRODUCING
THE V-SLIM SUBSEA
DEPLOYED LINE INTEGRITY
MONITOR**





THE V-SLIM IS DESIGNED TO IDENTIFY AND LOCATE ELECTRICAL FAULTS IN SUBSEA DISTRIBUTION SYSTEMS.

The IR Problem

When an electrical failure occurs in subsea systems it is often difficult to determine the cause or location of the fault. The most common failure in the subsea environment is the degradation of conductor insulation as a result of water ingress. In large systems with multiple electrical cables and points of disconnect, determining which cable(s) or connector(s) are causing the fault is currently only achieved through subsea intervention to disconnect subsea equipment, and replace with new until the fault is found or removed. Such intervention is highly inefficient, time consuming and an expensive way of fault finding.

The Solution

The V-SLIM® can be integrated into new subsea equipment, or into existing via diver or ROV. It provides a simple and convenient method of locating electrical problems. The product is designed to connect in between the connectors/jumpers and other subsea equipment such as UTAs or distribution units, or alternatively be integrated into the electrical flying leads. The V-SLIM will immediately detect the presence of earth leakage faults by measuring the insulation resistance and cable capacitance both 'upstream' and 'downstream' of the V-SLIM. The V-SLIM also measures and stores a number of other electrical parameters such as voltage, current, and power factor. By connecting multiple V-SLIM devices into a system with each one monitoring a specific cable, a complete picture can be developed of the asset's electrical integrity, and any associated degradation of the subsea electrical distribution network can be measured. Different methods of data retrieval are available; an external remote device known as the V-WAND can be used by a diver or ROV in order to retrieve all logged data, or the V-SLIM devices can form part of a proprietary communications network, V-NET®, which enables the data from each and every V-SLIM to be communicated back to the surface and logged in real time.

Key Benefits

- Significant reduction in subsea intervention requirements for fault finding
- Reduce mobilisation of spare connectors/cables
- Increased availability of subsea system
- Provides accurate electrical integrity data for all parts of the network
- Allows pre-emptive rather than reactive intervention campaigns
- Reduces the requirement for contingency spares
- Enables the subsea connection and distribution system to be commissioned as soon as it is installed.

Key Features

- Measures Insulation Resistance, both upstream and downstream of its location
- Measures voltage, current, and power factor
- Measures cable capacitance, both upstream and downstream
- Able to operate in circuit with systems powered or isolated
- Compatible with AC or DC systems and transformer coupled or bus-bar distribution
- Failsafe: V-SLIM failures do not impact on system operability or availability
- Communicates with other V-SLIM devices and top side V-LIM via the V-NET network
- Compatible with existing subsea control systems
- Can transmit data to topside in real time
- Can be remotely accessed by a diver / ROV with a V-WAND for data download
- Compatible with Megger testing from the topsides
- Wires routed directly through the V-SLIM with no disconnects.

SUBSEA LINE INTEGRITY MONITOR FULL PRODUCT SPECIFICATION

Line Voltage:

Up to 1000V AC/DC

Maximum Line Current:

15Arms

Insulation Resistance

Measurement Range:

5kΩ to 10GΩ

Design Life:

Minimum 15 years

Maximum Water Depth:

3000m (9,840ft)

Environmental:

Qualified to ISO 13628-6:2006