



ViperInnovations.com

V-LIFE FULL PRODUCT SPECIFICATION

The Insulation Resistance (IR) Problem

The most common cause of subsea electrical failures results from the ingress of water into the cable insulation. Such failures decrease the IR and may produce short circuits between conductors or conductors to earth. This often leads to loss of power/communications to subsea and possibly loss of production. Until recently subsea interventions to fault find and (if possible) replace cables, equipment or even umbilicals have been the only solution to this problem.

The Solution

V-LIFE is a standalone device that can be readily retrofitted into topside equipment. Viper have undertaken over 45 V-LIFE installations to date and it is fast becoming a popular alternative to subsea interventions.

V-LIFE acts as both a preventative measure and an active 'healer' to low insulation resistance. The topside installed device deploys an electro-kinetic and electrochemical process which minimises and mitigates the effect of water ingress into the insulation increasing the IR of the system without the need for a subsea intervention.

The V-LIFE service is inclusive of firmware updates, and a monthly report providing IR trend analysis and recommendations.

Key Benefits

- Increases Insulation Resistance with no subsea intervention required
- Recovers multiple IR failures throughout the system
- Extends the life of failing umbilicals or electrical distribution equipment
- 'Buys time' whilst a new umbilical is procured
- Used instead of installing a new umbilical
- Used to postpone field abandonment
- Increases technical margins to allow additional wells to be added
- Currently implemented on 5 different controls OEM systems
- Prevents further water ingress into the umbilical

Key Features

- Compatible with comms on power systems
- Can be applied to power and/or signal lines
- Can be applied to single or 3 phase systems
- Provides all the features of a line insulation monitor including IR measurements down to 1k ohm and configurable alarms/trips
- Can be integrated into existing system using purpose built interface
- Displays IR measurements graphically in real time
- Basic control and configuration through a graphical touch screen LCD
- Advanced control and configuration via USB and Ethernet interfaces

Maximum Line Voltage:

Up to 1000V AC

Operating Temperature Range:

-20 to +60 degrees C

Storage Temperature Range:

-20 to +70 degrees C

Unit Supply Voltage:

115 /250Vrms 47/63Hz
or 120V to 370V DC

Design Life:

Minimum 15 years operation

Interfaces:

USB and Ethernet

