

# Bender UK — Total Capability in Oil, Gas and Subsea Electrical Safety

**Oil, gas and subsea operators demand high production outputs and safe, functioning platforms to maximise productivity.**

A regular problem interfering with productivity, is harsh operating conditions where serious issues develop quickly. Operators rely on infrastructure working effectively and depend on the integrity of electrical power and communications systems. A world leader in electrical safety, Bender has a total capability in the oil and gas sector. Products and services are designed to maximise the availability of plant, equipment and processes.

### Monitor and manage system integrity

Bender insulation monitoring devices (IMDs) control the integrity of topside critical power, communications and subsea distribution networks, delivering monitoring and forewarning of failure so intervention can be planned safely with minimum disruption.

They provide a proven, risk-free solution for the detection of earth faults in unearthed IT system (AC, AC/DC and DC power supply applications) and ungrounded AC/DC systems. The technology monitors insulation resistance and alarms when failure is detected, while the ISOGraph feature trends system insulation resistance over time.

**State-of-the art LIM performance**  
 The isoHR685 LIM (Line Insulation Monitor) is designed specifically for subsea cable monitoring. It continuously monitors umbilical cables up to 10GΩ, to provide advanced warning of cable degradation and failure. It delivers a huge performance improvement compared to previous variants and can synchronise up to 100 units without cross disturbance.

Where long parallel cables supplied with AC or DC systems can cause interference through the coupling capacitance, the enhanced isoHR685 utilises the synchronised pulse principle which is unaffected by coupling capacitance.

**Monitoring off-line systems**  
 Bender equipment has the capability to monitor systems while offline. The ground fault location device EDS440 automatically locates earth faults in ungrounded AC and DC systems while remaining online, without the need to disconnect equipment. It monitors insulation resistance in IT systems which often sit idle, such as emergency shutdown systems, fire extinguisher pumps, and standby generators. Effective early warning of insulation degradation in this equipment supports preventive maintenance regimes.

**Portable technology**  
 Bender portable fault location cases can be used independently or in combination with Bender pre-installed devices. Deployed by engineers, it enables location of earth faults while systems remain online. Supplied with split core clamps the cost-effective portable cases enables technicians to effectively trace and identify earth faults across a wide area.

Portable EDS3090 Earth Fault Location Case



### Onshore & offshore engineering services

To achieve maximum effectiveness Bender technology must be set-up and commissioned correctly. Ineffective systems undermine safety and compromise the integrity of electrical infrastructure.

Bender UK delivers a broad range of services from system design, training, site surveys, commissioning, installation and aftersales support for onshore, offshore and subsea applications. With increasing demand for accuracy, plant life extension and improved productivity, Bender can support end-users in the field with any technical issues. With an offshore certified team, end-users can employ Bender UK for onsite technical support and training in the characteristics of ungrounded IT systems to improve overall safety and productivity.

For more information visit Bender at Offshore Europe on Stand 3J05.

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isoHR685 Line Insulation Monitoring (LIM) Device

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 CONFERENCE & EXHIBITION  
**STAND 3J05**



## Subsea Umbilical Cable Line Insulating Monitoring (LIM)

### ISOMETER isoHR685 LIM

- ▶ Detects ground faults up to 10GΩ
- ▶ Designed for use on AC, DC or AC/DC main circuits
- ▶ Provides advanced warning of developing insulation failure
- ▶ Synchronises up to 100 devices without cross disturbance
- ▶ Enables offshore monitoring and diagnosis
- ▶ Prevents downtime and loss of production
- ▶ Increases safety of operations

**ONSHORE OFFSHORE SUBSEA**

