

# Power Quality Monitoring from Bender UK Proves a Vital Tool for ROV Operators

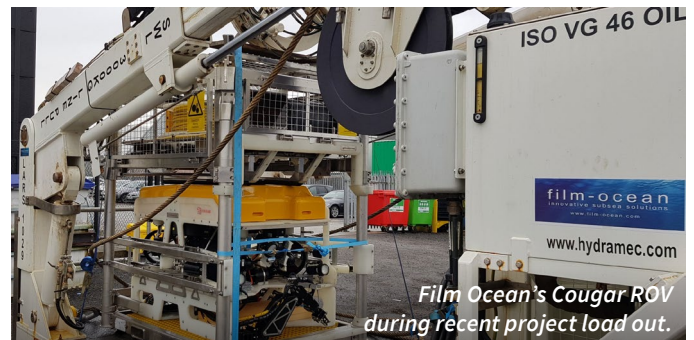
Power quality monitoring equipment from Bender UK is being used by a global subsea ROV operator to verify the integrity of power supplies offshore.

It is the first application of Bender power quality monitoring technology in the subsea sector. The company's insulation monitors and earth fault location technologies are widely employed within the oil and gas industry to protect personnel, subsea equipment, installations and associated electrical infrastructure from insulation failure.

Subsea contractor Film-Ocean provides ROV inspection and intervention services. They trust Bender power quality monitoring (PQM) systems to identify issues with fluctuating power supplies on board support vessels and offshore installations.

Bender's LINETRAXX® PEM735 measures and records the precise current status of electrical supply networks and displays the current/voltage harmonics for assessment of the power quality. The product was first deployed by Film-Ocean after a project was affected by a fluctuating electricity supply that resulted in damage to high-value PCB boards in their ROV equipment.

Mike Mackie, Operations Manager at Film-Ocean explains: "Bender's power quality monitoring equipment alert us to spikes or troughs in the power supply voltage that can seriously affect the ROVs and cause permanent damage. Equally serious is downtime of the equipment and delays



Film Ocean's Cougar ROV during recent project load out.

that can result from fluctuations in the power supply. If damage occurs, we can now track the cause and most importantly identify the source of the problem using Bender PQM ensuring maximum utilisation for our clients.

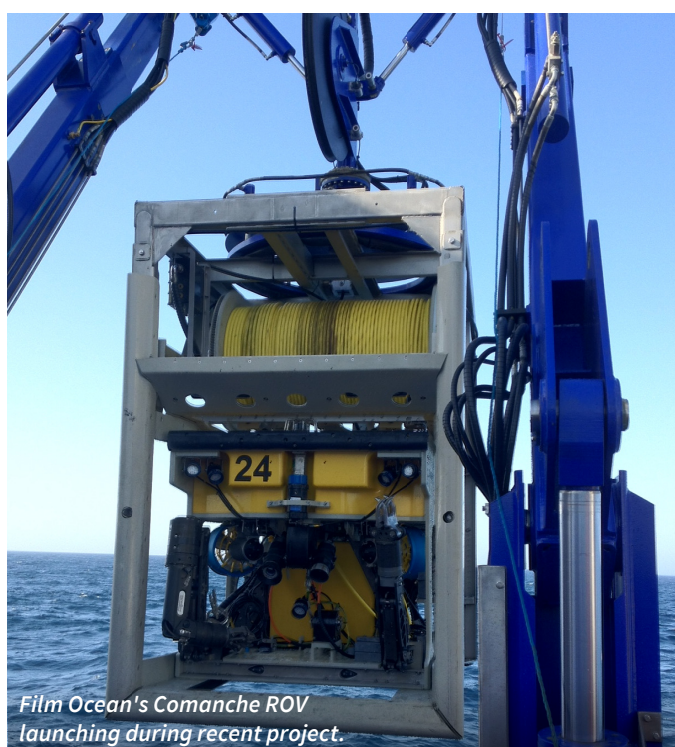
"The bigger ROV units can be more seriously affected by a dip or spike in supply. The Bender units won't protect against the effects, but they let us know that it is happening, and that enables us to identify the root cause. They are proving very successful and we are aiming to use more of the Bender power quality monitors in the future."

The biggest power quality problems occur on three phase systems. Cranes are often one of the most common causes of spikes and drops in the power supply. A crane pulls a lot of current when it starts up, and that can cause a fluctuation in the power supply. When the crane stops, the power can sometimes spike and potentially cause damage to other electrical equipment, but Bender's PQM technology records the changes in the power supply and alerts the Film-Ocean team.

If there is a problem, then Film-Ocean can look at ways to make the power supply more stable – either by bringing in a separate dedicated generator or installing voltage conditioning equipment.

Film-Ocean also uses Bender insulation monitoring devices to safeguard personnel and equipment subsea. Mike adds: "We use a variety of Bender line insulation monitors in multiple locations on all our ROV systems. Not only are they a critical safety device they are also used as condition-based monitors to identify a gradual or complete breakdown of insulation within our systems."

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Film Ocean's Comanche ROV launching during recent project.

