

Extreme Challenges to Radio Repeater Cable Connections in Harsh and Hazardous Areas Overcome with InstrumEx Connectors

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Fern Communications, manufacturers of the FRX1 radio signal repeater, has overcome problems of connecting their instrument in harsh and explosive environments with InstrumEx connectors from Hawke International. The connectors provide convenient secure and Ex compliant cable connection and safeguard the instrument at the critical cable entry point, but provide the flexibility to be safely and reliably live de-mated without hazard.

“There are many instrumentation manufacturer’s, like Fern, who could benefit from InstrumEx technology, not just in hazardous areas offshore, but in other harsh and challenging environments. Electronic product designers can access advice on our web site about the cable compatibility and suitability for different environments” commented Hawke’s marketing manager Gareth Turner.

“Workers in confined spaces are often shielded from radio signals, giving rise to health and safety concerns,” explained Clive Cushion, Fern’s technical director. To overcome these operational problems and address the safety issues of potentially explosive environments in oil and gas industries, we developed the portable FRX1 repeater,” Clive continued.

The FRX1 is a robust sealed unit that is light and easy to handle but tough enough to cope with extreme site conditions,

including exposure to moisture, high salinity and potentially explosive gasses. The integrity of the enclosure and all its connections are vital so the marine grade aluminium body of the FRX1 is sealed to achieve IP66 classification. Hawke's InstrumEx connectors play a key role in maintaining the integrity of the unit. The InstrumEx connector is ATEX and IECEx compliant and allows live connection and disconnection in zones 1, 2, 21 and 22.

All connectors have heavy-duty, maintenance-free, nickel plated brass or stainless steel shells to give ingress protection to IP66/67 and DTS01 and include models for in-line and bulkhead applications. They have a unique keying system which prevents possible misconnection and safeguards the contacts from damage. Reliable low resistance connections are ensured by the use of Multilam Technology which requires less force to engage or disengage the gold plated multi-pin connections.

Integral to the design of the connector is the Hawke cable gland, which contain a number of unique patented features for secure clamping of all wire armour and braided cable types. This is coupled with the sealing and explosion protection reliability expected from Hawke connection products in hazardous areas.

High resolution images are on the web at www.ainsmag.co.uk/ha218/4704ha1a-connectors.htm

For over 50 years, Hawke International, a member of the Hubbell Inc group of companies, has led innovation in the design and manufacture of cable glands, electrical connectors, enclosures and junction boxes for safe use in hazardous areas.

Design, development, manufacturing and stockholding are based at Ashton-under-Lyne in the United Kingdom. Worldwide sales, service and support are provided by dedicated sales and stock holding operations in Singapore, China and Texas together with an international network of distributors and agents.

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