

Teledyne Impulse-PDM

# Design and Development

Custom Engineered Subsea Connectors and Cable Solutions

Underwater cables, fibre optic and electrical subsea connectors, and bespoke engineering solutions

In addition to its manufacturing activities Teledyne Impulse-PDM (TI-PDM) has nurtured its substantial design and development capability. This work has included dedicated activities undertaken on the basis of client requirement specifications and co-operative projects carried out in conjunction with the client. Other projects have involved the design of assemblies with specific electromagnetic characteristics or to international standards. By way of illustration, examples of typical projects will be described.



*Custom Connector*

## Custom High Voltage Connector

Designed for the Global Marine Systems Subtrak vehicles, this connector had to have a compact envelope and a custom interface. The high voltage connector is produced in a 4 pin format and is rated at a max working voltage of 3.3kV AC. The current limit is 20A. Full acceptance testing was carried out on the units, and they have been in service for over a year.

## PAST PROJECTS

- Navigation buoy electrical cubicles
- Special underwater electrical (including high voltage) connectors
- Water blocked penetrators
- Polyurethane encapsulated sensors and transducers
- Submarine communication cable assemblies
- Underwater cable bend control devices
- Cable strain termination



**TELEDYNE IMPULSE-PDM**  
Everywhere you look™

A Member of Teledyne Marine

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## Subsea module penetrator

TI-PDM has designed and manufactured a subsea equipment module penetrator for eProduction Solutions. The equipment offers a multiple contact flexible penetrator which is currently configured to accommodate 60 pluggable contacts presently achieved with 30 2-way connectors. The system is designed for use in oil and fuels and for use at 6000psi. TI-PDM has been awarded a contract for this system for a well extension project.



*Penetrator*



*Divex harness*

## Harness Assemblies

TI-PDM produced the first assemblies for the Divex Stealth diving equipment in 1998. The equipment was designed to meet EOD and Special Forces requirements. The purpose of the latest project was to reduce the magnetic signature of the Diver to a minimum, whilst minimising the impact of electromagnetic interference (EMI). This involved TI-PDM in a detailed redesign of the harness assemblies. TI-PDM have also produced harnesses to CE and LVD requirements.

## Summary

From the range of projects described it can be seen that TI-PDM has the capability of carrying out design and development projects successfully. This is possible because of the company's extensive knowledge of materials, elastomers, tool design and manufacturing techniques. If you have a design or development project you would like assistance with please contact TI-PDM for a professional response based on real experience. All TI-PDM design and development work is carried out under BS EN ISO 9001:2000.