

Siemens Subsea DigiTRON3 Overview

Providing a compact cost effective electrical connector solution where you need it most.

Long Step Out Projects

- Long Step Outs are primarily used when power is supplied from onshore to Subsea components such as Subsea Control Modules (SCM).
- Increasing use of long step outs for green fields (New Developments) where there is no existing architecture.
- Also a low cost solution to brown field (Existing Wells) extensions.
- Projects are primarily Single Phase AC.
- Require higher voltage ratings due to the increase in distance travelled (Power losses).



DigiTRON3 Overview

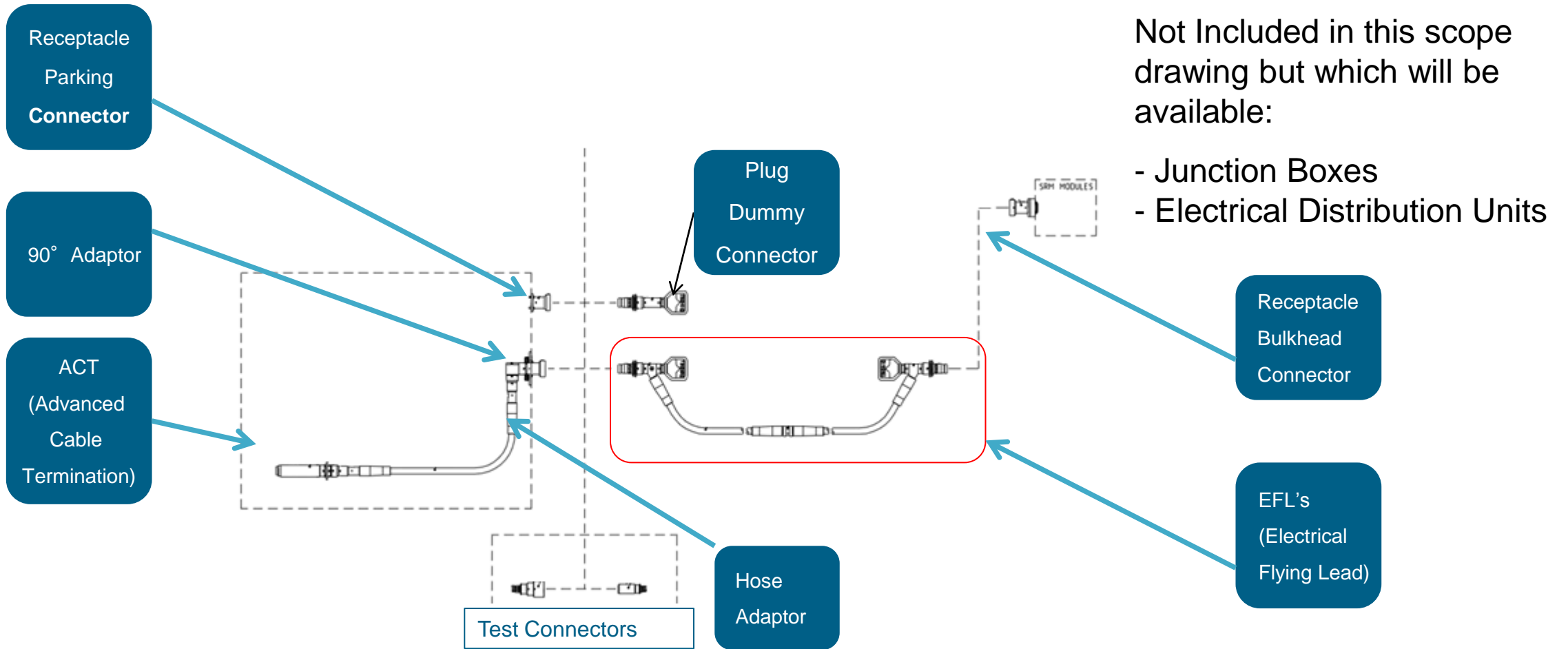
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- DigiTRON3 is a new 4 pin controls connector based on the DigiTRON+ size 10 connector with a modified HV (Higher Voltage) cable termination sleeve & cable management.
- It is a 1,8/3 (3,6)kV wet mate controls connector.
- The main aim of the DigiTRON3 development was to reduce the size and quantity of connectors the customer required for HV (Higher Voltage) controls projects.
- Colour differentiators are used on the DigiTRON3 connectors because they share the same metal work as DigiTRON+.
- Extended Electrical Qualification to TR2390 with power Voltage values applied (SEPS SP-1001).
- PD (Partial Discharge) testing conducted as part of FAT (Factory Acceptance Test)



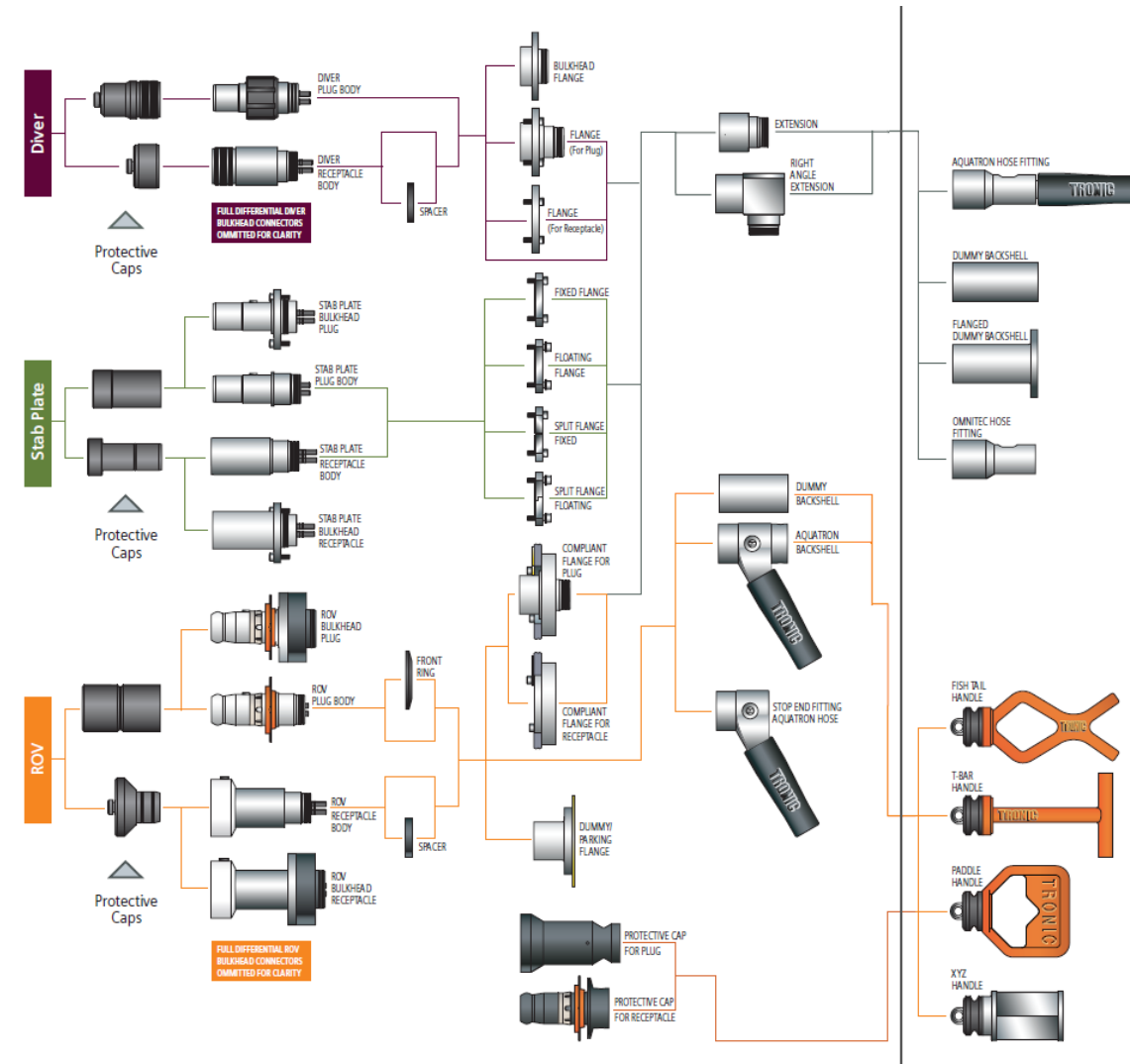
DigiTRON3 Overview

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DigiTRON3 Modular Map

- DigiTRON3 utilises the modularity of the DigiTRON family.
- The modular map shows the available components which have been suitably qualified.
- It is the scope of this product development to constantly evolve the modular map to meet all customer requirements.
- All the modular components that form part of the DigiTRON3 have acquired unrivalled track record through decades of projects at the lower voltage values of DigiTRON+.
- The ACT and Junction boxes are not indicated on the modular map as these are deemed as connector accessories however these do form part of the entirety of projects which this connector is aimed at.



DigiTRON3 Specification

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| Parameter | Value | Unit |
|--|-------------|-------|
| Rated Voltage | 1,8/3 (3,6) | kV |
| Rated Current | 30 | A |
| Frequency | 50 – 60 | Hz |
| Minimum Breakdown Voltage (>6U _o) | 10,8 | kV |
| Number of Contacts (Pins) | 4 | |
| Design Life | 30 | Years |
| Max Water Depth | 4 000 | m |
| Operating Temperature | -5 to 60 | °C |
| Storage Temperature | -25 to 60 | °C |

**Statoil Specification
TR2390 Electrical
Procedures followed with
Voltage Values applied
from SEPS SP-1001**

| Subsystem | Design | Current TRL | Qualification Next TRL |
|------------------------|---------------------|-------------------------------|-------------------------|
| Wet Mate Pair | Complete | 4 | TRL 5 Project Dependent |
| AquaTRON 75 Jumper | Complete | 4 | TRL 5 Project Dependent |
| ACT | Umbilical Dependant | 4 (Based on one umbilical) | TRL 5 Project Dependent |
| Subsea Protective Caps | Complete | 7 | N/A |
| Dummy Connectors | Complete | 4 | TRL 5 Project Dependent |
| Splitter Blocks | Complete | 4 | TRL 5 Project Dependent |

TRL values in reference to API 17n

DigiTRON3

Key Features and Benefits

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- Competitive pricing when compared to other HV (Higher Voltage) connectors.
- Compact connector size when compared to other solutions.
- Completes a full scope of work for Long Step Out controls projects.
- DigiTRON3 uses DigiTRON+ controlled environment front ends which have a proven track record of deployment (at lower voltages).
- Advanced Cable Termination (ACT)
 - Dual barrier testable seals.
 - Available to marshal the umbilical quad out to a maximum of 4 connectors.
- Extended Qualification to TR2390
 - Electrical Qualification Procedures followed from TR2390 with Voltage values applied from SEPS SP-1001
- TR2390 with Power Voltages FAT
 - Controls Connector to undergo PD testing in FAT.

DigiTRON₃ Development

Contact page

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