# DigiTRON$^3$

## 1.The World's first compact cost effective 3kV subsea connector

Our DigiTRON range of connectors have a proven track record to provide trusted quality and reliability.

At Siemens Energy Subsea, we have developed, qualified and manufactured a new DigiTRON connector for single phase long step-out and higher voltage applications.

DigiTRON3 has extensive commonality with the trusted DigiTRON range, which makes this connector compact, therefore reducing the impact on subsea structures and installations. With an improved design DigiTRON3 is a subsea

connector that has no recorded partial discharge (PD) level @ 1.73Uo(3.1kV) and 2.5Uo(4.5kV), ensuring long-term integrity and reliability that minimises operational costs.

## 2. Key features and benefits

- Compact connector size reduces impact on subsea structures therefore reducing client operating costs.
- A key new addition to tour trusted DigiTRON range.
- An onerous manufacturing test program providing quality and reliability.
- Enhanced design and cable management resulting in the connector having no recorded PD levels @1.73 Uo(3.1kV) and 2.5Uo (4.5kV).
- Common interface with DigiTRON to allow interchangeability on existing structures.
- Modularity shared with DigiTRON and qualification program conducted to the latest industry standards.
- An engineered solution supporting today's increasing field challenges.

# DigiTRON$^3$

## Specification

DigiTRON3 has improved upon the reliable DigiTRON design to allow further qualification for higher voltage applications:

- Qualified to a combination of industry specifications: TR2390 Statoil (controls) & SEPS SP-1001 (power)
- IEC voltage class: 1.8 / 3 (3.6) kV AC
- Frequency: 50 - 60 Hz
- Max. Continuous Current rating in Seawater: 30 Amps
- Minimum breakdown voltage (<6Uo): 10.8kV
- Number of contacts (pins): 4
- Design Life: 30 years
- Maximum water depth: 4000m
- Working Temperature: -5°C to +60°C

## Qualification Data

Based on industry input and combining the requirements of controls and power specifications, we have used industry wide standards, TQP-02 in accordance with SEPS-SP-1001. This combined industry specification, along with our own vigorous testing, has produced excellent results in the tests listed below:

- HV Breakdown
- Turbid Tank Wet Mating
- Flooded Connector Back-End
- Long Term Flooded Connector Back-End
- Flooded Connector Front-End
- Jumper Assembly PD
- Flooded Jumper Assembly PD

## The future for DigiTRON3 - The reliability of the 'First Away' connector

DigiTRON3 has endless capabilities to support the customer's future subsea connectivity requirements. We understand our clients need for the highest reliability on their fixed assets. The option to implement a triple barrier solution at the umbilical termination combined with having no recorded (PD) at 1.73Uo (3.1kV) gives DigiTRON3 unprecedented factors of safety and reliability where it's needed most. We're offering our clients a common 'first away' umbilical terminated connector for all their controls systems.

As well as the increased mechanical and electrical ratings the DigiTRON3 connector has the capability to become DC qualified. Therefore, DigiTRON3 will have the capability for DC power across control system, enabling operators to save significantly on installation costs.

**Published by**
Siemens Energy Global GmbH & Co. KG
Industrial Applications
Freyeslebenstraße 1
91058 Erlangen
Germany

***For the U.S. published by***
*Siemens Energy, Inc.*
*Transformation of Industry*
*4400 N Alafaya Trail*
*Orlando, FL 32826*
*USA*

For more information, please contact: Phone: +44 1229 580500 Email: ulverstontechnicalcontrols.gb@siemens-energy.com

 