Transmark Subsea

High Power 3kW Pinless Subsea Connector

WiSub's maximum power transfer and data transfer technologies merge to form the Torden 3kW pinless underwater connector.

Built on over a decade of experience developing and delivering pinless underwater, we are proud to offer this solution as a key enabler of subsea resident systems such as AUV and seabed docking systems.

Unlimited wet-mate cycles and large gap tolerances deliver next-level capabilities to enable a revolution in underwater equipment design & operations.





Connecting freedom Misalignment tolerance 360° rotation Infinite mating cycles



Data + Power Transfer From 200Mbit/s Ethernet & serial data formats Fiber optic & copper interfaces



Standardized interface Genderless mating faces Flexible mounting features Latching & packaging options

POWER TRANSFER

Power transfer	3000 Watts
GAP	0-50 mm
Output Voltage	200-450 VDC
Input Voltage Range	350-400 VDC
Output Current	10 Amps max.
Power start-up time	20 to 30 s
Protection	Current, temperature, foreign object detec- tion, reverse power
Efficiency 3000W	90% (est.)
Max constant current limit	10 A (adjustable)
Battery charging (CC/CV)	User can configure system to charge battery packs. CC: 1 to 10 Amps CV: 200 to 400 VDC



DATA TRANSFER

Ethernet transfer rate	Starting at 200 Mbit/s
Serial data rate (max)	115200 bps (RS323,RS422,RS485)
Data start-up time	32s

MECHANICAL PROPERTIES

Weight in air	45 kg
Weight in seawater	13 kg
Housing	Aluminum ¹
Depth rating	2000 metres

¹ Customer specified materials for housing are possible including 316, Duplex SS, beryllium copper or titanium





Flexible Operational Tolerances

WiSub pinless connectors overcome traditional conductive connector sub-millimeter tolerances to offer centimeter tolerances on your subsea connection applications, enabling subsea solutions never before possible.

Applications

Where frequent mate / de-mate connection cycles are required, pinless connection prevails.



Comparative Advantages

WiSub pinless connectors transfer data through seawater at much higher data rates than many other existing non-contact subsea communications methods, being based on WiSub high-speed, high-frequency microwave electronics vs. low-frequency RF, inductive or acoustic technologies.

Advantages over legacy "plug-in" wet-mate connectors include galvanic separation, alignment freedom, immunity against seal contamination and unlimited mating cycles.

WiSub pinless connectors are unaffected by acoustic disturbance and turbidity, or by marine growth that might affect optical systems. Driving electronics and transducers are optimized for through-water transmissions. Low-frequency inductive power transfer and high-frequency data transfer solutions peacefully co-existing without interference.

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