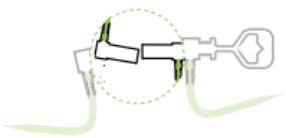
Transmark Subsea
Specialist in Subsea solutions

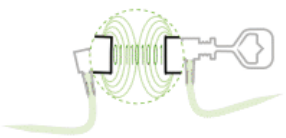
SPOTLIGHT ON NEW TECHNOLOGY 2017

High Performance Pinless Subsea Connector

WiSub's patented data transfer technology attains never-before achieved speeds in pinless connection, starting with a 300Mbps transparent Ethernet & serial interface. The convergence of this disruptive solution with proprietary inductive coupling has resulted in a flexible connection solution delivering unlimited wet-mate cycles and loose mating tolerances, enabling the development of new opportunities for underwater equipment manufacturers and operators.



Connecting freedom
Misalignment tolerance
360° rotation
Infinite mating cycles



Data + Power Transfer
From 300Mbit/s
Ethernet & serial data formats
Fiber optic & copper interfaces

Standardized interface
Genderless mating faces
No pin-count
Flexible mounting features
Latching & packaging options

DATA TRANSFER

Ethernet transfer rate	300 Mbit/s
Serial data rate (max)	115200 bps (RS323,RS422,RS485)

POWER TRANSFER

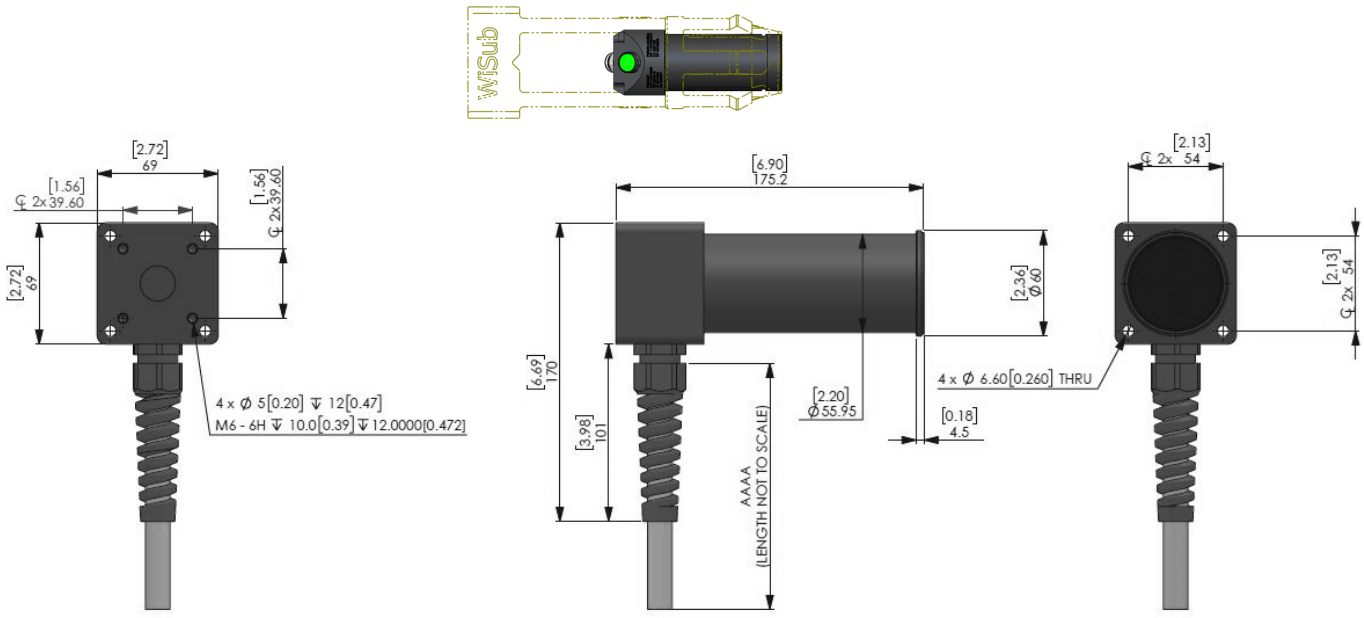
Power transfer	150W
GAP	0-10mm
Output Voltage	User selectable 5 to 24 VDC
Input Voltage Range	18-26VDC
Output Current (battery charging)	1-7A (limited by max power of 150W)

MECHANICAL PROPERTIES

Weight in air	1.3 kg
Weight in seawater	1.1 kg
Housing	Aluminum[1]
Encapsulation	Epoxy and Polyurethane[2]

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

[2] Alternative encapsulations available e.g. atmospheric or PBOF (pressure balanced, oil-filled)

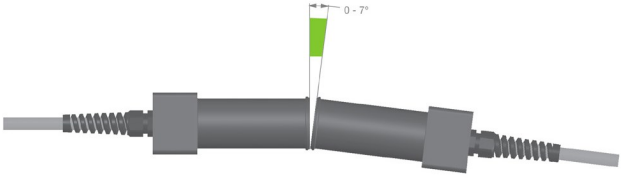


Flexible Operational Tolerances

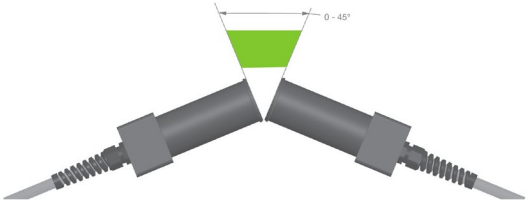
WiSub pinless connectors overcome sub-millimeter tolerances to offer centimeter tolerances on your subsea connection applications, enabling subsea solutions never before possible with pinned connectors.

Rotational Alignment Tolerance

Angular Misalignment Tolerance POWER

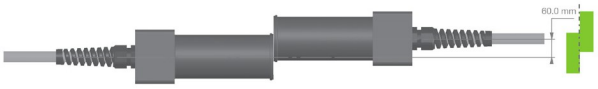


Angular Misalignment Tolerance DATA

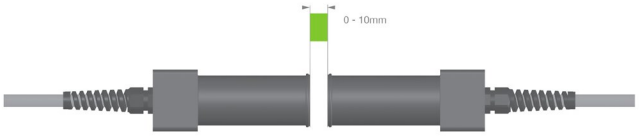


Cross Axis Tolerance POWER

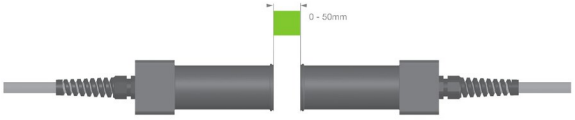
Cross Axis Tolerance DATA



Gap Tolerance POWER



Gap Tolerance DATA



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-patented 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 trans-missions. Low-frequency inductive power transfer and high-frequency data transfer solutions peacefully co-existing without interference.

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