

EOFL-C

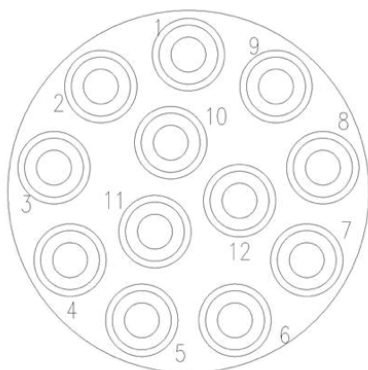
Optical Extended CAN Bus Jumper, using fault tolerant to Optical conversion to extend the range.



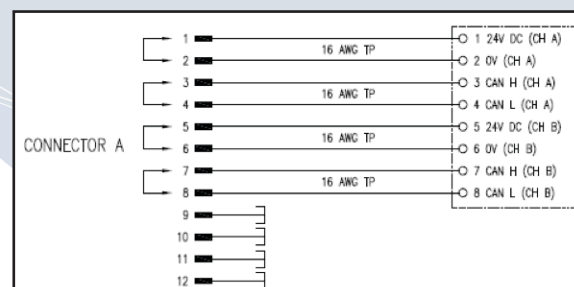
TECHNOLOGY OVERVIEW

CAN bus refers to multiple versions of a Controlled Area Network bus. The Oil and Gas industry has standardized on the Fault tolerant version of CAN as described by ISO11898-3. This technology converts the Fault tolerant signal to Optical Can, allowing for distances up to and above 5 KM. The Optical signal is then converted back to Fault tolerant on the far side.

PIN LAYOUT



ODI Pin	Description
1	Power + (CH A)
2	Power {GND} (CH A)
3	CAN H (CH A)
4	CAN L (CH A)
5	Power + (CH B)
6	Power {GND} (CH B)
7	CAN H (CH B)
8	CAN L (CH B)
9	Option
10	Option
11	Option
12	Option



CONVERTER HOUSING

The housing is a 1 ATM enclosure and will be back filled with dry Nitrogen to facilitate heat transfer for the circuit boards. The circuit boards are protected on one side by a glass to metal seal penetrator. These penetrators have a use history of over fifty years and show a very high reliability. The other side uses a hermetically-sealed Optical penetrator and FACT pins. Both have also proven reliability.

CIRCUIT BOARDS

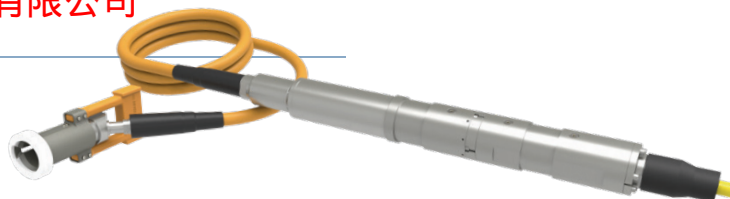
The converter boards are made to class 3 specifications per IPC 6012, requiring the tightest tolerances to ensure the highest reliability. The EOFL-C Can Bus Flying Lead contains two circuit boards. A power conversion board converts 24 VDC to 5 VDC. The DC to DC converter board is set up for two independent circuits and can handle an input range of 8 to 36 VDC. The EOFL-C CAN board is laid out to run a single channel. Running two channels requires an additional CAN board which fits inside the housing and has been tested.



TELEDYNE MARINE
ODI
Everywhereyoulook™

EOFL-C

Optical Extended CAN Bus Jumper,
using fault tolerant to Optical conversion to extend the range.



DESIGN SPECIFICATIONS

PARAMETERS	Max Operational Depth Pressure Balanced		4000 m (6,000 psi)	
			Receptacle	Plug
Max Operational Differential Pressure – 12-way Nautilus			224bar (3250psi)	303bar (4400psi)
Operational Temperature	Seawater Air	-5°C to +40°C	(23°F to 104°F)	
		-20°C to +50°C	(-4°F to 122°F)	
Storage Temperature			-30°C to +60° C	(-22°F to 140°F)
Subsea Mate/De-Mate Cycles			1000 total cycles maximum after factory testing 200 cycles maximum in turbid seawater conditions	
Maximum Mate/De-Mate Force			< 500N (112 lb-f)	
Minimum Force Needed to De-mate			98N (22 lb-f)	
Configurations			ROV, Stab & Diver-Mate	
Material			Shell & Latch Fingers: Titanium & High Strength Stainless Steel Boots & Bladders: Teledyne Proprietary Plastic & Rubber Components Slides (ROV Only): Titanium, Acetal, or Delrin Repeater Housing: Titanium	
Design Life			30 Years (Assuming Operational Temperature of 4°C)	
Number of Circuits			4,7,12	
POWER WIRES (PASS THROUGH)	Maximum Operational Current per Circuit		3 Amps	
	Maximum Operational Voltage		620 VAC Phase to Ground	
POWER WIRES (REQUIRED TO RUN REPEATER)	Insulation Resistance		≥ 10 GΩ @ 1 KVDC	
	Operating Power		5 watts	
	Operating Voltages		24 Volts +12/-16 Volts	
	Max In Rush Power		10 watts	
	Contact Resistance		≤ 10 mΩ per contact	
	Mated Connector Continuity Resistance		≤ 0.2 Ω per contact	
	Fully Compatible Materials		Fresh Water, Sea Water, DC 200 Silicone Oil	
	Intermittently Compatible Materials		MEG, Oceanic HW 443, 50% Citric Acid, 50% Acetic Acid	
	Max Length		2 Housings	
	(Dependent on customer equipment)		*5 KM (Dependent on Power loss)	



TELEDYNE MARINE
ODI
Everywhereyoulook™

www.teledynemarine.com

1026 N. Williamson Boulevard, Daytona Beach, FL 32114 USA

Tel +1-386-255-0780 or 1-888-506-3326 Fax +1-386-255-0906

Email: teledynemarine@teledyne.com

网址 www.aiboco.com 电话029-88256270 邮箱sales@aiboco.com

Specifications subject to change without notice.
© 2020 Teledyne Marine. All rights reserved. DN 1241746 Rev A.