

OCC PIERSIDE FAMILY



6 and 12 CH Family of Hermaphroditic Fiber Optic Connectors



Overview

The OCC Pierside family of fiber optic connectors is designed to meet stringent performance characteristics established by the U.S. Navy in accordance with NAVSEA 7379171 and 7379172 drawings. Conceived in 1997, these standards governed the requirements for a durable, high-quality 6- to 12-channel fiber optic hermaphroditic connector system to be concatenated when connecting naval vessels to network interfaces located at docks or piers.

The OCC Pierside style of connector is designed to enable “genderless” mating capabilities, without regard for male or female gender configuration of the interfacing connector to which it is mated. The coupling nut of hermaphroditic plug connectors can be selectively adjusted to convert the plug connector to a male or female coupling thread, allowing a hermaphroditic plug to couple to another plug configured in the opposite gender. This genderless characteristic allows cable assemblies with hermaphroditic plugs on both ends to be deployed without concern for orientation (male or female) when used in a “daisy-chained” configuration. Another benefit of cable assemblies using hermaphroditic plug connectors is that multiple identical cable assemblies can be linked together as needed (limited only by system link budget [dBm]). This “genderless” characteristic provides extreme flexibility in deployable system architectures and eliminates the gender orientation and logistics of deployment, redeployment or field system reconfiguration. This series of connectors uses MIL-PRF-29504/14 pins and MIL-PRF-29504/15 sockets with a unique captive alignment sleeve in a Detachable Socket Insert (DSI) [wedge-shaped removable insert cap]. Unlike competitive products, OCC plugs are fitted with a tethered hermaphroditic dust cap, and receptacles are fitted with tethered female dust caps.

The OCC Pierside family of fiber optic connectors affords users the most comprehensive complement of connector options available, including replacement dust caps, strain-relief receptacles and 90° plugs, etc. Available in either single-mode, multimode or a combination of both, the design is compliant to the Commercial Item Description (CID) standard issued by the Naval Sea Command.

Applications

- Ship-to-Shore Communications Umbilical Connect
- Mobile Emergency Telecommunications Stations
- Mobile Tactical Shelters
- U.S. Army, Navy, and Marine Corps Military Tactical Deployments
- Broadcast
- Oil and Gas Industries



All Pierside connectors can be utilized in any pre-terminated turnkey assemblies.

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Features and Benefits

FEATURES		BENEFITS
<p>Interoperable with other competitive connectors</p>		<p>End users are not limited to single-source or limited-source products.</p>
<p>Interchangeable detachable socket insert (DSI), M29504/14 and M29504/15 termini</p>		<p>Interchangeable detachable socket insert (DSI) and termini enable end users to purchase replacement components to be used with OCC or other manufacturers' products.</p>
<p>Replacement dust cap options</p>		<p>OCC offers replacement dust cap kits in male, female or hermaphroditic options.</p>
<p>Enhanced Kevlar™ retention system</p>		<p>Product supports tactical cable retention without degradation of optical signal.</p>
<p>Field convertible hermaphroditic design</p>		<p>Plug-to-plug assembly on a reel can be instantly provisioned for male (daisy-chain) or female connectivity.</p>
<p>Variety of connector configuration options</p>		<p>A complete complement of connector options, including replacement dust caps, strain-relief receptacles and 90° plugs are available.</p>
<p>Full complement of replacement components</p>		<p>All components designed to meet the scope of NAVSEA 7379171 and 7379172 for form, fit and function.</p>



Performance Specifications

DESCRIPTION	METRIC	PARAMETERS
Insertion loss (multimode)	EIA/TIA-455-171	0.30dB – typical, 0.75dB – max.
Insertion loss (single-mode)	EIA/TIA-455-171	0.40dB – typical, 0.75dB – max.
Back reflection (single-mode UPC polish)	EIA/TIA-455-60	-50dB – typical, -40dB – max.
Operating temperature	EIA/TIA-455-5	-54°C to + 85°C
Storage temperature	EIA/TIA-455-5	-65°C to + 85°C
Temperature cycling	EIA/TIA-455-3	-54°C to + 85°C
Mating durability	EIA/TIA-455-21	1000 cycles min.
Impact	EIA/TIA-455-2	EIA/TIA-455-2
Twist	TIA-455-36	±90° rotation, 1 cycle/5 sec., 1000 cycles
Cable sealing flex	MIL-STD-1344, method 2017	100 cycles
Cable retention	TIA-455-6	400 lbs. min.
Crush resistance	TIA-455-26	450 lbs.
Physical shock	TIA-455-14	Condition C
Vibration	MIL-STD-1344	Method 2005.1
Temperature humidity	EIA/TIA-455-5C	Method b
Fluid immersion	EIA/TIA-455-12	24 hours per fluid
Water pressure		25 PSI, 24 hrs.
Ozone exposure	ATSM-D-1149	100-150 PPM for 2 hrs.
Flammability		MIL-STD-1344, method 1012
Corrosion resistance	EIA/TIA-455-16	500 hours salt spray
Thermal shock	EIA/TIA-455-71	Condition B-0 except 10 cycles, @ 85°C and -62°C



CCPA10F11CB – 12 CH hermaphroditic plug

CCPA10C11CB – 6 CH hermaphroditic plug

CCPC22F11C – 12 CH jam nut receptacle, external jam nut

CCPC22C11C – 6 CH jam nut receptacle, external jam nut

Ordering Information

PART NUMBER	CONFIGURATION	PRODUCT DESCRIPTION
CCPA10C11Cx	Plug, with dust cap	6 CH plug, hermaphroditic, w/hermaphroditic dust cap
CCPA10F11Cx	Plug, with dust cap	12 CH plug, hermaphroditic w/hermaphroditic dust cap
CCPA30F11Cx	Plug, with dust cap	12 CH plug, hermaphroditic w/male dust cap
CCPM10F1ACx	Plug, with dust cap	12 CH plug, 90°, w/hermaphroditic dust cap
CCPC22C11C	Receptacle, jam nut, external	6 CH jam nut receptacle, external jam nut w/female dust cap
CCPC22F11C	Receptacle, jam nut, external	12 CH jam nut receptacle, external jam nut w/female dust cap
CCPF22C11Cx	Strain-relief receptacle	6 CH jam nut, strain-relief receptacle, external jam nut w/female dust cap
CCPF22F11Cx	Strain-relief receptacle	12 CH jam nut, strain-relief receptacle, external jam nut w/female dust cap
CCPH0WC11C	Accessory	Replacement detachable socket insert – DSI (wedge) 3 – ceramic alignment sleeves
CCPH0WF11C	Accessory	Replacement detachable socket insert – DSI (wedge) 6 – ceramic alignment sleeves
CCPH10F100	Dust cap	Replacement dust cap, hermaphroditic, 6 CH or 12 CH
CCPH20F100	Dust cap	Replacement dust cap, female, 6 CH or 12 CH
CCPH30F100	Dust cap	Replacement dust cap, male, 6 CH or 12 CH
TC1440CA	Termini	COTS M29504/14 pin 2.0mm ceramic ferrule, 126µm I.D.
TC1549DA	Termini	COTS M29504/15 socket without captive sleeve
TC0339AA	Termini	Dummy termini (fits either pin or socket)
TC1546EA	Termini	Replacement captivator guide bushing for DSI
PA35395-99-017	Crimp sleeve	Crimp sleeve, brass, 114 O.D.

REPLACE "X" WITH DIAMETER CODE CONFIGURATION	
A	0.190"–0.239"
B	0.240"–0.279"
C	0.280"–0.315"
D	0.316"–0.346"
E	0.347"–0.379"
F	0.380"–0.423"
G	0.424"–0.465"
H	0.466"–0.515"
K	0.550"–0.589"



OPTICAL CABLE CORPORATION

CORPORATE HEADQUARTERS

5290 Concourse Drive | Roanoke, VA 24019 | USA

Phone: +1-540-265-0690 | 800-622-7711

Fax: +1-540-265-0724

occfiber.com