

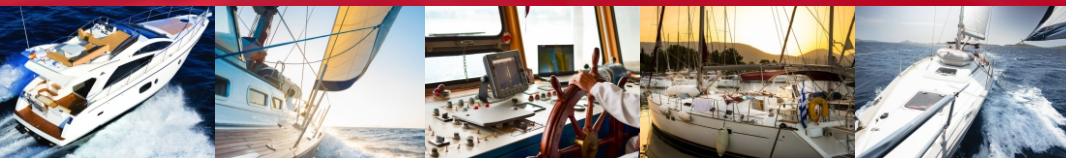


CHOGORI®

We Focus on Your Connections

Chogori Solutions for

Marine Application



www.chogori.com.cn

CHOGORI®

The Concept of NMEA 2000 System

About NMEA 2000®

NMEA 2000® is the marine standard for data communication between marine instruments. It connects multiple instruments together (Multi-Function Displays, Fish Finders, Sonar, GPS, and etc), regardless of brand for the purpose of sharing and/or displaying user selectable data with any or all other display instruments installed on the NMEA 2000 network.

The NMEA 2000 solution offers unique advantages in a networking package for multi-station sensing and display of boat systems and engine functions. Those key benefits include simplicity, easy installation, versatility and ease of sensor/display/system expansion, excellent performance and amazing affordability.

- The Micro cable system is used for smaller networks requiring less power (i.e., less than 4amps per network leg)
- The Mini cable system is used for larger networks (i.e., more than 4 amps but less than 8 amps per leg).

Multifunctional Display Screen

Global Positioning System

Receptacle & Single-Ended Cordset

NMEA 2000

Cabling System

- ✓ Receptacles
- ✓ Termination Resistors
- ✓ Field Installable Connectors
- ✓ Single-Ended Cordsets
- ✓ Double-Ended Cordsets
- ✓ T-Adapter
- ✓ Elbow Adapter
- ✓ T-Cable
- ✓ Bulkhead
- ✓ Network Terminator
- ✓ Bulkhead Feed-Thru
- ✓ Waterproof Caps

Termination Resistor

T-cable Assy

Field Connector

Positioning
Cem

Two Way Radio

Fish Finder Screen

Radar
Antenna

GPS
Antenna

Termination
Resistor

Installable
Connectors

Double-Ended
Cordsets

Bulkhead
Feed-Thru

Elbow Adapter

NMEA 2000 Cable

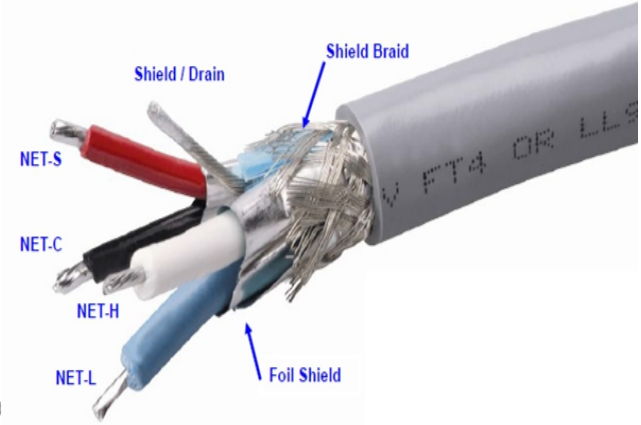
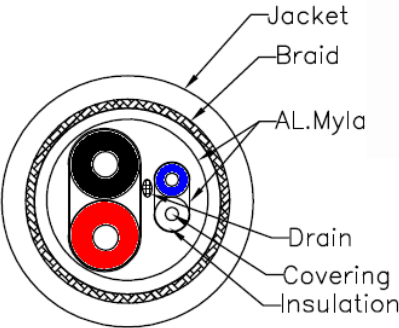
Heavy Cable (For Mini-C)

15AWG*1P+18AWG*1P or heavier.
Drain wire shall be No. 18AWG (0.83 sq.mm) or heavier.
Characteristic impedance: 95-140 Ohms,
Propagation delay: 5 nanoseconds per meter maximum.
10 Twists (minimum) per meter.

Light Cable (For Micro-C)

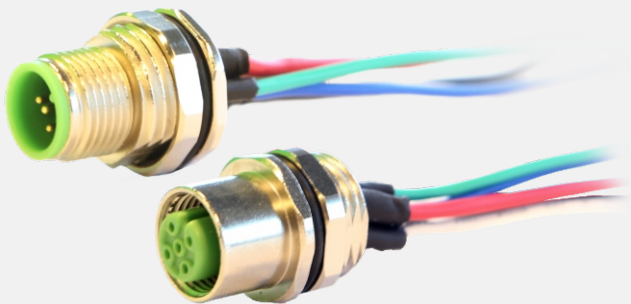
22AWG(0.38 sq.mm)*1P+24AWG (0.24 sq.mm) *1P or heavier.
Drain wire shall be No. 22AWG (0.38 sq.mm) or heavier.
Characteristic impedance:95-140 Ohms,
Propagation delay: 5 nanoseconds per meter maximum.
15 Twists (minimum) per meter.

Name	Pair	Color
Shield	Drain	Bare
NET-S	Power	Red
NET-C	Power	Black
NET-H	Signal	White
NET-L	Signal	Blue



**Product
Offerings**

Micro-C



Receptacles

M12 Receptacles with wires are die-cast connectors ideal for use in enclosures or for creating custom wiring configurations. Available in Male and Female versions, front or rear fastened, these IP68 connectors provide panel-mount capability, help keep things neat and organized, and allow simple replacement in areas where cables are likely to be damaged or replaced frequently.

Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Contact Mat'l: Shield Mat'l: Screw Nut Mat'l:	5 Contacts TPU+GF, Green Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated Copper Alloy, Nickel Plated
ELECTRICAL	Rated Current: Rated Voltage:	4.0 Amps 250V
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP68 (unmated) -40°C ~ 85°C

Products:

Part Numbers	Description
54055105-11-201	5Pin Male Conn, With 25mm Wire Harness, Front Fastened
54055105-13-201	5Pin Male Conn, With 25mm Wire Harness, Rear Fastened
54056105-11-201	5Pin Female Conn, With 25mm Wire Harness, Front Fastened
54056105-13-201	5Pin Female Conn, With 25mm Wire Harness, Rear Fastened



M12 90° Receptacles

M12 90° Receptacles are available in both plastic and die-cast versions. Designed with boardlock, the connectors secure connection to Printed Circuit Board.

Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	Nylon+GF
	Contact Mat'l:	Copper Alloy, Gold Plated
	Housing Mat'l:	Nylon+GF / Zinc Alloy, Nickel Plated
ELECTRICAL	Rated Current:	4.0 Amps
	Rated Voltage:	250V
ENVIRONMENTAL	Protection Class:	IEC IP67 (mated)
	Temperature Range:	-40°C ~ 105°C

Products:

P/N	Version	Description
56055105-24	Plastic	5Pin Male Conn, 90°
54055105-24	Metal	
56056105-24	Plastic	5Pin Female Conn, 90°
54056105-24	Metal	



Single & Double-Ended Cordsets

Rugged, compact, sealed connectors used for trunk or drop lines. It comes in a range of lengths to match any marine installation requirements.

Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Overmoulding Mat'l: Contact Mat'l: Screw Nut Mat'l:	5 Contacts TPU+GF, Green TPU, Black Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated / Nylon+GF
ELECTRICAL	Rated Current: Rated Voltage:	4.0 Amps 250V
CABLE	Outer Jacket Mat'l: Conductor Insulation Mat'l: No. of Conductors: Shielding (3-Levels):	PVC, Gray FPE (data), PVC (power) 1PX22 AWG, 1PX24 AWG, 22 AWG Drain Wire Braid (Overall), Al/My (Power), Al/My (Data)
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP67 (mated) -20°C ~ 80°C
APPROVALS	Flame Test (Cable): Suitability:	UL1685 FT4 (UL), FT4 (CSA) Sunlight & Oil Resistance

Products:

P/N	Version	Description
94051103-31-3XX	Plastic	5Pin Male Cordset, Single-Ended
54051103-01-2XX	Metal	
94054103-31-3XX	Plastic	5Pin Female Cordset, Single-Ended
54054103-01-2XX	Metal	
94057108-31-3XX	Plastic	5Pin M to M Cordset, Double-Ended
54057108-01-2XX	Metal	
94059108-31-3XX	Plastic	5Pin F to F Cordset, Double-Ended
54059108-01-2XX	Metal	
94058108-31-3XX	Plastic	5Pin F to M Cordset, Double-Ended
54058108-01-2XX	Metal	

Note : XX-denotes Cable length in Meters (m)



T-Cable Assy

Connected at the central part of the system, the T-Cable assy is designed to prevent errors in connecting power or network cables and provides easy installation.

Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Overmoulding Mat'l: Contact Mat'l: Screw Nut Mat'l:	5 Contacts TPU+GF, Green TPU, Black Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated / Nylon+GF
ELECTRICAL	Rated Current: Rated Voltage:	4.0 Amps 250V
CABLE	Outer Jacket Mat'l: Conductor Insulation Mat'l: No. of Conductors: Shielding (3-Levels):	PVC, Gray FPE (data), PVC (power) 1PX22 AWG, 1PX24 AWG, 22 AWG Drain Wire Braid (Overall), Al/My (Power), Al/My (Data)
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP67 (mated) -20°C ~ 80°C
APPROVALS	Flame Test (Cable): Suitability:	UL1685 FT4 (UL), FT4 (CSA) Sunlight & Oil Resistance

Products:

P/N	Version	Description
94050122-31-3XX	Plastic	5Pin Male-Female T-Cable Assy
54050122-01-2XX	Metal	
94057122-31-3XX	Plastic	5Pin Male-Male T-Cable Assy
54057122-01-2XX	Metal	
94059122-31-3XX	Plastic	5Pin FeMale-FeMale T-Cable Assy
54059122-01-2XX	Metal	

Note : XX-denotes Cable length in Meters (m)



Field Installable Connectors

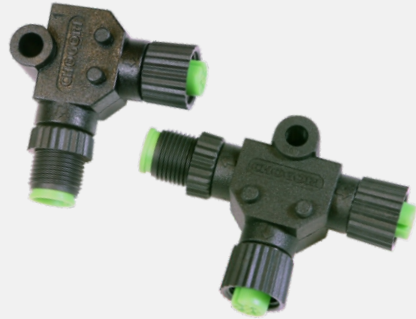
Like the cordsets, the trunk or backbone cables can also be created by running bulk cable using field installable connectors which are available in Male/Female versions. Using screw-in termination, the clamping parts are designed to yield to tensile stress when tightening the terminal screws.

Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	Nylon+GF, Black
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Zinc Alloy, Nickel Plated / Nylon+GF
	Max Wire Size:	0.75mm ² (18AWG)
ELECTRICAL	Cable Range:	4-6mm / 6-8mm
	Rated Current:	4.0 Amps
ENVIRONMENTAL	Rated Voltage:	30V AC / 36V DC
	Protection Class:	IEC IP67 (mated)
	Temperature Range:	-40°C ~ 85°C

Products:

P/N	Version	Description
54051101-01	Plastic	5Pin Male Field Installable Conn, Screw-In, 180°
94051101-32	Metal	
54054101-01	Plastic	5Pin FeMale Field Installable Conn, Screw-In, 180°
94054101-32	Metal	



T-Adapter / Elbow Adapter

The T-Adapter is required for adding components to NMEA 2000 network. It is installed on the backbone cable and uses one end of the T-Connector for the drop cable. With two female and one male connector, it can be easily connected to micro cordsets available in various lengths.

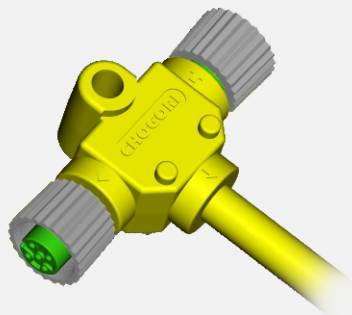
Also available in Elbow-designed adapter used in spots where it is impossible to bend a cordset around tight corners. It easily connects to a tee or double-ended cordsets making 90° turns practical at the end or anywhere along the system.

Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	TPU+GF, Green
	Overmoulding Mat'l:	TPU, Black
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Zinc Alloy, Nickel Plated / Nylon+GF
ELECTRICAL	Rated Current:	4.0 Amps
	Rated Voltage:	60V
ENVIRONMENTAL	Protection Class:	IEC IP67 (mated)
	Temperature Range:	-20°C ~ 80°C

Products:

P/N	Version	Description
94050118-31	Plastic	5Pin M-F-F T-Adapter
54050118-01	Metal	
94058111-32	Plastic	5Pin M-F Elbow Adapter
54058111-01	Metal	



Powertap Tee

The Powertap tee provides bus power to NMEA 2000 network. Consists of Female connectors on both L and R, this rugged IP67 cable connector allows easy and secure connections.

Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	TPU+GF, Green
	Overmoulding Mat'l:	TPU, Yellow
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Zinc Alloy, Nickel Plated / Nylon+GF
	Outer Jacket Mat'l:	PVC
ELECTRICAL	Number of Conductors:	5X22 AWG
	Rated Current:	4.0 Amps
	Rated Voltage:	250V
ENVIRONMENTAL	Protection Class:	IEC IP67 (mated)
	Temperature Range:	-20°C ~ 80°C

Products:

P/N	Version	Description
94054122-31-3XX	Plastic	5Pin Female-Female Power Tap Tee
54054122-01-0XX	Metal	

Note : XX-denotes Cable length in Meters (m)



■ Termination Resistors

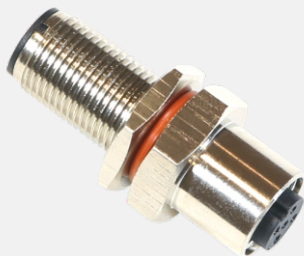
The NMEA 2000 network must be provided with a terminating resistor at both ends of the trunk lines in order to avoid signal reflection. For reliable and secured connections, connectors are designed with a rugged screw lock mechanism. In-Line Termination Resistor is also available as an option.

■ Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Contact Mat'l: Screw Nut Mat'l:	5 Contacts TPU+GF, Green Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated / Nylon+GF
ELECTRICAL	Rated Voltage: Internal Resistor:	10-30V 120 Ohms (1/4 W)
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP67 (mated) -20°C ~ 80°C

■ Products:

P/N	Version	Description
94051103-32	Plastic	5Pin Male Termination Resistor
54051103-22	Metal	
94054103-32	Plastic	5Pin Female Termination Resistor
54054103-22	Metal	
94058108-31	Plastic	In-Line Termination Resistor
54058108-01	Metal	



Bulkhead Feed-Thru

The Bulkhead Feed-Thru allows new connection point in a network installation. It creates positive alignment of connection when used thru panels or bulkheads.

Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	Nylon+GF
	Housing Mat'l:	Brass, Nickel Plated
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Copper Alloy, Nickel Plated
ELECTRICAL	O-ring Mat'l:	Silicone
ELECTRICAL	Rated Current:	4.0 Amps
	Rated Voltage:	250V
ENVIRONMENTAL	Protection Class:	IEC IP67 (Unmated)
	Temperature Range:	-40°C ~ 105°C

Products:

Part Numbers	Description
94050100-82	Male to Female Bulkhead Feed-Thru



■ Waterproof Caps

■ Products:

Part Numbers	Description
806-00079-00	Micro Cap for Male Conn
806-00084-00	Micro Cap for Female Conn

**Product
Offerings**

Mini-C



■ Single & Double-Ended Cordsets

Rugged, compact, sealed connectors used for trunk or drop lines. It comes in a range of lengths to match any marine installation requirements.

■ Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Overmoulding Mat'l: Contact Mat'l: Screw Nut Mat'l:	5 Contacts TPU, Black PVC, Black Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated
ELECTRICAL	Rated Current: Rated Voltage:	9.0 Amps 300V
CABLE	Outer Jacket Mat'l: Conductor Insulation Mat'l: No. of Conductors: Shielding (3-Levels):	PVC, Gray PE (data), PVC (power) Power 1Px16 AWG, 1Px18 AWG, 18 AWG Drain Wire Braid (Overall), Al/My (Power), Al/My (Data)
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP67 (mated) -20°C ~ 80°C
APPROVALS	Flame Test (Cable): Suitability:	UL1685 FT4 (UL), FT4 (CSA) Sunlight & Oil Resistance

■ Products:

P/N	Version	Description
93051103-01-3XX	Metal	5Pin Male Cordset, Single-Ended
93054103-01-3XX	Metal	5Pin Female Cordset, Single-Ended
93058108-01-3XX	Metal	5Pin M to F Cordset, Double-Ended

Note : XX-denotes Cable length in Meters (m)



T-Cable Assy

Connected at the central part of the system, the T-Cable assy is designed to prevent errors in connecting power or network cables and provide easy installation.

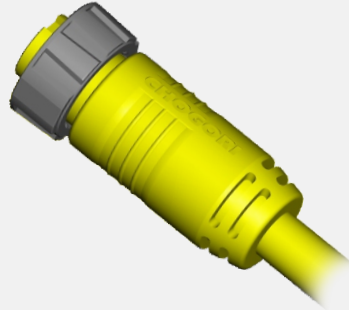
Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Overmoulding Mat'l: Contact Mat'l: Screw Nut Mat'l:	5 Contacts TPU, Black PVC, Black Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated / Nylon+GF
ELECTRICAL	Rated Current: Rated Voltage:	9.0 Amps 300V
CABLE	Outer Jacket Mat'l: Conductor Insulation Mat'l: No. of Conductors: Shielding (3-Levels):	PVC, Gray PE (data), PVC (power) Power 1Px16 AWG, 1Px18 AWG, 18 AWG Drain Wire Braid (Overall), Al/My (Power), Al/My (Data)
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP67 (mated) -20°C ~ 80°C
APPROVALS	Flame Test (Cable): Suitability:	UL1685 FT4 (UL), FT4 (CSA) Sunlight & Oil Resistance

Products:

P/N	Version	Description
93050122-01-3XX	Metal	5Pin Male-Female T-Cable Assy

Note : XX-denotes Cable length in Meters (m)



Power Cordset

The Powercord is connected to a Powertap to provide bus power to NMEA 2000 network. It connects power supply to NMEA 2000 Trunk line for a convenient plug/play connection.

Specifications:

MECHANICAL	Pin Configuration:	4 Contacts
	Contact Housing Mat'l:	TPU
	Overmoulding Mat'l:	PVC, Yellow
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Zinc Alloy, Nickel Plated
	Outer Jacket Mat'l:	PVC, Yellow
	Number of Conductors:	4x16 AWG
ELECTRICAL	Rated Current:	9.0 Amps
	Rated Voltage:	600V
ENVIRONMENTAL	Protection Class:	IEC IP67 (mated)
	Temperature Range:	-20°C ~ 85°C

Products:

P/N	Version	Description
93044103-31-3XX	Metal	4Pin Female Powercord

Note : XX-denotes Cable length in Meters (m)



■ Field Installable Connectors

Like the cordsets, the trunk or backbone cables can also be created by running bulk cable using field installable connectors which are available in Male/Female versions. Using screw-in termination, the clamping parts are designed to yield to tensile stress when tightening the terminal screws.

■ Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	Nylon+GF, Black
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Zinc Alloy, Nickel Plated
	Max Wire Size:	0.75mm ² (18AWG)
ELECTRICAL	Cable Range:	9~12mm
	Rated Current:	9.0 Amps
ENVIRONMENTAL	Rated Voltage:	250V
	Protection Class:	IEC IP67 (mated)
	Temperature Range:	-40°C ~ 105°C

■ Products:

P/N	Version	Description
93054101-01	Metal	5Pin Female Field Installable Conn, Screw-In, 180°
93051101-01	Metal	5Pin Male Field Installable Conn, Screw-In, 180°



■ Termination Resistors

The NMEA 2000 network must be provided with a terminating resistor at both ends of the trunk lines in order to avoid signal reflection. For reliable and secured connections, connectors are designed with a rugged screw lock mechanism.

■ Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	TPU
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Zinc Alloy, Nickel Plated
ELECTRICAL	Rated Voltage:	300V
	Internal Resistor:	120 Ohms (1/4 W)
ENVIRONMENTAL	Protection Class:	IEC IP68 (mated)
	Temperature Range:	-20°C ~ 80°C

■ Products:

P/N	Version	Description
93051103-32	Metal	5Pin Male Termination Resistor
93054103-32	Metal	5Pin Female Termination Resistor



T-Adapter / Elbow Adapter

The T-Adapter is required for adding components to NMEA 2000 network. It is installed on the backbone cable and uses one end of the T-Connector for the drop cable. With two female and one male connector, it can be easily connected to mini cordsets available in various lengths.

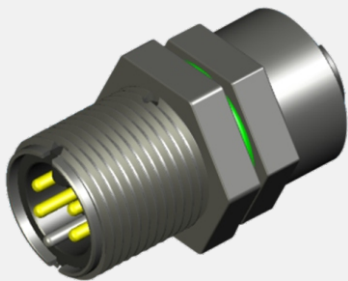
Also available in Elbow -designed adapter used in spots where it is impossible to bend a cordset around tight corners. It easily connects to a tee or double-ended cordsets making 90°turns practical at the end or anywhere along the system.

Specifications:

MECHANICAL	Pin Configuration: Contact Housing Mat'l: Overmoulding Mat'l: Contact Mat'l: Screw Nut Mat'l:	5 Contacts TPU, Black PVC, Black Copper Alloy, Gold Plated Zinc Alloy, Nickel Plated
ELECTRICAL	Rated Current: Rated Voltage:	9A 300V
ENVIRONMENTAL	Protection Class: Temperature Range:	IEC IP67 (mated) -20°C ~ 80°C

Products:

P/N	Version	Description
93050123-01	Metal	5Pin M-F-F T-Adapter
93058111-01	Metal	5Pin M-F Elbow Adapter



■ Bulkhead Feed-Thru

The Bulkhead Feed-Thru allows new connection point in a network installation. It creates positive alignment of connection when use thru panels or bulkheads.

■ Specifications:

MECHANICAL	Pin Configuration:	5 Contacts
	Contact Housing Mat'l:	Nylon
	Housing Mat'l:	Brass, Nickel Plated
	Contact Mat'l:	Copper Alloy, Gold Plated
	Screw Nut Mat'l:	Copper Alloy, Nickel Plated
ELECTRICAL	O-ring Mat'l:	Silicone
	Rated Current:	9.0 Amps
ENVIRONMENTAL	Rated Voltage:	600V
	Protection Class:	IEC IP68 (Unmated)
Temperature Range:		-40°C ~ 105°C

■ Products:

Part Numbers	Description
93050100-01	Male to Female Bulkhead Feed-Thru



■ Waterproof Caps

■ Products:

Part Numbers	Description
806-00080-00	Mini Cap for Male Conn
806-00081-00	Mini Cap for Female Conn



M12 Sensor Series



USB Series



D-Sub Series



Marine Electronic Devices

Fishing, Navigation & Communication Devices
such as Fishfinder, Sonar, Radar, GPS, Autopilot,
Radio Transceiver, Multifunction display, etc.



Circular Series



RJ45 Series

A photograph of an older couple sitting on the bow of a white sailboat with blue accents. The woman is wearing a blue top and white shorts, and the man is wearing a pink shirt and light blue pants. They are both smiling and looking at each other. The boat is on the water under a clear blue sky.

About Chogori

Chogori Technology Co., Ltd offers a wide range of environmentally sealed and rugged connectors designed to provide secure and safe connections in harsh or hostile conditions. This opens the door for a wide variety of marine and outdoor applications such as Marine Electronic Devices and NMEA 2000 Network System which require connectors and cables to be robust, dust-proof and waterproof. We made it possible to simplify your system needs and promote convenience with cost-effective offer and wide array of waterproof connector choices. All of these products are made with quality, enhanced performance and highly reliable. We are manufacturing since 2001 and the most flexible manufacturer capable of providing you custom solutions.

Chogori Technology Co.,Ltd.

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