



Thorkom™

High-Performance Plastic Circular Connectors
for Industrial, Medical and
Waterproof Applications

COOPER Interconnect

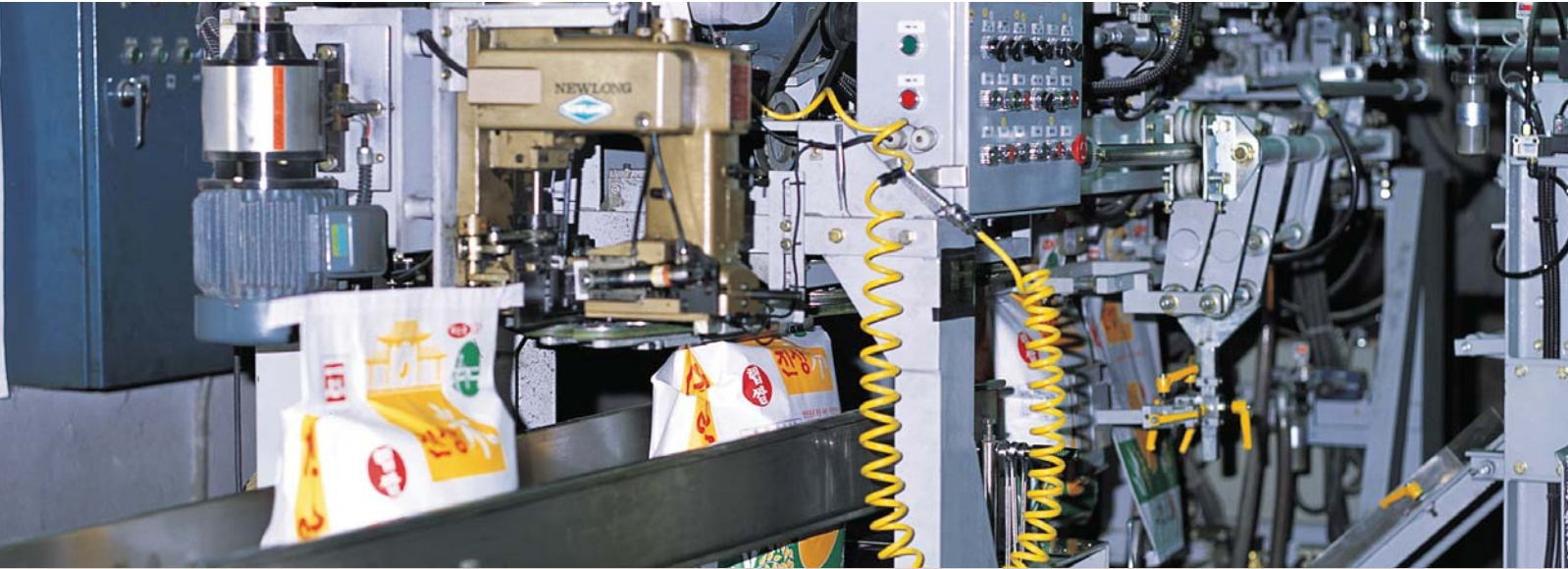


Thorkom™ Connectors



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Introduction



At Cooper Interconnect, innovation is our lifeblood. We are focusing on expanding technology platforms as an “Application Specific Solutions Provider.”

With the development of new products and technology, we enhance growth by continuously expanding the technical solutions and value that we can deliver to our customers. The Thorkom series of interconnect products represents our continued commitment to providing unique cost-effective solutions.



Cooper Interconnect's Thorkom I and II series of high performance plastic circular connectors are designed to offer easy and reliable mating under harsh environments.

Both Thorkom I and II are ideal for industrial, medical and communications applications where a sealed, safe connection are demanded. Thorkom II has the added benefit of being sealed for IP68 waterproof applications.



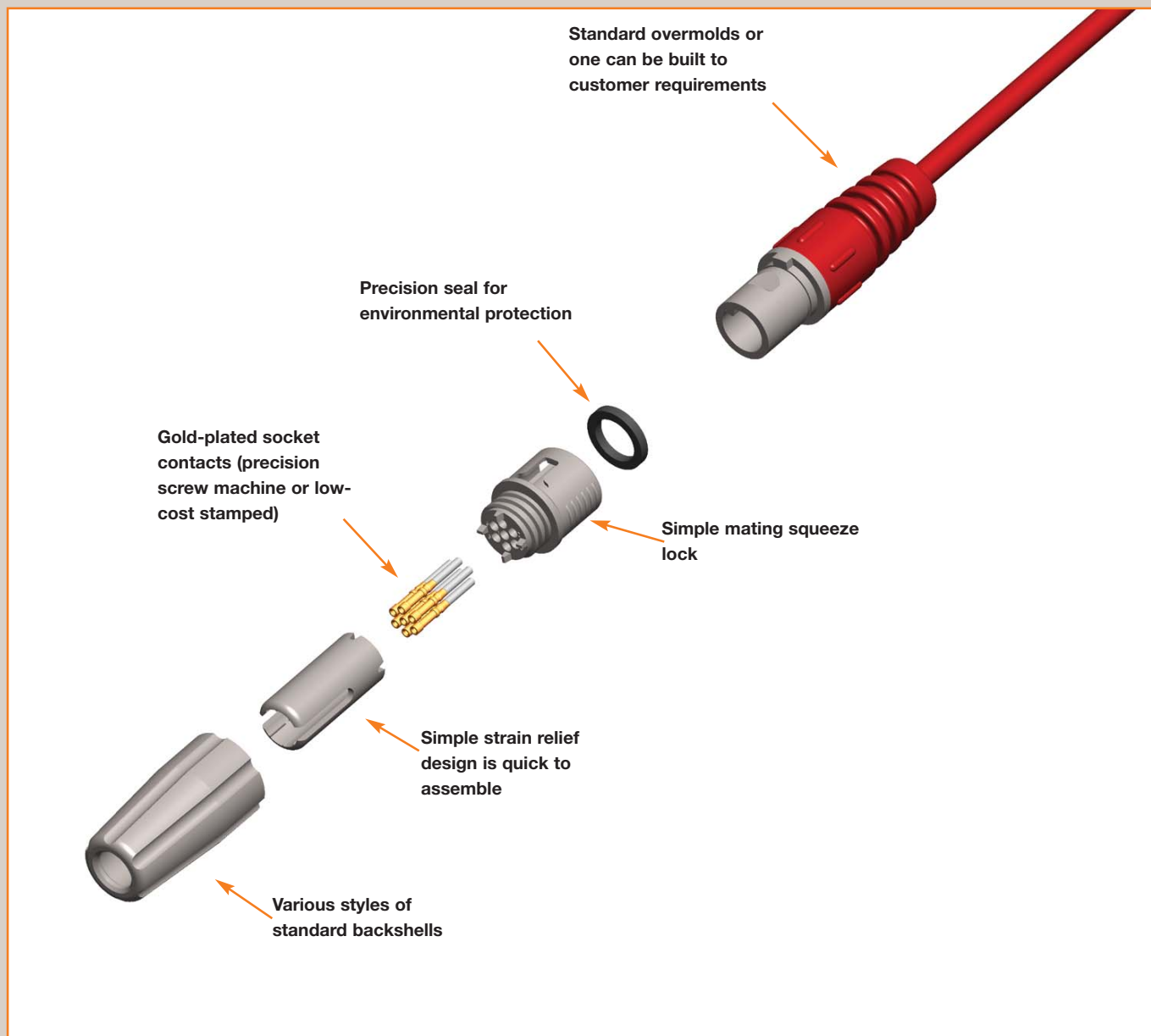
Cooper Interconnects Thorkom I connectors and assemblies have over 50 years of proven reliability in applications all over the world.

The simple push-to-lock and squeeze-to-unlock design provides a sure connection, all in one easy to use, cost-effective, interconnect solution. It's ideal for any application where reliability and cost are important.

Whether they are assembled on a single-use disposable medical cable or a piece of industrial electronic equipment that will see hundreds of mating cycles, the Thorkom I products can withstand the toughest environments.

Feature Overview

- All receptacles are autoclavable using our optional high-temperature, thermoplastic material. Consult factory.
- Receptacle options include flange mount, bulkhead, straight and right-angle PC board mount.
- Flexible mating systems:
 - V-Lok mating - pull to unmate.
 - P-Lok mating - squeeze to unmate.
- Durable interconnect - connect/disconnect.
- Low cost.
- Sealed.
- UL approved.
- Easy assembly.



Specifications

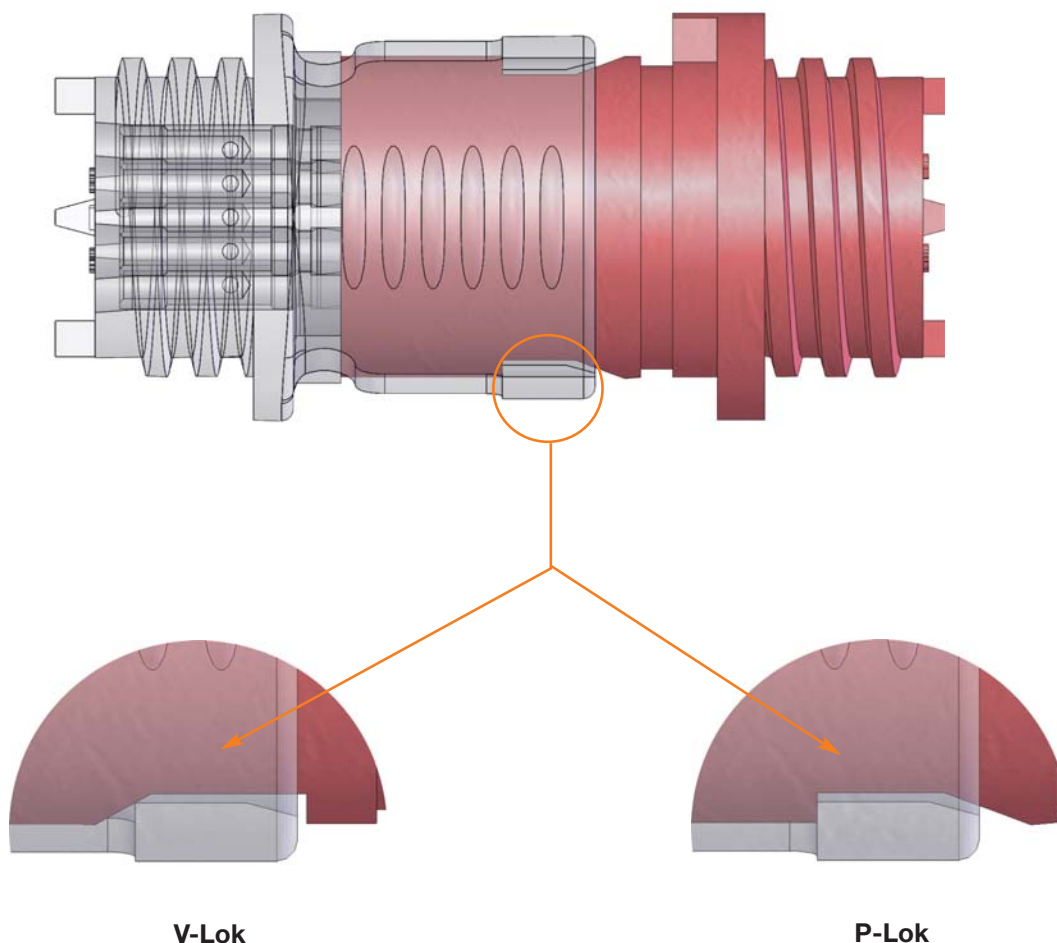
GENERAL CHARACTERISTICS			
Number of Contacts	7	12	24
Locking System	Squeeze lock (V-LOK/P-LOK)		
Termination	Crimp or PCB		
Wire Gauge (AWG)	22 to 26		
Cable Outlet	0.150"-0.500" (Depends on backshell type)		
Shell Protection	Dust/splash proof		
Mechanical Operation	>1000 cycles (screw machine), >100 cycles (stamped)		
Temperature Range	-55° C to 125° C (-67° F to 257° F); -101C to 149C (-150F to 300F) optional high temp material		
Approvals	UL File no. E74125, RoHS compliant		

ELECTRICAL CHARACTERISTICS	
Rated Current	5 Amps per contact
Dielectric Withstanding Voltage	1,500 VRMS (Sea level), 600 VRMS (70,000 ft.)
Insulation Resistance	5,000 MΩ min.

MATERIAL CHARACTERISTICS	
Connector Housing	High strength thermoplastic UL94V-2 approved (Polycarbonate) or "high-temperature resistant" thermoplastic material (Polysulfone) for autoclaving purposes*, UL94V-0 approved.
Gasket	Neoprene rubber.
Contact (Socket) Machined	Beryllium copper, gold plated (0.000010" thick) or tin plated (0.000200" thick). Hood: Stainless steel, passivated.
Contact (Socket) Stamped	Phosphor bronze, gold plated (0.000010" thick) or tin plated (0.000200" thick).
Contact (Pin) Machined	Brass, gold plated (0.000010" thick) or tin plated (0.000200" thick).
Backshell/Strain Reliefs	High strength thermoplastic UL94V-2 approved. Potting shell and tie strap backshell: High density polyethylene, 94V-2 approved.

***Non-standard material. Please consult factory for price and delivery.**

V-Lok/P-Lok Locking Systems



The V-Lok locking feature uses a front ramp system that allows the user to push-to-mate and pull-to-unmate the plug and receptacle without depressing the squeeze locking collar.

This is ideal for blind mating applications and environments where the mating connectors must separate without damaging the mounting cable or panel.

The P-Lok locking feature uses a front wall system that allows the user to push-to-mate the plug and receptacle connectors together. To unmate the connectors, squeeze the plug body for the connectors to separate.

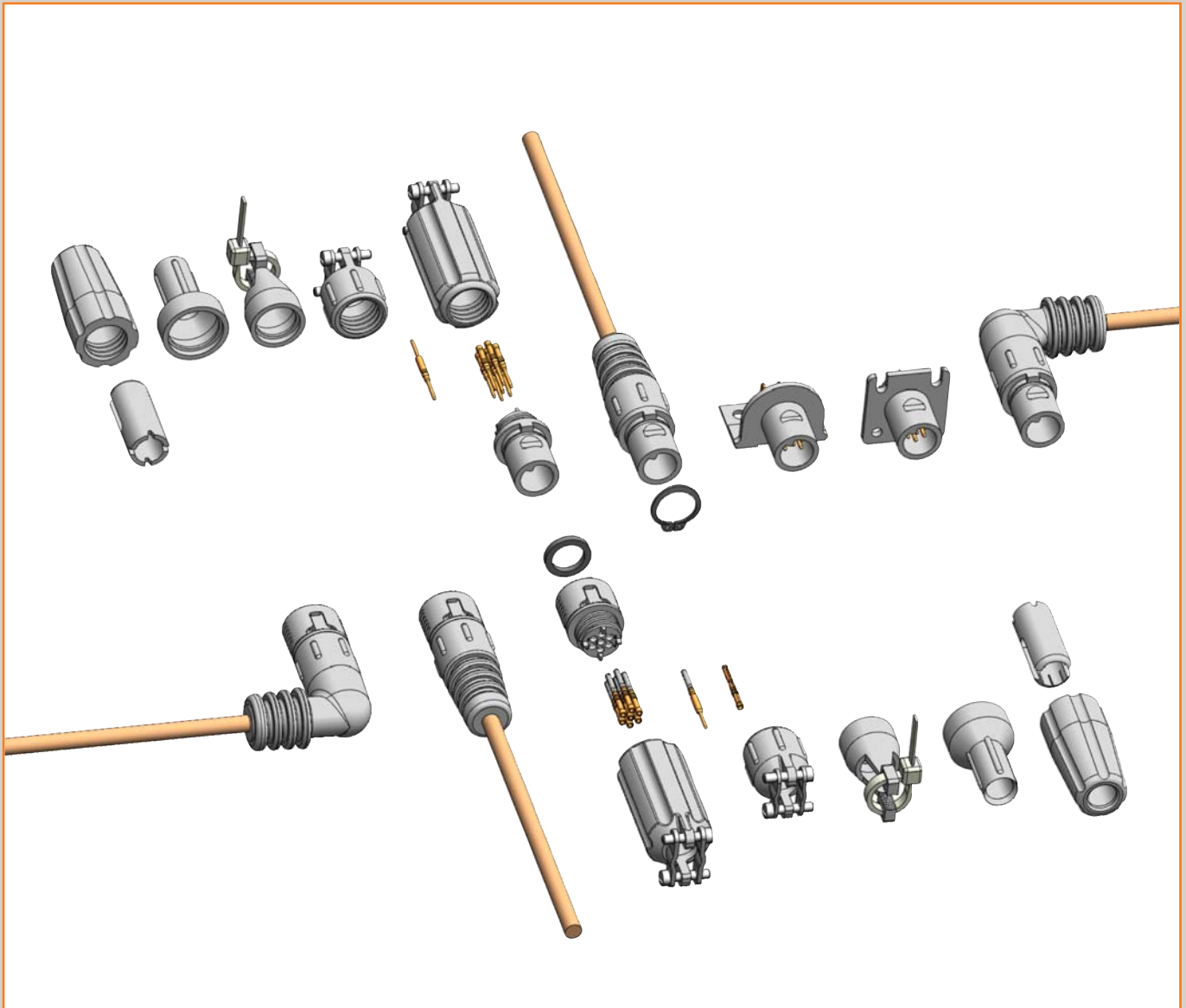
This is ideal for applications where the mating connectors should not separate without the user's involvement.

Product At-A-Glance

Thorkom I components provide a versatile mix of flexible configurations. Some convenient options include the following:

- 7, 12 or 24 position sizes.
- Inline cable plugs and receptacles.
- Eight color options.
- Five standard backshell options with many cable outlet choices.
- Bulkhead and square flange panel mount receptacles with available PC dip solder or crimp contacts.
- Angled PC board mount receptacle.

Assembly options are unlimited with the use of our standard or custom overmolds.



Step 1A: Select Plug Insert



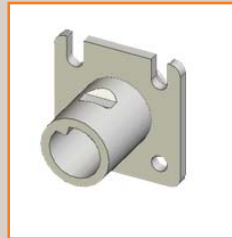
Plug Insert



Step 1B: Select Receptacle Insert



Receptacle Insert
Cable/Panel Mount

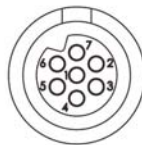


Receptacle
Panel Mount Square

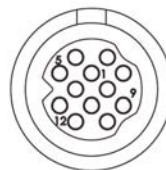


Receptacle
PCB Mount Angled
(Available in 7 Pin only)

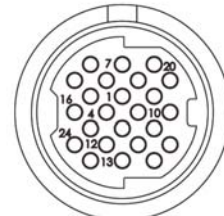
Step 2: Select Number of Contacts



7 Position



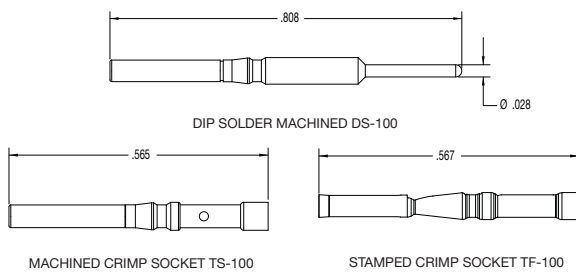
12 Position



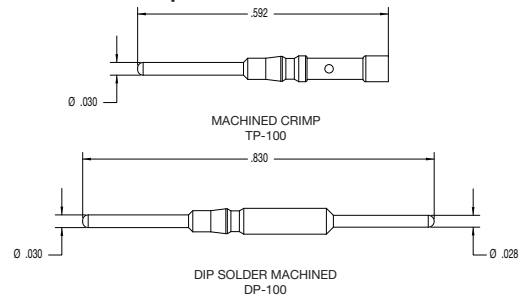
24 Position

Step 3: Select Contacts (Order separately)

Socket contacts for all plug inserts



Pin contacts for all receptacles



Step 4: Select backshell or cable mounting (see page 15)



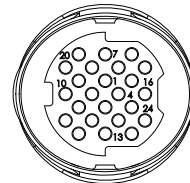
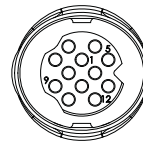
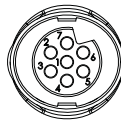
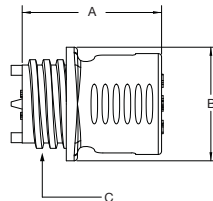
Plug Insert

7, 12 and 24 Position



Thorkom I plug inserts are available in three shell sizes to accommodate 7, 12 and 24 contacts. Plugs use socket contacts and mate with either P-Lok or V-Lok receptacles. Plug faces have a closed entry which protects the contacts.

- Easily mated
- Environmentally sealed
- Excellent heat resistance
- High-density configuration
- UL approved
- Flexible locking styles



PLUG DIMENSIONS

NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C thd
7	TNP07-1 1	.63 (16.0)	.51 (12.9)	12/32-16 stub acme
12	TNP12-1 1	.63 (16.0)	.61 (15.5)	1/2-16 stub acme
24	TKP24-1 1	.63 (16.0)	.81 (20.6)	11/16-16 stub acme

All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.

Plug Size: _____

07 12 24

7 Contacts 12 Contacts 24 Contacts TKP (for 24 positions only)

*Color _____

TNP **07** -1 * 1

0 Gray	2 Blue	4 Yellow	6 Red
1 Black	3 Orange	5 Green	7 White

Socket contacts are available in two styles:

- Screw machined for applications that require precision, excellent reliability and high mating life cycle.
- Stamped and formed version is for low-cost applications.

Type of Contact:

TS-100* Screw Machined

DS-100* Dip Solder

AU Gold

T Tin (TS and DS contacts only)

*Add AU for gold plate or T for tin plate

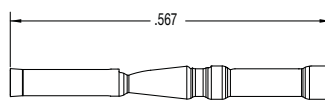
Contacts ordered separately

TS-100

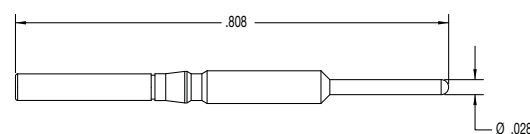
AU



MACHINED CRIMP SOCKET TS-100



STAMPED CRIMP SOCKET TF-100



DIP SOLDER MACHINED DS-100

Receptacle Insert

7, 12 and 24 Position

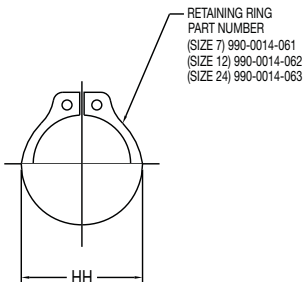


Inserts may be cable mounted or panel mounted using a supplied retainer ring.

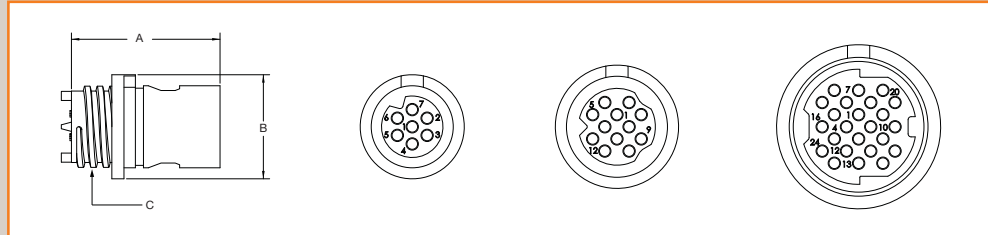
Thorkom I receptacle inserts are available in three shell sizes to accommodate 7, 12 and 24 contacts. Receptacles use pin contacts and mate with a Thorkom plug. The receptacles are available with two locking styles. P-Lok or V-Lok. They can also be inline cable mounted or panel mounted with the use of a supplied retaining ring.

- Easily mated
- Environmentally sealed
- Excellent heat resistance
- High-density configuration
- UL approved
- Flexible locking styles

Retaining Rings (Installed Dimensions)



Number of Contacts	Installed Dimensions HH Maximum
7	.468 (11.89)
12	.574 (14.58)
24	.779 (19.79)



RECEPTACLE DIMENSIONS

NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C thd
7	TBR07- 1 * 1 -	.74 (18.7)	.41 (10.4)	13/32-16 stub acme
12	TBR12- 1 * 1 -	.74 (18.7)	.50 (12.7)	1/2-16 stub acme
24	TKR24- 1 * 1 -	.74 (18.7)	.68 (17.4)	11/16-16 stub acme

All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.

Connector Size: **TBR** **07** -1 ***** 1- **P**

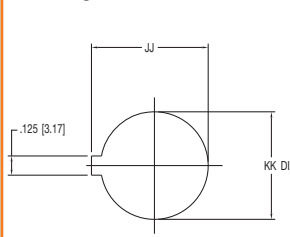
07 7 Contacts
12 12 Contacts
24 24 Contacts (TKR 24 position only)

*Color _____

Locking Style: P-Lok; V-Lok _____
(See page 8 for details)

0 Gray	2 Blue	4 Yellow	6 Red
1 Black	3 Orange	5 Green	7 White

Mounting Hole Sizes



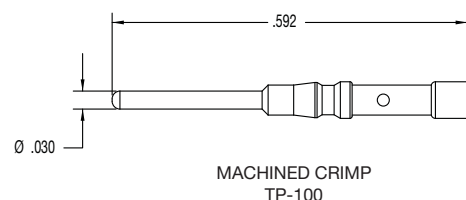
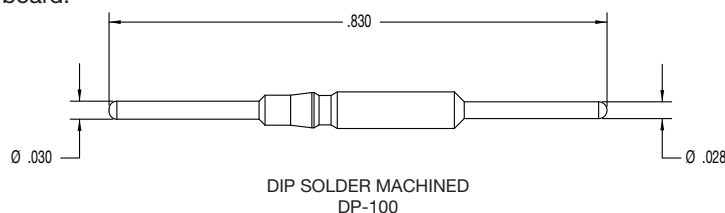
NUMBER OF CONTACTS	JJ	KK Dia
7	.470 (11.9)	.420 (10.6)
12	.565 (14.3)	.510 (12.9)
24	.760 (19.3)	.700 (17.7)

Pin contacts are available in two styles:

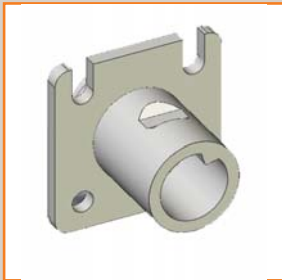
- Screw machined crimp for applications that are wire mounted. Designed to accept 22-26 wire AWG and use standard A-422 crimp tool.
- Screw machined PC dip solder for mounting in to a PC board.

Type of Contact: **TP-100** **AU**

TP-100* Screw Machined
DP-100* Dip Solder
Plating: AU - Gold, T - Tin
*Add AU for gold plate or T for tin plate

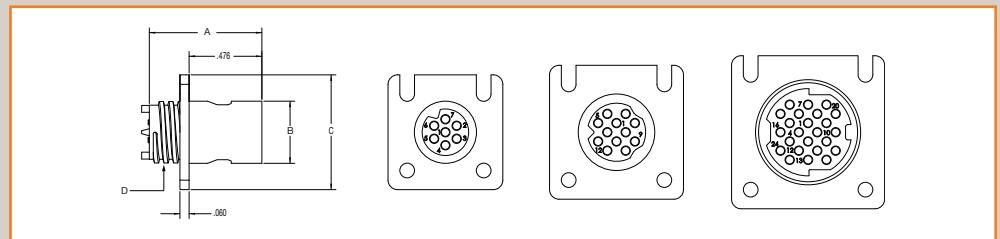
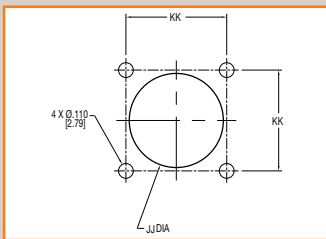


Square Flange Receptacle



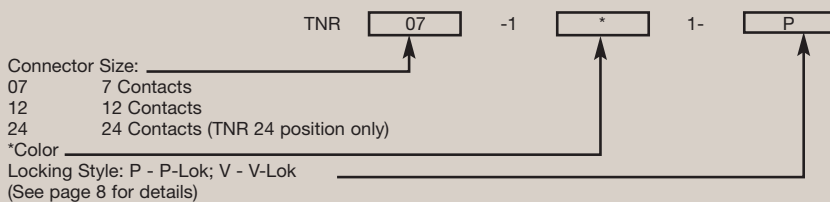
Thorkom I receptacle inserts are available in three shell sizes to accommodate 7, 12 and 24 contacts. Receptacles use pin contacts and mate with a Thorkom plug. The receptacles are available with two locking styles. P-Lok or V-Lok. They can also be inline cable mounted or panel mounted with the use of a supplied retaining ring.

- Easily mated
- Environmentally sealed
- Excellent heat resistance
- High-density configuration
- UL approved
- Flexible locking styles



NUMBER OF CONTACTS	JJ Dia	KK
7	.420 (10.6)	.500 (12.7)
12	.510 (12.9)	.625 (15.8)
24	.700 (17.7)	.750 (19.0)

SQUARE FLANGE RECEPTACLE DIMENSIONS					
NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C	D thd
7	TNR07- 1 * 1 -	.74 (18.7)	.406 (10.3)	.750	13/32-16 stub acme
12	TNR12- 1 * 1 -	.74 (18.7)	.50 (12.7)	.875	1/2-16 stub acme
24	TNR24- 1 * 1 -	.74 (18.7)	.687 (17.4)	1.00	11/16-16 stub acme



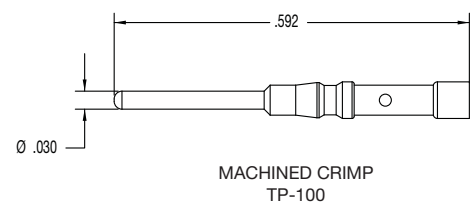
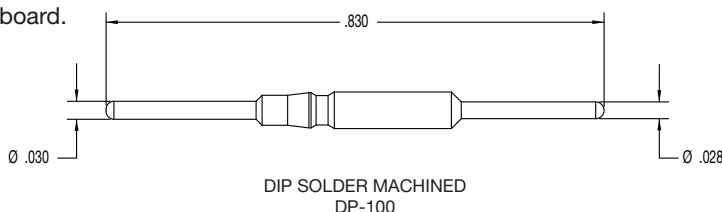
0 Gray	
1 Black	

Pin contacts are available in two styles:

- Screw machined crimp for applications that are wire mounted. Designed to accept 22-26 wire AWG and use standard A-422 crimp tool.
- Screw machined PC dip solder for mounting in to a PC board.

Type of Contact: _____

TP-100* Screw Machined
DP-100* Dip Solder
Plating: AU - Gold, T - Tin
*Add AU for gold plate or T for tin plate



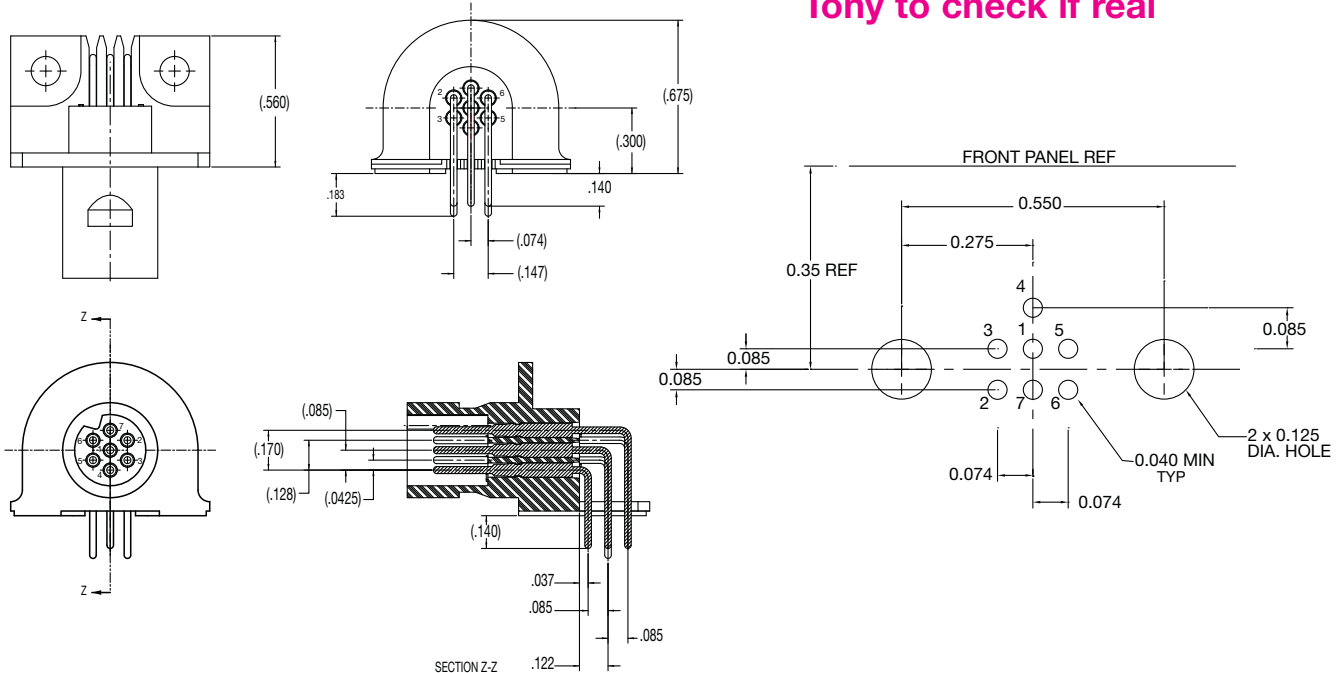
Right Angle PC Mount Receptacle



Thorkom I PCB mount receptacles accommodate 7 contacts and mates directly to standard Thorkom I plugs. The receptacles are available with two locking styles: P-Lok or V-Lok.

- Easily mated
- Environmentally sealed
- Excellent heat resistance
- High-density configuration
- UL approved
- Flexible locking styles

Tony to check if real

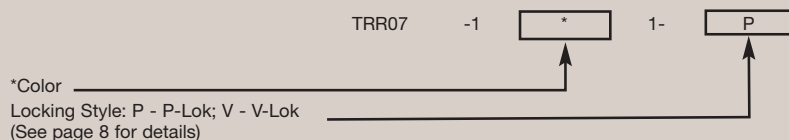


Operating Characteristics

- Voltage Rating: 200 VRMS max at sea level
- Current Rating: 5 amps max
- Temperature Rating: -55° C to +105° C
- Durability: 250 cycles
- Mated Connector Pull Test: 10 lbs. min.

Materials and Finishes

- Insulator: Polycarbonate.
- Contact: Brass alloy, .000010 min thick gold-plated over .000050 min. thick nickel underplate.



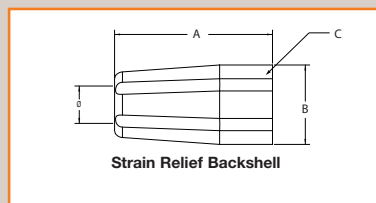
0	Gray
1	Black

Backshells and Accessories

The Thorkom product line includes an assortment of backshells and accessories that provide environmental protection and strain relief protection.

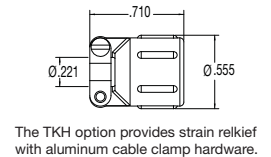
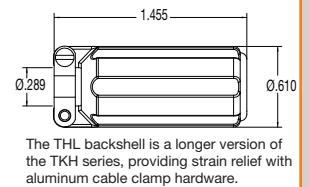
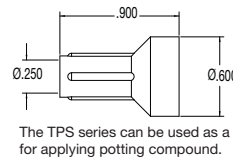
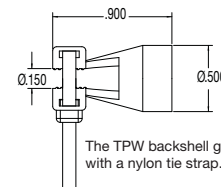
Standard Backshells

Thorkom standard strain relief/protective backshell assembly is easily installed. See pages 29-30 for installation instructions. These strain relief backshells come in gray or black. The 7 and 12 position connectors each accommodate three different cable diameters.



Nonstandard Backshells

Long and short cable clamp, tie-strap and stovepipe backshells can create connector assemblies to be used in a multitude of applications. Consult factory.



STANDARD BACKSHELL DIMENSIONS (All dimensions in inches and (millimeters). Tolerance $\pm .010$ (.25) unless otherwise specified.)

NUMBER OF CONTACTS	PART NUMBER	RANGE OF CABLE DIAMETERS	A $\pm .010$	B Dia. $\pm .010$	C Thd $\pm .005$	D $\pm .005$	E Dia. $\pm .005$
7	TSR07-2 1	.150/.185	1.12 (28.0)	.572 (14.5)	13/32-16 stub acme	.265 (6.6)	.25 (6.3)
7	TSR07-2 2	.190/.220	1.12 (28.0)	.572 (14.5)	1/2-16 stub acme	.26 (6.6)	.25 (6.3)
7	TSR07-2 3	.240/.255	1.12 (28.0)	.572 (14.5)	11/16-16 stub acme	.265 (6.6)	.25 (6.3)
12	TSR12-2 4	.230/.260	1.12 (28.0)	.672 (17.1)	1/2-16 stub acme	.345 (8.6)	.31 (7.8)
12	TSR12-2 5	.275/.300	1.12 (28.0)	.672 (17.1)	1/2-16 stub acme	.345 (8.6)	.31 (7.8)
12	TSR12-2 6	.335/.345	1.1 (28.0)	.672 (17.1)	1/2-16 stub acme	.345 (8.6)	.31 (7.8)

NON-STANDARD BACKSHELL DIMENSIONS

7	TKH07-1 0		.71 (18.0)	.51 (12.9)	13/32-16 stub acme	.23 (5.8)	—
7	TPS07-1 2		.90 (22.8)	.50 (12.7)	13/32-16 stub acme	.18 (4.5)	.25 (6.3)
7	TPW07-1 3		.90 (22.8)	.50 (12.7)	13/32-16 stub acme	.18 (4.5)	—
7	THL07-1 5		1.46 (37.0)	.51 (12.9)	13/32-16 stub acme	.30 (7.6)	—
12	TKH12-1 0		.71 (18.0)	.61 (15.5)	1/2-16 stub acme	.30 (7.6)	—
12	TPS12-1 2		.90 (22.8)	.60 (15.2)	1/2-16 stub acme	.25 (6.3)	.31 (7.8)
12	TPW12-1 3		.90 (22.8)	.60 (15.2)	1/2-16 stub acme	.25 (6.3)	—
12	THL12-1 5		1.48 (37.5)	.61 (15.5)	1/2-16 stub acme	.34 (8.6)	—
24	TKH24-1 0		.71 (18.0)	.81 (20.5)	11/16-16 stub acme	.34 (8.6)	—
24	TPS24-1 2		.90 (22.8)	.80 (20.3)	11/16-16 stub acme	.31 (7.8)	.37 (9.3)
24	TPW24-1 3		.90 (22.8)	.80 (20.3)	11/16-16 stub acme	.31 (7.8)	—
24	THL24-1 5		1.63 (41.4)	.81 (20.5)	11/16-16 stub acme	.50 (12.7)	—

Ordering Information: To order backshells separately, use ordering diagram below.

TKH	1*0	Cable-clamp backshell
TPS	1*2	Stovepipe backshell
TPW	1*3	Tie strap backshell
THL	1*5	Long cable clamp backshell
TSR	2*1	Strain relief 7 pos. cable dia. .150-.185
TSR	2*2	Strain relief 7 pos. cable dia. .190-.220
TSR	2*3	Strain relief 7 pos. cable dia. .240-.255
TSR	2*4	Strain relief 12 pos. cable dia. .230-.260
TSR	2*5	Strain relief 12 pos. cable dia. .275-.300
TSR	2*6	Strain relief 12 pos. cable dia. .335-.345

Type of Backshell
 Contacts:
 7 7 Contacts
 12 12 Contacts
 24 24 Contacts TKP (for 24 positions only)
 *Color (for TSR backshells)

TSR 07 2*2

0 Gray	2 Blue	4 Yellow	6 Red
1 Black	3 Orange	5 Green	7 White



Cooper Interconnect's Thorkom™ II IP68 rated waterproof connectors are the latest in a long history of high-quality interconnect products.

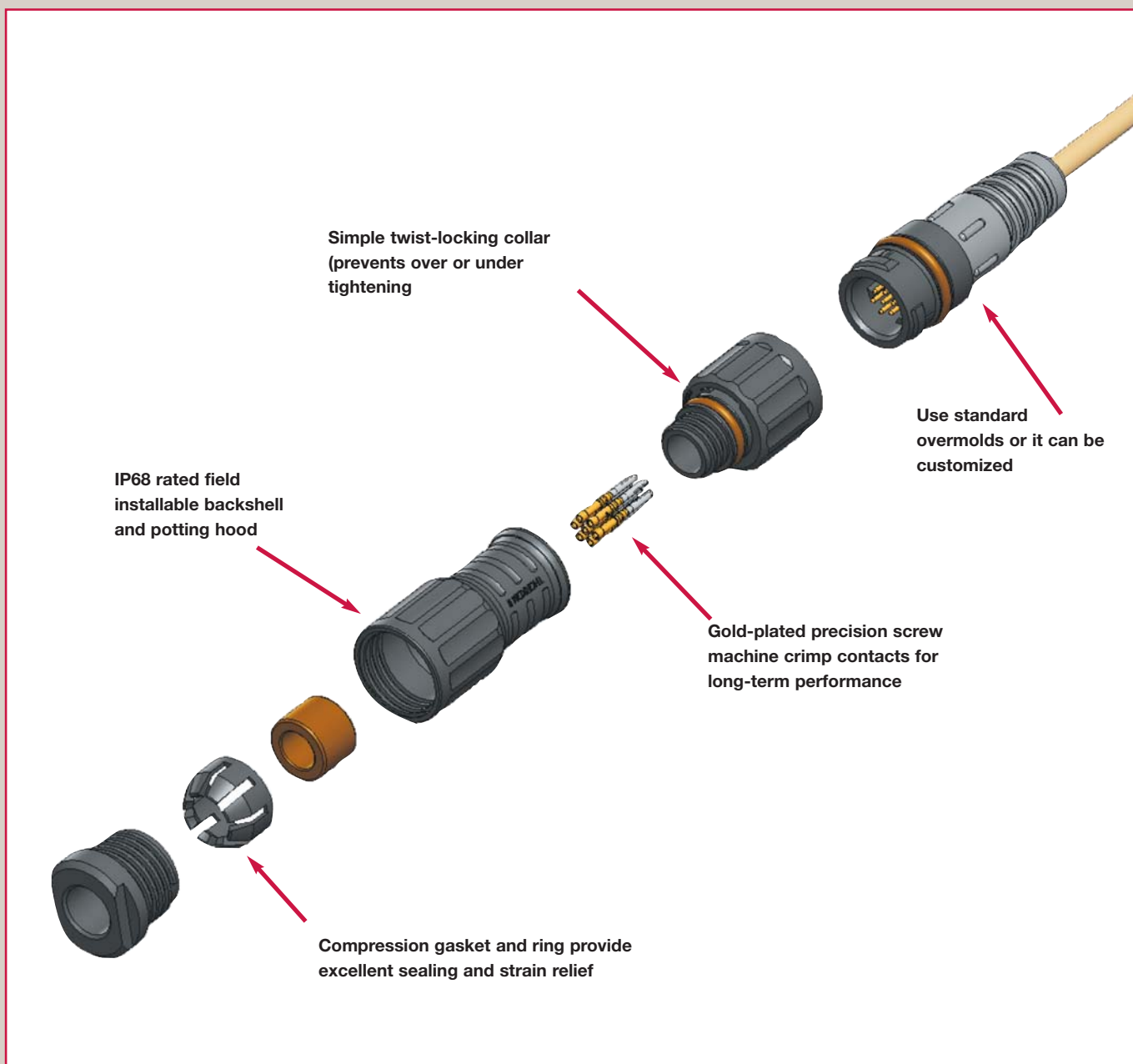


The simple twist-lock and dual O-ring design provide a solid waterproof connection for any environment where uninterrupted reliability and cost are important.

Whether the application is a marine fish finder or electronic equipment on an oil well, Thorkom II connectors and assemblies will keep your connection secure.

Feature Overview

- Sealed for IP68 waterproof applications.
- High-temperature, autoclavable housings.
- Twist locking system with positive detent feedback.
- Durable interconnect - connect/disconnect.
- Low cost.
- Enhanced safety feature prevents accidental unmating.
- Easy assembly.



Specifications

GENERAL CHARACTERISTICS		
Number of Contacts	7	24
Locking System	Twist-Lock	
Termination	Crimp or PCB	
Wire Gauge (AWG)	22 to 26	
Cable Outlet	Depends on backshell type	
Shell Protection	Submersible	
Mechanical Operation	>1000 cycles (screw machine)	
Temperature Range	-55° C to 125° C (-67° F to 257° F) Tony to verify??	
Approvals	RoHS compliant	

ELECTRICAL CHARACTERISTICS	
Rated Current	5 Amps per contact
Dielectric Withstanding Voltage	1,500 VRMS (Sea level), 600 VRMS (70,000 ft.)
Insulation Resistance	5,000 MΩ min.

MATERIAL CHARACTERISTICS	
Connector Housing	"High-temperature resistant" thermoplastic (Polysulfone) material for autoclaving purposes, UL94V-0 approved. Black. May be Polycarbonate???? Won't be autoclavable.
O Ring	EPDM (ethylene propylene diene monomer) rubber.
Sealing Gasket	Need material
Contact (Socket) Machined	Beryllium copper, cold plated (0.000010" thick) or tin plated (0.000200" thick). Hood: Stainless steel, passivated.
Contact (Pin) Machined	Brass, gold plated (0.000010" thick).
Backshell/Strain Reliefs	High strength thermoplastic UL94V-O approved. Black. Materials may change

Product At-A-Glance

Thorkom II components include many convenient configurations, such as the following options:

- 7 or 24 position.
- Inline cable plugs and receptacles.
- Bulkhead and square flange panel mount receptacles.
- PC board mount receptacles.
- Field installables and potting backshells.

Assembly options are unlimited with the use of our standard customer overmolds.



Step 1A: Select Plug Insert



Inline Cable Plug



Step 1B: Select Receptacle Insert



Inline Cable Receptacle

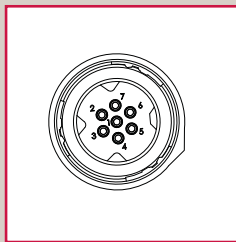


Jam Nut Panel Mount

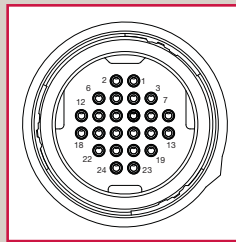


Square Flange Panel Mount

Step 2: Select Number of Contacts



7 Position



24 Position



PCB Mount Jam Nut



PCB Mount Square Flange

Step 3: Select Backshell (For inline cable connectors)



A - Potting Shell



B - Backshell

Shell Order Code

To select a shell, enter the code number in the space allowed in the part number.

For example: T2P07A

Part Number Examples

T2P07A - IP68 rated

7 position inline cable plug with potting style backshell that accepts a maximum cable diameter up to 0.255"

T2R24JN - IP68 rated

24 position jam nut receptacle.

Step 4: Select Contacts (Order separately)

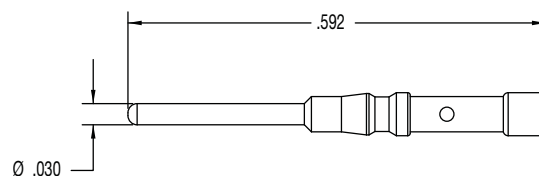
PCB Mount will come preloaded with gold-plated, DIP solder pin contacts.

Socket contacts for all plug inserts



MACHINED CRIMP SOCKET TS-100

Pin contacts for all receptacle inserts



MACHINED CRIMP
TP-100

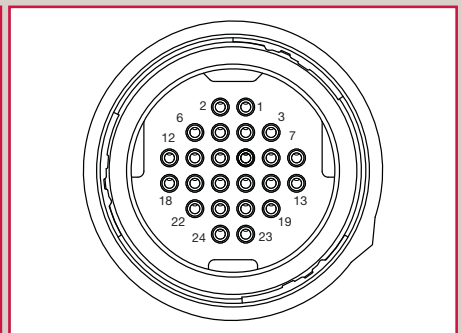
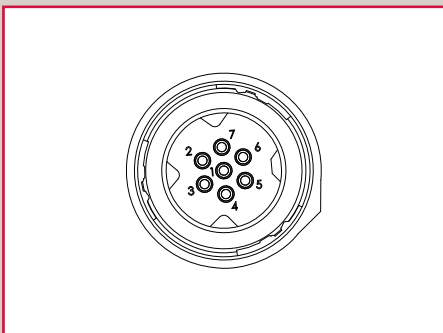
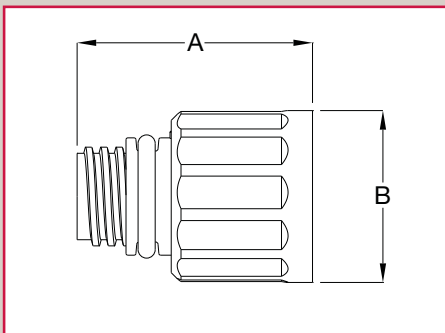
Inline Cable Plug

7 and 24 Position



Thorkom II plug inserts are available in two shell sizes to accommodate 7 and 24 contacts. Plugs use socket contacts and mate with Thorkom II inline cable, jam nut and square flange receptacles. Plug faces have a closed entry which protects contact from any possible stubbing during the mating cycle.

- Easily mated
- Waterproof/submersible
- Excellent heat resistance
- High-density configuration
- Fully autoclavable
- Secure twist-lock system



NUMBER OF CONTACTS	PART NUMBER	A	B (DIA.)
7	T2P07	0.97	0.70
24	T2P24	0.97	1.00

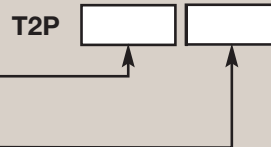
Part Number Guide

Plug size:

- 07 - 7 Contacts
- 24 - 24 Contacts

Backshell: (see page 26)

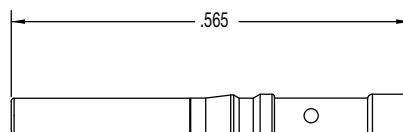
- A - Potting Shell
- B - Field-installable backshell



Socket contacts:

- Screw machined crimp for applications that are wire mounted. Designed to accept 22-26 wire AWG and use standard A-422 crimp tool.

Type of Contact: TS-100
 TS-100 Screw Machined Crimp Socket
 Plating: AU - Gold



MACHINED CRIMP SOCKET TS-100

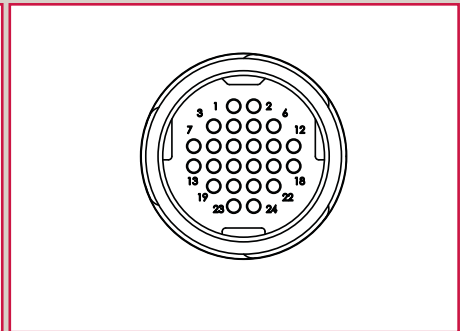
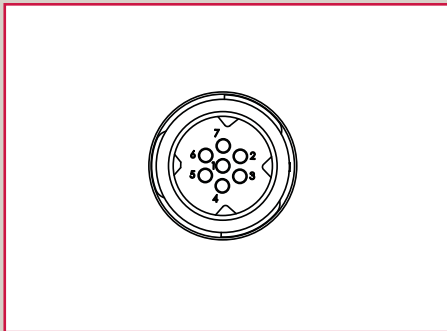
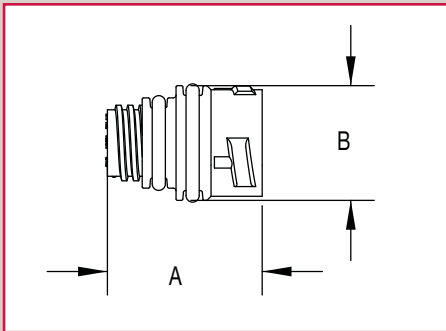
Inline Cable Receptacle

7 and 24 Position



Thorkom II receptacles are available in two shell sizes to accommodate 7 and 24 contacts. Receptacles use pin contacts and mate with Thorkom II inline cable plug. Flexible options include inline cable mount, jam nut panel mount and square flange panel mount.

- Easily mated
- Waterproof/submersible
- Excellent heat resistance
- High-density configuration
- Fully autoclavable
- Secure twist-lock system



NUMBER OF CONTACTS	PART NUMBER	A	B (DIA.)
7	T2R07	0.83	0.70
24	T2R24	0.83	1.00

Part Number Guide

Size: _____
 07 - 7 Contacts
 24 - 24 Contacts
 Backshell: (see page 26) _____
 A - Potting Shell
 B - Field-installable backshell

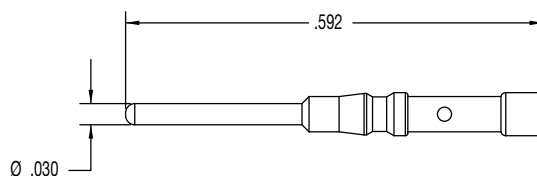
T2R

Pin contacts:

- Screw machined crimp for applications that are wire mounted. Designed to accept 22-26 wire AWG and use standard A-422 crimp tool.

Type of Contact: _____
 TP-100 Screw Machined Crimp Pin
 Plating: AU - Gold _____
 Contacts ordered separately

TP-100
 AU



MACHINED CRIMP
TP-100

Jam Nut Panel Receptacle

7 and 24 Position



Thorkom II receptacles are available in two shell sizes to accommodate 7 and 24 contacts. Receptacles use pin contacts and mate with Thorkom II inline cable plug. Flexible options include inline cable mount, jam nut panel mount and square flange panel mount.

- Easily mated
- Waterproof/submersible
- Excellent heat resistance
- High-density configuration
- Fully autoclavable
- Secure twist-lock system

NUMBER OF CONTACTS	PART NUMBER	A	B (DIA.)	C (THD)
7	T2R07JN	1.09	1.19	XX
24	T2R24JN	1.09	1.50	XX

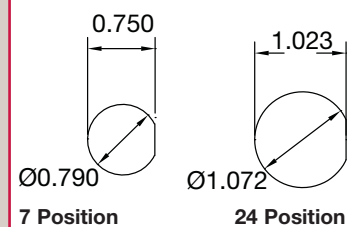
Part Number Guide

Size: _____

07 - 7 Contacts
24 - 24 Contacts

T2R  JN

Mounting Hole Dimensions

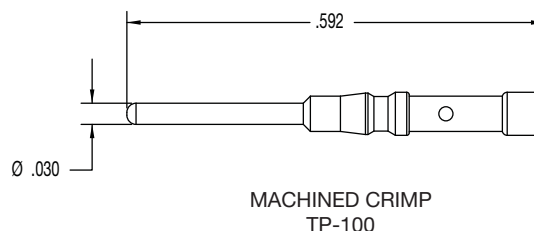


Pin contacts:

- Screw machined crimp for applications that are wire mounted. Designed to accept 22-26 wire AWG and use standard A-422 crimp tool.

Type of Contact: _____
TP-100 Screw Machined Crimp Pin
Plating: AU - Gold; T - Tin
Contacts ordered separately

TP-100
AU



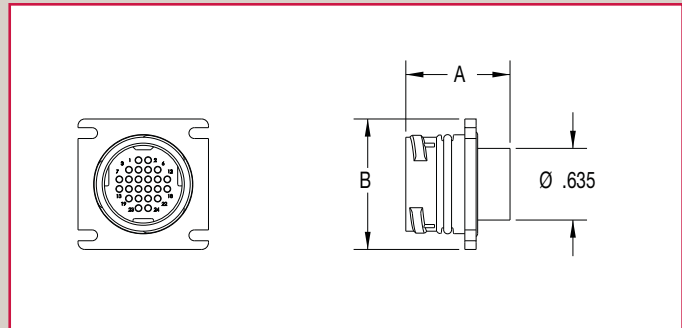
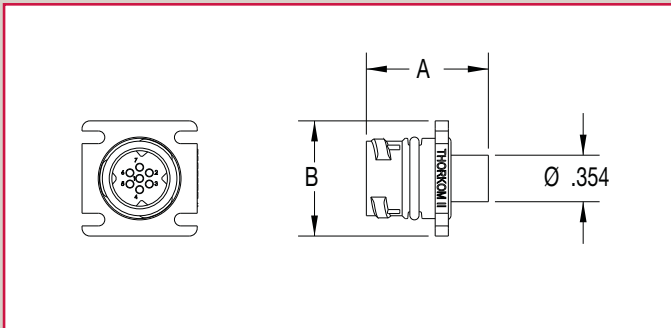
Square Flange Panel Receptacle

7 and 24 Position



Thorkom II receptacles are available in two shell sizes to accommodate 7 and 24 contacts. Receptacles use pin contacts and mate with Thorkom II inline cable plug. Flexible options include inline cable mount, jam nut panel mount and square flange panel mount.

- Easily mated
- IP68 waterproof rated
- Excellent heat resistance
- High-density configuration
- Fully autoclavable
- Secure twist-lock system



NUMBER OF CONTACTS	PART NUMBER	A	B (DIA.)	C (THD)
7	T2R07SQ	0.82	0.88	12/32-16 stub acme
24	T2R24SQ	0.82	1.16	11/16-16 stub acme

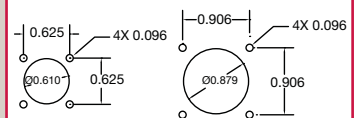
Part Number Guide

Size:

07 - 7 Contacts
24 - 24 Contacts

T2R SQ

Mounting Hole Dimensions



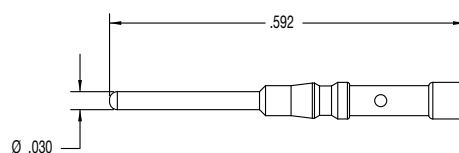
7 Position

24 Position

Pin contacts:

- Screw machined crimp for applications that are wire mounted. Designed to accept 22-26 wire AWG and use standard A-422 crimp tool.

Type of Contact: TP-100
TP-100 Screw Machined Crimp Pin
Plating: AU - Gold AU
Contacts ordered separately



MACHINED CRIMP TP-100

PCB Receptacles



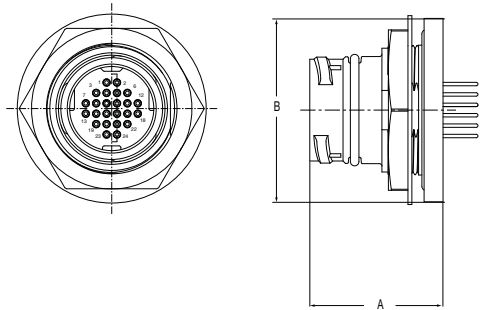
Thorkom II receptacles are available in two shell sizes to accommodate 7 and 24 contacts. Receptacles use pin contacts and mate with Thorkom II inline cable plug. Flexible options include inline cable mount, jam nut panel mount and square flange panel mount.

- Easily mated
- IP68 waterproof rated
- Excellent heat resistance
- High-density configuration
- Fully autoclavable
- Secure twist-lock system

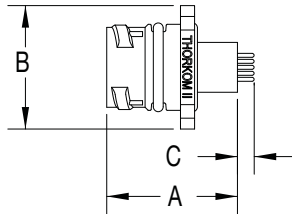
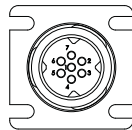


Jam Nut

move to bottom-Tony to
provide new top



Square Flange



delete-Tony to provide new

NUMBER OF CONTACTS	PART NUMBER	A	B (DIA.)
7	T2R07JNPC	1.09	1.19
24	T2R24JNPC	1.09	1.50
7	T2R07SQPC	0.82	0.88
24	T2R24SQPC	0.82	1.16

Part Number Guide

Size:

07 - 7 Contacts
24 - 24 Contacts

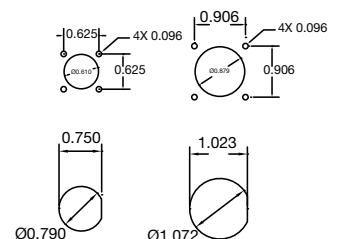
Body:

SQ - Square Flange
JN - Jam Nut

Note: PCB receptacles are preloaded with PC dip contacts.

T2R PC

Mounting Hole Dimensions



Backshells and Accessories

The Thorkom II product line includes an assortment of backshells and accessories that provide environmental protection and strain relief protection.



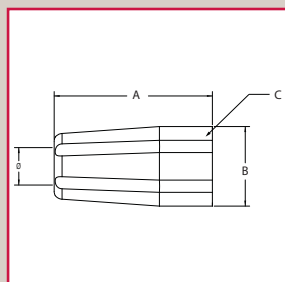
Potting Backshell (7 position only)



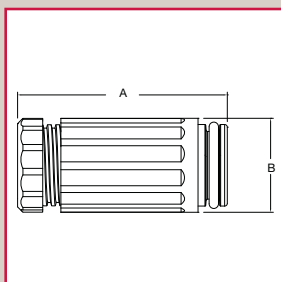
Field Installable Backshell



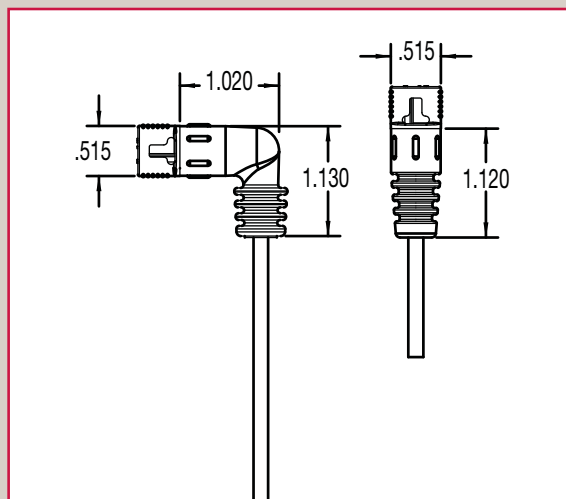
Molded Assemblies - Consult Factory - Thorkom I shown



A



B



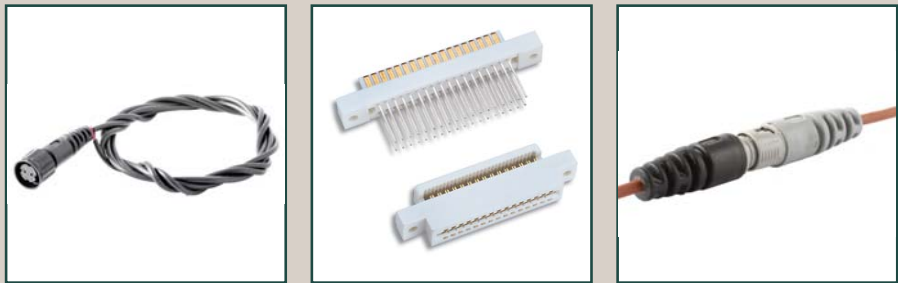
C

NUMBER OF CONTACTS	PART NUMBER	RANGE OF CABLE DIAMETERS	A ±.010	B DIA. ±.010	C THD. ±.005
7	A	0.255 Max.	1.12 (28.0)	.572 (14.5)	13/32-16 stub acme
7	B	0.24-0.31	1.57	0.70	13/32-16 stub acme
24	B	0.37-0.46	1.57	1.00	11/16-16 stub acme

The integrity of a waterproof seal is dependant on several factors, including: cable diameter, size, concentricity, material, environment and application. We highly recommend that you contact us to discuss your application prior to selecting a product for your design. Our products are designed to meet the waterproof specification if it is used as originally designed and if properly assembled / installed.

Custom Products and Assemblies

At Cooper Interconnect, innovation is our lifeblood. We focus on expanding technology platforms as an “application-specific solutions provider.”



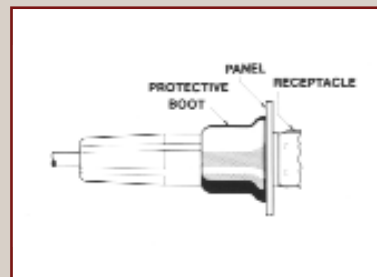
CUSTOM PRODUCTS

Accessories and Tools

Protective Boots

Application with Thorkom Plug.

The protective boot is available for use with the 7 or 12 contact series plug backshell assembly. The boot is transparent and provides a splash proof, moisture seal for the mated plug and bulkhead mounted receptacle.



PROTECTIVE BOOTS USED WITH	BOOT PART NUMBER
7 Contact Thorkom plug backshell assembly	035-0158-000
12 Contact Thorkom plug backshell assembly	035-0159-000

Contact Insertion/Extraction Tools



Insertion Tool - TIE-100

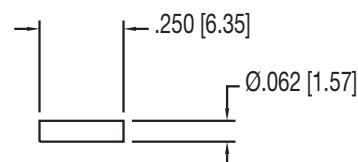


Extraction Tools
 115-0150-000, Socket contact extractor (from front of plug)
 115-0392-000, Pin contact extractor (from front of receptacle)
 115-0147-000, Insertion (from rear) both pin and socket

Crimp Tools



Crimp Tool - A-422



Dummy Filler - TD-200

Assembly Instructions

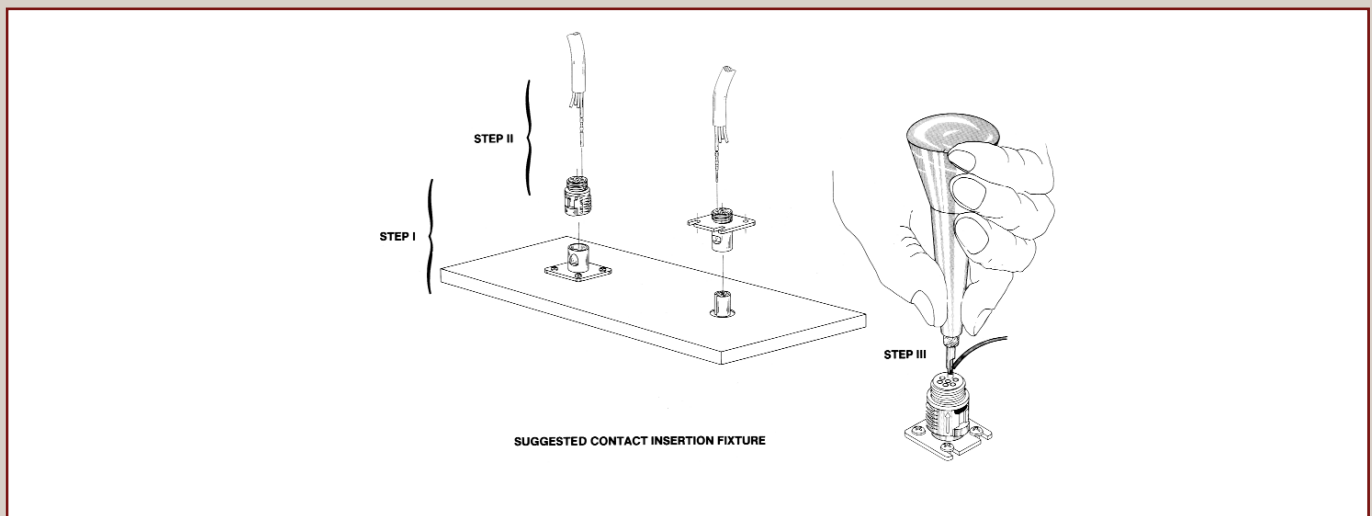
A. Crimping

(Use wire gauges 22 through 26 AWG.)

1. Strip insulation from wire, exposing conductor $200'' + .015''$.
2. Insert contact into crimping tool positioner and insert stripped end of wire into contact crimp barrel.
3. Close crimp tool until tool releases. Remove contact and wire assembly.

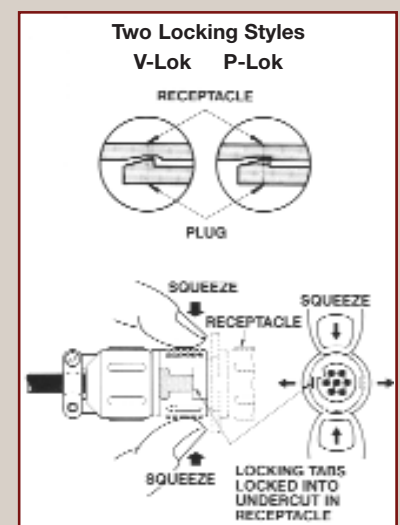
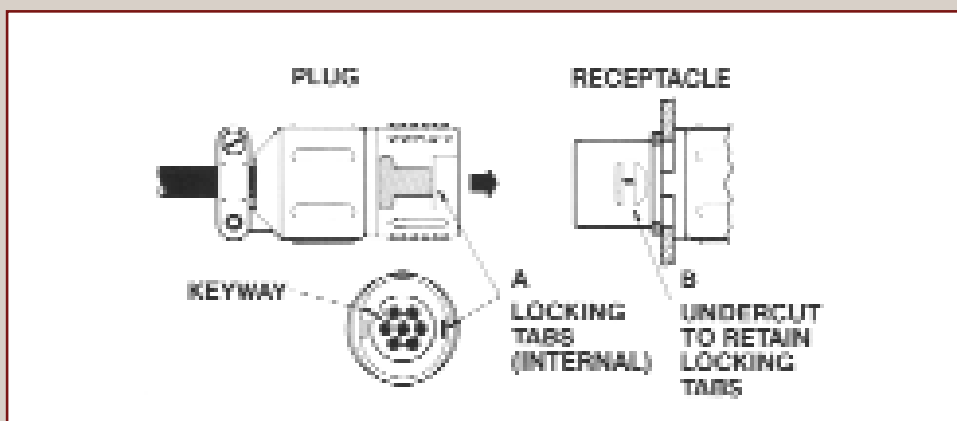
B. Contact Insertion

1. Place insulator for contact insertion onto proper mating connector on fixture.
2. Feed wire bundle through the backshell (if one is used). Insert contacts by hand into the back of the insulator.
3. Fit insertion tip between end of wire insulator and end of crimp barrel. Push contact into insulator until contact snaps into locked position. Slide backshell forward and thread it into the insulator.



How to Mate and Unmate Thorkom

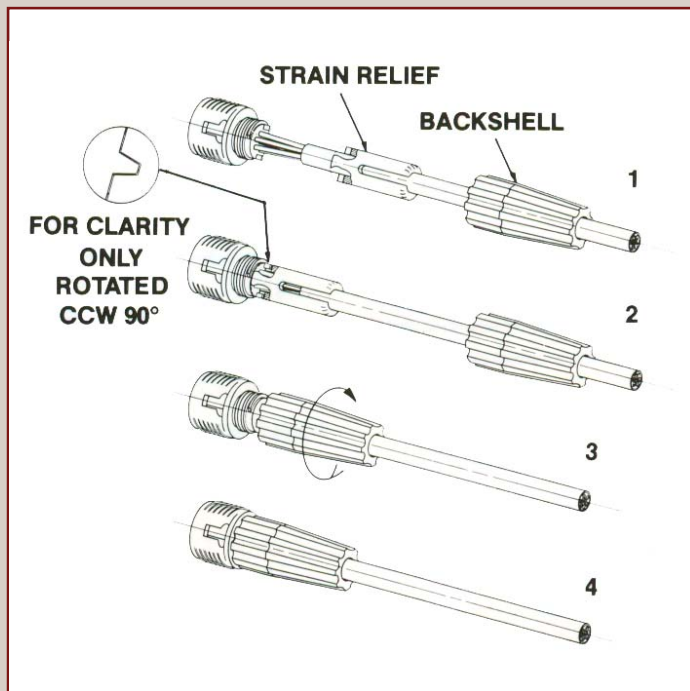
Thorkom connectors can be mated and unmated by means of two locking styles: V-Lok or P-Lok. The plugs used for both locking styles are identical. The receptacles differ in the latch configurations.



Instructions

How to Apply Strain Relief Backshell

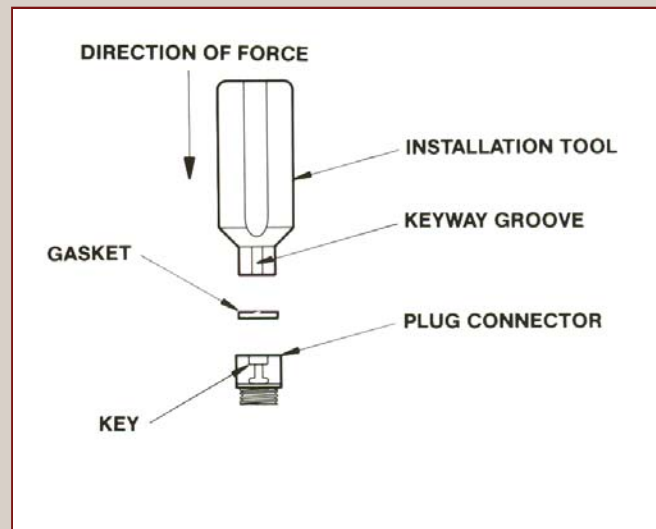
1. Insert backshell and strain relief on cable before inserting contacts into insulator.
2. Align stand-offs on insulator with slots on strain relief and mate them together.
3. Slide backshell over strain relief to meet threads. Do not turn backshell before this, or you may disengage strain relief from correct position. When the backshell is against the insulator threads, push and turn in the same motion to ensure continual mating of strain relief.
4. Continue to turn backshell until it bottoms out on insulator (Hand tight only).



Thorkom Plug Gasket Installation Instructions

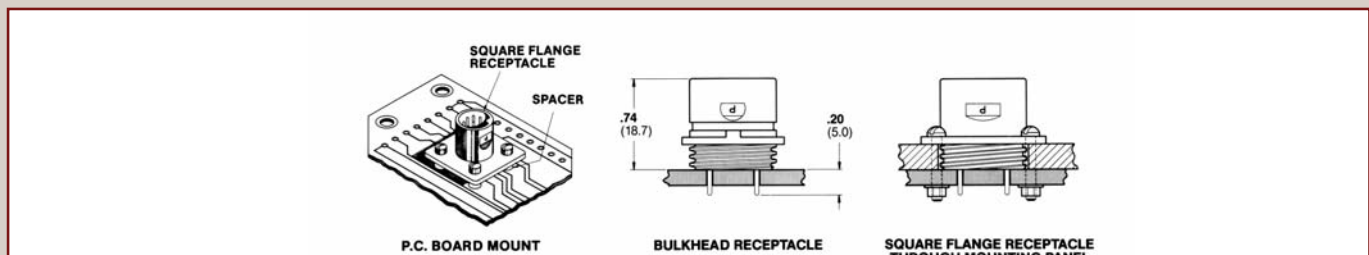
Tool Numbers: 7 position 000407-0127
12 position 000407-0128

1. Place gasket between shell and insulator.
2. Set installation tool grooves in line with locking keys of shell and push gasket down into the connector.



Dip Solder Applications

Using dip solder contacts, Thorkom receptacles may be soldered directly into printed circuit boards or flexible circuitry. The dip solder contact is also used as a solder post for pressure or temperature transducer applications.

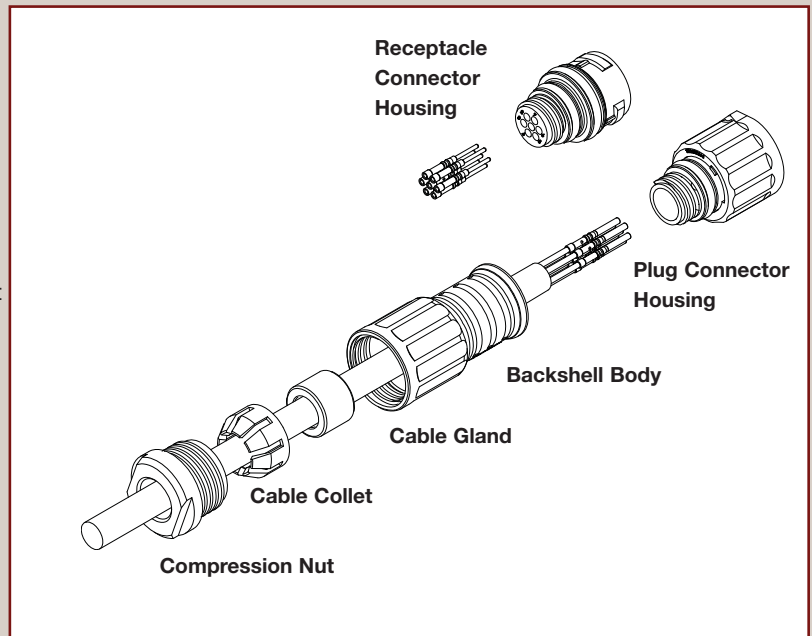


Assembly Instructions

Important - Please read instructions prior to assembly

Assembly of Inline Cable Connector and Field Installable Backshell

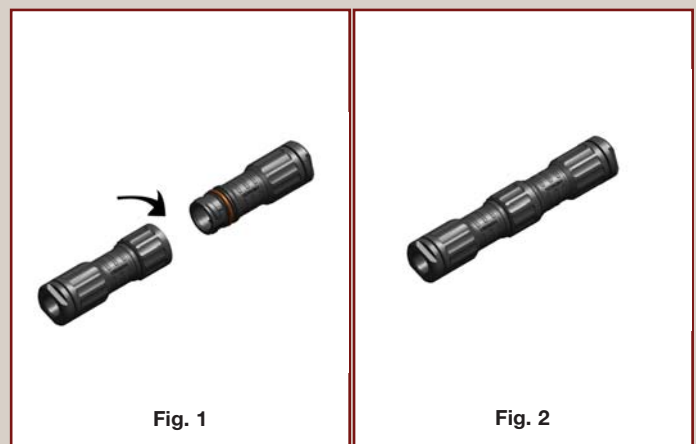
1. Insert the compression nut, collet, sealing gland and backshell body over the cable.
2. Strip cable jacket for $0.60" \pm 0.100"$. Note: Do not exceed stripping length as this may have a negative effect on sealing.
3. Strip individual conductor's insulation by $0.200" \pm 0.15"$.
4. Insert contact into crimping tool and insert stripped end of wire into contact crimp barrel.
5. Close crimp tool until tool releases. Remove crimped contact/wire assembly.
6. Insert contacts into connector housing and press in using an approved handle (TIE-100) and insertion tip (115-0147-000) only. Note: Contacts take some force to push into the connector body. Proper insertion will result in a pop sound to confirm the contact is fully seated.
7. Twist backshell body on to connector housing until finger tight
8. Slide the sealing gland and collet into the backshell body.
9. Tighten the compression nut onto the backshell body. As a reference, finger tighten the nut first. Then, use a box wrench and tighten an additional $\frac{1}{4}$ turn. Note: Do not over-tighten the compression nut as it will have a negative effect on the product's performance.



Mating Instructions

The Thorkom II has a twist locking system which includes a positive feedback secondary snap feature. When mated correctly, a waterproof seal will be created.

When mating connectors, turn the plug connector collar in a counter-clockwise. Push the connectors together until fully seated and turn the locking collar clockwise until you hear a click (See Fig. 1). The click sound is the positive feedback detent that confirms the parts are fully mated (See Fig. 2).



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Cooper Interconnect
5455 Endeavour Court
Moorpark, CA 93021-8009
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Chelsea, MA 02150
P: 617-889-3700
F: 617-889-6980

Cooper Interconnect
4758 Washington Street
LaGrange, NC 28551
P: 252-566-3014
F: 252-566-9337

Cooper Interconnect
1510 West 135 Street
Gardena, CA 90247-6862
P: 310-532-3330
F: 310-532-0303

Cooper Interconnect
750 West Ventura Boulevard
Camarillo, CA 93010
P: 805-484-0543
F: 805-987-5062

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90 W. Broadway
Salem, NJ 08079
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