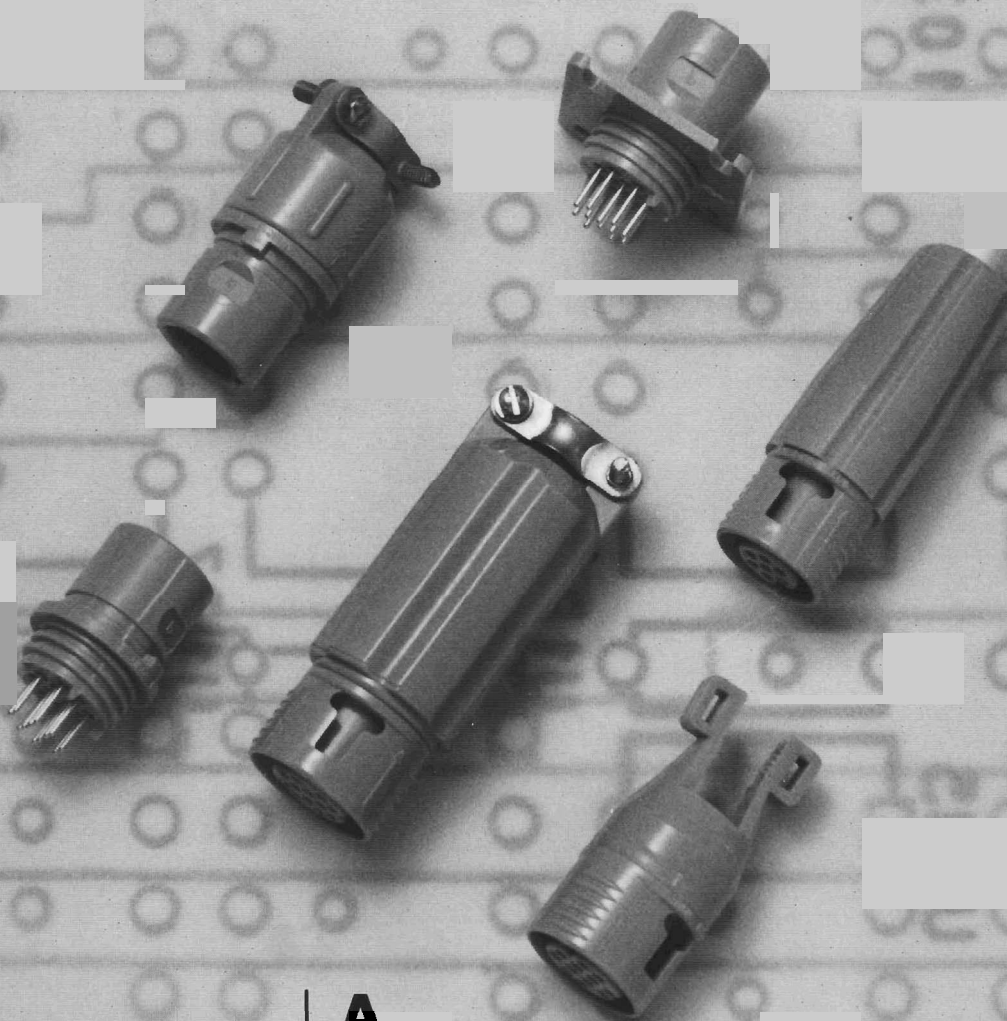


# VIKING

## THORKOM

## CIRCULAR

## CONNECTORS



**A  
Commitment  
To  
Service**

## FEATURES

- Available in various shell sizes, high density contact arrangements and mounting styles
- Quick connect and disconnect with either POSI-LOK or V-LOK coupling
- U.L. approved, 94V-2
- "High temperature resistant" thermoplastic for autoclaving processes
- Low unit cost
- Durable and competitively priced screw machined contacts
- Screw machined dip solder contacts
- Various backshell and strain relief options
- Environmental molded cable assemblies

**U.L.** listed under  
U.L. File No. E74125

**CSA** certified under  
File No. LR61763

## PERFORMANCE CHARACTERISTICS

- Current Rating on Contacts: 5 Amperes
- Dielectric Withstanding Voltage: 1500 VRMS Maximum @ Sea Level, 600 VRMS @ 70,000 feet (21,336 meters)
- Ambient Temperature: -55° to +125° C. (-67° to +257° F.)
- Insulation Resistance: 5,000 Megohms Minimum
- Contact Retention: 10 lbs. (4.5 kg) axially after one cycle.

## APPLICATIONS

- THORKOM connectors have been used in a broad variety of commercial and industrial applications. Some of these include:
- Computer Equipment
- Medical Instrumentation
- Automotive
- Communications
- Marine
- Aviation
- Process Control
- Audio Equipment
- Consumer Electronics
- Agriculture

## MATERIALS AND FINISHES

- Connector Housing: High Strength Thermoplastic, U.L. 94V-2 approved or "High Temperature Resistant" thermoplastic material for autoclaving processes\*, U.L. 94V-O approved
- Sealed Gasket: Neoprene Rubber
- Screw Machined Contacts: Copper Alloy (stainless steel hood over socket tines), gold plated per MIL-G-45204B Type II, Grade C over nickel (.000010" gold) or tin plated per MIL-T-10727A Type I, bright finish (.000200" min.)
- Cable Clamps: Aluminum, Chemical Conversion Coating
- Panel Mount Retaining Ring: Carbon Steel
- Strain Relief and Cable Clamp Backshells: High Strength Thermoplastic, U.L. 94V-2 approved
- Stove Pipe and Tie Strap Backshells: High Density Polyethylene, U.L. 94V-2 approved
- Contacts No. 22 (accepts 22-24-26 AWG wire)

\*Nonstandard material, please contact factory for price and delivery.

## STEPS IN SELECTING THORKOM CONNECTORS

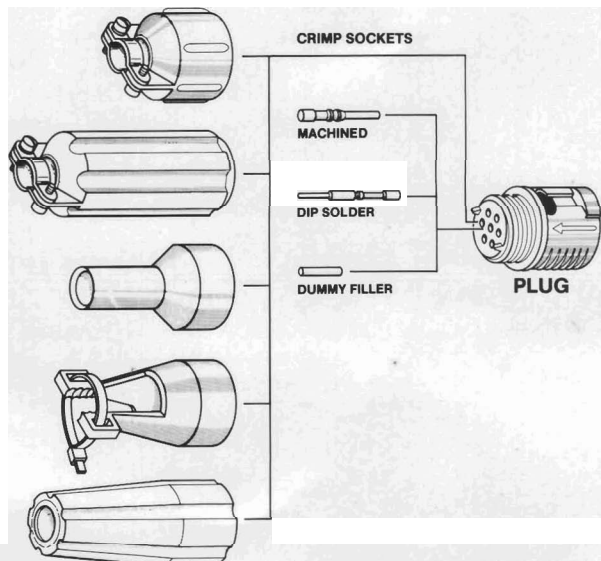
To assist you in selecting and ordering our connectors for your specific application, we have some suggested guidelines to follow:

1. Type of cable to be used (jacketed, shielded, coil, straight, AWG of individual wire)
2. Where connector is used (bulkhead, cable to cable)
3. What are the current requirements (volts, amps, etc.)
4. Size of connector and type (number of contacts, right angle or straight)
5. Strain relief (yes or no, if yes, type of backshell)
6. Type of approval connector needs to meet (U.L., CSA, VDE)

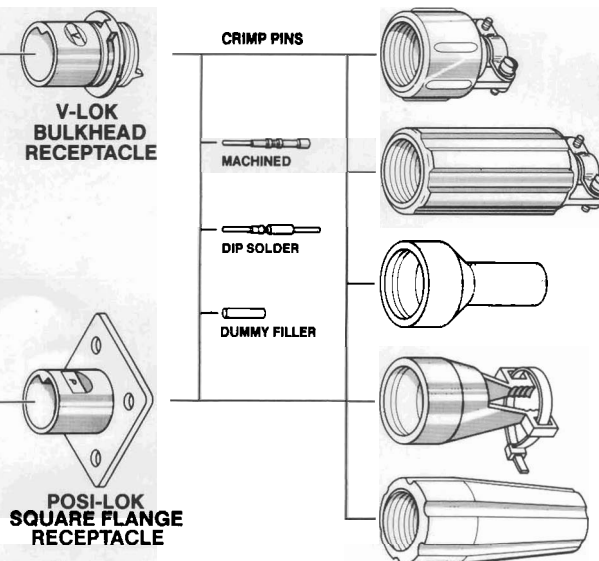
All these questions, when answered, will help expedite the placing of your order and ensure your receiving the correct product.

## THORKOM CONNECTORS, BACKSHELLS AND CONTACTS

### STRAIN RELIEF BACKSHELLS



### STRAIN RELIEF BACKSHELLS

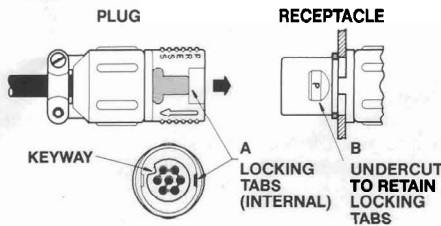


# Introduction

## HOW TO MATE AND UNMATE THORKOM

THORKOM connectors can be mated and unmated by means of two locking styles: V-LOK or POSI-LOK.

The plugs used for both locking styles are identical. The receptacles differ in the latch configurations.



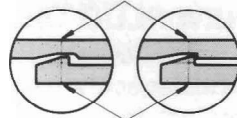
### TO MATE PLUGS AND RECEPTACLES:

1. Turn plug so "keyed" insulator faces align.
2. Push plug into receptacle until locking tabs (A) snap into undercuts (B).

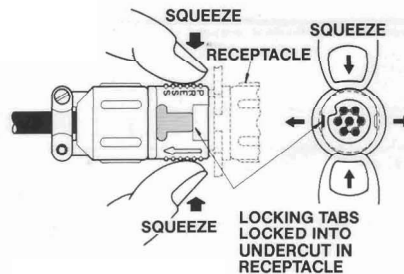
## TWO LOCKING STYLES

### V-LOK POSI-LOK

#### RECEPTACLE



#### PLUG



### TO UNMATE PLUGS FROM POSI-LOK RECEPTACLES:

1. Squeeze finger grips to flex plastic coupling area. The locking tabs will deflect outward and unlock.
2. Pull plug from receptacle.

### TO UNMATE PLUGS FROM V-LOK RECEPTACLES:

Simply pull plug from receptacle.  
Do not turn or twist.  
Do not use hand tools.

## HOW TO APPLY STRAIN RELIEF BACKSHELL

### STEP 1

Insert backshell and strain relief on cable before inserting contacts into insulator.

### STEP 2

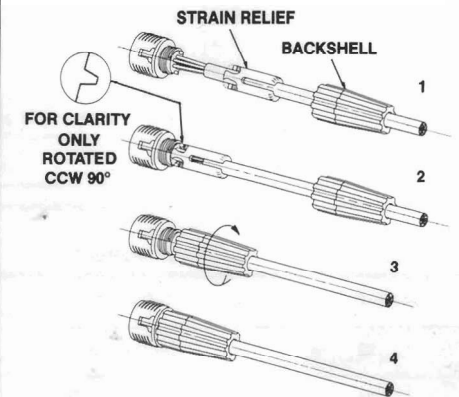
Align stand-offs on insulator with slots on strain relief and mate them together.

### STEP 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 backshell is against insulator threads push and turn in the same motion as to ensure continual mating of strain relief.

### STEP 4

Continue to turn backshell until it bottoms out on insulator. (Hand tight only)



## ORDERING INFORMATION

**CONNECTORS** - A connector order consists of connector and backshell. To order, use the chart shown below and combine component part numbers as required to suit your needs.

**CONTACTS** - Contacts for Thorkom connectors must be ordered separately. Ordering information for contacts is provided on pages 4 and 7. To order, use the chart shown below.

T	B	R	07	2	*	1	P
THORKOM	B Bulkhead (7 & 12 only) (pg. 5) N Plug and Receptacle (pg. 5-6)	K Bulkhead or Plug (24 pos. only) (pg.5) F Square flange (24 pos. only) (pg. 6)	R Receptacle (pg. 5-7)	P Plug (pg. 3-4)	07 7 Contact positions 12 12 Contact positions 24 24 Contact positions	BACKSHELLS: (pg.8-9) 1*0 Cable Backshell 1*1 Without Backshell 1*2 Stove Pipe Backshell 1*3 Tie Strap Backshell 1*5 Long Cable Clamp Backshell 2*1 Strain Relief, 7 position, Cable Dia. .150 - .185 2*2 Strain Relief, 7 position, Cable Dia. .190 - .220 2*3 Strain Relief, 7 position, Cable Dia. .240 - .255 2*4 Strain Relief, 12 position, Cable Dia. .230 - .260 2*5 Strain Relief, 12 position, Cable Dia. .275 - .300 2*6 Strain Relief, 12 position, Cable Dia. .335 - .345	

TP-100	AU
--------	----

**CONTACT PLATING:**  
Au Gold Plate  
T Tin Plate

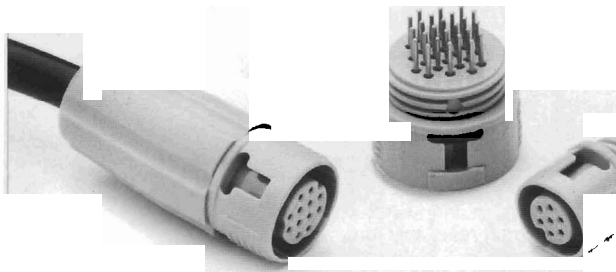
**TYPE OF CONTACT:**  
(pgs. 4 and 7)

TS-100 Screw Machined Contact (Loose)  
TP-100 Screw Machined Pin Contact (Loose)  
DS-100 Dip Solder Socket Contact (Loose)  
DP-100 Dip Solder Pin Contact (Loose)  
TD-200 Dummy Filler

**LOCKING STYLE:**  
(use for receptacle only)

P-POSI-LOK  
V-V-LOK

\* Color  
0 - Gray  
1 - Black



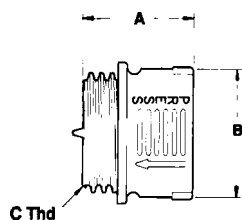
## PLUGS

Plugs are available in three shell sizes to accommodate 7, 12 and 24 contact configurations, in either gray or black. Plugs use socket contacts and mate with either POSI-LOK or V-LOK receptacles.

## NEW PLUG DESIGN

The new design offers the OEM customer an insulator that accommodates screw machined contacts. The new closed entry protects the contact from any possible stubbing when mating the connectors together.

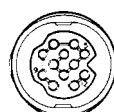
## BASIC PLUG ASSEMBLY



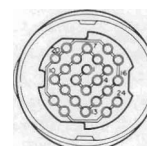
FRONT FACE



7 CONTACTS



12 CONTACTS

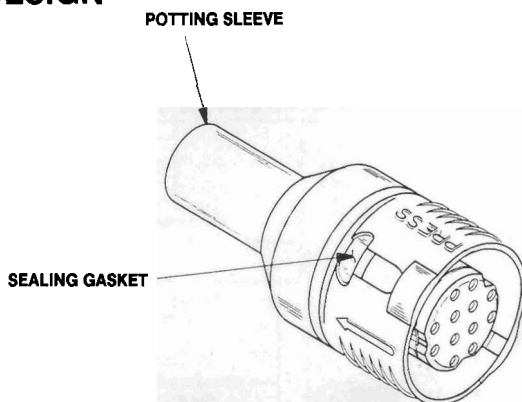


24 CONTACTS

NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C Thd
7	TNP07-1 1	.63 (16.0)	.51 (12.9)	13/32-16 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.

## NEW PLUG DESIGN



TYPICAL ASSEMBLY

## MATERIAL

Insulator - High Strength Thermoplastic, U.L. 94V-2  
Sealing Gasket - Neoprene Rubber

## REFERENCE INFORMATION

Applicable Specifications - Page 1  
Backshell and Accessories - Page 8

## MATEABLE CONNECTORS

Receptacles, Bulkhead Mount - Page 5  
Receptacles, Square Flange Mount - Page 6  
Terminating Method - Page 10

## ORDERING INFORMATION

Part numbers on this page do not include contacts. Order socket contacts separately (see page 4). To order plug assemblies separately, use ordering diagram at right.

PLUG SIZE: \_\_\_\_\_  
07 7 Contacts  
12 12 Contacts  
24 24 Contacts TKP (for 24 positions only)  
\*COLOR: \_\_\_\_\_  
0 Gray  
1 Black

TNP 07 - 1 \* 1

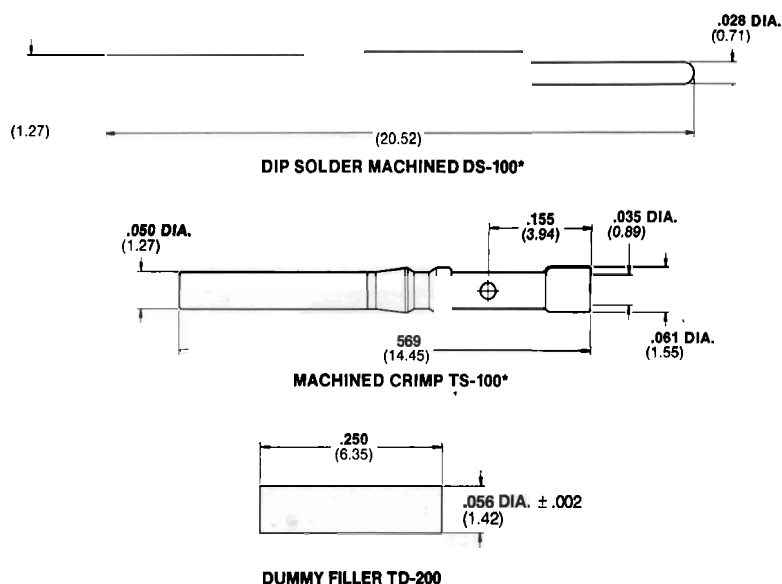
## CABLE APPLICATIONS

Shown in this diagram is a typical wire to wire cable assembly application. Plugs mate with flange and bulkhead receptacles. Improved single piece rugged construction allows for easy mating and unmating, with either V-LOK or POSI-LOK locking styles.



## SOCKET CONTACTS

Contacts are available in a screw machined style. Socket contacts are to be used with plugs. Contacts accept 22-26 AWG wire and use MIL-T-22520 crimp tool (for screw machined contacts only). To order contacts separately use part numbers below.



\*Add Au for gold plate or T for tin plate

## ORDERING INFORMATION

TYPE OF CONTACT: \_\_\_\_\_

TS-100\* Screw Machined

DS-100\* Dip Solder

TD-200 Dummy Filler

AU Gold \_\_\_\_\_

T Tin \_\_\_\_\_

\*Add Au for gold plate or T for tin plate

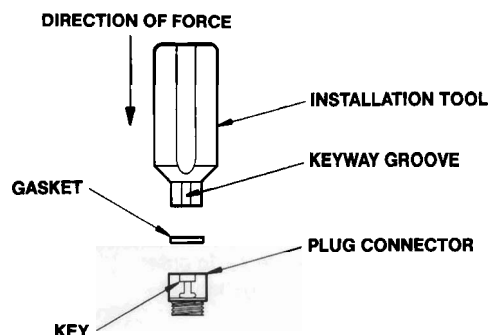
TS - 100 AU

## THORKOM PLUG GASKET INSTALLATION INSTRUCTIONS

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

Instructions: To Install Gasket:

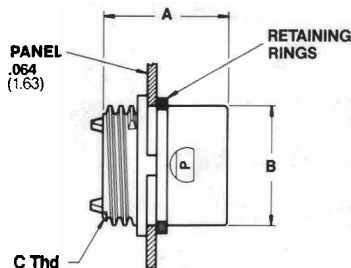
- Place gasket between shell and insulator.
- Set installation tool grooves in line with locking keys of shell and push gasket down into the connector.



## BULKHEAD MOUNTED RECEPTACLES

All receptacles are available in 7, 12 or 24 contacts in gray or black. POSI-LOK and V-LOK styles are offered. This receptacle can be used for cable applications or bulkhead mounted with a retaining ring which is supplied as part of the assembly.

### BASIC BULKHEAD RECEPTACLE



TKR □ - 1 □ 1 - □

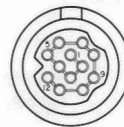


7 CONTACTS



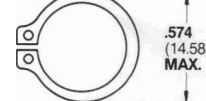
SIZE 7  
990-0014-061

FRONT FACE

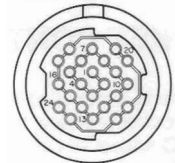


12 CONTACTS

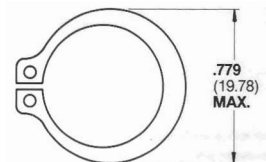
RETAINING RINGS  
(INSTALLED DIMENSION)



SIZE 12  
990-0014-062



24 CONTACTS



SIZE 24  
990-0014-063

#### NUMBER OF CONTACTS

#### PART NUMBER

#### A

#### RECEPTACLE DIMENSIONS

#### 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.

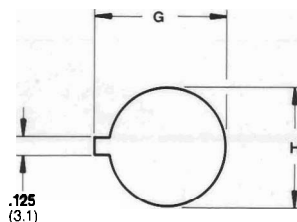
### MATERIAL AND FINISH

Insulator - High Strength Thermoplastic,  
U.L. 94V-2 approved.  
Retaining Ring - Carbon Steel

### REFERENCE INFORMATION

Applicable Specifications - Page 1  
Backshell and Accessories - Page 8  
Mateable Connectors - Page 3  
Terminating Tools - Page 10

### MOUNTING HOLE SIZES



SUGGESTED  
HORIZONTAL  
KEY LOCATION

#### NUMBER OF CONTACTS

#### G

#### H Dia.

7

.470

(11.9)

.420

(10.6)

12

.565

(14.3)

.510

(12.9)

24

.760

(19.3)

.700

(17.7)

## ORDERING INFORMATION-BULKHEAD RECEPTACLES

Part numbers on this page do not include contacts. Order pin contacts separately (see page 7). To order bulkhead mounted receptacles separately, use ordering diagram at right.

CONNECTOR SIZE: \_\_\_\_\_  
07 7 Contacts  
12 12 Contacts  
24 24 Contacts (TKR 24 position only)

\*COLOR: \_\_\_\_\_

O Gray  
1 Black

LOCKING STYLE: \_\_\_\_\_

P POSI-LOK  
V V-LOK

TBR 07 - 1 \* 1 - P



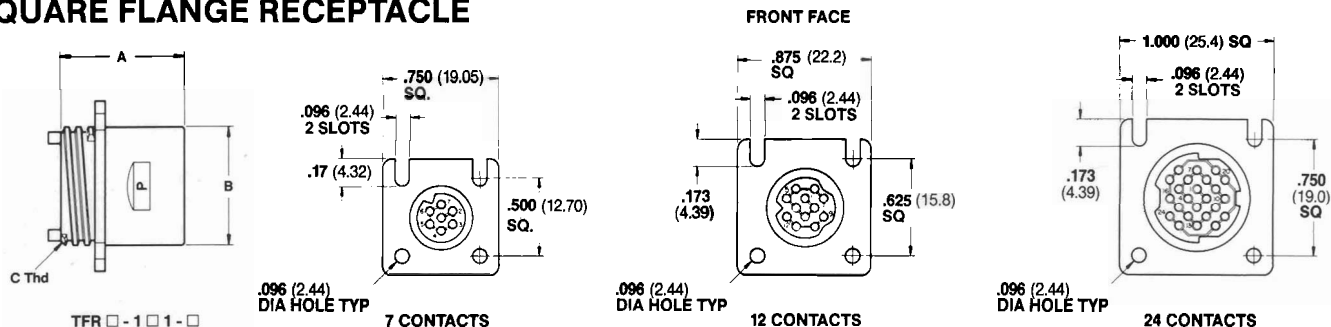
# Receptacles

## SQUARE FLANGE MOUNTED RECEPTACLES

All square flange receptacles are available in 7, 12 or 24 contacts in gray or black. Both POSI-LOK and V-LOK latching styles are offered.



### SQUARE FLANGE RECEPTACLE



NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	C Thd
7	TNR07- 1 □ 1 - □	.74 (18.7)	.406 (10.3)	13/32-16 stub acme
12	TNR12- 1 □ 1 - □	.74 (18.7)	.50 (12.7)	1/2-16 stub acme
24	TFR24- 1 □ 1 - □	.74 (18.7)	.687 (17.4)	11/16-16 stub acme

All dimensions in inches and (millimeters). Tolerance = .010 (.25) unless otherwise specified.

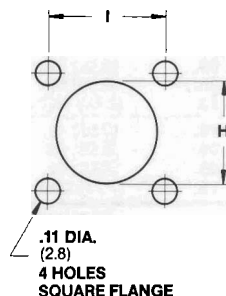
### MATERIAL

Insulator - High Strength Thermoplastic, U.L.  
94V-2 approved.

### REFERENCE

Applicable Specifications - Page 1  
Backshell and Accessories - Page 8  
Mateable Plugs - Page 3  
Terminating Tools - Page 10

### MOUNTING HOLE SIZES



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

### ORDERING INFORMATION-SQUARE FLANGE RECEPTACLES

TNR 07 - 1 \* 1 - P

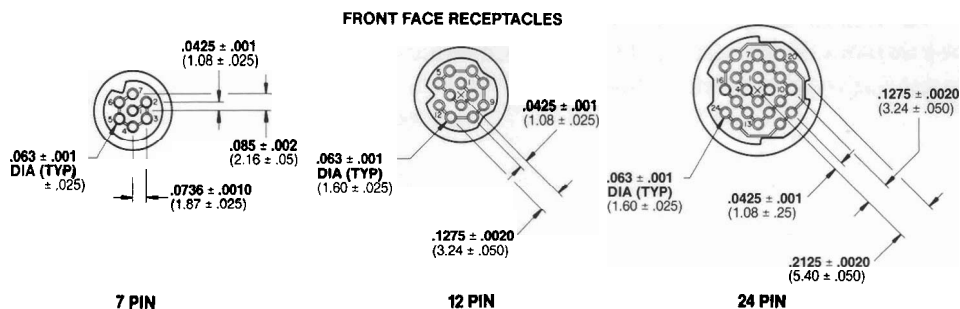
Part numbers on this page do not include contacts. Order pin contacts separately (see page 7). To order square flange receptacles separately, use ordering diagram at right.

CONNECTOR SIZE: \_\_\_\_\_  
 07 7 Contacts  
 12 12 Contacts  
 24 24 Contacts (TFR 24 position only)  
 \*COLOR: \_\_\_\_\_  
 O Gray  
 1 Black  
 LOCKING STYLE: \_\_\_\_\_  
 P POSI-LOK  
 V V-LOK

# Receptacles

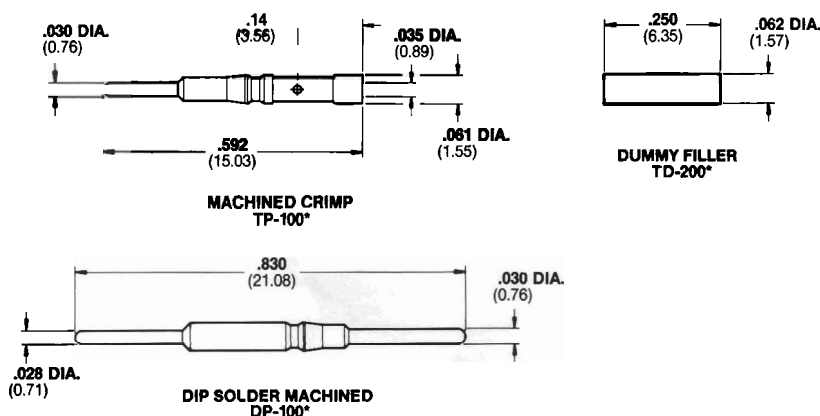
## CONTACT PATTERNS

THORKOM subminiature cylindricals offer high contact density within minimum shell sizes. Shown here are contact hole patterns for the three THORKOM shell sizes.



## PIN CONTACTS

Pin contacts are available in a screw machined type. Pins are typically used with receptacles. Contacts accept 22-26 AWG wire and use MIL-T-22520 crimp tool (screw machined contact only). To order contacts separately, use part numbers below.



\*Add Au for gold plate or T for tin plate

## ORDERING INFORMATION

To order backshells separately, use ordering diagram below. See page 2 for ordering backshells as part of complete assemblies.

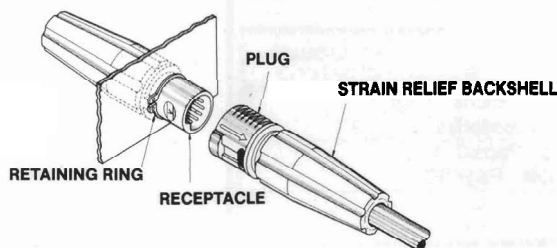
TYPE OF PIN CONTACT:

TP-100\* Screw Machine Pin Contact  
 DP-100\* Dip Solder Pin Contact  
 TD-200 Dummy Filler  
 AU Gold  
 T Tin

TP-100 AU

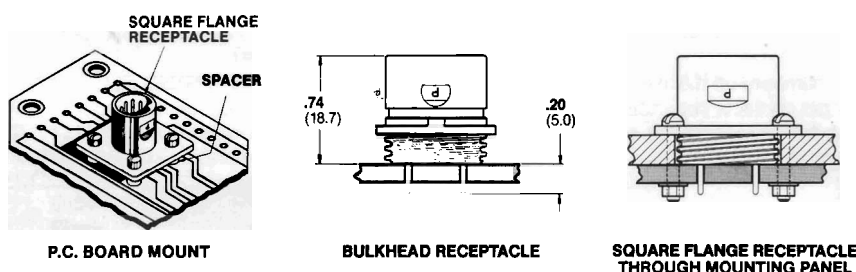
## WIRE TO WIRE APPLICATIONS

This diagram illustrates a bulkhead mounted receptacle with attached strain relief backshell.



## 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.





# Backshells

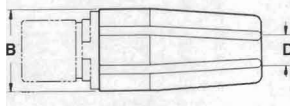
## BACKSHELLS AND ACCESSORIES

The THORKOM series includes an assortment of backshells and accessories that provide environmental protection and strain relief protection. Backshells can be ordered separately or as complete connector/backshell assemblies, as illustrated on page 9.



### STANDARD BACKSHELL

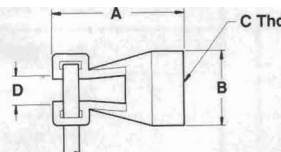
Viking standard strain relief/protective backshell assembly is easily installed. See page 2 for installation instructions. These strain relief backshells come in gray or black. The 7 and 12 position connectors each accommodate three different cable diameters.



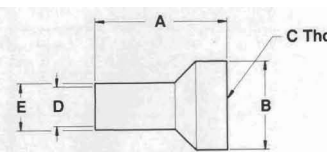
TSR □□ - 2 □□ - 1-6  
STRAIN RELIEF BACKSHELL

### NONSTANDARD BACKSHELLS

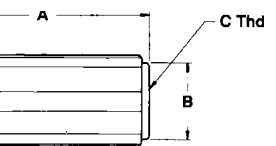
Long and short cable clamp, tie-strap and stovepipe backshells can create connector assemblies to be used in a multitude of applications. These backshells will require a factory quotation for price and delivery.



TPW □□ - 1 □ 3  
The TPW backshell gives strain relief with a nylon tie strap.

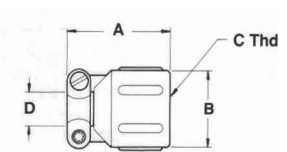


TPS □□ - 1 □ 2  
The TPS series can be used as a sleeve for applying potting compound.



TKH □□ - 1 □ 0

The TKH backshell is a longer version of Viking's TKH series, providing strain relief with aluminum cable clamp hardware.



TKH □□ - 1 □ 0  
The TKH option provides strain relief with aluminum cable clamp hardware.

NUMBER OF CONTACTS	PART NUMBER	RANGE OF CABLE DIAMETERS	STANDARD BACKSHELL DIMENSIONS				
			A ±.010	B Dia. ±.010	C Thd ±.005	D ±.005	E Dia. ±.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)	13/32-16 stub acme	.265 (6.6)	.25 (6.3)
7	TSR07-2□3	.240/.255	1.12 (28.0)	.572 (14.5)	13/32-16 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	1.12 (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)	—

All dimensions in inches and (millimeters). Tolerance ± .010 (.25) unless otherwise specified

## ORDERING INFORMATION

To order backshells separately, use ordering diagram below. See page 2 for ordering backshells as part of complete assemblies.

TYPE OF BACKSHELL:

TKH	1*0	Cable-Clamp Backshell
TPS	1*2	Stove Pipe 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

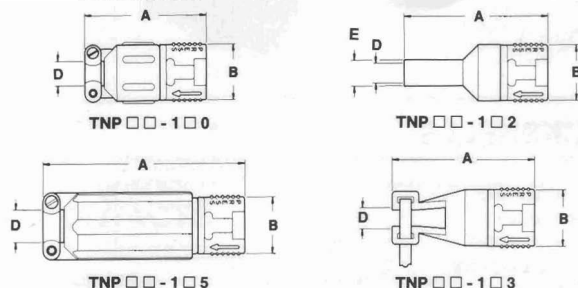
TSR	07	2 * 2
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\*COLOR:  
0 Gray  
1 Black  
CONTACTS:  
07 7 Contacts  
12 12 Contacts  
24 24 Contacts

# Backshell Assemblies

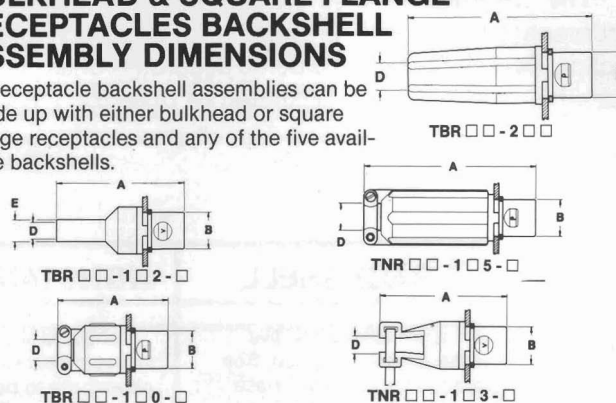
## PLUG BACKSHELL ASSEMBLY DIMENSIONS

Plugs can be made up into plug backshell assemblies by ordering them with any of the five backshells available.



## BULKHEAD & SQUARE FLANGE RECEPTACLES BACKSHELL ASSEMBLY DIMENSIONS

Receptacle backshell assemblies can be made up with either bulkhead or square flange receptacles and any of the five available backshells.



IMPORTANT: TBR designates bulkhead receptacle and TNR designates square flange receptacle. Dimensions specified.

NUMBER OF CONTACTS	PART NUMBER	A	B Dia.	D Dia.	E Dia.
7	TNP07 - 1 0 0	1.14 (28.9)	.51 (12.9)	.23 (5.8)	—
7	TNP07 - 1 0 2	1.33 (33.7)	.51 (12.9)	.18 (4.5)	.25 (6.3)
7	TNP07 - 1 0 3	1.33 (33.7)	.51 (12.9)	.18 (4.5)	—
7	TNP07 - 1 0 5	1.89 (48.0)	.51 (12.9)	.30 (7.6)	—
7	TNP07 - 2 0 1	1.55 (38.8)	.51 (12.9)	.265 (6.6)	—
7	TNP07 - 2 0 2	1.55 (38.8)	.51 (12.9)	.265 (6.6)	—
7	TNP07 - 2 0 3	1.55 (38.8)	.51 (12.9)	.265 (6.6)	—
12	TNP12 - 1 0 0	1.14 (28.9)	.61 (15.5)	.30 (7.6)	—
12	TNP12 - 1 0 2	1.33 (33.7)	.61 (15.5)	.25 (6.3)	.31 (7.8)
12	TNP12 - 1 0 3	1.33 (33.7)	.61 (15.5)	.25 (6.3)	—
12	TNP12 - 1 0 5	1.91 (48.5)	.61 (15.5)	.34 (8.6)	—
12	TNP12 - 2 0 4	1.55 (38.8)	.61 (15.5)	.345 (8.6)	—
12	TNP12 - 2 0 5	1.55 (38.8)	.61 (15.5)	.345 (8.6)	—
12	TNP12 - 2 0 6	1.55 (38.8)	.61 (15.5)	.345 (8.6)	—
24	TKP24 - 1 0 0	1.14 (28.9)	.81 (20.6)	.34 (8.6)	—
24	TKP24 - 1 0 2	1.33 (33.7)	.81 (20.6)	.31 (7.8)	.37 (9.3)
24	TKP24 - 1 0 3	1.33 (33.7)	.81 (20.6)	.31 (7.8)	—
24	TKP24 - 1 0 5	2.06 (52.3)	.81 (20.6)	.50 (12.7)	—

NUMBER OF CONTACTS	PART NUMBER	A ±.020 (.51)	B Dia.	D Dia.	E Dia.
7	TBR/TNR07 - 1 0 0 - □	1.25 (31.7)	.41 (10.4)	.23 (5.8)	—
7	TBR/TNR07 - 1 0 2 - □	1.44 (36.5)	.41 (10.4)	.18 (4.5)	.25 (6.3)
7	TBR/TNR07 - 1 0 3 - □	1.44 (36.5)	.41 (10.4)	.18 (4.5)	—
7	TBR/TNR07 - 1 0 5 - □	2.00 (50.8)	.41 (10.4)	.18 (4.5)	—
7	TBR/TNR07 - 2 0 1 - □	1.65 (41.3)	.41 (10.4)	.265 (6.6)	—
7	TBR/TNR07 - 2 0 2 - □	1.65 (41.3)	.41 (10.4)	.265 (6.6)	—
7	TBR/TNR07 - 2 0 3 - □	1.65 (41.3)	.41 (10.4)	.265 (6.6)	—
12	TBR/TNR12 - 1 0 0 - □	1.25 (31.7)	.50 (12.7)	.30 (7.6)	—
12	TBR/TNR12 - 1 0 2 - □	1.44 (36.5)	.50 (12.7)	.25 (6.3)	.31 (7.8)
12	TBR/TNR12 - 1 0 3 - □	1.44 (36.5)	.50 (12.7)	.25 (6.3)	—
12	TBR/TNR12 - 1 0 5 - □	2.02 (51.3)	.50 (12.7)	.34 (8.6)	—
12	TBR/TNR12 - 2 0 4 - □	1.65 (41.3)	.50 (12.7)	.345 (8.6)	—
12	TBR/TNR12 - 2 0 5 - □	1.65 (41.3)	.50 (12.7)	.345 (8.6)	—
12	TBR/TNR12 - 2 0 6 - □	1.65 (41.3)	.50 (12.7)	.345 (8.6)	—
24	TKR/TFR24 - 1 0 0 - □	1.25 (31.7)	.68 (17.4)	.34 (8.6)	—
24	TKR/TFR24 - 1 0 2 - □	1.44 (36.5)	.68 (17.4)	.31 (7.8)	.37 (9.3)
24	TKR/TFR24 - 1 0 3 - □	1.44 (36.5)	.68 (17.4)	.31 (7.8)	—
24	TKR/TFR24 - 1 0 5 - □	2.17 (55.1)	.68 (17.4)	.50 (12.7)	—

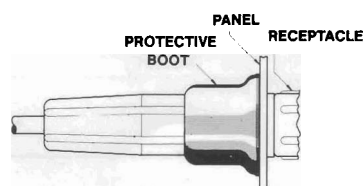
All dimensions in inches and (millimeters). Tolerance ± .010 (.25) unless otherwise specified.

\*All five backshell styles available for use with bulkhead receptacle (TBR - 7 & 12 position) (TKR - 24 position) or square flange receptacle (TNR - 7 & 12 position) (TFR - 24 position).

## 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

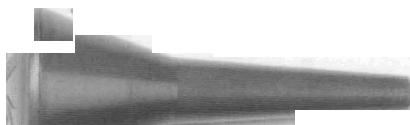
7 contact THORKOM plug backshell assembly

035-0158-000

12 contact THORKOM plug backshell assembly

035-0159-000

## CONTACT INSERTION/EXTRACTION TOOLS



**TIE-100**  
Handle contains 3 Tips



**GREEN (115-0147-000)**  
Insertion (from rear)  
Both Pin & Socket



**RED (115-0150-000)**  
Socket Contact Extractor  
(from front of plug)

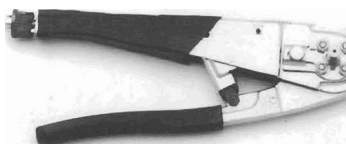


**BLUE (115-0392-000)**  
Pin Contact Extractor  
(from front of receptacle)

## CRIMP TOOLS



**T-422 CRIMP TOOL**  
Crimps contact wire sizes 22 & 24 AWG only



**TC-100 CRIMP TOOL**  
Crimps 22 thru 26 AWG wire sizes

## HAND WIRE STRIPPER



**HWS-100**  
Strips wire gauges 17 thru 28 AWG  
to precise length every time.

## ASSEMBLY INSTRUCTIONS

### A. Crimping

(Use wire gauges 22 thru 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

#### Step I.

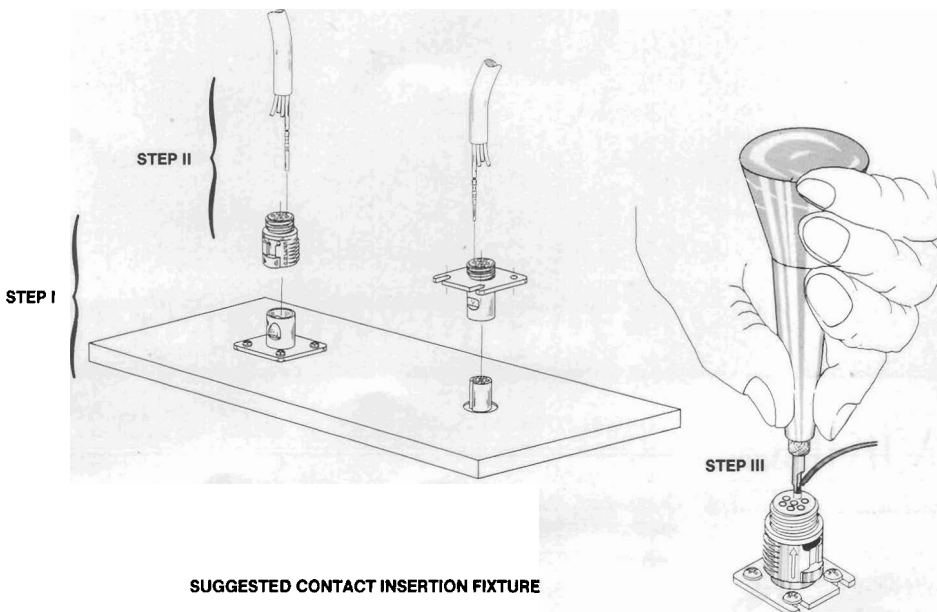
Place insulator for contact insertion onto proper mating connector on fixture.

#### Step II.

Feed wire bundle thru the back-shell (if one is used). Insert contacts by hand into the back of the insulator.

#### Step III.

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.



**SUGGESTED CONTACT INSERTION FIXTURE**