Thomas & Betts

CORD CONNECTORS
Cord Connectors

Thomas & Betts

- Feature / Benefit
  - Metallic
  - Nonmetallic
• Metallic
  - Ranger
  - T&B Cord Fitting
Cord Connectors

Thomas & Betts

- Ranger Cord Fittings
Feature / Benefit

• Gland Nut
  ‣ Designed for Channelock Installation
  ‣ Channels for Liquids
  ‣ No Pooling Around ID
  ‣ Double Plated
  ‣ Low Torque Required

• Nylon 66 Slip Ring
  ‣ Keeps Cable from Twisting
  ‣ Self Centering
  ‣ Easier to Install
Cord Connectors

Gland Nut
9 full threads of engagement

Gives you the power for greater range
NPT Size right on the gland
Cord range right on the gland

...Easy identification
Hex edge creates easy use with channel locks

...Ease of use
Splines create easy space to tighten with screwdriver

...Great for tight spaces
Cord Connectors

Thomas & Betts

2-Part internal component system
Why 2 parts?
Finger grips
1. Self Centering. Guaranteed proper installation each time. No floating component.
Finger grips

1. Self Centering. Guaranteed proper installation each time. No floating component.
2. Fingers are critical component for providing superior pull-out
Neoprene Grommet

1. Stepped interior closes fingers on plastic piece.
Neoprene Grommet

1. Stepped interior closes fingers on plastic piece.
2. Tapered end provides superior liquidtight seal.
Neoprene Grommet
Grommet custom fits the “bugle” shaped body.
8 threads allow great strength

10 threads allows great range
Feature / Benefit
- Sure Tight Gland Nut
  - Self Cleaning Threads
  - Double Redundant liquidtight function
Competition: Liquid Tight

Feature / Benefit
- Sure Tight Gland Nut
  - Umbrella Effect

Thomas & Betts
Thomas & Betts “Water Dynamic”. Unique Umbrella design. Sheds water away from the Fitting.
# Cord Connectors

## Thomas & Betts

### Ranger Fitting

<table>
<thead>
<tr>
<th>Diameter</th>
<th>T&amp;B</th>
<th>Crouse-Hinds</th>
<th>Appleton</th>
<th>Hubbell</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot;</td>
<td>2920</td>
<td>0.125 0.375</td>
<td>CGB192</td>
<td>CG-1250S 0.125 0.187</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2921</td>
<td>0.310 0.560</td>
<td>CGB193</td>
<td>CG-1850S 0.187 0.312</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2922</td>
<td>0.500 0.750</td>
<td>CGB194</td>
<td>CG-3150S 0.312 0.437</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2923</td>
<td>CGB195 0.500 0.625</td>
<td>CG-1275S 0.125 0.250</td>
<td>CG-1275S 0.125 0.250</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2930</td>
<td>0.125 0.375</td>
<td>CGB292</td>
<td>CG-1250S 0.125 0.187</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2931</td>
<td>0.310 0.560</td>
<td>CGB293</td>
<td>CG-2575S 0.375 0.500</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2932</td>
<td>0.500 0.750</td>
<td>CGB294</td>
<td>CG-3775S 0.375 0.500</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&quot;</td>
<td>2940</td>
<td>0.310 0.560</td>
<td>CGB295</td>
<td>CG-2575S 0.250 0.375</td>
</tr>
<tr>
<td>1&quot;</td>
<td>2941</td>
<td>0.500 0.750</td>
<td>CGB296</td>
<td>CG-6275S 0.625 0.750</td>
</tr>
<tr>
<td>1&quot;</td>
<td>2942</td>
<td>0.700 0.950</td>
<td>CGB297</td>
<td>CG-75100S 0.750 0.875</td>
</tr>
<tr>
<td>1&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1&quot;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOTAL SKU's:** 9, 16, 16, 15
<table>
<thead>
<tr>
<th>T&amp;B</th>
<th>2 Conductor</th>
<th>3 Conductor</th>
<th>4 Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SVO, SV, SVT</td>
<td>SJ, SJO, SJT, SJTO</td>
<td>S, SO, ST, STO</td>
</tr>
<tr>
<td></td>
<td>Min</td>
<td>Max</td>
<td>#18</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2920</td>
<td>0.125</td>
<td>0.375</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2921</td>
<td>0.310</td>
<td>0.560</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>2922</td>
<td>0.500</td>
<td>0.750</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2930</td>
<td>0.125</td>
<td>0.375</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2931</td>
<td>0.310</td>
<td>0.560</td>
</tr>
<tr>
<td>3/4&quot;</td>
<td>2932</td>
<td>0.500</td>
<td>0.750</td>
</tr>
<tr>
<td>1&quot;</td>
<td>2940</td>
<td>0.310</td>
<td>0.560</td>
</tr>
<tr>
<td>1&quot;</td>
<td>2941</td>
<td>0.500</td>
<td>0.750</td>
</tr>
<tr>
<td>1&quot;</td>
<td>2942</td>
<td>0.700</td>
<td>0.950</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Feature / Benefit

- Gland Nut
  - Designed for Channelock Installation
  - Channels for Liquids
  - No Pooling Around ID
  - Double Plated
  - Low Torque Required

- Nylon 66 Slip Ring
  - Keeps Cable from Twisting
  - Self Centering
  - Easier to Install
Cord Connectors

Thomas & Betts

Complies With:

- JIC Standards
- UL Listed As Liquid Tight Strain Relief & Outlet Bushing
  - File 13983
- CSA Certified Watertight
  - File 589 & 4484
- Suitable for Hazardous Location
  - CL1 Div2 - CL 2 Div 1 - CL 3 Div 1,2 where General Purpose Equipment is Specified by NEC
- Federal Specs WF406B & WF408B
- Meets Coast Guard CG293
Competition: Cord Connectors

Hubbell
Competition: Cord Connectors

Hubbell

Knurled Edge-
• Easy slipping
• No Splines
• Tough to fasten in tight spaces
• No ID on the fitting. What size is it good for?
Competition: Cord Connectors

Hubbell

Chomper Grip - Can damage conductors
Chomping action can damage wires when tightened or flexed.
Misalignment can damage integrity
Competition: Cord Connectors

Hubbell

Cork Grommet vs. Stepped Grommet
Competition: Cord Connectors

Hubbell

Less Material, less threads.
Competition: Cord Connectors

Hubbell

Well Defined Bugle

T&B Hubbell
Competition: Cord Connectors

**APPLETON**

- Feature / Benefit
  - Steel & Aluminum Bodies
    - Application Specific Choices
    - Aluminum is Screw Machined
  - Gland Nut Labeled
    - Part Number & Cord Size
    - Easy to Size Without Carton
Competition: Cord Connectors

APPLETON

Gland Nut
Competition: Liquid Tight

APPLETON

T&B

Appleton
Competition: Liquid Tight

APPLETON

T&B

Appleton
Gland Nut

- Flat top encourages liquid pooling into enclosure.
- Only 3 ½ threads

Pumpkin shaped gland nut
- Self Cleaning Threads
- Umbrella design pushes liquids away from the box. (no pooling)
- Serrated threads also provides fail safe escape for water to escape (if installed poorly)
- Double Plated
- 7 Threads ensures strength

Competition: Cord Connectors

APPLETON vs T&B
Competition: Cord Connectors

APPLETON vs T&B

Metal Washer
Washer can act as knife
Label very difficult to remove. Not very attractive.
Competition: Cord Connectors

Weakness

• ONLY Two Choices of Material
  ‣ UL Listed Through 1 1/4” Only
  ‣ Can Abrade Jacket of Cable
• More Rounded Gland Nut
  ‣ Does Not Work as Well with Crescent Wrench
• Steel Slip Ring
  ‣ Can Cut Cable, Causing Corrosion
  • Sealing Busing
    ‣ Harder Material more Torque to Compress
    ‣ Not Marked with Cable Size
    ‣ Low Pull Out Value
Competition: Cord Connectors

Crouse Hinds / Midwest

Feature / Benefit

- Steel & Aluminum Bodies
Competition: Cord Connectors

Crouse Hinds / Midwest

- Weakness
  - Smaller more common sizes come in a bag disassembled
Washer can be cut into cable
No identification of range
Grommet can extrude out of the fitting.  
(Tearing material)
Larger sizes go to a very large hex. Wastes Space
Crouse-Hinds  
CGB194  
(1/2” .35” to .50”)  
= 1.875”

T&B  
2921  
(1/2” .31” to .56”)  
= 1.125”

Larger sizes go to a very large hex. Wastes Space
Weakness
- Round & Hex Gland Nuts
  - ID Design can Cause Pooling
- Steel Slip Ring
  - Can Abrade Jacket of Cable
  - Can Rust in Abrasive Environment
- Neoprene Bushing
  - No Identification on Grommet Except Part #
- 1/2 & 3/4" Sold Unassembled
RACO

Weakness

- Gland Nut
  - Can Cause Pooling in Nylon Connectors
- Nylon Slip Ring & Chuck
  - Design can be off Center & Cut into Jacket
- Not Shipped with Locknut or Sealing Ring
Competition: Cord Connectors

OZ Gedney

Feature / Benefit

• Malleable Iron Construction
  ‣ Stronger than Most Materials

• Two Types of Sealing Rings
  ‣ Grip Tight - Strain Relief Limits Cord Bend
  ‣ Gold Seal

• Neoprene & PVC Bushing -
  ‣ Seals Cord To Connector

• Shipped with O-Ring & Locknut
OZ Gedney

**Weakness**

- Malleable Iron Design
  - Aesthetically Inferior, **NOT** Stronger than Steel
  - Small Hex area Hard to Work With
- ID of Gland Nut forms Pool
  - Holds Moisture at Critical Point
- Internal Plating Painted?
  - Poor Corrosion Protection
- Grip Tight Slip Ring
  - Must Fit into Notches in Grommet
  - Slower to Install
- Neoprene Bushing not as good as Buna-N
Non-Metallic Cord Fittings

2 Types:
- Industrial Grade
- OEM/Commercial Grade
Non-Metallic Cord Fittings

2 Types:
• Industrial Grade
• Nonmetallic Ranger
Cord Connectors

Thomas & Betts

Cord Connector

2 Types:
• Industrial Grade
• Black Beauty
Cord Connectors

Thomas & Betts

- Cord Connector

2 Types:
  - Industrial Grade
  - Black Beauty
Cord Connectors

Black Beauty
- Made of Nylon (stronger than PVC)
- Chuck design gives it the strongest pull out strength
- Submersible Rated (NEMA 6P)
Cord Connectors

Thomas & Betts

› Cord Connector

Silver Grip. Available in...
• Stainless Steel
• Aluminum

One heck of a grip! Increased Safety for Hazardous Locations

Introducing the Silver Grip™ Tray/Cord Fitting™ - the safe, yet cost-efficient choice for increased safety when terminating portable cord and tray cable in hazardous locations.

Designed for use in Class I, Gas and Vapour environments, the Silver Grip™ Tray/Cord Fitting™ provides efficient strain relief for cables entering enclosures and raceways, and for cords used on portable equipment.

• Corrosion-resistant, non-magnetic aluminum construction
• Tapered neoprene bushing and O-ring seal out moisture and dirt ingress
• Chuck grip provides high mechanical pull-out performance. Exceeds applicable requirements.
• Hand-tightens — no tools required

T&B Fittings • T&B Liquidtight Conduit • T&B Tekk Fittings
Cord Connectors

2 Types:
• Industrial Grade
• OEM/Commercial Grade
Spiral Cord
Multi-Hole Cord Connectors

- Assumption: Real Estate is expensive in a panel...
- Solution: Multi Hole Cord Fittings
#8 means of saving time and money in a panel...

- Assumption: Real Estate is expensive in a panel...
- Solution: Multi Hole Cord Fittings

<table>
<thead>
<tr>
<th>Old Method</th>
<th>New Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buy (3) CCNPT-12-G @ $1.49 each</td>
<td>Buy (1) CCNPT-12-G-3 @ $2.23 each</td>
</tr>
<tr>
<td>Time to install fittings (3@.16 hours)</td>
<td>Time to install fittings (1@.2 hours)</td>
</tr>
<tr>
<td>Hourly Rate ($20/hr)</td>
<td>Hourly Rate ($20/hr)</td>
</tr>
<tr>
<td>Total Material and Labor Cost</td>
<td>Total Material and Labor Cost</td>
</tr>
<tr>
<td>Total Space Required to install 3 fittings (w/ 1/2&quot; clearance per fitting)</td>
<td>Total Space Required to install 3 fittings (w/ 1/2&quot; clearance per fitting)</td>
</tr>
<tr>
<td>$4.47</td>
<td>$2.23</td>
</tr>
<tr>
<td>0.48 hours</td>
<td>0.20 hours</td>
</tr>
<tr>
<td>$9.60</td>
<td>$4.00</td>
</tr>
<tr>
<td>$14.07</td>
<td>$6.23</td>
</tr>
<tr>
<td>4.18&quot;</td>
<td>1.06&quot;</td>
</tr>
</tbody>
</table>

>Savings of $7.84, and over 3"
Cord Connectors

Feature / Benefit

- Available Materials
  - Malleable Iron
  - Nylon
  - Stainless Steel
  - Die Cast (1/2 & 3/4)

- Choose What is Best for Application Environment
- Neoprene Buna N Bushing
  - Can be Purchased Separately
  - Multi Holes
  - Cord Size Stamped on Bushing Eliminates Guess Work
  - Customer can Interchange Bushings