

T&B® Cord & Cable Fittings



In this section...



T&B® Cord & Cable Fittings

STAR TECK® Teck Cable Fittings.....	E-122–E-130
Spin-On® Series Fittings and Accessories.....	E-131–E-132
Metallic Liquidtight Cord and Cable Connectors.....	E-133–E-142
Non-Metallic Liquidtight Cord Connectors.....	E-143–E-146
Service Entrance Cable Fittings.....	E-147–E-151
MC and AC Cable Fittings.....	E-152–E-158
Tray Cable Fittings.....	E-159
Non-Metallic Sheathed Cable Fittings.....	E-160–E-164

STAR TECK® Teck Cable Fittings

STAR TECK® STE/STEX Series Cable Fittings

The STAR TECK® STE cable fitting series is designed for optimum integrity in ordinary applications. The STEX series is specially designed for classified hazardous areas. Both are designed to stand up to the harshest and most corrosive environment.

Application

- Provides means for passing jacketed metal clad cables through a bulkhead or enclosure in industrial and hazardous areas. (These fittings are suitable for hazardous areas when used with T&B sealing compound)
- Forms a mechanical grip and water- and/or oil-resistant termination
- Provides grounding continuity of cable armor

Features

- Powergrip grounding ring
- Removable armor-stop for greater cable ranges
- Built-in sealing device
- Elastomeric collar ring/ bushing for greater cable ranges
- Built-in jacket stripping gauge on gland nut
- Gland nut can be tightened with hammer and screwdriver

Range

- STAR TECK EXTREME® fittings are designed to accommodate a broad range of cables. Each hub range overlaps the adjacent hub range, thereby minimizing the possibility of mismatched cables and fittings in the field. They are available in hub sizes from ½" to 4" and will handle outer jacket diameters from .525" to 4.340"

Materials

Aluminum is standard material
 Add suffix "S" for steel with zinc plating
 Add suffix "PVC" for corrosion-resistant PVC coating
 Add suffix "SS" for stainless steel material

Cable Type

JMC, MC-HL, Teck

Environment Classification

- STE* Series
- Ordinary Location
 - Class I, Division 2†
 - NEMA 4, 4X (stainless steel), 6P
 - STE050 – STE200
 - NEMA 6P
 - STE250 – 400
 - NEMA 4
 - STE050 – 400
 - NEMA 4X (stainless steel)
- STEX** Series
- Class I, Division 1, Groups A, B, C, D
 - Class II, Division 1, Groups E, F, G
 - Class III
 - NEMA 4, 4X (stainless steel), 6P

UL Listed for Direct Burial when made from stainless steel material
 Suitable for use in wet locations and concrete tight (steel) applications per UL 514B

UL File No. E82038/E38947

CSA File No. LR638/LR23086

* These fittings are suitable for Class I hazardous locations when used in combination with a certified Class I hazardous location sealing fitting.

** Meets NEC® Class I Division 2/Zone 2 and Class II Division 2/Zone 22 requirements when installed as per Articles 501.10/505.15 and 502.10/506.15

*** May be used in hazardous areas with approved MC-HL or Teck cable (or equal) when installed in accordance with NEC®/CEC requirements.

Not applicable to all STEX series.

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STAR TECK® Teck Cable Fittings



STE Series Ordinary



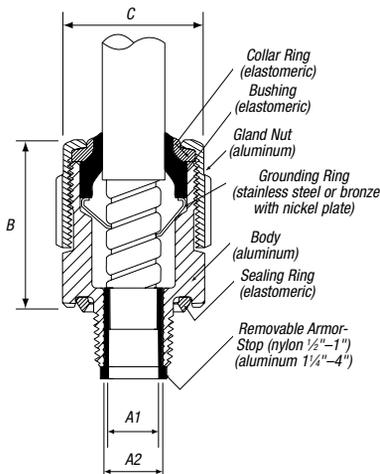
STEX Series Hazardous Locations



STAR TECK EXTREME® Jacketed Metal-Clad Cable Fittings

CAT. NO.	HUB SIZE NPT	STRIP LENGTH (IN.)	GLAND TORQUE (IN.-LB.)	CABLE RANGE OVER JACKET (IN.)		CABLE RANGE OVER ARMOR (IN.)		DIMENSIONS (IN.)				SEALING COMPOUND REQUIRED	
				MIN.	MAX.	MIN.	MAX.	A1: THROAT DIA. MIN. W/END STOP	A2: THROAT DIA. MIN. WO/END STOP	B OVERALL	C MAX. O.D.	SC65 PUTTY (G)	SC4-KIT LIQUID (CC)
Ordinary Locations													
STO50-462#	½	1¼	300	.525	.650	.415	.570	N/A*	.395	2.020	1.224	—	—
STE050DATA**#	½	¾	300	.592	.693	.502	.603	.375	.515	2.100	1.360	—	—
STE050*	½	1¼	300	.600	.985	.520	.895	.505	.612	2.650	1.630	—	—
STE075*	¾	1¼	600	.860	1.205	.780	1.125	.655	.816	2.900	2.080	—	—
STE100*	1	1¼	700	.950	1.375	.870	1.295	.785	1.044	3.020	2.300	—	—
STE125*	1¼	1¼	1,000	1.150	1.625	.990	1.465	.970	1.250	4.010	2.820	—	—
STE150*	1½	1¼	1,200	1.440	1.965	1.280	1.805	1.260	1.562	4.290	3.250	—	—
STE200*	2	1¾	1,600	1.825	2.375	1.665	2.215	1.645	1.995	4.120	3.600	—	—
STE250	2½	2½	1,600	2.265	2.840	2.105	2.680	2.075	2.424	5.320	4.750	—	—
STE300	3	2½	1,600	2.670	3.270	2.545	3.145	2.531	2.890	5.400	5.400	—	—
STE350	3½	2½	1,600	3.220	3.870	3.090	3.640	3.065	3.460	5.360	5.900	—	—
STE400	4	2½	1,600	3.665	4.340	3.550	4.225	3.525	3.941	5.415	6.400	—	—
Hazardous Locations													
STX050-462*	½	1¼	300	.525	.650	.415	.570	N/A*	.395	2.500	1.630	7	4
STX050-464*	½	1¼	300	.600	.760	.490	.680	N/A*	.485	2.530	1.630	7	4
STEX075*	¾	1¼	600	.600	.985	.520	.895	.504	.678	3.400	1.820	14	7
STEX100*	1	1¼	700	.860	1.205	.780	1.125	.650	.833	3.580	2.300	30	16
STEX125*	1¼	1¼	1,000	.950	1.375	.870	1.295	.834	1.065	3.920	2.510	45	22
STEX150*	1½	1¼	1,200	1.150	1.625	.990	1.465	.958	1.273	5.020	3.260	80	43
STEX200*	2	1¾	1,600	1.440	1.965	1.280	1.805	1.250	1.560	5.120	3.620	125	66
STEX250	2½	2½	1,600	1.825	2.375	1.665	2.215	1.640	1.995	5.170	4.580	341	164
STEX300	3	2½	1,600	2.265	2.840	2.105	2.680	2.075	2.461	6.610	5.100	497	239
STEX350	3½	2½	1,600	2.670	3.270	2.545	3.145	2.531	2.864	7.380	5.790	965	464
STEX400	4	2½	1,600	3.220	3.870	3.090	3.640	3.055	3.461	7.650	6.190	1323	636
STX400-484#	4	—	1,600	3.810	4.030	3.680	3.870	—	—	—	—	1645	791
STX400-485#	4	—	1,600	3.965	4.185	3.835	4.025	—	—	—	—	1645	791

Conduit & Fittings — T&B® Cord & Cable Fittings



To specify other material, add the appropriate suffix to the catalog number.

DESIRED MATERIAL	SUFFIX	EXAMPLE
Aluminum fitting with grounding lock nut	GRL	STE-050GRL
Steel with zinc plate	S	STE-050S
Stainless steel	SS	STX050-462SS
Aluminum with PVC coating	PVC	STE-050PVC
Steel with PVC coating	S-PVC	STE-050S-PVC

* These products are UL Listed Watertight NEMA Type 6P

** UL tested for data cables

Does not have a removable armor stop.

Sealing Compounds — Used for Hazardous Locations

CAT. NO.	DESCRIPTION	VOLUME
SC65	Putty-Type Sealing Compound	60 grams
SC4-KIT	Liquid-Type Sealing Compound for Use in High Wire Density Applications (five or more wires)	2.8 fl. oz. (66 cc)

STAR TECK® Teck Cable Fittings

STAR TECK® Jacketed Metal-Clad Cable Fittings

Overlapping range of sizes. STAR TECK® jacketed metal-clad cable fittings are designed to accommodate a broad range of cables, thereby minimizing the possibility of mismatched cables and fittings in the field.



Application

- Provide means for passing armored, metal-clad, jacketed cables through a bulkhead or enclosure in hazardous areas (these fittings are suitable for hazardous areas when used with T&B sealing compound)
- Form a mechanical grip and water- and/or oil-resistant termination
- Provide grounding continuity of cable armor

Cable Type

- JMC, MC-HL, Teck

Features

Easy Installation

- Exclusive power-grip. Provides a grip that's high up on the cable — not on the first convolution — so strip length and cutting of cable are not as critical

Dependable Service

- Stainless steel retaining ring. Withstands corrosive environments. Non-magnetic

Dependable Grounding

- Power-Grip grounding ring is non-magnetic stainless steel. Provides 360° long-term dependable grounding. It makes immediate contact with the cable

Watertight

- Tapered bushing. Cone shaped to provide a secure, tight fit while eliminating cupping or water in vertical installations

Easy to Install in Tight Spaces

- Low-profile gland nut fits tight spaces. Has grooves for screwdriver installation, and flats for a wrench. Durable and reusable with funnel entry for easy cable insertion

Materials

Aluminum is standard material

Add suffix "S" for steel with zinc plating

Add suffix "PVC" for corrosion-resistant PVC coating

Add suffix "SS" for stainless steel Grade 316 material (½"–2" sizes)

Environment Classification

Meets NEC® Class I Division 2/Zone 2 and Class II Division 2/Zone 22 requirements when installed as per Articles 501.10/505.15 and 502.10/506.15

NEMA 4

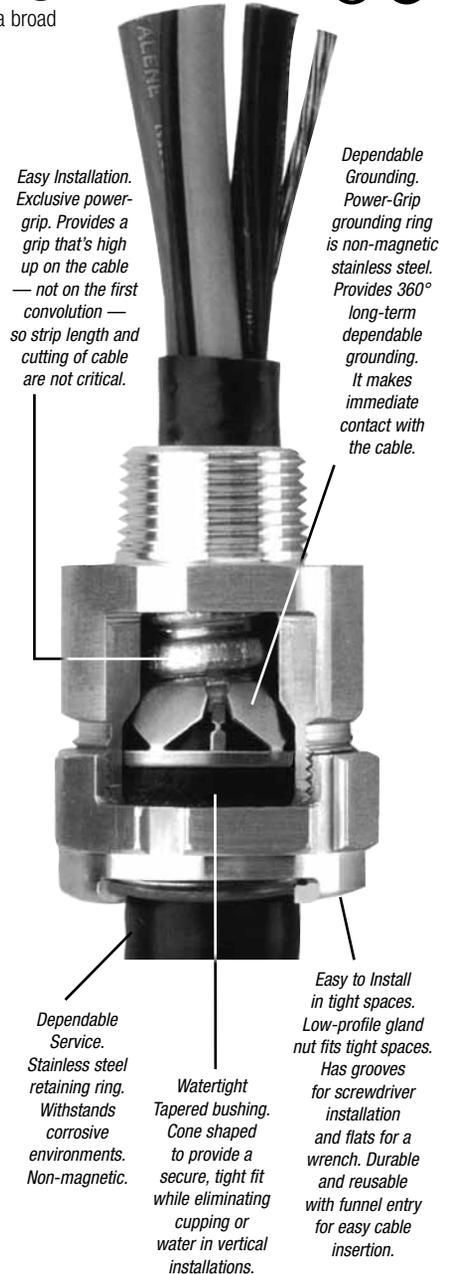
Suitable for use in wet locations and concrete tight (steel) applications per UL 514B

UL File No. E82038/E38947

CSA File No. LR638/LR23086

Range

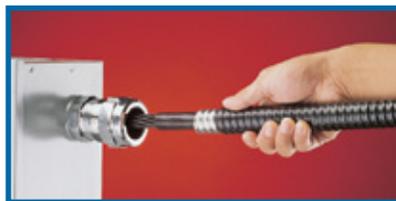
Available in hub sizes from ½" to 4", and will handle outer jacket diameters from .525" to 4.340"



Installing the STAR TECK® Fitting



1. Prepare cable

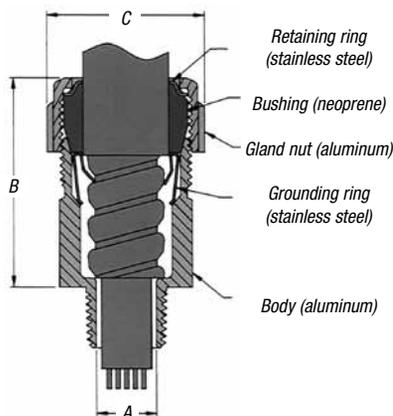


2. Insert cable



3. Tighten gland nut

STAR TECK® Teck Cable Fittings



- Overlapping sizes minimize possibility of mismatched cables and fittings in the field
- Available in hub sizes from ½" to 4", handling outer jacket diameters from .525" to 4.34"
- Suitable for hazardous locations (Class 1 Div. 2; Class II Div. 2; Class III)
- Where explosion-proof or dust-proof boxes are required by code, use STAR TECK XP® fittings (STX050-462 Series)

STAR TECK® Jacketed Metal-Clad Cable Fittings for Ordinary Locations



CAT. NO.	HUB SIZE NPT	CABLE RANGE OVER JACKET (IN.)		CABLE RANGE OVER ARMOR (IN.)		DIMENSIONS (IN.)		
		MIN.	MAX.	MIN.	MAX.	A	B*	C
ST050-462	½	.525	.650	.415	.570	.395	2.020	1.224
ST050-464	½	.600	.760	.490	.680	.485	2.020	1.363
ST050-465	½	.725	.885	.615	.805	.612	2.133	1.633
ST050-466	½	.825	.985	.715	.905	.612	2.133	1.633
ST075-467	¾	.880	1.065	.770	.985	.819	2.450	2.080
ST075-468	¾	1.025	1.205	.915	1.125	.819	2.450	2.080
ST100-469	1	1.187	1.375	1.077	1.295	1.039	2.601	2.230
ST125-470	1¼	1.357	1.625	1.240	1.545	1.182	3.282	2.824
ST125-550	1¼	1.500	1.625	1.390	1.545	1.370	3.282	2.824
ST125-471	1¼	1.600	1.875	1.490	1.795	1.370	3.282	2.824
ST150-472	1½	1.700	1.965	1.590	1.885	1.557	3.620	3.260
ST150-473	1½	1.900	2.187	1.790	2.107	1.600	3.620	3.260
ST200-551	2	1.900	2.187	1.790	2.107	1.715	3.640	3.620
ST200-474	2	2.100	2.375	1.990	2.280	1.995	3.640	3.620
ST200-475	2	2.300	2.565	2.190	2.485	2.057	3.640	4.020
ST200-476	2	2.500	2.750	2.390	2.656	2.057	3.640	4.020
ST250-477	2½	2.380	2.640	2.240	2.560	2.230	4.700	4.750
ST250-478	2½	2.580	2.840	2.440	2.750	2.430	4.700	4.750
ST300-479	3	2.790	3.060	2.640	2.970	2.630	4.700	5.050
ST300-480	3	3.000	3.270	2.870	3.190	2.860	4.790	5.480
ST300-481	3	3.210	3.480	3.042	3.390	3.032	4.790	5.480
ST350-482	3½	3.420	3.690	3.270	3.590	3.260	4.790	5.980
ST350-483	3½	3.610	3.870	3.440	3.770	3.430	4.790	5.980
ST400-484	4	3.810	4.030	3.600	3.930	3.590	4.840	6.435
ST400-485	4	3.965	4.185	3.755	4.065	3.745	4.840	6.435
ST400-486	4	4.120	4.340	3.910	4.220	3.900	4.840	6.435

* Approximate dimension before installation.

Suggested specifications for metal-clad cable fitting.

1. All metal-clad cable fittings for jacketed interlocked armor cable or continuous corrugated cable shall be approved by a nationally recognized testing laboratory, inspection agency or product evaluation organization.
2. Where corrugated-jacketed metal-clad cable exposed to intermittent or continuous moisture is terminated into a threaded opening, the fitting shall be watertight type furnished with:
 - a. An elastomeric beveled bushing.
 - b. A funnel entry, splined gland nut.
 - c. A non-magnetic stainless steel grounding device with dual grounding action.
 - d. A taper threaded hub.
 - e. A hexagonal body and gland nut as manufactured by Thomas & Betts (aluminum series ST050-464).
3. Where cable is terminated into a threadless opening, a suitable moisture-resistant elastomeric gasket as manufactured by Thomas & Betts, series 5262, shall be provided between the outside of enclosure and fitting shoulder.
4. With single-conductor cable and/or in corrosive environments, aluminum fittings such as Thomas & Betts series ST050-464 shall be installed.

Class I Div 2; Class II Div. 2; Class III. Where explosion-proof or dust-ignition-proof boxes are required by Teck, fitting must be used in conjunction with an approved sealing fitting.

STAR TECK® Teck Cable Fittings

Easy installation saves time, money!



STAR TECK XP® Jacketed Metal-Clad Cable Fittings for Hazardous Locations

Application

- Provide means for passing armored, metal clad, jacketed cables through a bulkhead or enclosure in hazardous areas (these fittings are suitable for hazardous areas when used with T&B sealing compound)
- Form a mechanical grip and water- and/or oil-resistant termination
- Provide grounding continuity of cable armor

Cable Type

- JMC, MC-HL, Teck

Features

- Sealing chamber is easier to fill, requires less sealing compound — saves time, material. Flame path is optimally designed to enable easy insertion into hub. Quick-turn lock
- Internal splines
- Union features twist-on action; red color for high visibility
- Exclusive Power Grip. Provides grip that's high up on cable armor non-magnetic stainless steel Power Grip grounding ring
- Low-profile gland nut

Materials

Aluminum is standard material

Add suffix "S" for steel with zinc plating

Add suffix "PVC" for corrosion-resistant PVC coating

Add suffix "SS" for stainless steel material

Environment Classification

Suitable for hazardous locations. Class I Div. 2; Class II Div. 2; Class III. Where explosion-proof or dust-proof fittings are required by code, use STAR TECK XP® fittings (STX Series)

NEMA 4, 4X (stainless steel)

Suitable for use in wet locations and concrete-tight (steel) applications per UL 514B

UL File No. E82038/E38947

CSA File No. LR23086

Range

Available in hub sizes from 1/2" to 4", and will handle outer jacket diameters from .525" to 4.185"



1. Prepare cable



2. Install Star Teck XP® on cable



3. Tighten gland nut



4. Pot cable (using liquid or putty)



5. Install hub on enclosure



6. Insert cable and tighten red union

Sealing chamber is easier to fill, requires less sealing compound — saves time, material. Flame path is optimally designed to enable easy insertion into hub. Quick-turn lock secures assembly during installation.

Exclusive Power Grip. Provides grip that's high up on cable armor — not on first convolution — so precise cable preparation is not critical. Non-magnetic stainless steel Power Grip grounding ring ensures 360° long-term dependable grounding. It provides phenomenal tensile pullout resistance.

Hub has hexagonal shape for dependable tool grip.

Low-profile gland nut fits tightest spaces. Has grooves for hammer/screwdriver installation and flats for wrench-gripping. Durable and reusable with funnel entry for easy cable insertion.

Internal splines enable installer to tighten gland nut either on or off enclosure.

Tapered bushing. Cone-shaped to provide secure, tight fit while eliminating cupping of water in vertical installations.

Copper-free construction. All-aluminum body and gland nut resist corrosion, oxidation.

Union features twist-on action for easy connection and disconnection; red color ensures high visibility, easy recognition. Union also serves as a "puller" during disassembly.

Stainless steel retaining ring. Withstands corrosive environments. Non-magnetic.

STAR TECK® Teck Cable Fittings

STAR TECK XP® Jacketed Metal-Clad Cable Fittings for Hazardous Locations



CAT. NO.	HUB SIZE NPT	CABLE RANGE OVER JACKET (IN.)		CABLE RANGE OVER ARMOR (IN.)		DIMENSIONS (IN.)			SEALING COMPOUND REQUIRED	
		MIN.	MAX.	MIN.	MAX.	A MIN.	B*	C	SC65** PUTTY (G)	SC4-KIT** LIQUID (CC)
STX075-465	3/4	.725	.885	.615	.805	.612	2.62	1.82	14	7
STX075-466	3/4	.825	.985	.715	.905	.720	2.62	1.82	14	7
STX100-467	1	.880	1.065	.770	.985	.755	2.83	2.30	30	16
STX100-468	1	1.025	1.205	.915	1.125	.900	2.83	2.30	30	16
STX125-469	1 1/4	1.187	1.375	1.077	1.295	1.062	3.05	2.51	45	22
STX150-470	1 1/2	1.357	1.625	1.240	1.545	1.182	3.76	3.26	80	43
STX150-550	1 1/2	1.500	1.625	1.390	1.545	1.370	3.76	3.26	80	43
STX150-471	1 1/2	1.600	1.875	1.490	1.795	1.470	3.76	3.26	80	43
STX200-472	2	1.700	1.965	1.590	1.885	1.557	4.05	3.62	125	66
STX200-473	2	1.900	2.187	1.790	2.107	1.757	4.05	3.62	125	66
STX200-474	2	2.100	2.375	1.990	2.280	1.995	4.15	4.02	150	80
STX250-475	2 1/2	2.300	2.565	2.200	2.485	2.185	4.31	4.58	341	164
STX250-476	2 1/2	2.500	2.750	2.380	2.656	2.365	4.31	4.58	341	164
STX300-478	3	2.580	2.840	2.477	2.750	2.460	5.64	5.10	497	239
STX300-479	3	2.790	3.060	2.677	2.970	2.660	5.80	5.33	609	293
STX350-480	3 1/2	3.000	3.270	2.880	3.190	2.864	6.32	5.79	965	464
STX350-481	3 1/2	3.210	3.480	3.080	3.390	3.062	6.32	5.79	965	464
STX400-482	4	3.420	3.690	3.307	3.590	3.290	6.63	6.19	1323	636
STX400-483	4	3.610	3.870	3.477	3.770	3.460	6.63	6.19	1323	636
STX400-484	4	3.810	4.030	3.650	3.930	3.630	7.09	6.90	1645	791
STX400-485	4	3.965	4.185	3.794	4.065	3.775	7.09	6.90	1645	791

* Approximate dimension before installation.

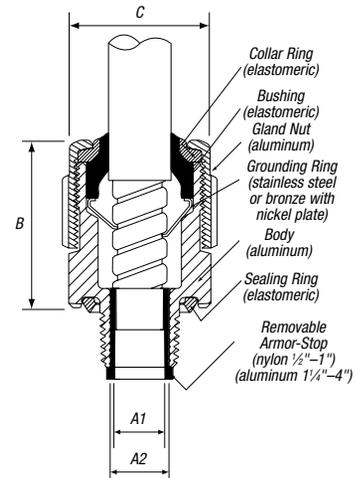
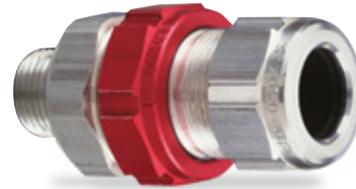
** One unit of SC65 putty type sealing compound contains 60 g. One unit of SC4-Kit liquid type sealing compound contains 66 cc and includes a dispensing syringe and fiber damming material.

CAUTION: STAR TECK XP® fittings must be installed with Thomas & Betts catalog numbers SC4-KIT or SC65 sealing compound (purchase separately). See installing instructions.

Note: Stainless Steel (SS suffix) STX and STEX fittings have a NEMA 4X rating.

Sealing Compounds

CAT. NO.	DESCRIPTION	VOLUME
SC65	Putty-Type Sealing Compound	60 grams
SC4-KIT	Liquid-Type Sealing Compound for use in high wire density applications (5 or more wires)	2.8 fl. oz. (66 cc)



UL Connectors When Used with Putty-Type Listed or Liquid-Type Compound for:

1/2" thru 3"	Class I	Div. 1	Groups A, B, C, D
	Class II	Div. 2	Groups F, G
	Class III		
			Enclosure Type 4

Connectors When Used with Putty-Type or Liquid-Type Compound for:

3 1/2" & 4"	Class I	Div. 1	Groups B, C, D
	Class II	Div. 2	Groups F, G
	Class III		Enclosure Type 4

CSA Certified for:

Class I	Division 1 and 2	Groups A, B, C, D
Class II	Division 1 and 2	Groups E, F, G
Class III, SL (Integral Seal)		Enclosure Type 4

STAR TECK® Teck Cable Fittings

Greater range, fewer part numbers, less inventory. A fitting combination!

NEW!

STAR TECK EXTREME® DIRECTOR™ Jacketed Metal-Clad and Teck Cable Termination Fittings

Terminating jacketed metal-clad and teck cable can be a time-consuming process, especially when angle adjustments are required. Current termination methods such as 90° elbows and LB conduit bodies take up a lot of space and lack flexibility.

To address these issues, Thomas & Betts introduces the electrical industry's first truly adjustable series of range-taking fittings, the STAR TECK EXTREME® DIRECTOR™.

STAR TECK EXTREME® DIRECTOR™ Cable Fittings are designed for optimum integrity in ordinary applications. They accept a range of jacketed metal-clad and teck cable diameters.

Featuring an exclusive swash-plate design, the STAR TECK EXTREME® DIRECTOR™ Cable Fittings adjust from 90° to 180°. A full circular bore makes cable insertion trouble free. Alignment guides serve as handy reference points for aligning installed fittings at the same angle.

What's more, STAR TECK EXTREME® DIRECTOR™ fittings require no disassembly prior to installation and can also be easily disconnected.

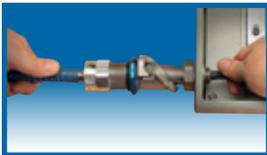


Save Time and Money!

Install



Insert

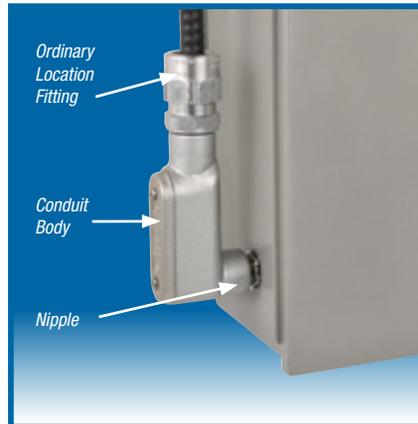


Rotate



DONE

Conventional Method



Multiple components are less flexible and require added space.

Time-Saving Method



One component that can be used at any angle adds flexibility and requires less space.

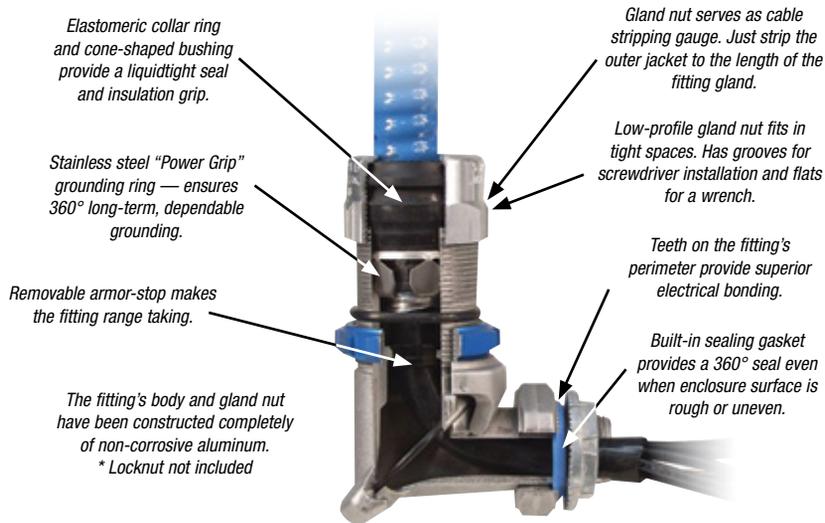


Turn blue compression nut one-half turn to loosen and rotate hub. Tighten blue compression nut to hold hub in place at desired angle.

STAR TECK® Teck Cable Fittings

STAR TECK EXTREME® DIRECTOR™ Jacketed Metal-Clad and Teck Cable Termination Fittings (continued)

Inside STAR TECK EXTREME® DIRECTOR™ Cable Fittings



90° to 180° Rotation

Environment Classification

Meets NEC® Class I Division 2/Zone 2 and Class II Division 2/Zone 22 requirements when installed as per Articles 501.10/505.15 and 502.10/506.15

NEMA Type 4

UL File No. E38947

NEC and National Electrical Code are registered trademarks of the National Fire Protection Association, Inc.

STAR TECK EXTREME® DIRECTOR™ Cable Fittings



CAT. NO.	HUB SIZE (NPT)	GLAND TORQUE (LB.-IN.)	RANGE OVER JACKET (IN.)		RANGE OVER ARMOR (IN.)		THROAT DIA. MIN. (IN.)		OVERALL LENGTH (IN.)
			MIN.	MAX.	MIN.	MAX.	WITH ARMOR STOP	WITHOUT ARMOR STOP	
STED050	½	450	.600	.885	.520	.795	.505	.617	5.375
STED075	¾	600	.860	1.205	.780	1.125	.645	.819	5.875

STAR TECK® Teck Cable Fittings

Jacketed Metal-Clad Cable and Teck Cable

Metal-Clad Cable (Type MC) Ref. NEC® Article 330

“Metal-Clad Cable Type MC is a factory assembly of one or more conductors, each individually insulated and enclosed in a metallic sheath of interlocking tape, or a smooth or corrugated tube.”

Metal-Clad Cable Type MC is rated for use up to 5,000 volts. The National Electrical Code permits use of metallic sheath as an equipment grounding conductor.

Metal-Clad Cables are available with a variety of phase conductor insulations such as crosslinked polyethylene and silicone rubber ethylene propylene, depending on rated temperature of conductors and working potential. Metallic sheath can be of galvanized steel, aluminum, copper or bronze. A special outer covering such as PVC or Neoprene over metallic sheath is usually provided for environmental protection.

Metal-clad cable is not permitted in locations where it could be subject to physical damage. Metal-clad cable can be used exposed, concealed, in cable tray, in any approved raceway and with minor exceptions in hazardous locations. Type MC cable can also be used for services, feeders, branch circuits, power, lighting, control and signal circuits.

Use of metal-clad cable is permitted in wet locations, or where exposed to destructive corrosive conditions or can be directly buried in earth, concrete or exposed to cinder fills, strong chlorides, caustic alkalis, vapors, chlorine or hydrochloric acids provided the construction of cable, the conductors within the metallic sheath, the metallic sheath and protective cover over metallic sheath comply with requirements enumerated in Sec. 330.10 of the National Electrical Code.

Bend radius restrictions are dependent on the size of the cable and the type of sheath, i.e., smooth, interlocked armor, corrugated sheath or shielded conductors and varies from seven times to 15 times cable external diameter.

NEC Article 330 requires that approved fittings be used for termination. Where single-conductor cables carrying alternating current enter a ferrous metal box or enclosure, procedures described in NEC Section 300.20 must be followed to reduce effects of heating due to induced currents. These procedures include recommended arrangements of conductors, cutting of slots in metal between individual conductor holes, passing of conductors through insulating walls, or use of non-magnetic aluminum sheathed cable and aluminum terminating fittings.

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Please refer to the following for further details and complete information:

1. NEC Article 330...Metal Clad Cable (Type MC)
2. UL 4, ANSI C33.9...Safety Standards for Type MC Metal Clad Cable
3. UL 514B, Safety Standards for Outlet Boxes & Fittings
4. A-A50552...Federal Specification. Fittings for Cable, Power Electrical & Conduit Metal, Flexible
5. NEMA FM-1...Standards Publication. Fittings and Supports for Conduit and Cable Assemblies

Teck Cables

Teck cable derived its name from one of its first users, the Teck-Hughes Gold Mines in Kirkland Lake, Ontario. Teck 90 is CSA Type designation. Trade designation of this cable is Armored Cable.

Teck cables up to 5,000-volt working potential are manufactured in accordance with CSA Standard C22.2 No. 131 and are provided with a bare ground conductor and an optional outer jacket. Depending on phase conductor insulation, the cables are designated as Teck 90 (X-LINK) when insulation is cross-linked polyethylene and Teck 90 (EP) when insulation is ethylene propylene. Both cables are rated for 90° C service (dry location) and 75° C (wet locations). When Teck cable is suitable for installation down to -40° F, the cables are marked Teck 90 (X-LINK) minus 40 or Teck 90 (EP) minus 40.

Over 5,000 volts working potential Teck cables are manufactured in accordance with IPCEA standards and are certified by CSA. Cables are provided with or without ground wire as required.

Teck cables with outer jacket may be used for exposed or concealed wiring in wet or dry locations, indoors/outdoors and in corrosive environments. Teck cables are suitable for use in ventilated, non-ventilated and ladder-type cable troughs, in ventilated flexible cable ways in both dry and wet locations. Teck cable with outer jacket is suitable for direct earth burial and for Class II Division 2, Class III Division 1 & 2 hazardous locations per Canadian Electric Code.

Some of the features of Teck cable are its flexibility and ease of installation. Absence of dead air space within cable increases heat transfer and minimizes condensation. Overall protective covering provides good environmental protection.

Bend radii for permanent training during installation usually varies between seven times to 12 times the cable diameter depending on cable construction and manufacturer's recommendations. Larger radii bends are required for other conditions.

Section 12-3028 of the Canadian Electric Code requires that the terminating fittings used must provide adequate strain relief to terminal connections and ensure electrical continuity without injury to non-metallic sheath. Continuity is mandatory whether or not the armor is used as a grounding conductor. Except for dry locations free from corrosive atmosphere, the non-metallic jacket is not permitted to be stripped back to a point where armor is exposed after installation.

Where single conductor cables carrying 200 amps or more enter metal boxes through separate openings, certain precautions are required to prevent overheating of the metal by induction. Use of non-ferrous or non-metallic box connectors, locknuts and bushings and installation of non-magnetic panel inserts is suggested in the code.

Please refer to the following for further details and complete information:

1. CEC Section 12...Wiring Methods
CEC Section 4...Conductors
2. CSA C22.2 No. 131 & 131S
(Supplement #1)...Safety Standard for Type Teck Cable
3. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings
4. UL File E82038 — Volume 1, Section 3, Page 1, Revision 1/31/2007

Note: The materials herein, whether relating to the National Electrical Code, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise are not intended to provide all relevant information required for use and installation of our products. Refer to applicable codes, instructions and industry specifications prior to installation or use.

Spin-On® Series Fittings and Accessories

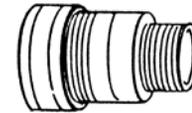
Spin-On® Series II Connectors and Accessories



CAT. NO.	HUB SIZE NPT	CABLE RANGE OVER ARMOR (IN.)	DIMENSIONS (IN.)		OPTIONAL CORROSION RESISTANT BOOT CAT. NO.
			A DIA.	B	
2-050-008	½	.380-.435	1¼	1½	NB050
2-050-010	½	.436-.500	1¼	1½	NB050
2-050-020	½	.501-.580	1¼	1½	NB050
2-050-030	½	.581-.650	1¼	1½	NB050
2-075-040	¾	.651-.730	1½	2½	NB075
2-075-050	¾	.731-.820	1½	2½	NB075
2-075-060	¾	.821-.880	1½	2½	NB075
2-100-070	1	.881-0.960	2	2½	NB100
2-100-080	1	.961-1.030	2	2½	NB100
2-100-090	1	1.031-1.100	2	2½	NB100
2-100-100	1	1.101-1.180	2	2½	NB100
2-125-110	1¼	1.181-1.240	2¼	2½	NB125
2-125-120	1¼	1.241-1.310	2¼	2½	NB125
2-125-130	1¼	1.311-1.390	2¼	2½	NB125
2-150-140	1½	1.391-1.480	2½	2½	NB150
2-150-150	1½	1.481-1.570	2½	2½	NB150
2-150-160	1½	1.571-1.660	2½	2½	NB150
2-200-170	2	1.661-1.750	3	2½	NB200
2-200-180	2	1.751-1.840	3	2½	NB200
2-200-190	2	1.841-1.930	3	2½	NB200
2-200-200	2	1.931-2.030	3	2½	NB200
2-250-210	2½	2.031-2.150	3½	3½	NB250
2-250-220	2½	2.151-2.270	3½	3½	NB250
2-250-230	2½	2.271-2.390	3½	3½	NB250
2-250-240	2½	2.391-2.510	3½	3½	NB250
2-300-250	3	2.511-2.640	4½	3½	NB300
2-300-260	3	2.641-2.770	4½	3½	NB300
2-300-270	3	2.771-2.900	4½	3½	NB300
2-300-280	3	2.901-3.040	4½	3½	NB300
2-350-300	3½	3.171-3.310	5	3½	NB350
2-350-310	3½	3.311-3.450	5	3½	NB350
2-350-320	3½	3.451-3.590	5	3½	NB350
2-400-330	4	3.591-3.730	5½	3½	NB400
2-400-340	4	3.731-3.870	5½	3½	NB400

UL File No. E38947

CSA File No. LR 2884



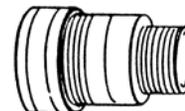
Connector
Aluminum



In corrosive environments, the T&B neoprene boot provides maximum corrosion protection to the connector. Simply match the connector hub size to the boot hub size to select the proper boot (NB Series).

Spin-On® Series Fittings and Accessories

Install a complete gas-blocked connector in a hazardous location! Spin-On® X Connectors for Hazardous Locations



CAT. NO.	HUB SIZE NPT	CABLE RANGE OVER ARMOR (IN.)	DIMENSIONS (IN.)		SEALING COMPOUND REQUIRED	
			A DIA.	B	SC65** PUTTY (G)	SC4-KIT** LIQUID (CC)
4-075-008	3/4	.380-.435	1 1/8	2 1/8	25	12
4-075-010	3/4	.436-.500	1 1/8	2 1/8	25	12
4-075-020	3/4	.501-.580	1 1/8	2 1/8	25	12
4-075-030	3/4	.581-.650	1 1/8	2 1/8	25	12
4-075-040	3/4	.651-.730	1 1/8	2 1/8	25	12
4-100-050	1	.731-.820	2	2 1/8	55	30
4-100-060	1	.821-.880	2	2 1/8	55	30
4-100-070	1	.881-.960	2	2 1/8	55	30
4-100-080	1	.916-1.030	2	2 1/8	55	30
4-125-090	1 1/4	1.031-1.100	2 1/4	2 1/2	70	40
4-125-100	1 1/4	1.101-1.880	2 1/4	2 1/2	70	40
4-125-110	1 1/4	1.181-1.240	2 1/4	2 1/2	70	40
4-125-120	1 1/4	1.241-1.310	2 1/4	2 1/2	70	40
4-150-130	1 1/2	1.311-1.390	2 3/8	2 3/8	80	45
4-150-140	1 1/2	1.181-1.240	2 3/8	2 3/8	80	45
4-150-150	1 1/2	1.241-1.310	2 3/8	2 3/8	80	45
4-200-160	2	1.571-1.660	3	2 3/8	95	55
4-200-170	2	1.661-1.750	3	2 3/8	95	55
4-200-180	2	1.751-1.840	3	2 3/8	95	55
4-200-190	2	1.841-1.930	3	2 3/8	95	55
4-250-200	2 1/2	1.931-2.030	3 1/2	3 3/8	200	120
4-250-220	2 1/2	2.151-2.270	3 1/2	3 3/8	200	120
4-300-240	3	2.391-2.510	4 1/2	3 3/8	275	165
4-300-260	3	2.641-2.770	4 1/2	3 3/8	275	165
4-300-270	3	2.771-2.900	4 1/2	3 3/8	275	165
4-400-350	4	3.871-4.010	5 3/8	3 3/8	500	300

Suffix Cat. No. with S for steel, B for brass.

SPIN-ON® X is UL Listed for: Class I, Div. 2, Groups A, B, C, & D in 3/4", 1", 1 1/4", 1 1/2", 2", 2 1/2" Hub sizes. Class I, Div. 2, Groups C & D in 3", 3 1/2", and 4" Hub sizes. The entire line is UL listed for Class II, Div. 2, Groups F & G and Class III. CSA certified through 4" Hub size for Class I, Groups A, B, C, D; Class II, Groups E, F, G; and Class III.

UL File No. E82038

CSA File No. LR23086

Spin-On® X Connectors for Hazardous Locations

- Each SPIN-ON® X catalog number is a complete compound-filled connector kit
- 3-piece construction — gland/body/insert with O-ring
- Red anodized gland identifies hazardous location fitting
- Compact size — overall length is 2/3 less than conventional fitting
- Installation time is 50% less than conventional
- Full tapered hub threads for gas-tight thread engagement
- Machined aluminum construction for corrosion resistance
- Sealing compound (sold separately) premixed for consistency — no jobsite variations
- Neoprene boots available for additional corrosion protection
- For control cable applications, order liquid compound separately

Sealing Compounds

CAT. NO.	DESCRIPTION	VOLUME
SC65	Putty-Type Sealing Compound	60 grams
SC4-KIT	Liquid-Type Sealing Compound for use in high wire density applications (5 or more wires)	2.8 fl. oz. (66 cc)

Metallic Liquidtight Cord and Cable Connectors

Whatever the application. Whatever the size. Thomas & Betts is your connection to tough, versatile cord and cable fittings.

Thomas & Betts offers a complete line of rugged, reliable cord and cable fittings. All fittings are produced to the highest standards, combining innovative design and precision manufacturing methods to provide the products you need for your specific applications. Combining proven performance, installation advantages and availability of ranges, T&B is also your connection to lower installed costs for the life of your cord and cable requirements.

Use this guide to help you specify the fitting you need for your cord and cable requirements.

Cord and Cable Requirements

CORD AND CABLE TYPE	T&B FITTING
S, SO, SV, ST, STD, SJ,	Ranger® 2920NM# Series, 2920# Series
SJO, SJT, SJTO, SVO	Liquidtight Strain Relief 2500# Series
S, SO, SV, ST, STD, SJ, SJO, SJT, SJTO, SVO	Wire Mesh Grips WMG-PC Series for Portable Cord

Considerations for Selection

- Selection of the proper device or fitting involves consideration of the type of cable to be installed and the environment that will surround the cable installation.
- A proper matching of the cable and its fitting is necessary to prevent physical damage to the cable when installed.
- NEMA Applications: Fittings used in a trade size knockout requiring a NEMA 3R, 4, 6 or 13 listing require a 5262 Series sealing ring.

Cord and Cable Descriptions

Type SJ, tradename is Junior Hard Service Cord. The outer covering is Thermoset and it is a pendant or portable cord used in damp locations for hard usage.

Type SJO, tradename is Junior Hard Service Cord. The outer covering is oil-resistant Thermoset.

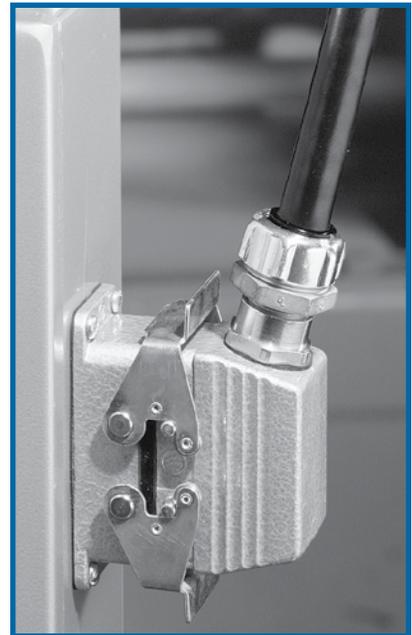
Type SJT, tradename is Junior Hard Service Cord. The outer covering is Thermoplastic.

Type SJTO, tradename is Junior Hard Service Cord. The outer covering is oil-resistant Thermoplastic.

Type SO, tradename is Hard Service Cord. The outer covering is oil-resistant Thermoset and it is a pendant or portable cord used in damp locations for extra-hard usage.

Suggested Specifications for Flexible Cord and Cable Fittings

- Flexible cord or cable and associated fittings shall be suitable for conditions of use and location and approved for the purpose by a nationally recognized testing laboratory, inspection agency or product evaluation organization
- Flexible cord or cable shall be so connected to the device or fitting that tension will not be transmitted to joints or terminal screws. Sufficient slack shall be provided to avoid sharp flexing and straining. Cord or cable shall be installed in such a manner that liquid will tend to run off the surface instead of draining towards the fitting
- Where flexible cord or cable exposed to intermittent or constant moisture and subjected to mechanical strain is terminated into a threaded or threadless opening, terminating fittings shall be of watertight strain relief type such as Thomas & Betts series 2920, 2920AL, 2920NM, 2520, 2631 or 2672. Fittings shall be equipped with a beveled moisture-resistant/oil-resistant synthetic rubber bushing
- Where space is limited inside the enclosure, a female hub type fitting such as Thomas & Betts series 2631 shall be furnished. A captivated resilient sealing O-Ring shall be included to positively protect against damage from overtorquing



Conduit & Fittings — T&B® Cord & Cable Fittings



Metallic Liquidtight Cord and Cable Connectors



2920 Ranger® Series



2920SST Ranger® Series



2920AL Ranger® Series



2516 Series

Ranger® Series of Liquidtight Flexible Cord and Cable Connectors

Application

- A liquidtight connector to connect flexible cord or cable to an enclosure and provide adequate strain relief

Features

- Liquidtight connection with enclosure is ensured by:
 - Taper threaded hub on 2520 series for female hub application
 - Using sealing ring series 5262 with 2520 series for knockout application
 - Captivated sealing O-Ring on 2631 series
 - Neoprene bushing makes liquidtight installation; applies pressure against cable the full length of bushing
 - Thermoplastic or stainless steel retaining ring
 - Will not abrade cord/cable jacket
 - Reduces installing torque effort
- UL Listed liquidtight, strain relief and as an outlet bushing; CSA certified watertight

Standard Material

Gland, Body.....Steel/Malleable Iron/Zinc Die Cast
 Retaining RingThermoplastic/Stainless Steel
 Bushing.....Neoprene
 O-RingBuna N

Standard Finish

Electro Zinc Plated & Chromate Coated

Range

2520 Series, straight 0.125" outside diameter to 3.200" outside diameter Cord or Cable
 2200 Series, 45° 0.125" outside diameter to 1.485" outside diameter Cord or Cable

2267 Series, 90° 0.125" outside diameter to 1.875" outside diameter Cord or Cable
 2900 and 4900 Ranger® Series 0.250" cable range
 Cord/Cable Type S, SO, SV, ST, STO, SJ, SJO, SJT, SJTO, SVO & SVT

Listings/Compliances

UL File No. E-13938
 CSA LR-589, LR-4484
 UL 514
 CSA. 22.2 No. 18
 ANSI C33.84, NFPA 70-1978 (ANSI)

CAT. NO	SIZE	MIN.	MAX.	SVO, SV, SVT				SJ, SJO, SJT, SJTO				S, SO, ST, STO			
				#18	#16	#14	#12	#18	#16	#14	#12	#10	#8	#6	
2 Conductor															
2920	1/2"	.125	.375	X				X	X	X					
2921	1/2"	.310	.560					X	X	X					
2922	1/2"	.500	.750					X	X	X	X	X			
2930	3/4"	.125	.375	X				X	X	X					
2931	3/4"	.310	.560					X	X	X					
2932	3/4"	.500	.750					X	X	X	X	X			
2940	1"	.310	.560					X	X	X					
2941	1"	.500	.750					X	X	X	X	X			
2942	1"	.700	.950					X					X	X	
3 Conductor															
2920	1/2"	.125	.375	X				X	X						
2921	1/2"	.310	.560					X	X						
2922	1/2"	.500	.750							X	X	X			
2930	3/4"	.125	.375	X				X	X						
2931	3/4"	.310	.560					X	X						
2932	3/4"	.500	.750							X	X	X			
2940	1"	.310	.560					X	X						
2941	1"	.500	.750					X			X	X			
2942	1"	.700	.950									X	X		
4 Conductor															
2920	1/2"	.125	.375	X											
2921	1/2"	.310	.560					X	X						
2922	1/2"	.500	.750							X	X				
2930	3/4"	.125	.375	X											
2931	3/4"	.310	.560					X	X						
2932	3/4"	.500	.750							X	X				
2940	1"	.310	.560					X	X						
2941	1"	.500	.750							X	X				
2942	1"	.700	.950								X	X	X		

Metallic Liquidtight Cord and Cable Connectors

The Ranger® Series of Steel Liquidtight Cord Connectors

The Ranger® Series Steel Liquidtight Connector takes twice the cable range of most ordinary strain-relief connectors. T&B's Ranger Connectors enable you to reduce your inventory and save time with one connector that can do the work of two.



Features

- Extended range with superior strain relief
- Reduced overall size, fits into tighter spaces
- Gland nut designed to restrict cable bending

Materials

Body: Steel — 2920 series,
Malleable Iron — 4920 & 4960 series

Gland Nut, Grip: Steel — all series
Bushing: Rubber

Environment Classification

- Ordinary locations
- Wet or dry locations
- Fittings used in a trade size knockout requiring a NEMA 3R, 4, 6 or 13 listing require a 5262 Series sealing ring

Range

Cord Range: .125" to .950"

Hub Size Range: ½" to 1"

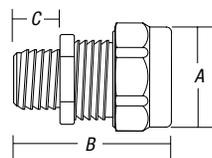
Application

- Provide means for passing a cord cable into an enclosure, through a bulkhead or into a rigid conduit
- Form a mechanical grip and water- and/or oil-resistant seal for cord
- Form a non-slip connection or termination for flexible cord

Cord & Cable Type

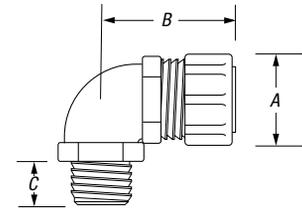
- S, SO, SV, ST, STD, SJ, SJO, SJT, SJTO, SVD

Steel Liquidtight Strain Relief Connectors — Straight



CAT. NO.	HUB SIZE	THROAT DIA.	CORD RANGE	DIMENSIONS (IN.)		
				A	B	C
2920	½"	47/64"	.125-.375	1 1/8	1 3/4	5/8
2921	½"	47/64"	.310-.560	1 1/8	1 3/4	5/8
2922	½"	47/64"	.500-.750	1 1/8	1 3/4	5/8
2930	¾"	13/16"	.125-.375	1 1/8	1 25/32	5/8
2931	¾"	13/16"	.310-.560	1 1/8	1 25/32	5/8
2932	¾"	13/16"	.500-.750	1 1/8	1 25/32	5/8
2940	1"	1 1/16"	.310-.560	1 1/8	1 3/4	3/4
2941	1"	1 1/16"	.500-.750	1 1/8	1 3/4	3/4
2942	1"	3 1/32"	.700-.950	1 1/8	1 7/8	3 1/32

Steel Liquidtight Strain Relief Connectors — 90° Angle



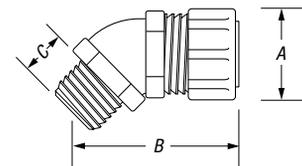
CAT. NO.	HUB SIZE	THROAT DIA.	CORD RANGE	DIMENSIONS (IN.)		
				A	B	C
4960	½"	1 1/32"	.125-.375	1 1/8	1 3/4	5/8
4961	½"	1 1/32"	.310-.560	1 1/8	1 3/4	5/8
4962	½"	1 1/32"	.500-.750	1 1/8	1 23/64	5/8
4970	¾"	25/32"	.125-.375	1 1/8	1 25/32	1 1/16
4971	¾"	25/32"	.310-.560	1 1/8	1 25/32	1 1/16
4972	¾"	25/32"	.500-.750	1 1/8	1 25/32	1 1/16
4980	1"	1	.310-.560	1 1/8	2 1/32	1 1/16

All items shown on this page are suitable for use in hazardous locations where general-purpose equipment is specifically permitted by the NEC®. NEC 501-4(b).

UL File No. E-13938

CSA File No. 52391

Steel Liquidtight Strain Relief Connectors — 45° Angle



CAT. NO.	HUB SIZE	THROAT DIA.	CORD RANGE	DIMENSIONS (IN.)		
				A	B	C
4920	½"	37/64"	.125-.375	1 1/8	1 1/16	47/64
4921	½"	37/64"	.310-.560	1 1/8	1 1/16	47/64
4922	½"	37/64"	.500-.750	1 1/8	1 1/16	47/64
4930	¾"	25/32"	.125-.375	1 1/8	1 1/16	5/8
4931	¾"	25/32"	.310-.560	1 1/8	1 1/16	5/8
4932	¾"	25/32"	.500-.750	1 1/8	1 1/16	5/8

For wire mesh grips, refer to page E-142.

Metallic Liquidtight Cord and Cable Connectors

The Ranger® Series of Non-Metallic Liquidtight Cord Connectors

The Ranger® Series Non-Metallic Liquidtight Cord Connector takes twice the cable range of most ordinary strain-relief connectors. T&B's Ranger Connectors enable you to reduce your inventory and save time with one connector that can do the work of two. The sturdy nylon material adds corrosion resistance to your installation.



Application

- Provide means for passing a cord into an enclosure or through a bulkhead or into a rigid conduit
- Form a mechanical grip and water- and/or oil-resistant seal for cord
- Form a nonslip connection or termination for flexible cord, cable (armored or unarmored)

Cord & Cable Type

- S, SO, SV, ST, STD, SJ, SJO, SJT, SJTO, SVD

Features

- Extended range with superior strain relief
- Reduced overall size, fits into tighter spaces
- Gland nut designed to restrict cable bending

Materials

Weather-stabilized nylon, temperature rated -34° C to 105° C

Bushing: Rubber

Environment Classification

Ordinary locations

Wet or dry locations

Fittings used in a trade size knockout requiring a NEMA 3R, 4, 6 or 13 listing require a 5262 Series sealing ring

Range

Cord Range: Straight — .125" to .950"

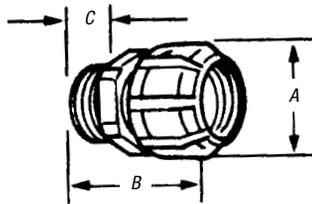
90° — .125" to .750"

Hub Size Range: Straight — ½" to 1"

90° — ½" to ¾"

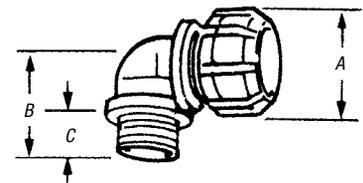
Listings/Compliances

UL Type 6 and 4X



Non-Metallic Liquidtight Strain Relief Connector — Straight

CAT. NO.	TRADE OR HUB SIZE	THROAT DIA.	CORD RANGE	DIMENSIONS (IN.)		
				A	B	C
2920NM	½"	.55	.125–.375	1½/32	2½/16	5/16
2921NM	½"	.55	.310–.560	1½/32	2½/16	5/16
2922NM	½"	.55	.500–.750	1½/32	2½/32	5/16
2930NM	¾"	.79	.125–.375	1½/32	2³/16	5/16
2931NM	¾"	.79	.310–.560	1½/32	2³/16	5/16
2932NM	¾"	.79	.500–.750	1½/32	2³/16	5/16
2940NM	1"	.98	.310–.560	1½/32	2½/32	25/32
2941NM	1"	.98	.500–.750	1½/32	2½/32	25/32
2942NM	1"	.98	.700–.950	1¼/64	2³/8	25/32



Non-Metallic Liquidtight Strain Relief Connector — 90° Elbow

CAT. NO.	TRADE OR HUB SIZE	THROAT DIA.	CORD RANGE	DIMENSIONS (IN.)		
				A	B	C
4960NM	½"	.55	.125–.375	1½/32	1¼	5/16
4961NM	½"	.55	.310–.560	1½/32	1¼	5/16
4970NM	¾"	.79	.125–.375	1½/32	1½	5/16
4971NM	¾"	.79	.310–.560	1½/32	1½	5/16
4972NM	¾"	.79	.500–.750	1½/32	1½	5/16

UL File No. E 13938

CSA File No. 52391

Meets Coast Guard CG293

Metallic Liquidtight Cord and Cable Connectors

Type 304 stainless construction for your harshest environments! The Ranger® Series of Stainless Steel Liquidtight Cord Connectors

Until now, there's been no ideal solution for liquidtight connections of portable cord to a box or enclosure in corrosive environments. Steel connectors rust, and non-metallic connectors can't withstand high temperatures or ultraviolet exposure.

In response to customer demand, Thomas & Betts has developed the latest addition to its high-performance line of Ranger® Cord Connectors. Made of Type 304 stainless steel, Ranger® Stainless Steel Liquidtight Cord Connectors stand up to highly corrosive environments — such as washdown areas in food and beverage or pharmaceutical processing — as well as high temperatures and UV exposure.

Application

- Provide means for passing a cord cable into an enclosure, through a bulkhead or into a rigid conduit
- Form a mechanical grip and water- and/or oil-resistant seal for cord
- Form a non-slip connection or termination for flexible cord

Cord & Cable Type

- SJ, SJE, SJE0, SJE00, SJO, SJOW, SJO0, SJOOW, SJT, SJTW, SJTO, SJTOW, SJT00, SJT00W, SO, SOW, SOO, SOOW, SV, ST, STD, SVD

Features

- Extended range with superior strain relief
- Reduced overall size, fits into tighter spaces
- Gland nut designed to restrict cable bending

Materials

Body, Gland Nut, Grip Type 304 stainless steel
 Bushing..... Thermoplastic rubber
 Grip Ring..... Nylon
 O-Ring (supplied)..... Buna N

Environment Classification

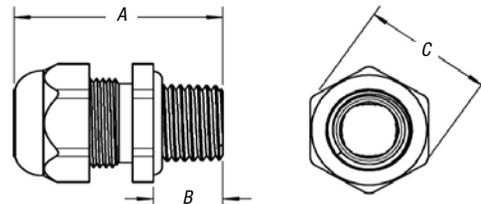
Ordinary locations (wet or dry)
 Temperature Rating -20° C to 105° C (-4° F to 221° F)

Range

Cord Range125" to .950"
 Hub Size Range ½" to 1"

Listings/Compliances

¼" and ¾" Sizes UL Recognized
 ½" through 1" Sizes UL Listed and CSA Certified for use with portable cord; UL514B liquidtight cord connectors; UL Type 6 and 4X



Conduit & Fittings — T&B® Cord & Cable Fittings

Stainless Steel Cable Glands — ¼"-¾" Hub Sizes



CAT. NO.	HUB SIZE (IN.)	CORD DIA. RANGE (IN.)	DIMENSIONS (IN.)			STD. PKG. QTY.
			A	B	C	
2918SST	¼	.118-.256	1.000	.250	.625	25
2919SST	¾	.157-.315	1.313	.438	.750	25

Stainless Steel Liquidtight Strain-Relief Cord Connectors — ½"-1" Hub Sizes



CAT. NO.	HUB SIZE (IN.)	CORD DIA. RANGE (IN.)	DIMENSIONS (IN.)			STD. PKG. QTY.
			A	B	C	
2920SST	½	.125-.375	1.935	.610	1.125	25
2921SST	½	.310-.560	1.935	.610	1.125	25
2922SST	½	.500-.750	2.003	.610	1.125	25
2930SST	¾	.125-.375	2.063	.630	1.125	10
2931SST	¾	.310-.560	2.063	.630	1.125	10
2932SST	¾	.500-.750	2.063	.630	1.125	10
2940SST	1	.310-.560	2.178	.785	1.500	10
2941SST	1	.500-.750	2.218	.785	1.500	10
2942SST	1	.700-.950	2.218	.785	1.500	10

Metallic Liquidtight Cord and Cable Connectors

The Ranger® Series of Aluminum Liquidtight Cord Connectors

Application

- A liquidtight connector to connect flexible cord to an enclosure and provide adequate strain relief
- Form a mechanical grip and water and liquidtight seal
- Form a non-slip connection or termination for flexible cord

Cord & Cable Type

- S.J, SJE, SJEW, SJE0, SJE00, SJE00W, SJO, SJOW, SJOO, SJOOW, SJT, SJTW, SJTO, SJTOW, SJT00, SJT00W, SO, SOW, SOO, SOOW, SV, ST, STD, SVD

Features

- Available in straight or 90° designs
- Designed to accept a wide range of cables, offering nine fittings that cover cord ranges from .125" through .950"
- Slotted design gland nut to accommodate securing in tight spaces

- Installer can simply use screwdriver to get into the hard-to-reach area and secure the gland nut
- Marked with cable ranges and conduit hub sizes

Material

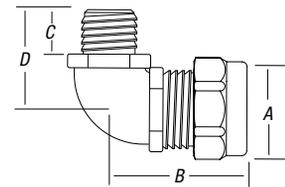
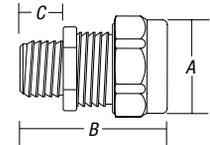
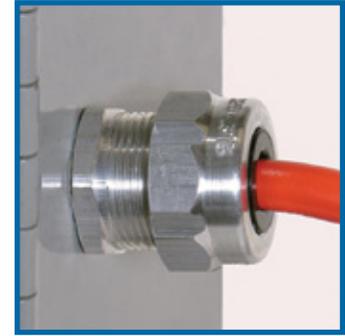
Body Copper-Free Aluminum
 Gland Nut, Grip..... Copper-Free Aluminum — All Series
 Bushing..... Thermoplastic Rubber
 Grip Ring..... Nylon

Environment Classification

Ordinary locations
 Wet or dry locations
 Temperature Range: -20° C to 105° C (-4° F to 221° F)

Range

Cord Range: .125" to .950"
 Hub Size Range: ½" to 1"



Aluminum Liquidtight Strain-Relief Connectors

CAT. NO.	HUB SIZE	CORD RANGE (IN.)	DIMENSIONS (IN.)				STD. PKG. QTY.	WT. PER 100
			A	B	C	D		
Straight								
2920AL	½"	.125-.375	1½	1¾	¾	—	25	8.50
2921AL	½"	.310-.560	1½	1¾	¾	—	25	8.05
2922AL	½"	.500-.750	1½	1¾	¾	—	25	9.95
2930AL	¾"	.125-.375	1½	1 ²⁵ / ₃₂	¾	—	10	12.30
2931AL	¾"	.310-.560	1½	1 ²⁵ / ₃₂	¾	—	10	11.90
2932AL	¾"	.500-.750	1½	1 ²⁵ / ₃₂	¾	—	10	11.50
2940AL	1"	.310-.560	1½	1¾	1½	—	10	18.00
2941AL	1"	.500-.750	1½	1¾	1½	—	10	16.00
2942AL	1"	.700-.950	1½	1¾	3½	—	10	16.70
90° Elbow								
4960AL	½"	.125-.375	1½	1¾	¾	1½	50	23.60
4961AL	½"	.360-.560	1½	1¾	¾	1½	50	11.60
4970AL	¾"	.125-.375	1½	1 ²⁵ / ₃₂	1½	1½	50	17.2
4971AL	¾"	.310-.560	1½	1 ²⁵ / ₃₂	1½	1½	50	30.00
4972AL	¾"	.500-.750	1½	1 ²⁵ / ₃₂	1½	1½	50	33.09
4980AL	1"	.310-.560	1½	2½	1½	1¾	25	21.50
4981AL	1"	.500-.750	1½	2½	1½	1¾	25	22.36
4982AL	1"	.700-.950	1½	2½	1½	2	25	18.20

* It may be necessary to remove sufficient outer covering of cable to permit conductors to pass through connector body.

All items shown on this page are suitable for use in hazardous locations where general-purpose equipment is specifically permitted by the NEC®, NEC 501-4(b).

UL File No. E-13938 CSA File No. 52391

For wire mesh grips, refer to page E-142.

Metallic Liquidtight Cord and Cable Connectors

T&B® Liquidtight Strain-Relief Cord Connectors



The T&B Steel Liquidtight Strain Relief Cord Connector is suited for most general control and power cable applications. This series features sturdy neoprene bushings and tapered hub threads.

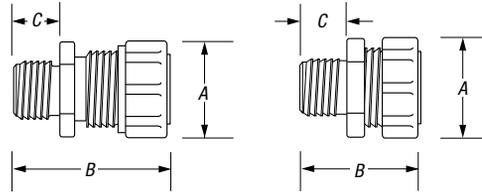


Fig. 1

Fig. 2



Application

- Provide means for passing a cord cable (armored or unarmored) into an enclosure, through a bulkhead or into a rigid conduit
- Form a mechanical grip and water- and/or oil-resistant seal for cord and unarmored or jacketed armored round cables
- Form a non-slip connection or termination for flexible cord, cable (armored or unarmored)
- Provide grounding continuity of cable armor

Cord & Cable Type

- S, SO, SV, ST, STD, SJ, SJO, SJT, SJTO, SVD

Features

- Extended range with superior strain relief
- Reduced overall size, fits into tighter spaces
- Gland nut designed to restrict cable bending

Materials

Body..... Cat. Nos. 2516–2519 — Steel
 Cat. Nos. 2520–2596 — Malleable Iron or Die-Cast Zinc
 2200 Series — Malleable Iron
 Gland..... Steel
 Bushing..... Neoprene

Environment Classification

Ordinary locations

Wet or dry locations

Fittings used in a trade size knockout requiring a NEMA 3R, 4, 6 or 13 listing require a 5262 Series sealing ring

UL Listed as liquidtight strain relief and outlet bushing.
 CSA certified watertight.

UL File No. E 13938

CSA File No. 589 & 4484

† UL not applicable.

* Remove sufficient outer covering of cable to permit conductors to pass through connector body.

Complies with JIC standards.

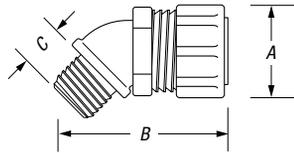
Temperature rating 105° C.

Suitable for hazardous locations use where general-purpose equipment is specifically permitted per NEC® Section 501-4(b).

CAT. NO.	CABLE SIZE (IN)		HUB SIZE	THROAT DIA. (MIN.)	FIG.	DIMENSIONS (IN.)			BUSHING PART NO.	GLAND-NUT MODEL NO.	RETAINER MODEL NO.	BODY MODEL NO.
	RANGE	MIN.-MAX.				A	B	C				
2516†	.060–.125		¼"	23/64"	2	39/64	17/16	19/32	035-73377-5	035-73377-3	035-73377-9	035-73377-1
2517†	.120–.250		¼"	23/64"	2	13/64	17/16	19/32	035-73377-6	035-73377-3	035-73377-9	035-73377-1
2518†	.060–.150		¾"	29/64"	2	31/32	1½	19/32	035-73377-7	035-73377-4	035-73377-9	035-73377-2
2519†	.150–.300		¾"	29/64"	2	31/32	1½	19/32	035-73377-8	035-73377-4	035-73377-9	035-73377-2
2520	.125–.250		½"	9/16"	1		121/32	5/8	053-71411-1	053-71411-37	035-72735-1	053-71411-43
2521	.250–.375		½"	9/16"	1	1½	121/32	5/8	053-71411-2	053-71411-37	035-72735-1	053-71411-43
2522	.375–.500		½"	9/16"	1	1½	121/32	5/8	053-71411-3	053-71411-37	035-72735-2	053-71411-43
2523	.450–.500		½"	9/16"	1	1½	121/32	5/8	053-71411-4	053-71411-37	035-72735-2	053-71411-43
2524*	.500–.625		½"	5/8"	1	1½	13/4	5/8	053-71411-59	053-71411-38	035-72735-3	033-72259-21
2525*	.625–.750		½"	5/8"	1	1½	13/4	5/8	053-71411-60	053-71411-38	035-72735-3	033-72259-21
2530	.125–.250		¾"	13/16"	1	1½	13/4	9/16	033-72259-1	053-71411-38	035-72735-4	053-71411-44
2531	.250–.375		¾"	13/16"	1	1½	13/4	9/16	053-71411-5	053-71411-38	035-72735-4	053-71411-44
2532	.375–.500		¾"	13/16"	1	1½	13/4	9/16	053-71411-58	053-71411-38	035-72735-4	053-71411-44
2534	.500–.625		¾"	13/16"	1	1½	13/4	9/16	053-71411-59	053-71411-38	035-72735-3	053-71411-44
2535	.625–.750		¾"	13/16"	1	1½	13/4	9/16	053-71411-60	053-71411-38	035-72735-3	053-71411-44
2536*	.750–.880		¾"	3/4"	1	1½	19/16	5/8	053-71411-61	053-71411-39	035-72735-5	033-72259-22
2541	.250–.375		1"	49/64"	1	111/16	129/32	9/16	053-71411-5	053-71411-38	035-72735-4	053-71411-45
2542	.375–.500		1"	49/64"	1	111/16	129/32	9/16	053-71411-58	053-71411-38	035-72735-4	053-71411-45
2544	.500–.625		1"	49/64"	1	111/16	129/32	9/16	053-71411-59	053-71411-38	035-72735-3	053-71411-45
2545	.625–.750		1"	49/64"	1	111/16	129/32	7/8	053-71411-60	053-71411-38	035-72735-3	053-71411-45
2546	.750–.880		1"	63/64"	1	111/16	17/8	9/16	053-71411-61	053-71411-39	035-72735-5	053-71411-46
2547	.875–.985		1"	63/64"	1	111/16	17/8	9/16	053-71411-62	053-71411-39	035-72735-5	053-71411-46
2548*	.880–1.065		1"	29/32"	1	21/8	23/8	29/32	053-71411-63	053-71411-40	035-72735-6	033-72259-23
2549*	1.065–1.205		1"	29/32"	1	21/8	23/8	29/32	053-71411-64	053-71411-40	035-72735-6	033-72259-23
2558	.880–1.065		1¼"	117/64"	1	21/8	23/8	5/8	053-71411-63	053-71411-40	035-72735-6	053-71411-47
2559	1.065–1.205		1¼"	117/64"	1	21/8	23/8	5/8	053-71411-64	053-71411-40	035-72735-6	053-71411-47
2556*	1.187–1.375		1¼"	1¼"	1	23/8	21/2	19/16	053-71411-18	053-71411-41	035-72735-7	033-72259-24
2557*	1.375–1.485		1¼"	1¼"	1	23/8	21/2	19/16	033-72259-2	053-71411-41	035-72735-7	033-72259-24
2562	.812–1.000		1½"	17/16"	1	23/8	21/2	19/16	033-72259-3	053-71411-41	035-72735-7	053-71411-48
2563	1.000–1.187		1½"	17/16"	1	23/8	21/2	19/16	053-71411-17	053-71411-41	035-72735-7	053-71411-48
2564	1.187–1.375		1½"	17/16"	1	23/8	21/2	19/16	053-71411-18	053-71411-41	035-72735-7	053-71411-48
2565*	1.375–1.625		1½"	129/64"	1	23/4	23/8	19/16	053-71411-65	053-71411-42	035-72735-8	033-72259-25
2573	1.125–1.375		2"	17/8"	1	23/4	23/8	19/16	053-71411-66	053-71411-42	035-72735-8	053-71411-49
2574	1.375–1.625		2"	17/8"	1	23/4	23/8	19/16	053-71411-65	053-71411-42	035-72735-8	053-71411-49
2575	1.625–1.875		2"	17/8"	1	23/4	31/2	19/16	053-71411-67	053-71411-42	035-72735-8	053-71411-49
2576*	1.750–1.965		2"	129/32"	1	33/32	31/2	19/16	033-72259-5	033-72259-17	035-72735-9	033-72259-26
2577*	1.937–2.187		2"	129/32"	1	33/32	31/2	19/16	033-72259-6	033-72259-17	035-72735-9	033-72259-26
2584	1.750–1.965		2½"	2"	1	33/32	33/4	1½	033-72259-5	033-72259-17	035-72259-14	033-72259-27
2585	1.937–2.187		2½"	2"	1	33/32	33/4	1½	033-72259-6	033-72259-18	033-72259-14	033-72259-27
2586*	2.156–2.360		2½"	25/32"	1	315/16	41/4	1½	033-72259-7	033-72259-19	033-72259-15	033-72259-28
2587*	2.350–2.565		2½"	25/32"	1	315/16	41/4	1½	033-72259-8	033-72259-19	033-72259-15	033-72259-28
2592	2.156–2.360		3"	213/32"	1	315/16	41/4	1½	033-72259-7	033-72259-19	033-72259-15	033-72259-29
2593	2.350–2.565		3"	213/32"	1	315/16	41/4	1½	033-72259-8	033-72259-19	033-72259-15	033-72259-29
2594	2.535–2.750		3"	213/32"	1	315/16	41/4	1½	033-72259-9	033-72259-19	033-72259-15	033-72259-29
2595*	2.735–2.985		3"	213/32"	1	411/16	43/8	1½	033-72259-10	033-72259-20	033-72259-16	033-72259-30
2596*	2.970–3.220		3"	213/32"	1	411/16	43/8	1½	033-72259-11	033-72259-20	033-72259-16	033-72259-30

Metallic Liquidtight Cord and Cable Connectors

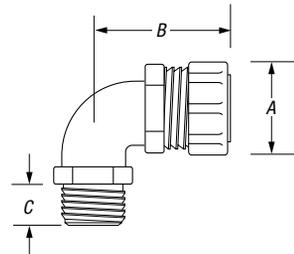
Liquidtight Strain-Relief Connectors — 45°



For wire mesh grips, refer to page E-142.

CAT. NO.	CABLE-SIZE MIN.-MAX. (IN.)	HUB SIZE	DIMENSIONS (IN.)			THROAT DIA.
			A	B	C	
2200	.125-.250	1/2"	1 1/8	1 1/32	9/16	3/16
2201	.250-.375	1/2"	1 1/8	1 1/32	9/16	3/16
2202	.375-.500	1/2"	1 1/8	1 1/32	9/16	3/16
2203	.450-.560	1/2"	1 1/8	1 1/32	9/16	3/16
2204*	.500-.625	1/2"	1 3/8	1 13/32	9/16	3/16
2205*	.625-.750	1/2"	1 3/8	1 13/32	9/16	3/16
2206	.125-.250	3/4"	1 3/8	1 13/32	5/8	25/32
2207	.250-.375	3/4"	1 3/8	1 13/32	5/8	25/32
2208	.375-.500	3/4"	1 3/8	1 13/32	5/8	25/32
2209	.500-.625	3/4"	1 3/8	1 13/32	5/8	25/32
2210	.625-.750	3/4"	1 3/8	1 13/32	5/8	25/32
2211*	.750-.880	3/4"	1 11/16	1 1/2	1 1/2	3/4
2213	.375-.500	1"	1 3/8	1 1/2	25/32	15/16
2214	.500-.625	1"	1 3/8	1 1/2	25/32	15/16
2215	.625-.750	1"	1 3/8	1 1/2	25/32	15/16
2216	.750-.875	1"	1 11/16	1 13/32	25/32	15/16
2217*	.875-.985	1"	1 11/16	1 13/32	25/32	15/16
2218*	.880-1.065	1"	2 1/16	1 31/32	25/32	15/16
2219*	1.065-1.205	1"	2 1/16	1 31/32	25/32	15/16
2220*	.880-1.065	1 1/4"	2 1/16	1 29/32	1 3/16	15/16
2221*	1.065-1.205	1 1/4"	2 1/16	1 29/32	1 3/16	15/16
2222*	1.187-1.375	1 1/4"	2 1/16	2 1/4	1 3/16	1 21/64
2223*	1.375-1.485	1 1/4"	2 1/16	2 1/4	1 3/16	1 21/64

Liquidtight Strain-Relief Connectors — 90°



CAT. NO.	CABLE-SIZE MIN.-MAX. (IN.)	HUB SIZE	DIMENSIONS (IN.)			THROAT DIA.
			A	B	C	
2268	.250-.375	1/2"	1 1/8	1 23/32	5/8	19/32
2269	.375-.500	1/2"	1 1/8	1 23/32	5/8	19/32
2270	.450-.560	1/2"	1 1/8	1 23/32	5/8	19/32
2250*	.500-.625	1/2"	1 3/8	1 11/16	9/16	39/64
2251*	.625-.750	1/2"	1 3/8	1 11/16	9/16	39/64
2252	.125-.250	3/4"	1 3/8	1 3/4	1/2	25/32
2271	.250-.375	3/4"	1 3/8	1 5/8	1/2	25/32
2272	.375-.500	3/4"	1 3/8	1 5/8	1/2	25/32
2273	.500-.625	3/4"	1 3/8	1 5/8	1/2	25/32
2274*	.620-.750	3/4"	1 3/8	1 5/8	1/2	25/32
2253*	.750-.880	3/4"	1 11/16	1 31/32	9/16	25/32
2254	.375-.500	1"	1 3/8	2	25/32	1
2255	.500-.625	1"	1 3/8	2	25/32	1
2256*	.625-.750	1"	1 3/8	2	25/32	1
2275	.750-.875	1"	1 11/16	2	5/8	1
2276	.875-.985	1"	1 11/16	2	5/8	1
2257*	.880-1.065	1"	2 1/16	2 21/32	25/32	1 3/16
2258*	1.065-1.205	1"	2 1/16	2 21/32	25/32	1 3/16
2277	.880-1.065	1 1/4"	2 1/16	2 7/8	1 1/16	1 3/16
2278	1.065-1.205	1 1/4"	2 1/16	2 7/8	1 1/16	1 3/16
2279*	1.187-1.375	1 1/4"	2 1/16	2 13/16	1 3/16	1 11/32
2280*	1.375-1.485	1 1/4"	2 1/16	2 13/16	1 3/16	1 11/32
2281	.812-1.000	1 1/2"	2 5/16	2 7/8	1 3/16	1 13/32
2282	1.000-1.187	1 1/2"	2 5/16	2 7/8	1 3/16	1 13/32
2283*	1.187-1.375	1 1/2"	2 5/16	2 7/8	1 3/16	1 13/32
2284	1.125-1.375	2"	2 25/32	3 1/4	2 7/32	1 31/32
2285	1.375-1.625	2"	2 25/32	3 1/4	2 7/32	1 31/32
2286	1.625-1.875	2"	2 25/32	3 1/4	2 7/32	1 31/32

UL Listed as liquidtight strain relief and outlet bushing.
CSA certified watertight.

UL File No. E 13938

CSA File No. 589 & 4484

* UL not applicable.

* Remove sufficient outer covering of cable to permit conductors to pass through connector body.

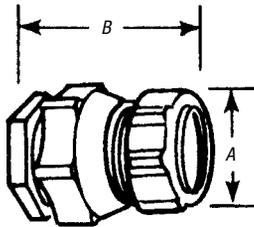
Complies with JIC standards.

Temperature rating 105° C.

Suitable for hazardous locations use where general-purpose equipment is specifically permitted per NEC®.

Metallic Liquidtight Cord and Cable Connectors

CHASE® Liquidtight Cord Connectors



CAT. NO.	CABLE SIZE RANGE SIZE (IN.)	THROAT DIA.	CORD RANGE	DIMENSIONS (IN.)	
				A	B
2631	.125-.250	1/2"	9/16"	1 1/16"	1 5/8"
2632	.250-.375	1/2"	9/16"	1 1/16"	1 5/8"
2633	.375-.500	1/2"	9/16"	1 1/16"	1 5/8"
2634	.450-.560	1/2"	9/16"	1 1/16"	1 5/8"
2637	.125-.250	3/4"	25/32"	1 1/16"	1 3/4"
2638	.250-.375	3/4"	25/32"	1 1/16"	1 3/4"
2639	.375-.500	3/4"	25/32"	1 1/16"	1 3/4"
2640	.500-.625	3/4"	25/32"	1 1/16"	1 3/4"
2641	.625-.750	3/4"	25/32"	1 1/16"	1 3/4"
2646	.500-.625	1"	1"	1 5/8"	1 13/16"
2647	.625-.750	1"	1"	1 5/8"	1 13/16"
2648	.750-.880	1"	1"	1 5/8"	1 13/16"

Suitable for hazardous locations use in Class I, Div. 2; Class II, Div. 1 and 2; Class III, Div. 1 and 2, where general-purpose equipment is specifically permitted per NEC® Section 500-2(a).

Complete with O-Ring seal and nylon insulated throat and neoprene bushing.

UL Listed as liquidtight strain relief and outlet bushing.
CSA certified watertight.

Temperature Rating: 105° C UL File No. E 13938

CSA File No. 589. CHASE® Liquidtight Cord Connectors are ideal for installation where space is limited inside the enclosure.

Conduit & Fittings — T&B® Cord & Cable Fittings

Multi-Hole Flexible Cord and Cable Connectors



CAT. NO.	HUB SIZE (IN.)	DIA. NO.	CORD DIA. (IN.)
2520-2	1/2"	2	.220
2530-2	3/4"	2	.220
2531-2	3/4"	2	.260
2531-3	3/4"	3	.260
2541-2	1"	2	.300
2542-2	1"	2	.375
2540-3	1"	3	.225
2541-3	1"	3	.300
2540-4	1"	4	.220
2555-2	1 1/4"	2	.500

Note: Range of cord dia. ±.010.

In many applications, you have only room for one fitting but you need to run two cables (for example, proximity switches). Now you can provide strain relief and liquidtight protection with T&B's new multi-hole liquidtight strain relief connectors. With the ever-increasing number of signal cables, now you have a solution to the problem of how to strain relieve multiple cables in one fitting.

Metallic Liquidtight Cord and Cable Connectors

The T&B WMG-PC Series Wire Mesh Grips for Portable Cord

T&B Wire Mesh grips are ordered separately and fit with your existing inventory of Ranger® connectors and liquidtight strain-relief connectors. There's no need to duplicate inventory.

Application

- Provides high gripping strength for adequate cable support and strain relief without damage to the cable sheath
- Compression of a tapered neoprene bushing ensures the watertight integrity of the fittings
- To meet National Electrical Code (NEC®) requirements for electrical installations in hazardous atmospheres, a sealing fitting may be required in conjunction with the cable and cord fitting

Cord & Cable Type

- S, SO, SV, ST, STD, SJ, SJO, SJT, SJTO, SVD

Features

- Prevents severe cord bends and pullouts
- Used in aluminum and/or steel fittings

How to select proper wiremesh grip:

1. Determine O.D. of portable cord, e.g., .200
2. Determine size of knockout or threaded hub, e.g. 1/2"
3. Select Cat. No. of strain relief connector, e.g., 2520, 2920AL.
4. Match up O.D. with grip range and strain relief to determine Cat. No. of Wiremesh Grip (e.g., .200 + 2520 = WMG-PC1)



Now Includes Ranger Series

Materials

Wiremesh made of stainless steel.
Retaining rings made of aluminum

Environment Classification

Ordinary locations

Range

.187 – 3.220



CAT. NO.	GRIP RANGE	STRAIN-RELIEF CONNECTOR								
		STRAIGHT			45°			90°		
		RANGER® STEEL	RANGER® ALUMINUM	T&B STEEL	RANGER® STEEL	T&B STEEL	RANGER® STEEL	RANGER® ALUMINUM	T&B STEEL	
WMG-PC1	.187-.250	2920	2920AL	2520	4920	2200	4960	4960AL	2267	
WMG-PC2	.250-.375	2920	2920AL	2521	4920	2201	4960	4960AL	2268	
WMG-PC3	.375-.500	2921	2921AL	2522	4921	2202	4961	4961AL	2269	
WMG-PC4	.500-.625	2922	2922AL	2524	4922	2204	4962	4962AL	2250	
		2932	2932AL	2534	4932	2209	4972	4972AL	2273	
		2941	2941AL	2544	4941	2214	4981	4981AL	2255	
WMG-PC5	.625-.750	2922	2922AL	2525	4922	2205	4962	4962AL	2251	
		2932	2932AL	2535	4932	2210	4972	4972AL	2274	
		2941	2941AL	2545	4941	2215	4981	4981AL	2256	
WMG-PC6	.187-.250	2930	2930AL	2530	4930	2206	4970	4970AL	2252	
WMG-PC7	.250-.375	2930	2930AL	2531	4930	2207	4970	4970AL	2271	
WMG-PC8	.375-.500	—	—	2541	—	—	—	—	—	
		2931	2931AL	2532	4931	2208	4961	4961AL	2272	
		2940	2940AL	2542	4940	2213	4980	4980AL	2254	
WMG-PC9	.750-.875	—	—	2536	—	2211	—	—	2253	
		—	—	2547	—	2217	—	—	2276	
		2942	2942AL	2546	4942	2216	4982	4982AL	2275	
WMG-PC10	.875-1.000	—	—	2547	—	2217	—	—	2276	
		—	—	2548	—	2218	—	—	2257	
		—	—	2558	—	2220	—	—	2277	
WMG-PC11	.875-1.000	—	—	2548	—	2218	—	—	2257	
		—	—	2558	—	2220	—	—	2277	
		—	—	2548	—	2218	—	—	2257	
WMG-PC12	1.000-1.125	—	—	2558	—	2220	—	—	2277	
		—	—	2549	—	2219	—	—	2258	
		—	—	2559	—	2221	—	—	2278	
WMG-PC13	1.125-1.250	—	—	2549	—	—	2258	2258	2219	
		—	—	2559	—	2221	—	—	2278	
		—	—	2556	—	—	2279	2279	2222	
WMG-PC14	1.125-1.250	—	—	2563	—	—	—	—	2282	
		—	—	2564	—	—	—	—	2283	
		—	—	2564	—	—	—	—	2256	
WMG-PC15	1.250-1.375	—	—	2564	—	2222	—	—	2283	
		—	—	2564	—	—	—	—	2280	
		—	—	2557	—	2223	—	—	2280	
WMG-PC16*	1.375-1.500	—	—	2557	—	—	—	—	2284	
WMG-PC17*	1.125-1.250	—	—	2573	—	—	—	—	2284	
WMG-PC18*	1.250-1.375	—	—	2573	—	—	—	—	2284	
WMG-PC19*	1.375-1.500	—	—	2565	—	—	—	—	2285	
		—	—	2574	—	—	—	—	—	
WMG-PC20*	1.500-1.625	—	—	2565	—	—	—	—	2285	
		—	—	2574	—	—	—	—	—	
		—	—	2574	—	—	—	—	—	
WMG-PC21*	1.625-1.750	—	—	2575	—	—	—	—	2286	
WMG-PC22*	1.750-1.875	—	—	2575	—	—	—	—	2286	

*Replacement Gland Nut supplied with these catalog numbers only.



2920 Series



2920AL Series



2516 Series

Non-Metallic Liquidtight Cord Connectors

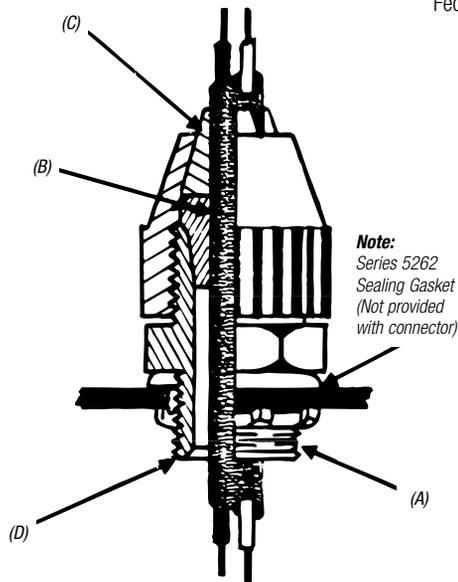
Non-Metallic Liquidtight Flexible Cord Connectors — Black Beauty® Series

Application

- A liquidtight connector to connect flexible cord to a box or enclosure and provide adequate strain relief

Features

- Taper Thread hub seals in female hub (A)
- Neoprene bushing provides liquidtight installation (B)
- Hand tightens — no tools needed for assembly
- Segmented chuck provides high mechanical pullout performance — will not cut or damage cord jacket (C)
- Corrosion- and weather-resistant plastic is excellent for outdoor/indoor use
- Plastic parts improve dielectric strength and provide insulated throat (D)
- Wide range — reduces inventories



Typical Installation

Note:
Series 5262
Sealing Gasket
(Not provided
with connector)

Standard Material

Body, Gland & Segmented Chuck Weather-stabilized thermoplastic rated for -34° C (-29° F) to 105° C (221° F) application
Bushing..... Neoprene

Standard Finish

All parts as molded

Range

.250 Outside Diameter to 1.020 Outside Diameter Type S, SO, SV, ST, STO, SJ, SJO, SJT, SJTO, SVTO, SVO, SVT
Flexible Cords & Cables

Listings/Compliances

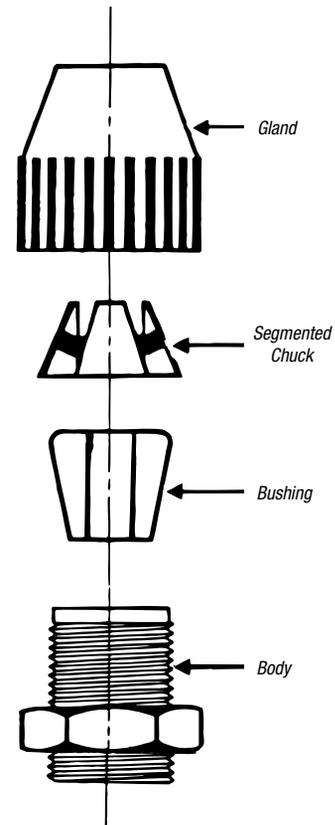
UL (UL File No. E-23018)
CSA LR-2884, LR-4484
UL 514B
CSA C22.2 No. 18
NFPA 70
Federal Standard H-28 (Threads)



2672 Series



2682 Series

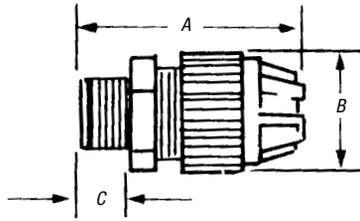


2672 Series

Non-Metallic Liquidtight Cord Connectors

Rugged, weather-stabilized nylon construction!

Black Beauty® Non-Metallic Liquidtight Strain-Relief Connector — Straight



- UL 94-V2 flammability rated
- Temperature rating: -34° C to +105° C
- Meets Coast Guard CG293

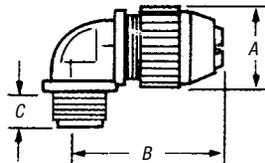


CAT. NO.	TRADE OR HUB SIZE	THROAT DIA. (IN.)	CORD RANGE (IN.)	DIMENSIONS (IN.)		
				A	B	C
2671	3/8"	.33	.125-.275	2.0	.90	.46
2690	1/2"	.33	.125-.275	2.3	.90	.60
2672	1/2"	.55	.250-.400	2.6	1.27	.60
2673*	1/2"	.55	.400-.560	2.6	1.27	.60
2691*	1/2"	.54	.560-.690	3.0	1.57	.60
2692*	1/2"	.54	.660-.780	3.0	1.57	.60
2693	3/4"	.55	.250-.400	2.7	1.27	.62
2694*	3/4"	.55	.400-.560	2.7	1.27	.62
2674	3/4"	.79	.560-.690	3.0	1.57	.62
2675	3/4"	.79	.660-.780	3.0	1.57	.62
2696*	3/4"	.76	.770-.895	3.2	1.89	.62
2676	1"	.98	.660-.780	3.3	1.89	.77
2677	1"	.98	.770-.895	3.3	1.89	.77
2678*	1"	.98	.870-1.020	3.3	1.89	.77
2699	1"	.98	.890-1.090	4.2	2.58	.77
2702	1 1/4"	1.25	.890-1.090	4.2	2.58	.80
2703	1 1/4"	1.25	1.080-1.280	4.0	2.58	.80
2704	1 1/4"	1.25	1.270-1.470	4.0	2.58	.80
2705-TB	1 1/2"	1.47	.890-1.150	4.2	2.95	.82
2706	1 1/2"	1.47	1.140-1.400	4.3	2.95	.82
2707	1 1/2"	1.47	1.390-1.650	4.3	2.95	.82
2708	2"	1.89	1.190-1.530	5.1	3.50	.84
2709	2"	1.89	1.520-1.860	4.9	3.50	.84
2710*	2"	1.89	1.850-2.190	4.9	3.50	.84

*Remove sufficient outer covering of cable to permit conductors to pass thru connector body. All items shown on this page are suitable for use in hazardous location where general-purpose equipment is specifically permitted by the NEC®, Class I, Div. 2, Class II, Div. 1 & 2, Class III, Div. 1 & 2.
 UL File No. E 13938
 CSA File No. 52391

90° angle with a standard-size body!

Black Beauty® Non-Metallic Liquidtight Strain-Relief Connector — 90° Elbow



- Weather-stabilized nylon construction
- UL 94-V2 flammability rated
- Temperature rating: -34° C to +105° C
- Meets Coast Guard CG293

CAT. NO.	TRADE OR HUB SIZE	THROAT DIA. (IN.)	CORD RANGE (IN.)	DIMENSIONS (IN.)		
				A	B	C
2680	3/8"	.33	.125-.275	2 3/32	1 1/4	.460
2681	1/2"	.55	.250-.400	—	—	—
2682*	1/2"	.55	.400-.560	—	—	—
2683	3/4"	.78	.560-.690	—	—	—
2684	3/4"	.78	.660-.780	—	—	—
2688	1"	.98	.560-.690	1 27/32	3/4	.770
2685	1"	.98	.660-.780	1 27/32	3/4	.770
2686	1"	.98	.770-.895	1 27/32	3 1/16	.770
2687*	1"	.98	.870-1.020	1 27/32	3	.770

*Remove sufficient outer covering of cable to permit conductors to pass thru connector body. 90° angle, standard size body. All items shown on this page are suitable for use in hazardous locations where general-purpose equipment is specifically permitted by the NEC. Class I, Div. 2, Class II, Div. 1 & 2, Class III, Div. 1 & 2.
 UL File No. E 13938
 CSA File No. 52391

Non-Metallic Liquidtight Cord Connectors

Low-profile cable gland perfect for tight spots.

Non-Metallic Cable Glands

T&B Nylon Cable Glands have a sturdy cable sealing mechanism that results in superior strain relief. The compact size ensures quick and easy installation in cramped spaces. The non-metallic construction provides excellent corrosion, chemical and impact resistance. The glands have long threads and locknuts are available.



- Halogen free
- Flame-retardant UL94V-0
- Rated IP68 5 BAR, suitable for NEMA 4 enclosures
- UL® Listed*, CSA Certified for certain ranges of cable
- Working temperatures: -30° C (-22° F) to 80° C (176° F)
Continuous, +150° C (276° F) Intermittent
- Meets VDE ratings

* Material not UV resistant. Sturdy Nylon 6 for strong, lightweight construction. Gray color shown; also available in black.



CAT. NO. FITTINGS	TRADE SIZE	COLOR	CORD RANGE		LENGTH OF THREAD		USE T&B LOCKNUT CAT. NO.	UNIT PKG.	STD. PKG.
			IN.	MM	IN.	MM			
NPT Threads									
CC-NPT38-B	¾"	Black	.197-.394	5-10mm	.590	15mm	—	50	250
CC-NPT38-G	¾"	Gray	.197-.394	5-10mm	.590	15mm	—	50	250
CC-NPT12-B	½"	Black	.394-.551	10-14mm	.590	15mm	LN501	50	250
CC-NPT12-G	½"	Gray	.394-.551	10-14mm	.590	15mm	LN501	50	250
CC-NPT34-B	¾"	Black	.512-.709	13-18mm	.590	15mm	LN502	25	100
CC-NPT34-G	¾"	Gray	.512-.709	13-18mm	.590	15mm	LN502	25	100
CC-NPT1-B	1"	Black	.709-.984	18-25mm	.709	18mm	LN503	20	100
CC-NPT1-G	1"	Gray	.709-.984	18-25mm	.709	18mm	LN503	20	100
ISO/Metric Threads									
CC-ISO16-G	16"	Gray	.197-.394	5-10mm	.394	10mm	LN-ISO16-G	50	200
CC-ISO20-G	20"	Gray	.236-.473	6-12mm	.590	15mm	LN-ISO20-G	50	200
CC-ISO25-G	25"	Gray	.512-.709	13-18mm	.590	15mm	LN-ISO25-G	25	100
CC-ISO32-G	32"	Gray	.709-.984	16-25mm	.590	15mm	LN-ISO32-G	20	100
CC-ISO40-G	40"	Gray	.748-1.10	22-32mm	.709	18mm	LN-ISO40-G	15	75
PG Threads									
CC-PG7-G	7"	Gray	.118-.256	3-6.5mm	.315	8mm	LN-PG7-G	50	200
CC-PG9-G	9"	Gray	.157-.315	4-8mm	.315	8mm	LN-PG9-G	50	200
CC-PG11-G	11"	Gray	.197-.394	5-10mm	.315	8mm	LN-PG11-G	25	100
CC-PG135-G	13½"	Gray	.236-.473	6-12mm	.354	9mm	LN-PG135-G	25	100
CC-PG16-G	16"	Gray	.394-.551	10-14mm	.394	10mm	LN-PG16-G	25	100
CC-PG21-G	21"	Gray	.512-.709	13-18mm	.433	11mm	LN-PG21-G	10	50
CC-PG29-G	29"	Gray	.709-.984	18-25mm	.433	11mm	LN-PG29-G	10	50
CC-PG36-G	36"	Gray	.867-1.26	22-32mm	.512	13mm	LN-PG36-G	10	50

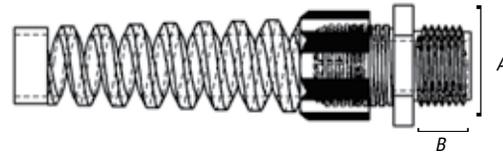
Listed under UL file E13938, control #137B. NPT and PG threaded Cable Glands are UL Listed; ISO/Metric Threaded Cable Glands are not UL Listed.

Non-Metallic Liquidtight Cord Connectors

Non-Metallic Cable/Cord Fitting with Integral Strain-Relief

Thomas & Betts is pleased to announce the new non-metallic spiral cable/cord connector. T&B spiral cable/cord connectors are ideal in environments where maximum protection is needed against conductor fatigue caused by flexing cables.

- Strain-relief is integral to the fitting, saving time and costs of additional parts for cable/cord installations
- UL Listed
- Rated IP68, suitable for NEMA 4 enclosures
- Meets VDE ratings for European applications



Specifications

Materials	Polyamide 6 (Body, Cap), Neoprene (Sealing Ring)
Colors Available	Black, Gray
Protection Class	IP68, 5 Bar
Temperature Range	-30° C to 80° C permanent (-22° F to 176° F)
Operating Temperature	Up to +150° C (+276° F) continuous

Please contact your Thomas & Betts sales representative regarding our custom grommet offering.

CAT. NO.	TRADE SIZE	MIN. CABLE RANGE	MAX. CABLE RANGE	USE T&B LOCKNUT CAT. NO.	COLOR	DIMENSIONS (IN.)		STD. PKG. QTY.
						A	B	
SP-NPT38-G	3/8"	.197	.394	—	Gray	.866	.590	25
SP-NPT38-B	3/8"	.197	.394	—	Black	.866	.590	25
SP-NPT12-G	1/2"	.394	.551	LN501	Gray	1.062	.590	25
SP-NPT12-B	1/2"	.394	.551	LN501	Black	1.062	.590	25
SP-NPT34-G	3/4"	.512	.709	LN502	Gray	1.299	.590	25
SP-NPT34-B	3/4"	.512	.709	LN502	Black	1.299	.590	25

Space and labor-saving cord fittings for panels.

Multi-Hole Cord Grip Connectors

- Ideal in limited-space environments where multiple cables run into an enclosure
- Small cables such as instrumentation wires, proximity device wiring and signal cables can run safely into the enclosure
- Rated IP68, suitable for NEMA 4 enclosures
- Easy to assemble, provide good strain relief, offer a wide clamping range and are simple to use



CAT. NO.	TRADE SIZE	NUMBER OF OPENINGS	CABLE RANGE		BODY LENGTH		LENGTH OF THREAD	STD. PKG. QTY.
			MINIMUM	MAXIMUM	MINIMUM	MAXIMUM		
CC-NPT12-G2	1/2"	2	.190"	.250"	1.051"	1.291"	.590"	50
CC-NPT12-G3	1/2"	3	.190"	.250"	1.051"	1.291"	.590"	50
CC-NPT34-G2	3/4"	2	.230"	.290"	1.283"	1.492"	.590"	25
CC-NPT34-G3	3/4"	3	.230"	.290"	1.283"	1.492"	.590"	25
CC-NPT34-G4	3/4"	4	.230"	.290"	1.283"	1.492"	.590"	25

Service Entrance Cable Fittings

Suggested Specifications for Service Entrance Fittings

All service fittings shall be approved for the purpose by a nationally recognized testing laboratory, inspection agency or product evaluation organization.

Where service raceway consists of a rigid metal conduit, intermediate metal conduit, electrical metallic tubing or where service entrance cable is used as service conductors, a suitable raintight service head conforming to Federal Standard W-C-586 shall be provided.

Fastening



Series 4175
Pipe Strap (EMT)



Series 1275/1275AL
Pipe Strap (Rigid Metal Conduit & IMC)



Series 1350/1350AL
Pipe Spacer
(Rigid Metal Conduit IMC & EMT)

Service raceway shall be securely fastened in place to the supporting surface at intervals as specified by the Code using suitable straps and spacers; straps and spacers shall be of malleable iron or steel construction, hot dipped galvanized or electro zinc plated conforming to Canadian Standards Association Standard C22.2 No. 18 and as manufactured by Thomas & Betts; series 1275 or 4175 straps and series 1350 spacers; aluminum straps or spacers such as series 1275AL and series 1350AL may be substituted when installed in environmental conditions that are more than normally corrosive.

Threaded Rigid Metal



Series 1490
Entrance ELL

Where threaded rigid metal service raceway enters the building, the raceway shall be equipped with a cast malleable iron/copper-free aluminum entrance ell with a burr-free end stop and taper tapped holes as manufactured by Thomas & Betts, series 1490.



Conduit & Fittings — T&B® Cord & Cable Fittings

Grounding & Bonding



Series 3870
Bonding & Grounding Bushing — Insulated

For grounding and bonding of service raceway, end of raceway or the terminating fitting shall be equipped with bonding locknuts and insulated metallic grounding and bonding bushing as required.

Bonding locknuts shall be of hardened steel or malleable iron construction, electro zinc plated, and provided with hardened bonding screws as manufactured by Thomas & Betts, series 106 bonding locknuts.

Insulated metallic grounding and bonding bushing shall be of malleable iron/steel construction, electro zinc plated and assembled with an insulator listed or certified for 150° C/302° F service as manufactured by Thomas & Betts, series 3870.



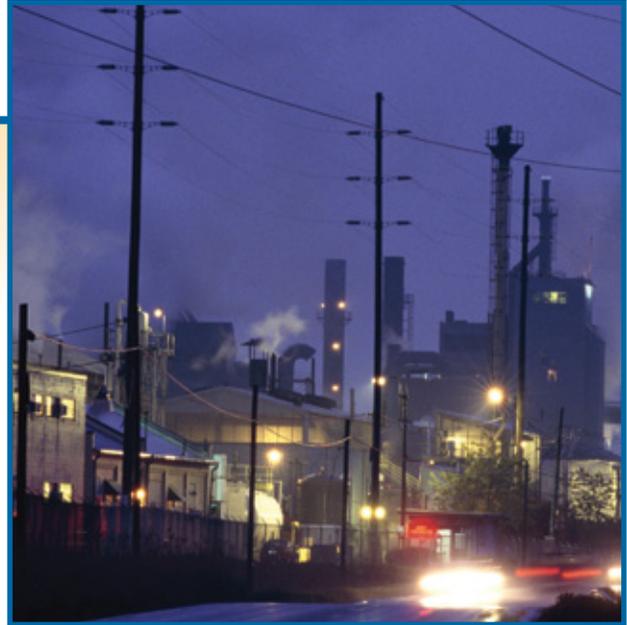
Series 106
Bonding Locknut

Service Entrance Cable Fittings

Suggested Specifications for Service Entrance Fittings *(continued)*

Where service entrance cable is used as overhead service conductors and code requires use of a service head, entrance caps shall be installed; caps shall be cast metal type of suitable ferrous or non-ferrous metal equipped with thermoset insulators and proper knockout openings; caps when installed with proper drip loop must ensure raintight conditions.

At the point where the service cable enters the building, a suitable sill plate shall be provided; sill/wall plate shall be sealed to ensure raintight conditions.



Terminating Fittings



Series 2111
Service Entrance Cable Connector



Series 2116
Underground Feeder Cable Connector



Series 3302M
Two-Screw Connector (Insulated)

Terminating fittings for service entrance cable (Type SE or USE) or underground feeder and branch — circuit cable (Type UF) in locations where exposed to intermittent or constant moisture or in dry locations and subjected to mechanical strain shall be of watertight strain-relief type as manufactured by Thomas & Betts, series 2111 or 2116; fittings shall be constructed of ferrous or non-ferrous metal and equipped with taper threaded hub, beveled moisture-resistant/oil-resistant synthetic rubber bushing.

In dry locations, nylon-insulated two-screw type fittings of malleable iron/steel construction electro zinc plated inside outside, including threads such as series 3302M manufactured by Thomas & Betts may be substituted.

Gaskets



Series 5262
Sealing Gasket

Where service entrance cable is terminated into a threadless opening using hub-type fittings, a gasket shall be provided between the outside of box or enclosure and fitting shoulder; gasket shall be of moisture-resistant/oil-resistant synthetic rubber type adequately protected by and permanently retained to a metallic retainer as manufactured by Thomas & Betts, series 5262.

Supports



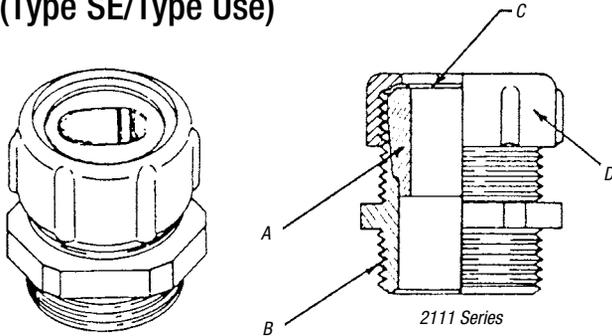
Series 1341
Cable Strap

Service entrance cable shall be adequately supported at intervals enumerated in code using cable straps conforming to requirements of Canadian Standards Association Standard CSA 22.2 No. 18; cable straps shall be of malleable iron/steel construction, hot-dipped galvanized or electro zinc plated as manufactured by Thomas & Betts, series 1341.

Service Entrance Cable Fittings

Service Entrance Cable Connector

(Type SE/Type Use)



Application

- To connect service entrance cables to a meter box or an enclosure

Standard Material/Finish

Body Zinc Die Cast/As Cast
 Gland Steel/Electro Zinc Plated & Chromate Coated
 Retaining Ring Stainless Steel/Passivated
 Bushing Neoprene/As Molded

Range

Oval (Flat) Cable Size 260 x .500 thru 1.062 x 1.765
 Type USE Cable Size (3) #12 thru (3) 4/0 AWG Conductors
 Hub Size ½" thru 2" NPT (taper pipe threads)

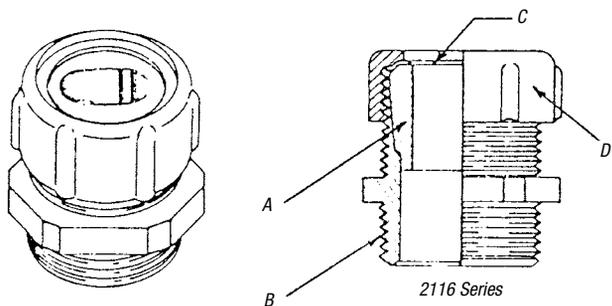
Features

- Neoprene bushing, resists oil and water; grips cable the full length of the bushing, providing adequate strain relief without damaging outer jacket (A)
- Taper threaded body (B)
- Stainless steel retaining ring protects cable jacket against abrasion; reduces installing torque effort (C)
- Rugged ribbed steel gland construction (D)
- Suitable for Type SE & USE Service Entrance Cable

Listings/Compliances

UL (UL File No. E15170)
 CSA (LR589, LR4484)
 UL514, NEMA FB1, Federal Standard
 H-28 (Threads), NFPA70

Underground Feeder Cable Connectors



Application

- To connect underground feeder cables to a box or an enclosure

Standard Material/Finish

Body Zinc Die Cast/As Cast
 Gland Steel/Electro Zinc Plated & Chromate Coated
 Retaining Ring Stainless Steel/Passivated
 Bushing Neoprene/As Molded

Range

Oval (Flat) Cable Size 235 x .500 thru .260 x .740
 Hub Size ½" thru 1" NPT (tapered pipe threads)

Features

- Neoprene bushing resists oil and water; grips cable the full length of the bushing providing adequate strain relief without damaging outer jacket (A)
- Taper threaded body (B)
- Stainless steel retaining ring protects cable jacket against abrasion; reduces installing torque effort (C)
- Rugged ribbed steel gland construction (D)

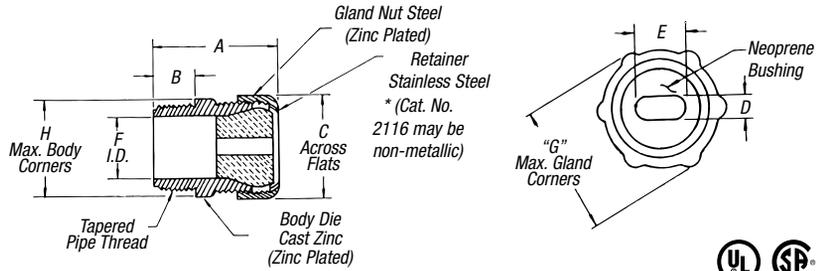
Listings/Compliances

UL
 CSA (LR2884)
 UL514B, NEMA FB1, Federal Standard
 H-28 (Threads), NFPA70

Service Entrance Cable Fittings

Oil- and water-resistant neoprene bushing specially designed for sealing around underground feeder cable!

Underground Liquidtight Feeder-Cable Fittings



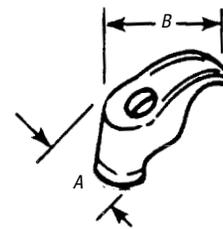
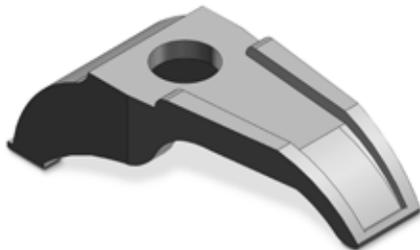
- Stainless steel retaining ring provides bearing surface for glandnut and eliminates cable twist
- Ribbed glandnut tightens easily with wrench to form high-strength connection

CAT. NO.	HUB SIZE	CABLE OPENING	DIMENSIONS (IN.)									
			A	B	C	D		E		F	G	H
						MIN.	MAX.	MIN.	MAX.			
2116-TB*	1/2"	.235 x .500	1 1/16	5/8	1	.060	.235	.350	.500	3/16	1 1/8	1 1/8
2237	3/4"	.230 x .430	1 1/16	5/16	1 1/32	.080	.230	.320	.430	13/16	1 1/8	1 1/8
2238	3/4"	.235 x .465	1 1/16	5/16	1 1/32	.050	.235	.340	.465	13/16	1 1/8	1 1/8
2239	3/4"	.240 x .685	1 1/16	5/16	1 1/32	.060	.240	.500	.685	13/16	1 1/8	1 1/8

* Not CSA Certified
UL File No. E-23017
CSA File No. 2884

Rocking action of foot allows each strap to accept a wide range of wire sizes!

Cable Straps



- Hole for 1/4" screw
- Hot-dipped galvanized malleable iron construction

CAT. NO.	WIRE SIZE	DIMENSIONS (IN.)	
		A	B
1341-TB	2-#10	5/8	1 1/8
1344	3-#6 or 3-#8	5/8	1 1/16
1345*	3-#4 or 3-#2	13/16	1 5/64
1346	3-1/0	3/4	2 1/16
1347	3-4/0	3/4	2 5/32

* Steel, hot-dipped galvanized.
UL not applicable
CSA Certified

Service Entrance Cable Fittings

Two-taper design — one slow and one fast — enables connectors to accept varied cable sizes for maximum take-up!

Watertight Connectors for Oval Cable



- Tapered neoprene bushings resist oil, sunlight and water
- Hex gland and body take same wrench opening
- Stainless-steel slip ring prevents cable from twisting as gland ring is tightened
- Threads on body tapered for water-sealing

CAT. NO.	HUB SIZE	OVAL CABLE RANGE	
		MAX.	MIN.
2111	1/2"	.420 x .560	.380 x .520
2232	3/4"	.385 x .600	.260 x .500
2233	3/4"	.500 x .750	.375 x .625
2234	3/4"	.555 x .800	.490 x .675
2432	1"	.385 x .600	.260 x .500
2433	1"	.500 x .750	.375 x .625
2434	1"	.555 x .800	.430 x .675
2438	1"	.565 x .855	.440 x .730
2439	1"	.635 x .975	.510 x .850
2442	1 1/4"	.635 x .975	.510 x .850
2443	1 1/4"	.640 x 1.050	.490 x .900
2446	1 1/4"	.750 x 1.150	.565 x .965
2454	1 1/2"	.840 x 1.275	.655 x 1.090
2447	1 1/2"	.880 x 1.425	.695 x 1.240
2448	2"	.968 x 1.500	.790 x 1.390
2449	2"	1.062 x 1.765	.850 x 1.550
2450	2"	1.820 x 1.190	1.700 x 1.050

UL File No. E-15170

CSA File No. 589

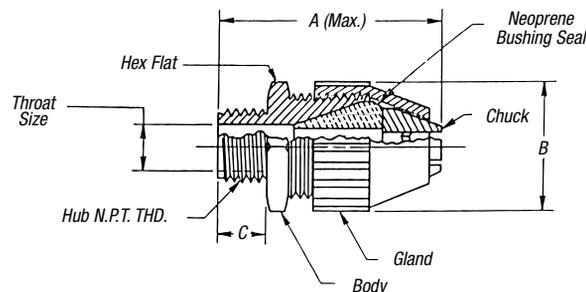
Note: These may be obsolete and replaced.

Hand tightens — no tools required!

Nylon UF-Cable Fittings for Corrosive Environments



- Tapered threaded hub
- Liquidtight and dust tight
- Corrosion- and weather-resistant nylon construction for both outdoor and indoor applications



CAT. NO.	HUB SIZE	UF CABLE RANGE		A	B	C
		MAX.	MIN.	MAX.	±.060	±.060
2827	1/2"	.550 x .280	.400 x .190	2.60	1.270	.600
2828	3/4"	.675 x .280	.525 x .190	3.00	1.570	.620
2829	3/4"	.775 x .280	.625 x .190	3.00	1.570	.620

UL File No. 15170

CSA File No. 589

MC and AC Cable Fittings

Metal-Clad Cable, Armored Cable and Flexible Metal Conduit

Armored Cable (Type AC) — Ref. NEC® Article 320

National Electrical Code® defines type AC armored cable as, "A fabricated assembly of insulated conductors in a flexible metallic enclosure."

- ACT** Indicates an armored cable employing conductors having thermoplastic (Type T) insulation.
- AC** Indicates an armored cable employing conductors having rubber insulation of code grade.
- ACH** Indicates an armored cable employing conductors having rubber insulation of the heat-resistant (75° C) grade.
- ACHH** Indicates an armored cable employing conductors having rubber insulation of the heat-resistant (90° C) grade.
- ACU** Indicates an armored cable employing conductors having rubber insulation of latex grade.
- "L"** Used as a suffix, it indicates that a lead covering has been applied over the conductor assembly.

All armored cables may employ copper or aluminum or copperclad aluminum conductors with the following sizes and are rated for 600 volts or less:

- No. 14 AWG to No. 1 AWG Copper
- No. 12 AWG to No. 1 AWG Aluminum or Copperclad Aluminum

Type AC cables except ACL carry an internal bonding strip of copper or aluminum in intimate contact with the armor for its entire length. Armored cable can be used for both exposed or concealed locations. With lead-covered conductors (Type ACL), the cable can be embedded in masonry or concrete and can be used in damp locations or where exposed to oil.

Armored cable is not permitted in locations where it will be subjected to physical damage or corrosive fumes. Armored cable cannot be used for direct burial in earth.

With minor exceptions, armored cable is also not permitted to be used in hoists or elevators, storage battery rooms, any hazardous locations, in commercial garages and in theaters or similar locations.

Codes require that cable shall be supported with straps or staples without damaging conductors and also limit the minimum bend radius to five times the diameter of type AC cable. Certain precautions are prescribed in code where cable is installed through joist rafters or similar wood members.

According to NEC 320 where armored cable is terminated, a fitting is required to protect conductors from abrasion. In addition, a bushing is required between the conductors and armor. Design of fitting has to be such that the insulating bushing is visible for inspection. Bushing is not required with lead-covered cables when properly installed.

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Please refer to the following for further details and complete information:

1. NEC Article 320...Armored Cable (Type AC Cable)
2. UL 4, ANSI C33.9...Safety Standards for Armored Cable
3. UL 514B, Safety Standards for Outlet Boxes and Fittings
4. A-A-50552...Federal Specification. Fittings for Cable, Power, Electrical and Conduit, Metal, Flexible
5. NEMA FB-1...Standards Publication. Fittings & Supports for Conduit and Cable Assemblies
6. CEC Section 12-700...Wiring Methods (Armored Cable)
7. CSA C22.2 No. 51...Safety Standards for Armored Cables
8. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

Note: The materials herein, whether relating to the National Electrical Code, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, are not intended to provide all relevant information required for use and installation of our products. Refer to applicable codes, instructions and industry specifications prior to installation or use.

MC and AC Cable Fittings

Flexible Metal Conduit — Ref. NEC® Article 348

Flexible metal conduit can be used for exposed or concealed work in dry locations. It can be used for wet locations provided conductors within are lead covered or other approved type.

Flexible metal conduit cannot be used underground or embedded in poured concrete or aggregate. With rubber covered conductors, the conduit cannot be exposed to oil, gasoline or other materials having a deteriorating effect on rubber.

With minor exceptions use of flexible metal conduit is not permitted in hoists, in storage battery rooms and in any hazardous locations. Use of flexible metal conduit is restricted to systems under 600 volts.

According to NEC® Article 348, flexible metal conduit no longer than six feet and containing circuit conductors protected by overcurrent device rated for 20 amps or less is suitable as a grounding means provided, it is terminated in fittings approved for the purpose.

Flexible metal conduit longer than six feet is permitted to be used as a grounding means provided the conduit and the fitting are approved for the purpose. To date, there is no flexible metal conduit approved for the purpose by the Underwriters Laboratories.

In Class I & II, Division 2 hazardous areas, the conduit itself cannot be used as the grounding means. A bonding jumper must be installed in accordance with NEC Section 250.102. Flexible metal conduit is available with steel or aluminum armor in trade size 5/8" to 4". With few exceptions where 3/8" and 3/4" trade sizes are used, Code prohibits use of conduit less than "d" trade size. Bends in concealed work are restricted to 360 degrees total. No angle connectors are permitted in concealed raceway installations.

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Please refer to the following for further details and complete information:

1. NEC Article 348...Flexible Metal Conduit
2. UL 1, ANSI C33.92...Safety Standards for Flexible Metal Conduit
3. UL 514B, Safety Standards for Outlet Boxes and Fittings
4. A-A-50552...Federal Specification. Fittings for Cable, Power, Electrical and Conduit, Metal Flexible
5. WW-C-566...Federal Specification. Conduit, Metal, Flexible
6. NEMA FB1...Standards Publication. Fittings and Supports for Conduit and Cable Assemblies
7. CEC 12-1100...Wiring Method (Rigid & Flexible Conduit)
8. CSA C22.2 No. 56...Safety Standards for Flexible Metallic Conduit and Liquidtight Flexible Metal Conduit
9. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

Suggested Specifications for Armored Cable and Flexible Metal Conduit Fittings

- Armored cable (metal-clad cable type AC) and flexible metal conduit shall conform to provisions of following applicable standards:

Armored Cable...UL 4/ANSI C33.9/ CSA 22.2 No. 51

Flexible Metal Conduit...UL 1/ANSI C33.92/WW-C-566/CSA 22.2 No. 56

Type of cable used and conductors within flexible metal conduit shall be suitable for conditions of use and location.

- Where approved armored cable or flexible metal conduit is used as an equipment grounding conductor, terminating fitting used shall be of the grounding type as manufactured by Thomas & Betts, series 3110

- Where armored cable or flexible metal conduit terminates into a threadless or threaded opening, it shall be assembled with approved fittings; fittings shall be of malleable iron/steel construction, electro zinc plated inside/outside, equipped with nylon insulated throat and shall be of angled saddle type as manufactured by Thomas & Betts, series 3110. Direct-bearing screw type fittings shall not be used

- Suitable bushing as manufactured by Thomas & Betts, series 422 or 390, shall be provided between the conductors and armor



Series 3110
Armored Cable Connector
& Flexible Metal Conduit



Series 390
Anti-Short Bushing

MC and AC Cable Fittings

TITE-BITE® Connectors

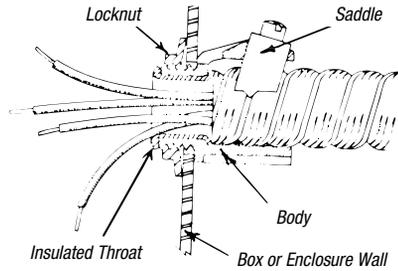
Application

- To connect and effectively bond metal-clad cables, armored cable or flexible metal conduit to a box or an enclosure

Features

- Provided with an angled saddle designed to:
- Insulated throat protects conductors during and after installation and reduces wire pull effort
- Heat-curved insulator in throat:
- Locknuts designed to provide effective bond between connector and box or enclosure, will not vibrate loose
- Designed with fewer installing screws — reduces installation time and labor cost
- Armor stop with viewing window
- Rugged all-steel or malleable iron construction
- Suitable as a grounding means per NEC® Article 348 for flexible metal conduit, NEC® Article 320 for armored cable and NEC® Article 330 for metal-clad cable
- Suitable for hazardous location use per Class 1 Division 2 NEC 501.10 (b)(2)

Typical Installation



3110 Series

Standard Material/Finish

Body	Steel or Malleable Iron/ Electro Zinc Plated & Chromate Coated
Saddle	Steel/Electro Zinc Plated & Chromate Coated
Screws	Steel/Electro Zinc Plated & Chromate Coated
Insulator	Thermoplastic/As Molded

Listings/Compliances

UL	514B
CSA	C22.2 No. 18
NEMA	FB1
UL	(UL File No. 23018)
CSA	(LR-2884, LR-4484)

**Super-Fast
Installation!**

*Up to 2X faster
than standard
connectors!*

**Very High
Cable Pull-Out
Resistance!**

**Now UL Listed
for New Interlocked
Armor Ground Type
Metal Clad Cable
(MCI-A)!**

RANGE	HUB SIZE	CONDUIT SIZE	CABLE OPENING
3110 Series Straight Connectors	½" to 4" NPS	¾" to 4"	.470" to 4.560"
3130 Series 90° Connectors	½" to 4" NPS	¾" to 4"	.470" to 4.560"

(All hubs provided with straight pipe threads NPS)

MC and AC Cable Fittings

Designed to resist vibration and strain!



TITE-BITE® Connectors — Nylon Insulated



- Super-fast installation and extreme pull-out resistance due to angled saddle design
- Steel or malleable iron construction
- Tough, insulated lining and Tite-Bite® design make these connectors a “must” when conductors are subject to vibration or strain
- Look for the unique T&B blue color to ensure the highest quality fitting

CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
	MAX.	MIN.			A†	B	C
2492*•#	.500	.370	3/8"	1/2"	1 1/16"	1 1/8"	7/16"
3110-TB**•	.660	.470	3/8"	1/2"	1 1/4"	1 1/8"	7/8"
3112#•	.920	.670	1/2"	1/2"	1 1/4"	1 1/8"	7/8"
3115#	1.125	.906	3/4"	3/4"	1 25/32"	1 1/4"	1 1/32"
3117#	1.468	1.250	1"	1"	2 1/8"	1 3/4"	1 1/8"
3118***	1.750	1.562	1 1/4"	1 1/4"	2 3/4"	2"	1 1/4"
3119***	2.031	1.812	1 1/2"	1 1/2"	3 1/8"	2 5/8"	1 3/4"
3120***	2.500	2.312	2"	2"	3 3/4"	2 3/4"	1 13/16"
3121***	3.062	2.812	2 1/2"	2 1/2"	4 3/8"	3 1/4"	2 1/4"
3122***	3.562	3.312	3"	3"	5"	3 3/4"	2 1/4"
3123****††	4.060	3.620	3 1/2"	3 1/2"	—	—	—
3124****††	4.560	4.120	4"	4"	—	—	—

Material: Steel thru 3/4" trade size.

UL File No. E 23018

CSA File No. 2884

#UL Listed for Metal Clad Cable (MCI).

•UL Listed for new Interlocked Armor Ground Type Metal Clad Cable (MCI-A).

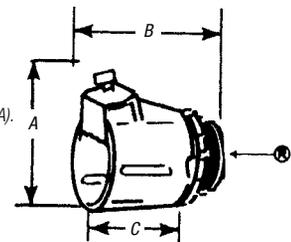
*Good for aluminum-sheathed cable.

**UL Listed for Armored Cable and Metal Clad Cable.

***UL Listed for Flexible Metal Conduit only.

†Approximate dimension with screw at minimum height.

††CSA not applicable.



Easy to install!

TITE-BITE® Connectors



- Easy to install with double-grip saddle
- 3/8" and 1/2" sizes made of formed steel, which produces uniform high quality and a smooth throat to protect conductor insulation
- 3/4" and larger size are malleable iron

CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
	MAX.	MIN.			A†	B	C
300-TB**•	.660	.470	3/8"	1/2"	1 1/4"	1 1/8"	7/8"
301-TB*•	.781	.460	3/8"	1/2"	1 1/8"	1 1/8"	7/8"
302-TB#•	.920	.670	1/2"	1/2"	1 1/8"	1 1/16"	1 1/64"
304#	1.093	.906	3/4"	3/4"	1 1/8"	1 1/16"	1 1/32"
306#	1.468	1.250	1"	1"	2 1/8"	1 3/4"	1 1/8"
308***	1.750	1.562	1 1/4"	1 1/4"	2 5/16"	2 1/32"	1 1/4"
310***	2.031	1.812	1 1/2"	1 1/2"	2 5/8"	2 1/16"	1 3/4"
312***	2.500	2.312	2"	2"	3 1/8"	2 13/16"	1 13/16"
314***	3.062	2.812	2 1/2"	2 1/2"	3 1/2"	3 1/8"	2 1/4"
316***	3.562	3.312	3"	3"	4 1/16"	3 3/16"	2 1/4"
318****††	4.060	3.620	3 1/2"	3 1/2"	—	—	—
320****††	4.560	4.120	4"	4"	—	—	—

Material: Steel thru 1/2" trade size.

UL File No. E 23018

CSA File No. 2884

#UL Listed for Metal Clad Cable (MCI).

•UL Listed for new Interlocked Armor Ground Type Metal Clad Cable (MCI-A).

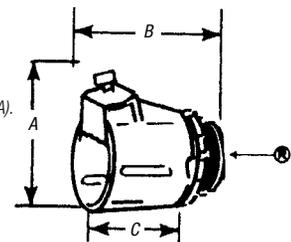
*Not UL Listed.

**UL Listed for Armored Cable and Metal Clad Cable.

***UL Listed for Flexible Metal Conduit only.

†Approximate dimension with screw at minimum height.

††CSA not applicable.



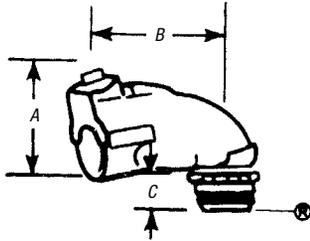
MC and AC Cable Fittings

The easiest and best connector to install when making sharp bends at the enclosure or equipment!

TITE-BITE® Connectors — 90° Angle Nylon Insulated



- Steel or malleable iron construction
- Offers all of the advantages of the straight connector with only one screw to tighten, except in the larger sizes, which have two
- Peep hole on top provides for easy inspection of ABC bushing
- Narrow design makes it easy to install connectors in adjacent knockouts



CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
	MAX.	MIN.			A†	B	C
3130-TB#•	.660	.470	3/8"	1/2"	1 1/32	1 19/32	15/16
3132#•	.920	.670	1/2"	1/2"	1 1/8	2 5/16	15/16
3135#	1.093	.906	3/4"	3/4"	2 1/8	2 1/8	9/16
3137#	1.468	1.250	1"	1"	2 21/32	2 1/8	1/2
3138***	1.750	1.562	1 1/4"	1 1/4"	3 5/16	3 3/32	9/16
3139***	2.031	1.812	1 1/2"	1 1/2"	4	4 1/8	11/16
3140***	2.500	2.312	2"	2"	4 19/16	5 1/16	11/16
3141***	3.062	2.812	2 1/2"	2 1/2"	6 9/32	6	3/4
3142***	3.562	3.312	3"	3"	7 1/32	7 1/16	3/4
3143****†	4.060	3.620	3 1/2"	3 1/2"	—	—	—
3144-TB****†	4.560	4.120	4"	4"	—	—	—

UL File No. E 23018

CSA File No. 2884

#UL Listed for Metal Clad Cable (MCI).

•UL Listed for new Interlocked Armor Ground Type Metal Clad Cable (MCI-A).

***UL Listed for flexible metal conduit only.

†Approximate dimension with screw at minimum height.

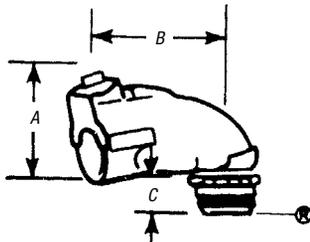
††CSA not applicable.

Angle clip provides secure mechanical grip that tightens under tension or vibration!



TITE-BITE® Connectors — 90° Angle

- Throat is long enough to install in cast housing knockouts
- 3/8" and 1/2" sizes of steel construction
- 3/4" and larger sizes made of malleable iron



CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
	MAX.	MIN.			A†	B	C
321#•	.660	.470	3/8"	1/2"	1 1/32	1 1/2	3/8
323#•	.920	.670	1/2"	1/2"	1 1/8	2 3/8	17/32
325#	1.093	.906	3/4"	3/4"	2 1/8	2 1/8	1/2
326-TB#	1.468	1.250	1"	1"	2 21/32	2 1/8	1
327-TB***	1.750	1.562	1 1/4"	1 1/4"	3 1/8	3 3/8	—
328***	2.031	1.812	1 1/2"	1 1/2"	4 1/8	4 1/8	—
329***	2.500	2.312	2"	2"	4 3/8	4 31/32	—
330-TB***	3.062	2.812	2 1/2"	2 1/2"	6 1/2	6	—
331***	3.562	3.312	3"	3"	5 29/32	7	—
332††	4.060	3.620	3 1/2"	3 1/2"	—	—	—
333††	4.560	4.120	4"	4"	—	—	—
3144-TB****†	4.560	4.120	4"	4"	—	—	—

UL File No. E 23018

CSA File No. 2884

#UL Listed for Metal Clad Cable (MCI).

•UL Listed for new Interlocked Armor Ground Type Metal Clad Cable (MCI-A).

***UL Listed for flexible metal conduit only.

†Approximate dimension with screw at minimum height.

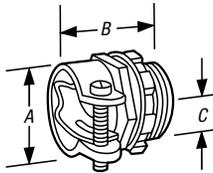
††CSA not applicable.



MC and AC Cable Fittings

Fits every size of armored cable, metal-clad cable and flexible metal conduit!

Squeeze Connectors — Straight



- Malleable iron or steel construction
- Catalog Nos. 252, 253-TB, 254-TB and 255 are steel
- Add "I" suffix for insulated throat

CAT. NO.	INS. CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
		MAX.	MIN.			A†	B	C
252***	—	.531	.437	5/16"	3/8"	13/16	25/32	11/32
253-TB***†	253-I-TB***†	.585	.455	3/8"	1/2"	31/32	113/64	5/8
254-TB	254-I-TB	.938	.812	1/2"	1/2"	17/32	13/8	13/32
255	255-I	1.094	.938	3/4"	3/4"	11/4	117/32	7/16
256	256-I	1.375	1.250	1"	1"	119/32	15/8	1/2
257***	257-I***	1.656	1.500	11/4"	11/4"	17/8	123/32	17/32
258***	258-I***	1.875	1.688	11/2"	11/2"	21/4	17/16	9/16
259***	259-I***	2.500	2.313	2"	2"	231/32	25/8	11/16
249***	249-I***	3.062	2.812	21/2"	21/2"	35/16	211/16	3/4
277***	277-I***	3.563	3.312	3"	3"	313/16	27/8	3/4
278-TB***††	278-I-TB***††	4.370	3.200	31/2"	31/2"	65/8	51/4	13/16
281-TB***††	281-I-TB***††	4.600	3.500	4"	4"	71/4	53/4	15/8

** UL Listed for armored cable only. Fitting material steel.

*** UL Listed for flexible metal conduit only.

† Approximate dimension with screw at minimum height.

†† cULus Certified

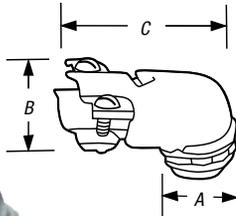
.485"–.660" cable opening range for 253-I-TB.

UL File No. E 23018

CSA File No. 2884

Only two screws to tighten!

Squeeze Connectors — 90° Angle



- Cap lifts off simply by loosening screws partway
- 3/8" and 1/2" sizes made of steel
- 3/4" and larger sizes made of malleable iron
- Add "I" suffix for insulated throat

CAT. NO.	INS. CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
		MAX.	MIN.			A†	B	C
266-TB	266-I-TB	.656	.406	3/8"	1/2"	11/2	113/32	17/16
272**	272-I**	.812	.688	3/8"	1/2"	11/16	17/8	—
268-TB	268-I-TB	.937	.813	1/2"	1/2"	111/16	113/16	11/8
279	279-I	1.000	.875	3/4"	3/4"	113/16	27/16	113/16
270	270-I	1.125	1.000	3/4"	3/4"	118	114	111/16
273-TB	273-I-TB	1.406	1.187	1"	1"	25/8	27/32	27/16
274***	274-I***	1.656	1.375	11/4"	11/4"	3	3	3
275***	275-I***	1.875	1.625	11/2"	11/2"	33/8	33/16	4
276***	276-I***	2.500	2.125	2"	2"	41/2	313/16	47/8
282-TB***††	282-I-TB***††	3.100	2.520	21/2"	21/2"	45/16	51/16	73/16
283-TB***††	283-I-TB***††	3.640	3.100	3"	3"	51/16	63/16	81/16
284-TB***††	284-I-TB***††	4.220	3.700	31/2"	31/2"	613/16	83/16	111/4
285-TB***††	285-I-TB***††	4.600	4.100	4"	4"	71/4	83/8	123/8

** UL Listed for armored cable only.

*** UL Listed for flexible metal conduit only.

† Approximate dimension with screw at minimum height.

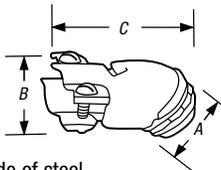
†† cULus Certified

UL File No. E23018

CSA File No. 2884

Fast and easy installation — simply loosen screws partway to lift off cap!

Squeeze Connectors — 45° Angle



- 3/8" and 1/2" sizes made of steel
- 3/4" size made of malleable iron
- Add "I" suffix for insulated throat

CAT. NO.	INS. CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
		MAX.	MIN.			A†	B	C
265	265-I	.656	.406	3/8"	1/2"	117/32	15/32	11/8
267	267-I	.937	.813	1/2"	1/2"	123/32	1/2	11/4
269	269-I	1.125	1.000	3/4"	3/4"	2	17/32	13/16

UL File No. E-23018

CSA File No. 2884

UL Listed for armored cable and flexible metal conduit.

† Approximate dimension with screw at minimum height.

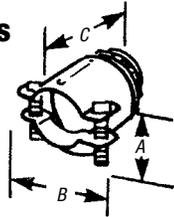
MC and AC Cable Fittings

Armor-gripping saddle stays open by itself when cable is being inserted!



Two-Screw Connectors

- Formed steel body
- Carefully round bushing

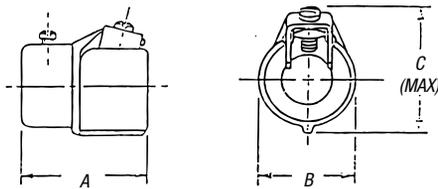


CAT. NO.	CABLE OPENING (IN.)		TRADE SIZE	K.O. SIZE	DIMENSIONS (IN.)		
	MAX.	MIN.			A†	B	C
3301-TB**	.656	.250	3/8"	1/2"	31/32	1 1/16	1 1/16
3312-TB	.937	.500	1/2"	1/2"	1 1/32	1 5/8	1 5/8

** UL Listed for armored cable only. UL File No. E 1383 CSA File No. 2884

TITE-BITE® design holds flexible metal cable firmly in place with a single screw!

Adapter — EMT to Flex



CAT. NO.	SIZE	DIMENSIONS (IN.)		
	FLEX TO EMT	A	B	C
503TB	1/2" - 1/2"	1 2/32	1 3/16	1 5/8
504	3/4" - 3/4"	1 25/32	1 7/16	2 1/8
505-TB	1" - 1"	2 1/32	2 1/16	2 5/8

CSA File No. 8994 UL File No. E-23018

Smooth plastic bushing protects conductor insulation from rough edges of armored cable and flexible metal conduit!

Anti-Short Bushing



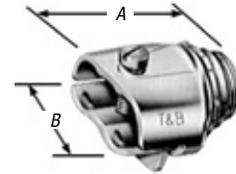
CAT. NO.	SIZE (AWG)
390	#14-2, #14-3, #12-2
391	#14-4, #12-3, #6-1, and #4-1
392	#12-4, #10-2, #10-3 and #2-1
393	#10-4, #8-2, #8-3, and #1-1
394	#8-4, #6-2, #6-3, #4-2, #4-3, and #6-4

Colorized. CSA File No. 589
Temperature Rating: 240° F. UL not applicable.

For flexible metal conduit and armored cable.

Duplex Clamp Connector

- Malleable iron construction

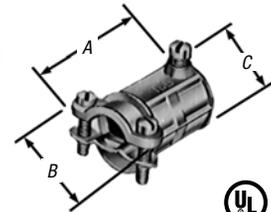


CAT. NO.	K.O. SIZE	DIMENSIONS (IN.)	
		A	B
291-TB	1/2"	1 13/32"	1 11/16"

UL File No. E 1383 CSA File No. 2884

One-piece fitting couples 3/8" flexible metal conduit to 1/2" EMT!

Combination Coupling



CAT. NO.	SIZE	DIMENSIONS (IN.)		
	FLEX TO EMT	A	B	C
449-TB	3/8" - 1/2"	1 2/32	1 11/32	1 9/16

Cable opening: max. .656, min. .250. UL File No. E-23018 CSA File No. 2884

Fast and easy installation!

Strap

- Elongated bolt hole makes alignment easy, even when holes in mounting surface are off center



- Snap-on design holds strap in place

CAT. NO.	SIZE
65-TB	3/8" Flex

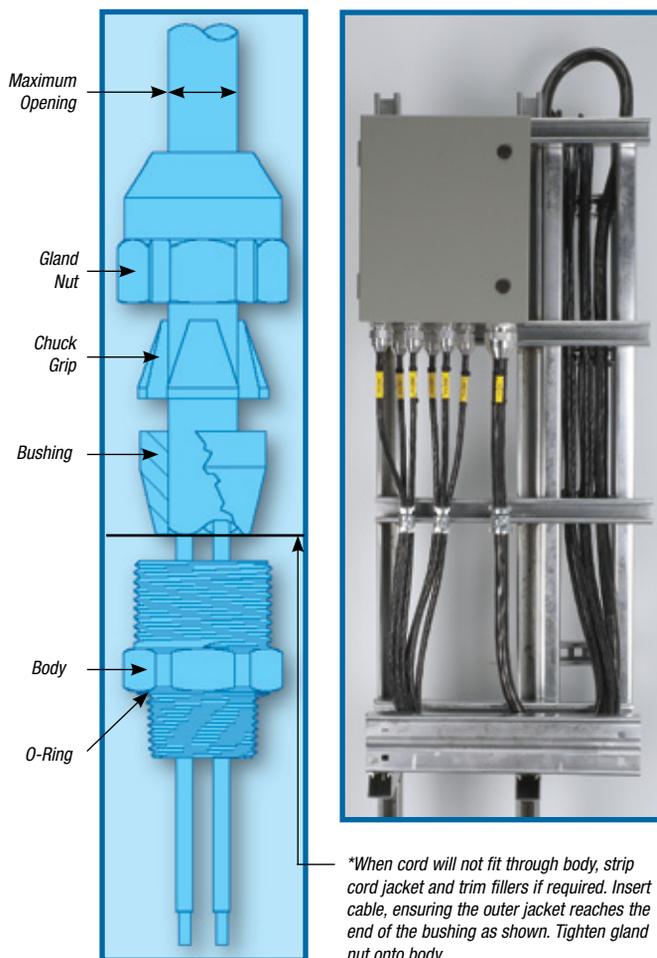
Tray Cable Fittings

Increase safety for hazardous locations.

Silver Grip® TCF® Series — Tray Cord Fitting

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 Vapor environments, the Silver Grip® Tray Cord Fitting provides efficient strain relief for cables entering enclosures and raceways, and for cords used on portable equipment.

- Now available in stainless steel in hub sizes from ½" to 1"
- 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



**Now Available
in Stainless
up to 1"**

Applications

Tray Cable: Complies with IEC requirements for Class I, Zone 2 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF® fittings must be used in combination with a certified Class I hazardous location sealing fitting.

Portable Cord: Complies with IEC requirements for Class I, Zone 1 locations when used with enclosures containing no arcing or sparking devices. For enclosures with arcing or sparking devices, TCF® fittings must be used in combination with a certified Class I hazardous location sealing fitting.

Note: Tray cable is not suitable for use in Zone 1 locations. Portable cord can be used in Zone 1 applications only when installed on portable equipment.

- CSA File Number LR4484
- Class 4418-03 Fittings for Hazardous Locations
- Class 4418-03 Fittings for Hazardous Locations — Certified to U.S. Standards
- Class I, Zone 1, AEx e II



CAT. NO.	HUB SIZE NPT	THROAT DIA. (IN.)	MIN. CABLE DIA. (IN.)	MAX. OPENING (IN.)	STD. PKG. QTY.
TCF050-27AL	½	.330	.150	.270	25
TCF050-40AL	½	.540	.250	.400	25
TCF050-54AL	½	.540	.400	.540	25
TCF050-67AL	½	.540	.540	.670	10
TCF050-78AL	½	.540	.660	.780	10
TCF075-40AL	¾	.540	.250	.400	15
TCF075-54AL	¾	.540	.400	.540	15
TCF075-67AL	¾	.780	.540	.670	10
TCF075-78AL	¾	.780	.660	.780	10
TCF075-88AL	¾	.765	.770	.880	10
TCF100-78AL	1	.980	.660	.780	10
TCF100-88AL	1	.980	.770	.880	10
TCF100-100AL	1	.980	.870	1.000	10
TCF125-109AL	1¼	1.255	.800	1.090	4
TCF125-128AL	1¼	1.255	1.080	1.280	4
TCF125-147AL	1¼	1.255	1.270	1.470	4
TCF150-115AL	1½	1.470	.890	1.150	2
TCF150-140AL	1½	1.470	1.140	1.400	2
TCF150-165AL	1½	1.470	1.390	1.650	2
TCF200-153AL	2	1.896	1.190	1.530	2
TCF200-186AL	2	1.896	1.520	1.860	2
TCF200-219AL	2	1.896	1.850	2.190	2
TCF250-252AL	2½	2.466	2.120	2.520	—
TCF300-278AL	3	2.780	2.380	2.780	—
TCF300-304AL	3	3.037	2.640	3.040	—
TCF300-330AL	3	3.068	2.900	3.300	—

For stainless steel (316), replace AL with SS6 (up to 1" only)

Non-Metallic Sheathed Cable Fittings

Non-Metallic Sheathed Cable

Ref. NEC® Article 334

Code defines non-metallic sheathed cable as, "A factory assembly of two or more insulated conductors having an outer sheath of moisture resistant, flame retardant, non-metallic material."

Non-metallic sheathed cable is constructed of insulated conductors (#14 to #2 AWG Copper or #12 to #2 AWG Aluminum or Copperclad Aluminum), and an outer non-metallic sheath classified as Type NM or Type NMC.

Non-metallic sheathed cable is provided with or without a bare or insulated equipment grounding conductor. Non-metallic sheathed cable is rated for 60° C service with voltage limitation of 600 volts.

Type NM — has flame-retardant moisture resistant sheath.

Type NMC — has flame-retardant, moisture-resistant, fungus-resistant and corrosion-resistant sheath.

Non-metallic sheathed cable is permitted by code to be used exposed or concealed in one, two or multifamily dwellings or other structures not exceeding three floors. Use of Type NM cable is restricted to dry locations whereas Type NMC can be used in dry, moist, damp or corrosive environments.

Non-metallic sheathed cable (both Type NM & NMC) is not permitted to be used as a service conductor, in commercial garages, in hoists or cannot be embedded in cement, concrete or aggregate. With minor exceptions, use of non-metallic sheathed cable is also prohibited in theaters or any hazardous locations.

NEC® Section 334.30 requires that cable be secured in place by suitable means so as not to injure the cable. Adequate protection for cable is also required when run is exposed, through joists or rafters, through floors, in unfinished basements and accessible attics.

Cable bends are limited to a minimum of five times the diameter of the cable.

NEC® 300.4(B) requires that cable be protected from physical damage when it passes through factory or field punched, cut or drilled holes in metal members. A bushing or grommet firmly secured in place is recommended.

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Please refer to the following for further details and complete information:

1. NEC® Article 334...Non-Metallic Sheathed Cable (Type NM & NMC)
2. NEC® Article 300...Wiring Methods
3. UL 719, ANSI C33.56...Safety Standards for Non-Metallic Sheathed Cable
4. UL 514B, Safety Standards for Outlet Boxes and Fittings
5. NEMA FB-1...Standards Publication. Fittings and Supports for Conduit and Cable Assemblies
6. CEC Section 12-600...Wiring Methods (Non-Metallic Sheathed Cable)
7. CSA C22.2 No. 48...Safety Standards for Non-Metallic Sheathed Cable
8. CSA C22.2 No. 18...Safety Standards for Outlet Boxes, Conduit Boxes and Fittings

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Note:

The materials herein, whether relating to the National Electrical Code®, the Underwriters Laboratories, Inc. listing, to industry practice or otherwise, are not intended to provide all relevant information required for use and installation of our products. Refer to applicable codes, instructions and industry specifications prior to installation or use.

Non-Metallic Sheathed Cable Fittings

Suggested Specifications for Non-Metallic Sheathed Cable Fittings

- Where non-metallic sheathed cable or flexible cord terminates into a threaded or threadless opening, terminating fittings used shall be approved for the purpose by nationally recognized laboratory, inspection agency or product evaluation organization.
- Terminating fittings shall be of malleable iron, steel or thermoplastic construction designed to provide adequate strain relief and positively prevent damage to jacket or conductor insulation such as series 3300 or 3302M manufactured by Thomas & Betts.
- Ferrous metal fittings shall be electro zinc plated inside/ outside including threads and bushed with a nylon insulated throat.
- Thermoplastic material used for connector construction shall be of high impact strength suitable for 105° C/ 221° F service with a UL flammability rating of 94V-1.
- Where non-metallic sheathed cable passes through either factory or field punched, cut or drilled holes in metallic members, the cable shall be protected by thermoplastic bushing such as series 3210 manufactured by Thomas & Betts. Bushing shall be firmly secured in opening. Nylon bushed metallic fittings such as Thomas & Betts series 1942 may be substituted as required.



Series 3300
Non-Metallic Sheathed
Cable and Flexible Cord
Connectors (All Plastic)



Series 3302M
Non-Metallic Sheathed Cable and
Flexible Cord Connectors (Steel)



Series 3210
Knockout Bushings



Series 1942
Insulated Nipples

Non-Metallic Sheathed Cable Fittings

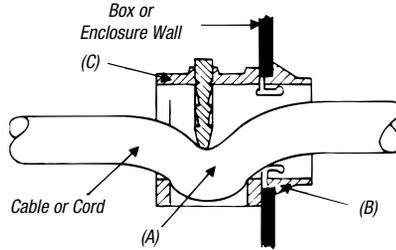
Non-Metallic Sheathed Cable and Flexible Cord Connectors (All Plastic)

Application

- To connect non-metallic sheathed cable and flexible cord to a box or an enclosure

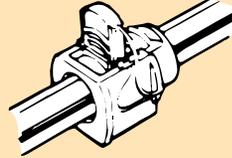
Features

- Design provides strain relief by partially deflecting cable (A); therefore:
 - Connector will not damage outer covering or jacket of cable, or conductor insulation; designed to give safe trouble free installation
 - Holding power and cable strain relief are not affected by surface finish of outer covering or cable jacket
 - Connector provides superior holding power far in excess of listing agency requirements
- Snap-in one-piece design; accommodates variation in knockout dimensions, saves installation time (B).
- All high-impact thermoplastic construction provides:
 - Insulated throat; conductors are protected from abrasion
 - Improved dielectric strength, and eliminates potential shorts
 - Corrosion resistance
- Wide range — reduces inventories
- Connector may be pre-installed in box K.O. or on cable



3300 Series

Typical Installation

 <p>1. Remove sheath from end of cable (4" or more as required). Insert cable through connector as shown (Cable under button).</p>	 <p>2. Insert button into cavity.</p>	 <p>3. With grooved pliers or parallel jaw type pliers (commercially available), squeeze button into cord wires as far into connector body as possible. Note: It may be necessary to re-adjust pliers to ensure button is properly installed.</p>
 <p>4. Snap connector into knockout box. If desired, this step can be done prior to Step 1.</p>	 <p>5. To remove from knockout box, depress ears.</p>	 <p>6. To remove from cable, cut connector as shown.</p>

Range

CAT. NO.	CABLE/KNOCKOUT SIZE	CORD RANGE
3300	1/2"	#10-2, #12-2 & #14-2 Type NM Cable; .125" to .300" outside diameter cord
3201 & 3350	1/2"	#10-3, #12-3, #14-3, #10-2, #12-2, #14-2 Type NM Cable; also multiple (2) #12-2 and #14-2 Type NM Cable; .300" to .600" outside diameter cord
3202	3/4"	#8-3 and #6-3 type NM cables; also Multiple (2) #14-3 and #10-2 Type NM Cable; .500" to .850" outside diameter cord

Standard Material

All high-impact polycarbonate — UL Class 94V-1 suitable for 105° C application

Standard Finish

As molded (Black)

Listings/Compliances

UL (UL File No: E-23017)
 CSA (Cat. #3201, 3350) for factory installation (LR-589, LR-2884)
 UL 514B
 CSA C22.2 #18 (Where applicable)
 ANSI C33.84, NFPA 70

Non-Metallic Sheathed Cable Fittings

Non-Metallic Sheathed Cable and Flexible Cord Connectors (Steel)

Application

- To connect non-metallic sheathed cable and flexible cord to a box or an enclosure

Features

- Rugged all-steel/malleable iron construction (A)
- Rounded cable clamp grip provides superior mechanical holding power without damaging conductor insulation or outer jacket (B)
- Clamp designed to cover body opening for a neat and safe installation
- Screws thread into clamp and not body; screw heads are snug with body and ends of screws do not project beyond the body (C)
- Insulator firmly secured in place protects conductors and reduces wire pulling effort; protects threads from damaging during handling (D)
- Locknut designed to secure connector to a box or enclosure; will not vibrate loose

Standard Material

Body	1/2" thru 1" Steel; 1/4" thru 2" Malleable Iron
Clamp	1/2" thru 1 1/4" Steel; 1/4" thru 2" Malleable Iron
Locknut	All Steel
Insulator	Thermoplastic

Standard Finish

All steel and malleable iron parts —
Electro Zinc Plated & Chromate Coated

Range

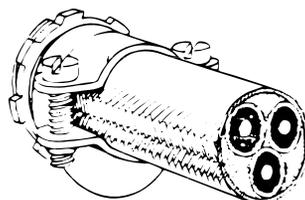
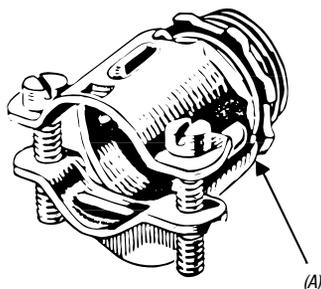
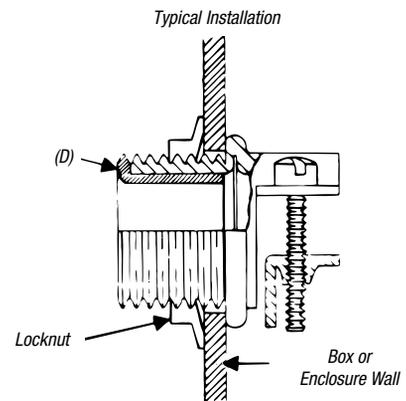
Hub Size	1/2" thru 2" Hubs Provided with Straight Pipe Threads (NPS.)
Cable	(2) #14 thru (4) #4 Type NM
Cable Outside Diameter	.250" to 1.150"

Listings/Compliances

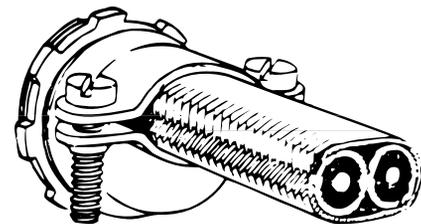
UL (UL File No: E-23017)
CSA (LR-589, LR-2884)
UL 514B
CSA C22.2 No. 18
NFPA 70
NEMA FB1
Federal Standard H-28 (Threads)



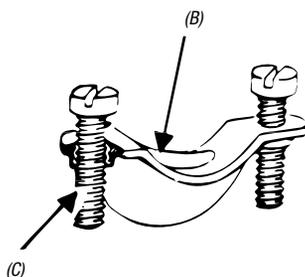
3302M Series
Non-Metallic Sheathed Cable Connector



Typical Installation (Flexible Cord)



Typical Installation (NM-Sheathed Cable)



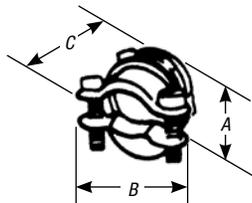
Non-Metallic Sheathed Cable Fittings

Steel or malleable iron

Two-Screw Connectors

Rounded cable grip and smooth bushing protect the cable sheath and wire insulation. Because saddle is threaded, screws do not travel or extend beyond the connector body as it is clamped to the cable. An extra lip on the saddle closes the unused part of the connector opening.

- Threaded saddle means screws don't travel or extend beyond connector body as it's clamped to cable
- Extra lip on saddle closes unused part of connector opening
- Steel or malleable iron construction
- Look for the unique T&B blue color ensuring the highest quality fitting



NON-INSULATED CAT. NO.	INSULATED CAT. NO.	K.O. SIZE	UL LISTED & CSA CERTIFIED		UL LISTED & CSA CERTIFIED SERVICE ENTRANCE CABLES	IN.			INSULATED CABLE OPENING (IN.)	
			SINGLE NM & NMC CABLE	PAIRS OF NM & NMC CABLE		A	B	C	MAX.	MIN.
3302-TB*	3302M-TB	1/2"	(2) #14, (2) #12, (2) #10, (3) #14, (3) #12, (3) #10	(2) #14, (2) #12	(2) #12 thru (2) #4, (3) #12, (3) #10	1	1 1/32	1	.590	.250
3303-TB	3303M	3/4"	(2) #8, (2) #6, (3) #8, (3) #6, (3) #4	(2) #12, (2) #10, (2) #8, (3) #14	(2) #8 thru (2) 1/0, (3) #8, (3) #6, (2) #6 + #8 GND, (2) #1, (2) 1/0, (3) #6 thru (3) #2	1 1/4	1 3/8	1 1/8	.750	.530
3304	3304M	1"	(3) #8, (3) #6, (3) #4	(2) #8, (3) #10	(2) #4 + #6 GND, (2) #3 + #5 GND, (2) #2 + #4 GND (3) #2 thru (3) 2/0, (2) #1 + #3 GND	1 1/2	1 7/8	1 1/4	.990	.690
3305	3305M	1 1/4"	—	(2) #8, (2) #6, (2) #4, (3) #8	(2) 1/0 + #2 GND, (2) 2/0 + #1 GND	1 29/32	2 1/4	1 1/4	1.320	.850
3306	3306M	1 1/2"	(3) #4, (3) #6	—	(3) 3/0, (3) 4/0, (2) 3/0 + 1/0 GND, (2) 4/0 + 2/0 GND	2 5/16	2 5/8	1 1/16	1.530	.930
3307	3307M	2"	Max. 1.98", Min. 1.15"	Max. 1.98", Min. 1.15"	—	2 3/4	3 1/4	1 7/8	—	—
3308†	—	2 1/2"	Max. 2.38", Min. 1.5"	Max. 2.38", Min. 1.5"	—	3 1/4	3 15/16	2 1/16	—	—
3309†	—	3"	Max. 2.88", Min. 1.75"	Max. 2.88", Min. 1.75"	—	3 9/16	4 9/16	2 1/16	1.980	1.150
3310†	—	3 1/2"	Max. 3.38", Min. 2.25"	Max. 3.38", Min. 2.25"	—	4 7/16	5 1/4	2 27/32	—	—
3311†	—	4"	Max. 3.88", Min. 2.5"	Max. 3.88", Min. 2.5"	—	4 7/8	5 15/16	3 3/32	—	—

*UL Listed for use with rubber and thermoplastic flexible cords (both single and multiple cords and two oval cables).

UL Listed for multiple cords and cables.

CSA File No. 2884

UL File No. E-23013 - 1/2" - 1 1/2"; U.L. File No. E-15170 - 2"

† Not UL Listed or CSA certified.