Thomas & Betts MORE POWER TO YOU

For over 70 years, Canadian electrical contractors, plant engineers and engineering consultants have placed their trust in Thomas & Betts electrical components. Today, Thomas & Betts Ltd. offers a complete package of market-driven products and services designed to give you the power to succeed in today's economy.

THE POWER OF T&B ENGINEERED PRODUCTS AND SERVICES

Our products and services continue to set new standards for quality, reliability and innovation.

- Highly-focused sales, product support and customer service team dedicated to serving the industrial MRO and OEM markets
- Guaranteed, competitive pricing
- The broadest offering of field-proven, brand name products available from one manufacturer
- “One order, one shipment” for thousands of standard products through Thomas & Betts and your Signature Service distributor
- Reduced lead time on critical products through your Signature Service distributor
- Technical support via phone, fax on demand and the internet
- ISO-certified manufacturing - quality engineering and manufacturing
- Local and national inventory support
- T&B Tool Lease program - the tools you need today without tomorrow's investment

Thomas&Betts

THE POWER OF CHOICE

As North America's largest single source for electrical components, Thomas & Betts is powered by the longest and most complete list of reputable brand name products available from one manufacturer in the industry today. With services like "one order, one shipment" available through your Thomas & Betts distributor, the more T&B purchases you make, the more you can save.

To request information about any of these products contact your Regional Sales Office.

All-Struct™	aluminum and steel structures
Amerace®	airfield lighting
Battpac®	battery-powered and compression tools
Blackburn®	compression connectors
Blackburn®	grounding products
Catamount™	one-piece ties and accessories
Color-Keyed®	compression connectors
Deltec™	aerial cable support systems
Diamond™	pole line hardware
Elastimold®	premolded connectors for underground distribution applications
Emergi-Lite™	emergency lighting systems
ExpressTray™	wire-mesh cable management system
E-Z-Code®	wire marker systems
E Z Ground™	compression connectors
Furseweld®	exothermic connectors
Hazlux™	hazardous location lighting
Iberville®	“roughing-in” products
Iberville®	steel boxes and covers
Kold-n-Klose®	forced encapsulated closures and sheath repair systems
LRC®	connectors, splices, adaptors and accessories
Lumacell®	emergency lighting systems
Marrette®	wire connectors and nonmetallic boxes
Meyer®	transmission and light duty engineered steel poles
Microlectric®	meter sockets and pole line hardware
Mipco®	plugs, receptacles, modules, power outlets and connectors
Ocal™	coated products
Partex®	wire marker systems
Pos-E-Kon®	industrial connectors
Ready-Lite™	emergency lighting systems
Red•Dot®	weatherproof boxes and covers
Reznor®	heating, ventilation and cooling systems
Russellstoll®	plugs, receptacles and connectors
Sachs™	drop line and construction hardware, grounding and bonding products, signal security hardware
Safe-Ty®	low profile in-line fasteners
Shield-Kon®	grounding connectors and tools
Shrink-Kon™	insulation products
South River™	wireless antenna mounts and hardware
Sta-Kon®	terminals and application tools
StarTeck™	fittings for teck cable
Steel City®	floor boxes, access modules and poke throughs
Superstrut®	metal framing, channel and accessories
Sure-Ty™	automated fastening system
T&B	cable tray systems
T&B	conduit fittings
Ty-Duct™	wiring duct
Ty-Rap®	cable ties

Shrink-Kon™

Table of Contents

Thomas&Betts

Overview

Protect against moisture, corrosion and abrasion!

T&B has you covered when it comes to insulation!

- Easy to use
- Heat shrinkable
- Products with heavy, medium,and thin walls
- Covers available for H-type taps and splices

Heavy-Wall Shrink-Kon™ — Heat-Shrinkable Insulators

When it comes to moisture-proofing connections and terminations, T&B's heat-shrinkable tubing, boots, and end caps have proven themselves over years of service to the industry. Made of thermally stabilized cross-linked polyolefin, these heat-shrinkable insulators can be used over lead, steel, aluminum, copper, standard plastic and elastomeric insulating materials.

T&B heat-shrinkable insulators are designed to be easy to use. They provide an appropriate level of insulation and abrasion protection.

Where applicable, T&B heat-shrink insulators are UL Listed. Also, all standard size insulators have an internally applied adhesive sealant.

Heavy-Wall Shrink-Kon™ Heat-Shrinkable End Cap & Boots

Redesigned for superior durability and performance!

Seals and insulates cable ends at a 600V rating. Installs fast, while providing insulation resistance to moisture, corrosion, and abrasion. The extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal.

Seals and insulates multiconductor cables and conduit with the same cost savings and superior properties of T&B's heat-shrinkable tubing. These boots replace time-consuming tapes,epoxies, encapsulations and dips. The boots are internally coated with sealant.

T&B Heat-Shrinkable Insulators Offer:

- Heavy-duty protection
- A full range of sizes from #14 to 2500 kcmil
- Field-proven reliability
- Internal sealant provides protection against moisture

Featured Products Include:

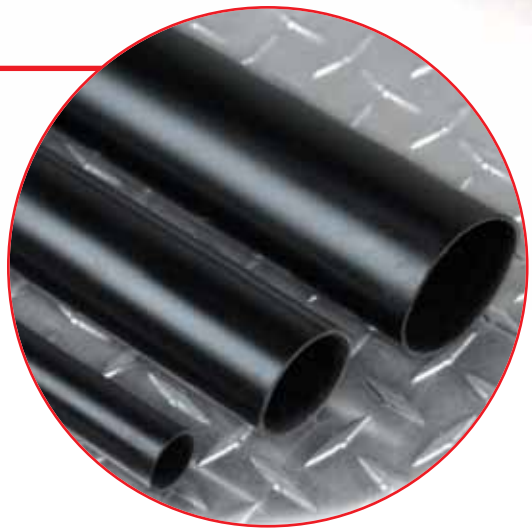
- High Shrink Ratio HSHR series with 6:1 shrink ratio designed for applications with extreme differences between cable, connector, and back shell sizes
- Flame Retardant HSFR series provides maximum flame retardancy

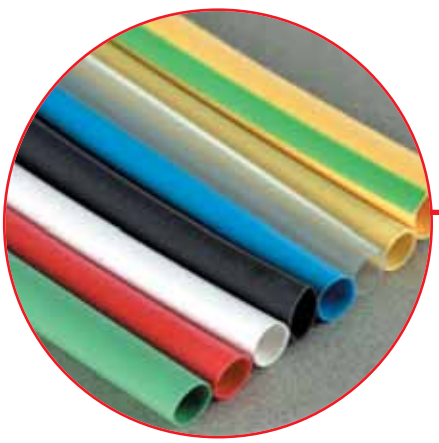
Overview

Shrink-Kon™ — Medium-Wall Tubing

More flexible than heavy-wall products, with excellent resistance to impact and abrasion.

- Seals and protects cable splices and terminations
- Thermoplastic adhesive liner guarantiees complete environmental protection and insulation





Shrink-Kon™ — Thin-Wall Tubing

Manufactured from stabilized Polyolefin, these insulators are used to insulate bare Sta-Kon® and Color-Keyed® connectors and splices. They also provide a degree of strain relief and may be used to harness wires. Available in cutpieces or reels.

Featured Products Include:

- Standard non-lined 2:1 thin wall tubing
- 3:1 adhesive lined thin-wall CPO-A series provides excellent flexibility with environmental sealing capability
- Extra clear heat shrink for use on power connections and data connections

Covers

These new insulating covers provide hard-shell insulated protection for “H” type compression taps and splices, and, because there is no taping required, you get uniform quality and appearance each time. The exclusive locking design provides the range-taking capability. Only six H-tap insulating catalogue numbers accomodate the range of 6 AWG–1000 kcmil in the main and 12 AWG–500 kcmil.

- Hard-shell outer covers guard against impact... inner seal keeps out dust
- Installs quickly and easily without special tools... simply snaps together
- Eliminates time-consuming taping
- Provides high-quality, neat, uniform installations
- Range-taking design reduces inventory

Heavy-Wall Heat-Shrinkable Tubing

HS Series

3:1 Shrink Ratio

- Made of thermally stabilized cross-linked polyolefin, enabling a recovered wall thickness greater than that of the cable jacket replaced
- Withstands severe mechanical requirements of U.R.D., submersible, and direct burial installations
- Tubing, featuring an internally applied sealant, offers protection against moisture, and may be used over lead, steel, aluminum, copper, standard plastic and elastomeric insulating materials
- Shrink temperature of 120° C
- High-impact, abrasion, corrosion and chemical resistance
- Rated for 600V, 90° C continuous use
- Thermoplastic adhesive liner provides complete environmental protection and insulation
- Meets: UL486D, CSA C22.2 No.198.2, ANSI C119.1, Western Underground Guide Numbers 2.4, 2.5, ICEA and NEMA insulation thickness requirements
- Continuous operating temperature: -55° C to 110° C
- T&B recommended up to 1 kV

HS Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation		600%
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)		No cracking or flowing
Longitudinal Change		+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking
Specific Gravity	ASTM D792	1.1
Hardness (Shore D)	ASTM D2240	50D
Electrical		
Delectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500V, 600Hz, 1 Min.)	UL 486D	No Breakdown, 24kV–1 min., 15kV–4 hrs.
Volume Resistivity	ASTM D257	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
Adhesive		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002	125 psi (0.875 MPa)
Adhesive Softening Point	ASTM E28	90°C±5°C
Adhesive Peel Strength (300mm/min. at 23°C) – to steel, aluminum, P.E. – PVC	ASTM D 1000	 35 lb/po linéaire 20 lb/po linéaire
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion

Heavy-Wall Heat-Shrinkable Tubing

HS Series Heavy-Wall Heat-Shrinkable Tubing — Black

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nom. Recovered Wall (in.)	Std. Length (in.)	Fits any listed or certified AL or CU splice with dia. no larger than		Cable Range	Std. Pkg. Qty
					O.D. (in.)	Length (in.)		
HS16-12	0.35	0.12	0.07	3	0.27	1.00	#14 AWG to #10 AWG	25
HS16-12L				6				
HS16-12-4				48				5
HS12-6	0.51	0.16	0.09	3	0.38	1.75	#8 AWG to #6 AWG	25
HS12-6L				6				
HS12-6-4				48				5
HS6-1	0.75	0.24	0.09	4	0.63	2.50	#6 AWG to #2 AWG	25
HS6-1L				8				
HS6-1-4				48				5
HS4-30	1.10	0.35	0.12	5	0.75	3.25	#1 AWG to 3/0 AWG	20
HS4-30L				9				10
HS4-30-4				48				5
HS40-400	1.50	0.47	0.16	8	–	–	2/0 kcmil to 350 kcmil	10
HS40-400L				12				
HS40-400-4				48				5
HS500-1000	2.00	0.63		9			250 kcmil to 500 kcmil	2
HS500-1000L				15				
HS500-1000-4				48				
HS12-30**	3.54	1.18		12			800 kcmil to 1250 kcmil	
HS30-30**				30				
HS30-4**				48				1
HS12-40**	4.72	1.57	0.17	12			1500 kcmil to 2500 kcmil	
HS30-40**				30				
HS40-4-TB				48				

Order multiple is std. pkg.
All lengths have factory-applied sealant.
***Not UL Listed*

HS Series Heavy-Wall Heat-Shrinkable Tubing — Red

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Length (in.)	For 2-Way Connector Cable Sizes	Std Pkg. Qty
HS12-6LR	0.51	0.16	6	#8–6 AWG	25
HS6-1LR	0.75	0.24	8	#6–2 AWG	
HS4-30LR	1.10	0.35	9	#1–3/0 AWG	10

Order multiple is std. pkg.
All lengths have factory-applied sealant.

Heavy-Wall Tubing (25' rolls) — Black

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Length (in.)	For 2-Way Connector Cable Sizes	Std Pkg. Qty
HS16-12-25	0.35	0.12	0.07	#14–10 AWG	1
HS12-6-25	0.51	0.16	0.09	#8–6 AWG	
HS6-1-25	0.75	0.24		#6–#2 AWG	
HS4-30-25	1.10	0.35	0.12	#1–3/0 AWG	
HS40-400-25	1.50	0.47	0.16	2/0–350 kcmil	
HS500-1000-25	2.00	0.63		250–500 kcmil	

*Order by reel, not by feet. 25' reels **not** supplied with factory applied sealant.*

Heavy-Wall Heat-Shrinkable Tubing

HSHR Series — High Shrink Ratio

6:1 Shrink Ratio

- Accommodates a wide variety of connector shapes and configurations.
- Thermoplastic Adhesive Liner for complete environmental protection and insulation
- Continuous operating temperature: -55° C to 110° C
- Shrink temperature: 120° C
- Flame retardant

HSHR Series Heavy-Wall Heat-Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pkg. Qty
HSHR750-4	0.75	0.13	0.10	#22–#46 AWG	48	25
HSHR1300-4	1.30	0.22	0.12	#8–700 AWG		
HSHR1750-4	1.75	0.29	0.13	#4–1000 AWG		
HSHR2000-4	2.00	0.33		#2–1250 AWG		
HSHR2750-4	2.75	0.46	0.14	1/0–1500 kcmil		15
HSHR3500-4	3.50	0.58	0.15	3/0–1750 kcmil		10
HSHR4700-4	4.70	0.78		300–2000 kcmil		5

Order multiple is std. pkg.
Standard color: black

HSHR Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation		600%
Elongation after Heat Aging (168 hrs. at 150°C)	ASTM D2671	500%
Heat Shock (4 hrs. at 225°C)		No cracking or flowing
Longitudinal Change		+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking
Specific Gravity	ASTM D792	1.1
Hardness (Shore D)	ASTM D2240	50D
Electrical		
Delectric Strength	ASTM D149, IEC 243	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown, 15kV–4 hrs.
Volume Resistivity	ASTM D257	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053/15	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
Adhesive		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002	125 psi (0.875 MPa)
Adhesive Softening Point	ASTM E28	90°C±5°C
Adhesive Peel Strength (300mm/min. at 23°C) – to steel, aluminum, P.E. – PVC	ASTM D 1000	 35 lb/po linéaire 20 lb/po linéaire
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion

Heavy-Wall Heat-Shrinkable Tubing

HSFR Series — Flame-Retardant Heavy-Wall

3:1 Shrink Ratio

- Insulates and protects electrical splices and terminations
- High-impact and abrasion resistance
- Thermoplastic adhesive liner
- Rated for 600V,90° C continuous use. Continuous operating temperature: -55° C to 110° C
- Shrink temperature of 120° C
- Meets: UL 486D, CSA 22.2 No.198.2, ANSI C119.1, Western Underground Guide Nos. 2.4, 2.5, MIL-DTL-23053/15, IEEE 383 Vertical Flame Test, ANSI C37.20.2, ICEA S-19-8 and NEMA insulation thickness requirements

HSFR Series Heavy-Wall Heat-Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pkg. Qty
HSFR16-12-4	0.35	0.12	0.07	#14–#10 AWG	48	25
HSFR12-6-4	0.51	0.16	0.09	#8–#6 AWG		
HSFR6-1-4	0.75	0.24		#6–#2 AWG		
HSFR4-30-4	1.10	0.35	0.12	#1–3/0 AWG		
HSFR40-400-4	1.50	0.47	0.16	2/0–350 kcmil		
HSFR500-1000-4	2.00	0.63		250–500 kcmil		

Order multiple is std. pkg. – Standard color: black.

HSFR Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation		600%
Longitudinal Change	ASTM D2671	+1%, -10%
Specific Gravity	ASTM D792	1.2
Elongation after Heat Aging (168 hrs. at 175°C)	ASTM D2671, ISO 37	500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking or splitting
Hardness (Shore D)	ASTM D2240	50D
Oxygen Index	ASTM D2863	27.00
Flammability	ASTM D2671	Flame Retardant
Electrical		
Delectric Strength	ASTM D149	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown, 24kV–4hrs, 15kV–4 hrs.
Volume Resistivity	ASTM D257	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053/5	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%
Adhesive		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002	125 psi (0.875 MPa)
Adhesive Softening Point	ASTM E28	90°C±5°C
Adhesive Peel Strength (300mm/min. at 23°C) – to steel, aluminum, P.E. – PVC	ASTM D 1000	 35 lb/po linéaire 20 lb/po linéaire
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Adhesive Water Absorption	ASTM D570	Less than 0.3%
Water Penetration	STM 706	No penetration after 286 hrs. of continuous immersion

Heavy-Wall Heat-Shrinkable Tubing

3:1 Shrink Ratio

HSC Series End Caps

- Provides effective method for sealing cable ends, pipe conduit, etc.
- Extra thickness at the tip of the end cap prevents sharp ends of the cable from puncturing the seal
- Flame retardant
- Rated from 600/1000V, 90° continuous use
- Shrink temperature of 120° C
- Resistant to common fluids and solvents
- Adhesive liner provides complete environmental protection and insulation
- Heat indicating lines. Continuous operating temperature: -55° C to 110° C

HSC Series Heat-Shrinkable End Caps

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Recovered Wall (in.)	Code Cable Size	Nom. Length (in.)	Std. Pkg. Qty
HSC8-4	0.51	0.16	0.09	#8–#6 AWG	2.50	100
HSC2-20	0.75	0.24		#6–#2 AWG		
HSC30-250	1.10	0.35	0.12	#1–3/0 AWG	3.00	50
HSC300-600	1.50	0.47	0.16	2/0–350 kcmil	3.25	
HSC700-1000	2.00	0.63		250–500 kcmil	3.50	
HSC750	2.70	0.87		600–1000 kcmil	4.00	10
HSC300*	3.50	1.18		800–1250 kcmil	4.50	5
HSC500*	4.70	1.57	0.17	1500–2500 kcmil	5.50	

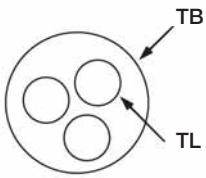
*Order multiple is std. pkg. – *Not UL Listed or CSA Certified.*

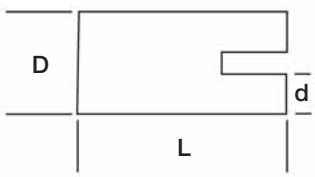
HSC Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation		550%
Elongation after Heat Aging (168 hrs. at 150°C)		500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Longitudinal Change on Recovery		+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking
Specific Gravity	ASTM D792	1.1
Hardness (Shore D)	ASTM D2240	50D
Electrical		
Delectric Strength	ASTM D149, IEC 243	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500 V, 60Hz, 1 Min.)	UL 486D	No Breakdown, 15kV–4 hrs.
Volume Resistivity	ASTM D257	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
Adhesive		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002	125 psi (0.875 MPa)
Adhesive Softening Point	ASTM E28	90°C±5°C
Adhesive Peel Strength (300mm/min. at 23°C) – to steel, aluminum, P.E. – PVC	ASTM D 1000 (mod.)	 35 lb/po linéaire 20 lb/po linéaire
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No penetration after 236 hrs. of continuous immersion
Room Temperature	168 hrs./40 psi	No leaks
Temp. Cycling (-40°C to 60°C)	50 cycles/15 psi	
Burst Pressure		100 psi (0.70 MPa)

Heavy-Wall Heat-Shrinkable Tubing

HSB Series — Heat-Shrinkable Breakout Boots





- Boots for 2-, 3- and 4-way cable breakouts
- Thermoplastic adhesive liner provides complete environmental protection and insulation
- Meets ESI 09-11
- Strain relief and mechanical protection
- Continuous operating temperature: -55° C to 100° C
- Shrink temperature of 135° C

HSB Series Heat-Shrinkable Breakout Boots

Cat. No.	No. Legs	D		d		L	TB	TL	Application Legs 600V Conductor AWG/kcmil	Std. Pkg. Qty
		Expanded Dia. (min.) (in.)	Recovered Dia. (max.) (in.)	Expanded Dia. (min.) (in.)	Recovered Dia. (max.) (in.)	Recovered Length (nom.) (in.)	Wall Thickness of body (nom.) (in.)	Wall Tickness of legs (nom.) (in.)		
HSB200-75-2	2	1.97	0.90	0.83	0.30	4.69	0.13	0.13	#3–300	10
HSB120-50-3	3	1.50	0.50	0.65	0.16	4.47	0.11	0.11	#8–3/0	
HSB170-82-3		2.20	0.89	1.20	0.35	7.09	0.12	0.12	#1–600	
HSB240-112-3		2.83	1.38	1.46	0.69	7.01	0.16	0.12	300–1000	
HSB125-50-4	4	1.83	0.47	0.59	0.12	3.74	0.10	0.08	#12–2/0	
HSB175-82-4		2.36	0.90	1.18	0.25	7.95	0.16	0.13	#4–600	
HSB265-120-4		3.10	1.40	1.50	0.49	9.45	0.13		3/0–1000	
HSB350-138-3	3	3.54	1.34	1.38	0.55	7.87	0.12	0.08	4/0–1000	5
HSB430-157-3		4.33	1.38	1.57	0.69	7.01	0.16	0.12	300–1000	
HSB490-200-3		4.92	2.32	2.00	1.00	11.14	0.15	0.15	450–1000	
HSB520-135-4	4	5.25	3.00	1.35	0.55	10.02	0.13	0.16	4/0–1000	

Order multiple is std. pkg.

HSB Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 540	2100 psi (14.5 MPa)
Ultimate Elongation		600%
Elongation after Heat Aging (168 hrs. at 175°C)		520%
Heat Shock (4 hrs. at 225°C)	ASTM2671	No dripping, cracking, flowing
Low Temperature Flexibility (-55°C)		No cracking
Flammability	ASTM D630	Self ext. within 1.97 sec.
Electrical		
Delectric Strength	ASTM D2671	280 V/Mil (11kV/mm)
Chemical		
Water Absorption	ASTM D570	0.03%

Medium-Wall Heat-Shrinkable Tubing

HSMW Series — Medium-Wall Tubing

3:1 Shrink Ratio

- More flexible than heavy-wall products
- Seals and protects cable splices and terminations
- High resistance to impact and abrasion
- Shrink temperature of 120° C
- Continuous operating temperature: -55° C to 110° C
- Thermoplastic adhesive liner guarantees complete environmental protection and insulation

HSMW Series Medium-Wall Heat-Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pkg. Qty
HSMW400-48	0.40	0.15	0.08	#4–#14 AWG	48	25
HSMW750-48	0.75	0.22		4/0–#8 AWG		
HSMW1100-48	1.10	0.40		400–#1 AWG		
HSMW1300-48	1.30			600–#1 AWG		
HSMW1500-48	1.50	0.50		750–3/0 kcmil		
HSMW1700-48	1.70			1000–2/0 kcmil		
HSMW2050-48	2.05	0.75		250–600 kcmil		
HSMW2750-48	2.75	1.00		500–1000 kcmil		15
HSMW3500-48	3.50	1.18	0.10	750–1250 kcmil		10
HSMW4700-48	4.70	1.57	0.11	1500–2500 kcmil		5
HSMW6700-48	6.70	2.30		–		
HSMW9000-48	9.00	3.00	0.12	–		

Order multiple is std. pkg.

HSMW Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2100 psi (14.5 MPa)
Elongation		550%
Elongation after Heat Aging (168 hrs. at 150°C)		500%
Heat Shock (4 hrs. at 225°C)	ASTM D2671	No cracking or flowing
Longitudinal Change		+1%, -10%
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking
Specific Gravity	ASTM D792, ISO/R1183	1.1
Hardness (Shore D)	ASTM D2240	50D
Electrical		
Delectric Strength	ASTM D149, IEC 243	500 V/Mil (20kV/mm)
Dielectric Voltage Withstand (2500V, 600Hz, 1 Min.)	UL 486D	No Breakdown, 24kV–1 min., 15kV–4 hrs.
Volume Resistivity	ASTM D257	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.1%
Adhesive		
Adhesive Lap Sheer (1 in./min. at 23°C)	ASTM D1002 (mod.)	125 psi (0.875 MPa)
Adhesive Softening Point	ASTM E28	92°C/-5°C
Adhesive Peel Strength (300mm/min. at 23°C) – to steel, aluminum, P.E. – PVC	ASTM D 1000	 35 lb/po linéaire 20 lb/po linéaire
Adhesive Blocking (30°C)	ASTM D1146	No Blocking
Water Penetration	STM 706	No penetration after 286 hrs. of continuous immersion

Thin-Wall Heat-Shrinkable Tubing

CPO Series — Thin-Wall Tubing, Non-Lined

2:1 Shrink Ratio

- Flame-retardant, cross-linked polyolefin
- Continuous operating temperature: -55° C to 135° C
- Shrink temperature of 120° C
- Meets UL 224, 125° C; CSA C22.2 No.198.1, 125° C; MIL-DTL-23053/5 Class 1&2; AMS 3636 & 3637; DEF STAN 59-97, Issue 3, Type 2a

CATALOGUE NUMBER CONSTRUCTION

Series	Colour	Length ft	Final Order No.
CPO63	+ 0	+ C	= CPO63-0-C

Available Colours

0 •	Black	5 •	Green
C •	Clear	6 •	Blue
2 •	Red	9 •	White
4 •	Yellow	S •	Green & Yellow Striped*

Available Packaging

25	•	25' reel
A	•	4'
B	•	Bulk
C	•	100'

(see page 12 for lengths)

CPO Series – Thin-Wall Heat-Shrinkable Tubing

Cat. No.*	Min. Expanded I.D. (in.)	Max. Recovered I.E. (in.)	Nom. Recovered Wall Thickness (in.)	Code Cable Size
CP063-_-_	0.06	0.05	0.02	–
CP093-_-_	0.09	0.05		–
CP0125-_-_	0.13	0.06		#24–#30 AWG
CP0187-_-_	0.18	0.09		#14–#22 AWG
CP0250-_-_	0.25	0.13	0.03	#10–#16 AWG
CP0375-_-_	0.38	0.19		#6–#12 AWG
CP0500-_-_	0.50	0.25		#1–#6 AWG
CP0750-_-_	0.75	0.38		4/0–#2 AWG
CP01000-_-_	1.00	0.50	0.04	350–2/0 kcmil

**See catalogue construction to complete.*
UL Recognized File Number E137759 and CSA Certified. (NOTE: Clear material not UL Recognized). When ordering standard package, order by package not feet.
Larger diameters available upon special request; contact your Regional Sales Office.
Order multiple for 4' sticks is 25 sticks.
Order multiple for reels is 1 reel.

Series	Bulk Length (ft)	Series	Bulk Reel Length (ft)
CPO63 = 1/16"	1,000	CPO375 = 3/8"	500
CPO93 = 3/32"		CPO500 = 1/2"	400
CPO125 = 1/8"		CPO750 = 3/4"	300
CPO187 = 3/16"		CPO1000 = 1"	
CPO250 = 1/4"	500		

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.E. (in.)	Nom. Recovered Wall Thickness (in.)	Std. Pkg. Qty
CP063-0-6	0.06	0.03	0.02	20
CP093-0-6	0.09	0.05		
CP0125-0-6	0.13	0.06		
CP0187-0-6	0.19	0.09		
CP0250-0-6	0.25	0.13	0.03	
CP0375-0-6	0.38	0.19		
CP0500-0-6	0.50/	0.25		10
CP0750-0-6	0.75/	0.38		
CP01000-0-6	1.00	0.50	0.04	5

Order multiple is std. pkg.
Catalogue numbers listed are Black color, other colors available upon request. Contact your Regional Sales Office.

Thin-Wall Heat-Shrinkable Tubing

Shrink-Kon™ Thin-Wall Insulation Kit

Catalogue No.	Description	Weight Each Kit	UPC Code
CHS-KIT	43' (13 m) Assorted Colors, Sizes – Thin-Wall Heat Shrink Tubing in plastic reusable case	1 lb / 0.45 kg	76821092835

Shrink-Kon thin-wall heat shrink kits feature useful colors and sizes in a convenient resealable storage box.

CHS-KIT Thin-Wall Insulation Kit

Now brought to you in color!
Shrink-Kon's new Thin-Wall Heat Shrink Kit features a large assortment of practical colors and sizes for your demanding jobs. Great for identification and adding a professional finishing touch on wire termination projects.

- Over 43' (13 m) of multi-colored polyolefin thin-wall heat shrink
- Convenient plastic kit for single storage location
- Individual 6" (15 cm) pieces for easy installation
- 2:1 shrink ratio
- UL Recognized and CSA approved
- Wide range of sizes – 3/16" (9 mm) to 1" (25 mm)

Products included in CHS-KIT

			Color Quantity Per Kit						
Qty/Kit	**Size in. (mm)**	**Catalogue No.**	**Black**	**Clear**	**Blue**	**Yellow**	**Red**	**Green**	**White**
36	3/16 (5)	**CPO187+**	6	6	4	4	6	4	6
24	1/4 (6)	**CPO250+**	6	4	2	2	4	2	4
12	3/8 (9)	**CPO375+**	2	2	2		2	2	2
6	1/2 (12)	**CPO500+**	1	1	1		1	1	1
4	3/4 (19)	**CPO750+**	1	1			1		1
4	1 (25)	**CPO1000+**	1	1			1		1

+Actual catalogue numbers require suffix for appropriate color.

Thin-Wall Heat-Shrinkable Tubing

Shrink-Kon™ Thin-Wall Insulation Kit

Catalogue No.	Description	Weight Each Kit	UPC Code
HS-KIT	37' (11 m) Assorted Sizes – Black Color Thin-Wall Heat Shrink Tubing in plastic reusable case	1 lb / 0.45 kg	76821093898

The Original Black Version HS-KIT

- Over 37' (11 m) of black polyolefin thin-wall heat shrink
- Convenient plastic kit for single storage location
- Individual 6" (15 cm) pieces for easy installation
- 2:1 shrink ratio
- UL Recognized and CSA approved

Products included in HS-KIT

Qty/Kit	Size in. (mm)	Catalogue No.
32	3/16 (5)	**CPO187-0-6**
20	1/4 (6)	**CPO250-0-6**
8	3/8 (9)	**CPO375-0-6**
6	1/2 (12)	**CPO500-0-6**
4	3/4 (19)	**CPO750-0-6**
4	4 (25)	**CPO1000-0-6**

Thin-Wall Heat-Shrinkable Tubing

Custom order lengths for those special jobs!

2:1 Shrink Ratio

Custom-Cut Length of Bulk Packaging – Thin-Wall Tubing

To best meet your requirements for thin-wall heat-shrinkable tubing, Thomas & Betts welcomes the opportunity to cut bulk reels of tubing. Minimum order requirement is one standard bulk reel, and multiples thereof. See table for bulk reel length by size. Tubing cannot be cut smaller that 1/2".

When ordering custom-cut lengths of tubing, order by piece, not by length. To determine the minimum number of pieces to order, simply figure how many pieces of a specific length of tubing is required to make use of a complete bulk reel.

Series	Bulk Reel Length (ft)	Series	Bulk Reel Length (ft)
CPO63 = 1/16"	1,000	CPO375 = 3/8"	500
CPO93 = 3/32"		CPO500 = 1/2"	200
CPO125 = 1/8"		CPO750 = 3/4"	100
CPO187 = 3/16"		CPO1000 = 1"	
CPO250 = 1/4"	500		

CUT PIECE CATALOGUE NO. CONSTRUCTION			
THIN-WALL SERIES	MINIMUM EXPANDED I.D. (IN.)	COLOUR	LENGTH (IN.)
CPO =	63 = 0.063	0 - Black	**XXXX** – 4 digits specify
	93 = 0.093	C = Clear	length of cut in inches
Corss-Linked	125 = 0.125	2 = Red	
Modified	187 = 0.187	4 = Yellow	
Polyolefin	250 = 0.250	5 = Green	
	375 = 0.375	6 = Blue	
	500 = 0.500	9 = White	
	750 = 0.750	S = Green & Yellow Striped	
	1000 = 1.000		

Example: CPO + 125 + 2 + 1.500 = CPO125-2-1.500
CPO Thin-wall Shrink, size 125 (0.125"), red colour, 1.5" long
Contact your Regional Sales Office for bulk reel quantity

Exemple 1

If a bulk length of tubing is 1.000' and the desired length of each individual piece is 6", the minimum order requirement is 2,000 pieces.

Given (length of reel) .....1,000'
Convert to inches by multiplying by 12 ..... 12 x 1,000
Length of reel in inches .....= 12,000
Divide by desired length .....12,000 ÷ 6
Total number of 6" pieces
in a 1,000' reel (Minimum Order) ..... = 2,000

Exemple 2

If a bulk reel of tubing is 400' and the desired length of each individual piece is 2", the minimum order requirement is 2,400 pieces.

Given (length of reel) .....400'
Convert to inches by multiplying by 12 ..... 12 x 400
Length of reel in inches .....= 4,800
Divide by desired length .....4,800 ÷ 2
Total number of 2" pieces
in a 400' reel (Minimum Order) ..... = 2,400

Contact your Regional Sales Office for pricing and availability on cut pieces.

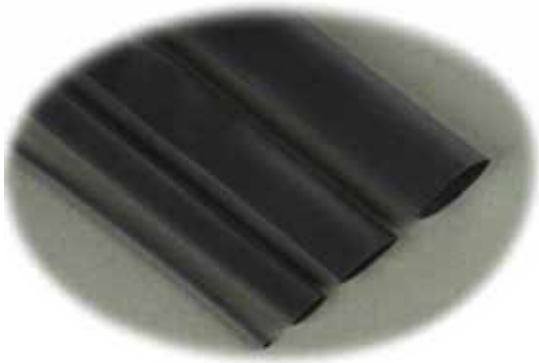
CPO Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2200 psi (15.0 MPa)
Elongation		400%
Longitudinal Change	ASTM D2671	+1%, -10%
2% Secant Modulus		16,000 psi (110 MPa)
Specific Gravity	ASTM D792, ISO/R1183	1.3" (colors) 0.95" (clear)
Restricted Shrinkage	ASTMD2671	No cracking
Elongation after Heat Aging (168 hrs. at 175°C)		350%
Heat Shock (4 hrs. at 250°C)		No cracking or flowing
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking or Splitting
Flammability		Flame Retardant (except Clear)
Electrical		
Delectric Strength	ASTM D2671, IEC 243	600 V/Mil (24kV/mm)
Volume Resistivity	ASTM D2671	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%

Thin-Wall Heat-Shrinkable Tubing

CPO-A Series — Thin-Wall, Adhesive Lined

3:1 Shrink Ratio



- Adhesive lined for moisture-proof environmental seal
- High 3:1 shrink ratio for covering irregularly shaped objects
- Continuous operating temperature: -55° C to 110° C
- Shrink temperature: 120° C

CPO-A Series Thin-Wall Heat-Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Expanded I.D. (in.)	Nom. Recovered Wall (in.)	Code Cable Size	Standard Length (in.)	Std. Pkg. Qty
CPO-A-125-48	0.13	0.02	0.04	#24–#30 AWG	48	25
CPO-A-187-48	0.18	0.06	0.05	#14–#22 AWG		
CPO-A-250-48	0.25	0.08		#10–#22 AWG		
CPO-A-375-48	0.38	0.14		#6–#16 AWG		
CPO-A-500-48	0.50	0.19	0.07	#2–#12 AWG		
CPOA-750-48	0.75	0.31		3/0–#4 AWG		

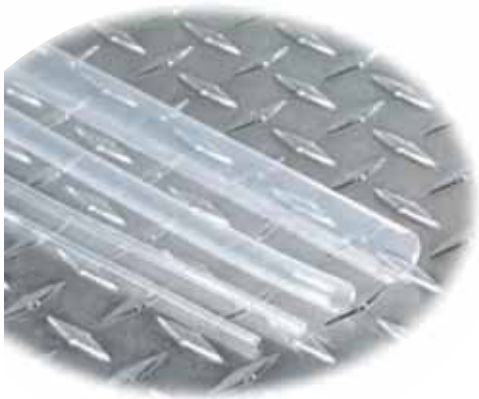
Note: Non-standard colours, sizes, and lengths available subject to your Regional Sales Office quotation.
Standard colour: Black

CPO-A Series Specifications

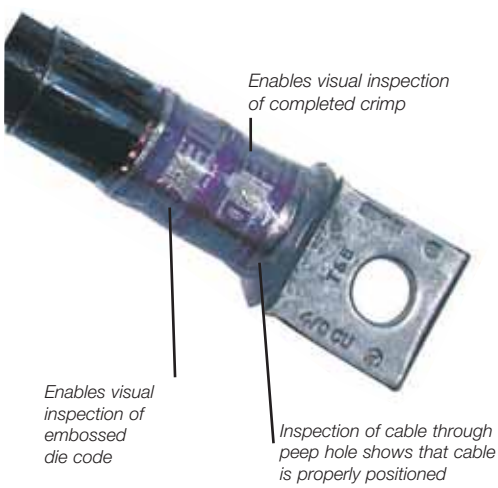
Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	2200 psi (15.0 MPa)
Elongation		400%
Heat Shock (4 hrs. at 250°C)	ASTM D2671	No cracking or Flowing
Longitudinal Change		+/-5%
Low Temperature Flexibility (4 hrs. at -55°C)		No cracking
Specific Gravity	ASTM D792, ISO/R1183	1.1
2% Secant Modulus	ASTM D2671	1600 psi (110 MPa)
Heat-Resistant Properties (168 hrs. at 175°C)	MIL-DTL-23053/4	240%
Flammability	ASTM D2671	Moderately Flame Retardant
Electrical		
Delectric Strength	ASTM D2671, IEC 243	600 V/Mil (24kV/mm)
Volume Resistivity	ASTM D2671	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.2%

Thin-Wall Heat-Shrinkable Tubing

CHS Series — Clear Thin-Wall PVC Heat Shrink



- Clear shrink enables user to inspect die and crimp details after installation
- Flexible PVC tubing is suitable for industrial and electronic applications
- UL standard UL224, VW-1 rated
- CSA standard C22.2 no.198.1
- Flame retardant
- Low shrink temperature of 110° C
- Dielectric strength — 600V/MIL



CHS Series Thin-Wall Heat-Shrinkable Tubing

Cat. No.	Min. Expanded I.D. (in.)	Max. Recovered I.D. (in.)	Nominal Recovered Wall (in.)	Code Cable Size	Std Length (ft.)	Std Pkg. Qty
CHS18	0.13	0.06	0.02	#22–#18 AWG	50	1
CHS18B					250	
CHS14	0.25	0.13	0.03	#16–#10 AWG	50	
CHS14B					250	
CHS38	0.38	0.19		#8–#6 AWG	50	
CHS38B					250	
CHS12	0.50	0.25		#4–#2 AWG	50	
CHS12B					250	
CHS34	.75	0.38	0.04	#1–3/0 kcmil	50	
CHS34B					250	
CHS100	1.00	0.50		4/0–300 kcmil	25	
CHS100B					100	
CHS112	1.50	0.75		350–700 kcmil	25	
CHS112B					100	
CHS200	2.00	1.00		750–1,000 kcmil	25	
CHS200B			0.05		100	

Standard package is in reels.
Order by reel; not by feet.

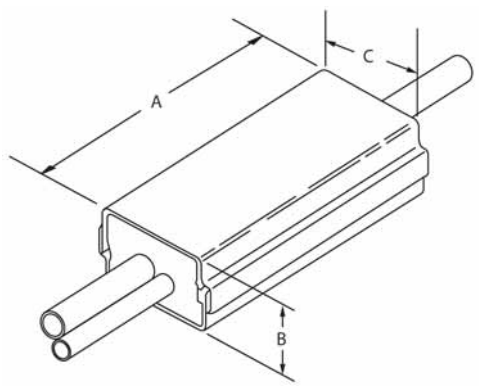
CHS Series Specifications

Property	Test Method	Typical Performances
Physical		
Tensile Strength	ASTM D412, ISO 37	3300 psi (23.0 MPa)
Elongation		300%
Longitudinal Change	ASTM D2671	+/-10%
2% Secant Modulus		16,000 psi (110 MPa)
Specific Gravity	ASTM D792, ISO/R1183	1.31
Elongation after Heat Aging (168 hrs. at 136°C)	ASTM D2671, ISO 37	250%
Heat Shock (4 hrs. at 250°C)	ASTM D2671	No cracking or Flowing
Low Temperature Flexibility (1 hrs. at 10°C)		No cracking or Slitting
Flammability		Self Extinguishing
Electrical		
Delectric Strength	ASTM D2671, IEC 243	600 V/Mil (24kV/mm)
Volume Resistivity	ASTM D2671	1016 ohm-cm
Chemical		
Fluid Resistance	MIL-DTL-23053/5, ISO 1817, ISO 37	Good to Excellent
Fungus Reistance	ASTM G21	No growth
Copper Corrosion	ASTM D2671	No Corrosion
Water Absorption	ASTM D570	0.3%

Splice Insulators & Insulating Covers

H-Tap Insulating Covers (Hard Covers)

- Interlocking insulating covers for H-type compression taps
- Easy installation: Place the H-Tap in the cover and snap the cover closed
- Consult your Regional Sales Office for flame-retardant version
- Can also be used on C-Taps



Cat. No.	Nominal Dimensions in.			Std. Pkg. Qty
	A (Length)	B (Thick.)	C (Width)	
HTC2S	2	1.13	1.44	15
HTC2	3.5			
HTC40	4.25	1.56	2	2
HTC40L2	5.75			
HTC500	6	1.75	2.75	8
HTC1000	7	2.38	3.88	2
HTC1000L	10			3

Specifications

- HTC2 and HTC2S use insulation wrap instead of end cushions for inner seal.
- Connector Cat. Nos. 54755 through 54790 and 63148 through 63180 require hydraulic crimping tools. Refer to instruction sheets
- Outer Hard Shell Covers: High-impact black thermoplastic (Noryl) Flammability Class, UL 94V-1
- Inner seal: Black neoprene sponge soft closed cell, oxygen index 28% UL 94 HBF
- Temperature Rating: 90° C Maximum
- Voltage Rating: 600V Maximum

For H-Tap Applications

Cover Cat. No.	AL/CU H-Tap No.	CU H-Tap
HTC2	63105	–
HTC2S	–	CHT814-10
HTC40	63110 63118 63125 63140	CHT214-9 CHT250214-8 CHT2514-7 CHT2502-6
HTC500	63148 63160	CHT50010-5/CHT50040-4 CHT75010-3/CHT750350-2
HTC1000L	63170	–
HTC1000	63180/63169	CHT750350-1F

For C-Tap Applications

Cover Cat. No.	C-Tap No.	Colour Code
HTC40	54720 54725 54730 54755 54760	Brown Green Pink Blue Brown
HTC40L2	54735 54740 54745 54750	Black Orange Purple Yellow
HTC500	54765 54770 54775 54780 54785	Pink Black Yellow White –
HTC1000	54790	–

Splice Insulators & Insulating Covers

H-Tap Insulating Covers (Soft Covers)

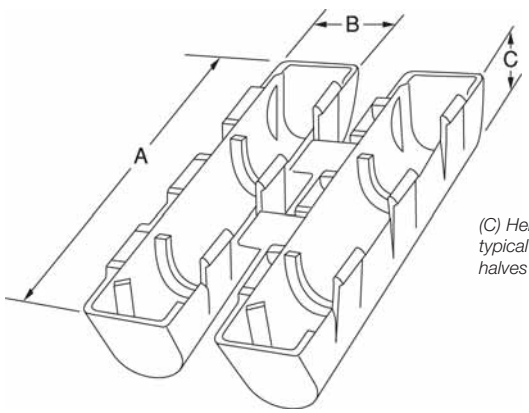
- Eliminates taping
- Provided with three positive locking latches and overlapping fringe for maximum cable insulation

Cat. No.	Wire Range		Installs "H" Tap Cat. No.	Std. Pkg. Qty
	Min.	Max.		
HT20C	6	2/0	63110 & 63125	50
HT40C		4/0	63140 & 63148	25
HT600C	2	500 kcmil	63160 & 63169	10
HT1000C	1/0	750 kcmil	63180	5
HT100C-L		1000 kcmil	63170	

Order multiple is std. pkg.

Specifications

- Rating: 90° C, 600V
- Material: Flame-retardant, high-impact polypropylene
- Colour: Black



(C) Height, typical both halves

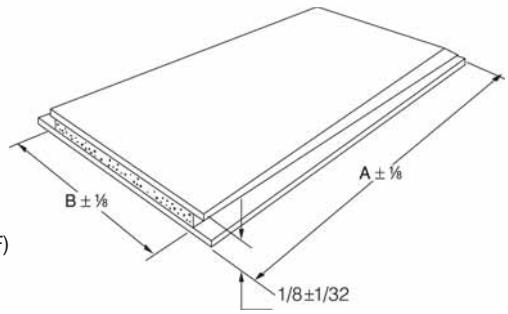
H-Tap Insulating Covers

Cat. No.	Wire Range		Use to insulate T&B H-Taps	In.			"A" Dim.	"B" Dim.
	Max.	Min.		A	B	C		
HT20C	2/0	6	6110/63115 63125/63120	4.5	1.25	1.13	–	–
HT40C	4/0		63140 63148	5.61	1.41	1.19		
HT600C	500 kcmil	2	63160/63169	6.81	2.13	1.45		
HT1000C	100 kcmil to 500 kcmil	250 kcmil to 1/0 AWG	63180	–	–	–	[184.15 mm] 7.250	2.330 +0.060
HT100C-L	1000 kcmil to 500 kcmil	250 kcmil to 250 kcmil	63170				[263.40 mm] 10.374	

Splice Insulators & Insulating Covers

Adhesive Insulating Covers

- Seals against moisture
- Voltage rating up to 600
- Workable from -10° C to 49° C (14° F to 120° F))
- Maximum operating temperature of 80° C (176° F)
- No installing tools required
- Also available in 10' rolls; consult your Regional Sales Office



Specifications

Electrical
- Dielectric Constant: 3.2 ASTM-D150 (60 Hz)
- Power Factor: 007 ASTM-D150 (60 Hz)
- Dielectric Strength: 340 Volts/mil ASTM-D1373

Chemical
- Water Absorption: 0.06% ASTM-570
- Ozone Resistance: Excellent: 03% ASTM-D1373
- CorrosionNone Visible: per ASTM-D 69

Cat. No.	A	B	Std. Pkg Qty
AC 5 x 3	5”	3”	10
AC 5 x 7		7”	
AC 85 x 75	8.5”	7.5”	5
AC 85 x 105		10.5”	

Order multiple is std. pkg.

- UL Listed – File No. E9809 – for use with T&B Covers.
- For “H” Taps, “C” Taps, two-way connectors, mechanical taps, and Color-Keyed® lugs and joints.
- Material: 6 mil vinyl backing, butyl rubber mastic adhesive thickness 1/8” approx. Polyethylene release sheet.
- Not for submersion in liquid.

Adhesive Insulator Cat. Nos.	Compression Lug Cat. Nos.										Compression Two-Way Connector Cat. Nos.			“H” Tap Cat. Nos.	“C” Tap Cat. Nos	Compression Cable Joint Cat. Nos.
AC5X3 Size Key #2	60096	60113	60130	60150	54132	54145	54160	54207	54906	54860	60500		54806	63105	54710	54610
	60097	60114	60150	60151	54134	54108	54162	54208	54942	54862	60501		54807	–	54715	54615
	60099	60016	60230	60230	54105	54147	54163	54255	54947	54864	60507		54806	–	54720	54620
	60101	60017	60236	60236	54135	54148	54111	54209	54909	54866	60512		54504	–	54725	54625
	60102	60018	60238	60238	54136	54150	54165	54210	54910	–	60516		54505	–	54730	54630
	60103	60120	60242	60242	54138	54152	54167	54260	54965	–	60905		54506	–	54735	54635
	60104	60122	60244	60244	54106	54153	54168	54211	54970	–	60910		54507	–	54740	–
	60106	60123	60248	60248	54139	54109	54112	54265	54850	–	60915		54506	–	54745	–
	60107	60124	60250	60250	54140	5415	54170	54212	54852	–	60920		54509	–	54750	–
	60108	60126	54104	54104	54107	54157	54204	54270	54854	–	60925		54500	–	–	–
	60109	60128	54130	54130	54142	54158	54205	54930	54856	–	54804		54511	–	–	–
	60112	60129	54131	54131	54143	54110	54206	54905	54858	–	54805		–	–	–	–
AC 5 x 7 Size Key #4	–	60152	60169	60267	54173	54115	54129	54222	54920	–	60522	60945	54516	63110	54755	54640
	–	60153	60174	60268	54174	54183	54213	54291	54923	–	60530	60950	54518	63115	54760	54645
	–	60154	60172	60269	54113	54116	54275	54223	54928	–	60538	60955	54809	63120	54765	54650
	–	60156	60174	60271	58161	54185	54214	54295	54868	–	60542	60960	54810	63125	54770	–
	–	60157	60176	60276	58162	54118	54280	54224	54870	–	60548	60965	54811	–	54775	–
	–	60159	60178	60274	58163	54187	54215	54226	54872	–	60554	60970	54812	–	54780	–
	–	60160	60180	60275	58165	54120	54282	54228	54874	–	60560	54509	54813	–	–	–
	–	60162	60254	60276	58166	54122	54216	54913	54876	–	60565	54510	54814	–	–	–
	–	60163	60256	60277	54178	54123	54218	54914	54878	–	60568	54511	54815	–	–	–
	–	60165	60260	60278	54179	54124	54286	54915	54880	–	60574	54512	54816	–	–	–
	–	60166	60262	60280	54114	54126	54220	54916	54882	–	60930	54513	54817	–	–	–
	–	60168	60265	54172	54181	54128	54289	54918	–	–	60935	54514	–	–	–	–
	–	–	–	–	–	–	–	–	–	–	60940	54515	–	–	–	–
AC85 x 75 Size Key #6	–	–	–	–	60184	–	–	–	–	–	60574		54522	63130	–	–
	–	–	–	–	60284	–	–	–	–	–	60576		54523	63135	–	–
	–	–	–	–	–	–	–	–	–	–	60578		54524	63140	–	–
	–	–	–	–	–	–	–	–	–	–	60580		54526	63145	–	–
	–	–	–	–	–	–	–	–	–	–	60584		54528	63150	–	–
	–	–	–	–	–	–	–	–	–	–	60975		54820	–	–	–
	–	–	–	–	–	–	–	–	–	–	60980		54823	–	–	–
	–	–	–	–	–	–	–	–	–	–	60985		54828	–	–	–
	–	–	–	–	–	–	–	–	–	–	54520		–	–	–	–
AC85 x 105 Size Key #8	–	–	–	–	–	–	–	–	–	–	–	–	–	63155	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–	63160	–	–
	–	–	–	–	–	–	–	–	–	–	–	–	–	63165	–	–

Splice Insulators & Insulating Covers

Once you try it, you'll wonder what you ever did without it!

T&B Self-Fusing Insulation Tape

MADE IN CANADA

Quick and easy inslulation no heat or adhesive required!

You won't believe how easy it is to use Shrink-Kon™ Self-Fusing Insulation Tape to insulate splices, terminations and connections. Forget the heat gun and adhesive. Two layers of this self-amalgamating tape form a flexible dielectric layer that protects your connection against moisture, humidity and corrosion. The tape offers high tensile strength, enabling you to stretch the first layer of tape to form a solid, compressed, watertight seal. Apply the second layer with minimal to no stretch, and your insulation job is complete!

- just to layers form a moisture-proof, abrasion-resistant, dielectric seal
- Easy-release, non-stratic-sensitive liner peels right off
- Tape adheres only to itself for ease of installation
- Creates and immediate, permanent bond even when wet
- Suitable for high and low voltage applications
- Stable even under extreme temperatures
- Resistant to UV radiation, arc track, ozone, steam, moisture and saltwater
- Easily removable – just slice with a knife and pull off – leaves no residue
- Smooth filler putty compound available for use under tape when insulating bolted or dimensionally inconsistent splices and terminations

TBF421-36

TBFP9-2

Cat. No.	Width (in.)	Length (ft)	Thickness (mils)	Color	Std Pkg. Qty
Self-Fusing Insulation Tape					
TBFT421-36	1	36	40	Red	10
TBFT201-36			20	Black	
TBFT201-6		6			6
Smooth Filler Putty Compound					
TBFP9-2	1	2	–	White	1

Standard package is rolls. Order by rolls; not by feet.

Features and Benefits

- Requires no heat gun or adhesive to form a moisture-proof abrasion-resistant bond
- Easy-release, non-static-sensitive, high-visibility liner peels right off
- Self-fusing tape material adheres to itself for ease of installation
- Creates an immeidate, permanent bond even when wet – no waiting period
- Stable even under exteme temperatures: -90° C to 260° C (-130° F to 500° F)
- UV, radiation, arc-track, ozone, steam, moisture and saltwater-resistant
- Easily removable – just slice with a knife and pull off – leaves no residue

Typical Applications:

Electrical | Plumbing | Automobive | Residential

- Repair deteriorated insulation on cables and conductors
- Insulate and seal, underground and above-ground bonding installations
- Insulate harmessing, bundling, cabling and wiring in aircraft, automotive, marine and other industrial machinery/equipment
- Motor connections
- Protects against vibration, scratching and moisture

Specifications

- Material: Modified silicone rubber compound
- Tensile Strength: 1200 psi
- Dielectric Strength: 20 mil: 600 vpm; 40 mil: 800 vpm
- Abrasion Resistance: 110 lbs./in.
- Water Absorption: < 0.5%
- Temperature Range: 90° C to 260° C (-130° F to 500° F)

Introducing the NEW T&B Self-Fusing Insulation Tape display. It will allow you to demonstrate the use of our tape. To get on, please contact your regional sales office.

Splice Insulators & Insulating Covers

HSTS25 — Tape Sealant

- Available in a 25-ft. roll
- Used in conjunction with T&B Heat-Shrinkable Insulators for better moisture sealing

Cat. No.	Description	Width (in.)	Thickness (in.)	Length (ft)	Std Pkg. Qty
HSTS25	Tape Sealant	1	0.06	25	1

Standard package is reels. Order by reel; not by feet.

Installation Guidelines

1. The cable, etc., should be relatively clean and free of greases, oils, and other foreign substances.
2. It is best to overlap each wrap of tape by 1/4 to 1/2 the width for the best seal.
3. When using heat-shrinkable products, most applications require only 1 or 2 layers of tape prior to sliding tubing in place.
4. Shrink the tubing, cap, boot, etc., following the installation procedure for the applicable heat-shrinkable part.

To seal the junction or crotch of an application requiring two or more cables, conductors, etc. without a common jacket.

1. Apply the overlapped 1 or 2 layers around each cable, conductor, etc., at the same distance from the connector, or ball up the sealant and press into crotch or junction of the joint.
2. Apply 2 overlapping wraps over the bundle.
3. Slide the expanded heat-shrinkable part over the joint and shrink.

Specifications

Physical	Electric	Chemical
Description: Butyl Rubber Polymer Application Temperature: 4°C to 38°C (40°F to 100°F) Service Temperature: -40°C to 82°C (-40°F to 180°F) Environmental Resistance: Resists ozone and all normal aging processes	Dielectric Strength: 250 v/mil minimum Volume Resistivity: 1014 ohms/cm	Chemical Resistance: Resists acids, bases and alcohols. Passes Fed. Spec. SS-S-00210, section 3.6

Splice Insulators & Insulating Covers

Quick and dependable way to insulate and waterproof motor lead connections up to 5kv.

Medium-Voltage Motor Stub Splice Insulator

- Installs in seconds
- Flame retardant
- Flexible boot and impact-resistant cap
- Long lasting and reusable
- Waterproof and abrasion resistant
- One size fits all hookups — reduces inventory
- Enables easy inspection of connection

This first-generation multi-splice insulator is designed to give you a quick, dependable means of protecting medium-voltage motor stub splice connections up to 5kV. You can install it in seconds simply by pushing the cover and boot together. Once installed, it completely waterproofs the connection and provides excellent protection against abrasion or mechanical abuse.

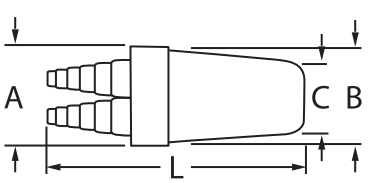
One size reduces inventory
The insulator accommodates wire sizes #8–2/0 AWG having outer diameters of .375" to .840". This range-taking feature should accommodate all of your medium-voltage motor hookups.

Inspectable and reusable
The insulator consists of just two parts: an elastomer boot and thermoplastic cap. The boot has two tapered cable entry legs that fit snugly around the cable to form a watertight seal. The legs are designed to be trimmed during installation to fit the required cable size tightly. The cap simply pushes into a groove in the boot — and pulls out easily when you want to inspect the connection. Removal of the cap does not disturb the seal around the cables, nor does it interrupt the bolted splice connection.

Quality engineered
The boot is made of flexible, abrasion-resistant elastomer, and the cap is made of high impact-resistant thermoplastic — high-performance materials you can depend on. Use the insulator for pigtail applications in motor junction boxes, manholes or wherever a waterproof, impact-resistant insulator is required.

Specifications

- 5KV Wire Range: #8 AWG–2/0
- Rating: 90° C Applications
- UL Listed to: 600V
- CSA Certified to: 600V
- T&B Recommended to: 5000V-90° C
- Material:
  Cap — NORYL, U.L.94V-1
  Boot — EPDM Elastomer, U.L.94V-2
  Lubricant — Silicone Grease



Wide Range Splice

Cat. No.	Wire Range	Insulation O.D. Range (in.)	Bolt Max. Length (in.)	Length L (in.)	Dia. A (in.)	Dia. B (in.)	Dia. C (in.)	Std Pkg. Qty
MSCV20	8-2/0 AWG	0.38–0.84	1.25	6.5	3	22.03	2	5

Order in multiples of std. pkg.

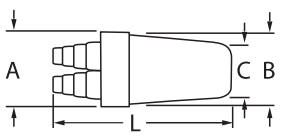
Splice Insulators & Insulating Covers

Quick-Seal Multi-Splice Insulators

- Fast and easy to use
- Reusable insulator snaps closed and can be opened for inspection
- 600V at 90° C

All-purpose quick-seal multi-splice can be used wherever a watertight insulator is needed in motor junction boxes, manholes, street lighting, bridges, machines, rooftop airconditioning, airport lighting, as well as in marine use. The insulator is a two-piece design, an abrasion-resistant elastomer cable entry boot and a high impact-resistant thermoplastic quick-seal cap. Installs in seconds, completely waterproof, long-lasting, reusable, inspectable, flame-retardant, impact-resistant, range-taking, inexpensive and totally dependable.

Specifications



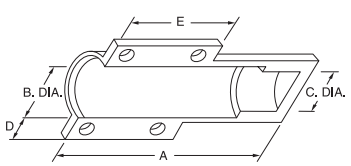
Material:

- Cap:NORYL,U.L.94V-1
- Boot: EPDM Elastomer, UL 94V-2
- Lubricant Silicone Grease

Quick-Seal Splice Insulators

Cat. No.	Wire Range	Insulation O.D. Range (in.)	Length L (in.)	Dia. A (in.)	Dia. B (in.)	Dia. C (in.)	Bolt Size Max. Dia.	Bolt Size Max. Length	Conn. Size Max. Length	Conn. Size Max. Width	Std Pkg. Qty
MSLT 8	14–8	0.15–0.28	2.625	1.22	1.03	0.813	0.25	0.50	1.25	0.50	10
MSLT 1	6–1	0.20–0.52	3.625	1.81	1.53	1.25	0.38	0.75	1.75	0.70	5

Order multiple is std. pkg.



Motor Stub Splice Insulators

- Re-enterable motor stub insulator
- Easy installation
- No special tools required
- Permits inspection of connector joint by simply removing the snap on cap, wide cable range, long life

This innovative product has been designed to insulate motor stub splices quickly, easily, and dependably. It consists of a boot-type insulator with integral TY-RAP® cable ties. To install, simply position the insulator over the bolted splice and tighten the cable ties. That's all there is to it. It produces uniform, high-quality installations every time… in about 30 seconds. The completed installation is immediately ready for inspection and use. If required, the insulator can be easily removed. Simply snip the cable ties and slide the insulator off the splice. It leaves no sticky residue.

Données techniques

- UL File E9809.UL and CSA Certified (94V-1 Flammability Class)
- Rated for 600V and 90° C application Material
- Body: Modified Neoprene Elastomer Straps: Nylon

Motor Stub Splice Insulators

Cat. No.	Wire Range	Length A (in.)	Bolt Max. (in.)	Dia. B (in.)	Dia. C (in.)	D (in.)	E (in.)	Std Pkg. Qty
MSC14*	#14–#10	3.38	1.5	0.56	0.50	0.38	0.35	15
MSC8	#12–#8		2.39	0.76	0.67		1.20	10
MSC2	#12–#2	0.75	3.25	0.95	0.88		1.5	
MSC20	#2–2/0	1.5	4.25	1.39	1.05	0.43	1.70	4
MSC250	3/0–300 kcmil		7.56	1.88	1.80	0.45	1.90	2
MSC500	350–500 kcmil	1.75	8.88	2.56	2.48		2.10	5

**One Ty-Rap cable tie only.*
Order in multiples of std. pkg.

Installation Tools

Separate fuel- and air-flow controls enable precise adjustment of flame and temperature up to 1,371° C (2,500° F) !

Portable Heat Shrink Torch

- 1,371° C (2,500° F) output capacity satisfies virtually any heat-shrink, brazing or soldering requirement
- Dual fuel- and air-flow controls enable separate adjustment of temperature and flame precision
- Brass and steel construction provides durability

Specifications

- Dimensions (without base): 3.9"L x 1.4"W x 5.4"H
- Weight (when filled): 9.88 oz.
- Fuel Tank Capacity: 2.03 fl.oz.
- Operating Time (per full fuel tank): Up to 220 minutes

Cat. No.	Description	Std. Pkg Qty
WT-PTORCH	Shrink-Kon™ Portable Heat-Shrink Torch	1

Order multiple is std. pkg.

Electric Heat Gun

- UL/CSA approved
- 232° C to 649° C heat range (450° F to 1,200° F)
- 120V 60Hz AC

Cat. No.	Description	Std. Pkg Qty
WT1400	Dual Temp. heat gun. 600°F / 900°F, 1,300W, 120VAC 60Hz	1

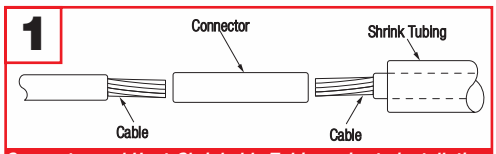
Order multiple is std. pkg.

Installation Guidelines and Cross Reference

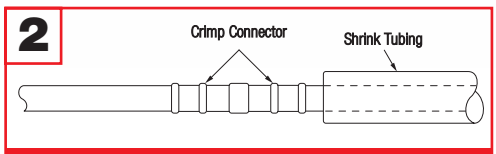
Installation

No Special Installation Skills Required

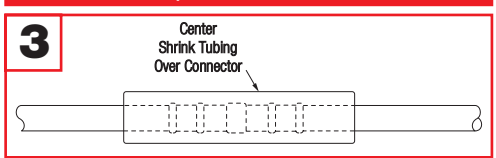
1. Remove any oil, grease, water, dirt, etc., by wiping the cable ends and connector. Remove all sharp edges and burrs from connector.
2. Center tubing over splice connector.
3. Use the light blue outer portion of the flame when using the SIT-1 torch. Do not hold the torch still in one position or concentrate the hot inner flame of the torch on the tubing; this may cause scorching.
4. Begin heating tubing in the center. Recover the central portion of the tubing first by heating around the circumference of the splice. (Keep heat source moving constantly around the circumference of the insulator to ensure uniform shrinkage of the insulator.)
5. Continue heating around the tubing and out toward one end. Move torch around the tubing until one end is completely recovered.
6. Repeat the above procedure on the opposite end of the splice, again working la source from the center outward and around the tubing.
7. Installation is complete when the tubing conforms to splice and sealant flow is apparent at both ends.



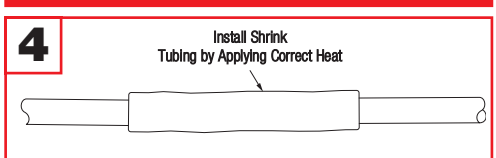
Connector and Heat-Shrinkable Tubing prior to installation.



Crimp connector installed.



Heat-Shrinkable tube in position.



Heat-Shrinkable tube after heat application.

Typical Specifications

Insulating and sealing of all 600V, in-line cable splices from #16 AWG through 1000 kcmil shall be done in accordance with the instructions provided with the Shrink-Kon™ shrinkable insulators, catalogue series HS.

The connector insulator must be made of thermally stabilized, homogeneous polyolefin having internally applied sealant. It must have underwriter's Laboratories Listing (UL 486, 90°C, 600V) and be approved for the use. It must be usable without additional covering or adhesive both indoors and outdoors, in overhead, direct burial, or submersed applications at rated voltage. It must not be adversely affected by moisture, ozone, oils, fuels, mild acidsand alkalies, or ultraviolet light. It must be compatible with all commonly used cable jacket materials, including rubber, plastic, lead, steel, aluminum and copper.

Factory-Applied Sealant

A standard sealant is coated on the entire inside surface of most precut sizes. Tubing is also available without sealant — consult factory. The sealant is rated for continuous 90° C operation on non-pressurized cable systems and aids in sealing out moisture and corrosion.

Cost and Reliability of Heat-Shrinkable Tubing Compared to Tape

The cost differential in the installation of T&B heat-shrinkable tubing over taping can result in up to a 34% savings in labor and overhead. For example, on a 2/0 aluminum splice, heat-shrinkable tubing can be installed in 3 minutes, versus 10 minutes of taping. In addition to the direct cost reduction, there are the advantages of assured uniformity of wall thickness and moisture sealing.

Cross Reference

T&B	Panduit	3M	Raychem	Sumitomo	Alpha	Coleflex	Insultab
CPO	HSTT & HSTTM	FP 301 (1 & 2)	RNF 100 (1 & 2)	A2 & B2	FIT 221	ST221 / STS221	HS 101
CPO-A	HSTTA & HSTTVA	EPS300	TAT 125 ATUM 3:1	W3B2	FIT321	ST303	HS101 MW 3:1
HSMW	–	–	MWTM (U) BSTS-M / SST-M				CTV
HS	–	–	WSCM / SST	–	FIT700	–	–
HS FR	HST	HDT	BSTS FR / SSTFR WCSF / FCSM	–	–	–	CTVH
HSC	HSEC	ICEC	S3C/ESC SSC-FR / ESC-FR	–	–	TYT	–
CPO-HF	–	–	–	NH	–	–	–
HSM-HF	–	–	XFFR	–	–	–	–
CHS	–	–	–	–	–	–	–

Breakaway Connector Kits

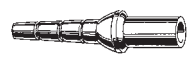
Features / Benefits:

- Completely waterproof
- Individual fusing allows separation of kit without de-energizing complete circuit
- Break-away style fuse holder eliminates risk of electrical shock. Exposed current carrying components are all contained in harmless load side of the kit
- Readily identifiable problem area simplifies maintenance
- Easy to install, no need for tapes or compounds
- Insulated to 600 volt

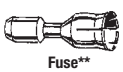
Applications:

- Roadway lighting fixtures
- Flood and area lighting fixtures
- Power distribution systems

Max. overall length, installed, 7 3/4". Diameter 1 1/8"



Line side housing (Receptacle)



Fuse**

Crimp-on fuse holder

Load side housing (Plug)

Fuse**

Crimp-on fuse holder

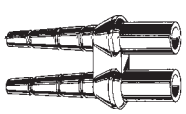
Style 65 Break-Away

Type: Single pole in-line
Electrical rating: For 600 volt, 10-30 amp., 13/32" x 1-1/2" fuse

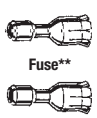
Cat. No.	Conductor Size (AWG)	Conductor Material*	Packaging	
			Unit	Standard
65 U	14 through 6	Copper	1	20

***Fuse not included with kit. Do **NOT** use glass fuses.*

Max. overall length, installed, 7 3/4". Diameter 2 5/16"

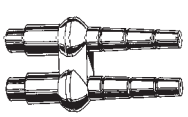


Line side housing (Receptacle)

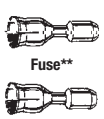


Fuse**

Crimp-on fuse holder



Load side housing (Plug)



Fuse**

Crimp-on fuse holder

Style D65 Break-Away

Type: Double pole in-line
Electrical rating: For 600 volt, 10-30 amp., 13/32" x 1-1/2" fuse

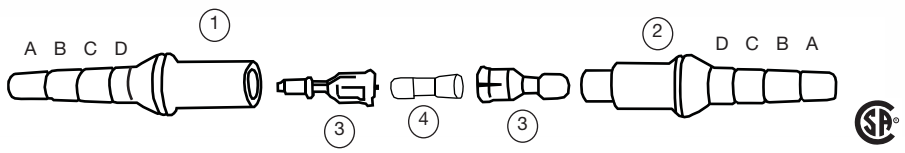
Cat. No.	Conductor Size (AWG)	Conductor Material*	Packaging	
			Unit	Standard
D65 U	14 through 6	Copper	1	20

***Fuse not included with kit. Do **NOT** use glass fuses.*

Installation Instructions for 65 & D65 Fused Connector Kit

Contents:
1- Line side (female) rubber housing
2- Load side (male) housing
3- Metal Fuse Sockets (4 in D65 Kits)
4- Fuse (not provided)

- Assembly Dowel
- Lubricant
- Wiper



Outside Diameter

Cable OD (in.)	
A	0.120 - 0.205
B	0.195 - 0.260
C	0.250 - 0.330
D	0.320 - 0.430

Table 1

Universal Contact

Crimp Area	Conductor Size in AWG		Recommended Crimp Tools & Dies	
	Stranded	Solid		
A	14	12, 14	T&B No. WT111M	"C" Cavity
	10, 12	8, 10		
B	6	6	T&B No. TBM41E/45S	"Blue" Cavity
	6	4		

Table 2

Step 1 Measure cable diameter and from Table 1, select corresponding section on molded sleeve. Cut off remaining sections of housing to size required. Example: If cable OD is 0.270 in., it falls withing the "C" range – cut between "B" and "C".

Step 2 Thoroughly clean approximately 8" of the Line side cable to be inserted using the wiper provided. Apply lubricant to cable and small hole in Line side (receptacle) housing.

Step 3 Insert cable through the small hole in the housing, and push through sufficiently to allow for stripping of insulation.

Step 4 Strip wires 3/4 in. for wire 14 AWG through 10 AWG, 3/8 in. for wire szes 8 AWG through 4 AWG. (DO NOT PENCIL INSULATION). Crimp on Line side socket. (Refer to Table 2 for suggested tool and die.)

Step 5 Apply lubricant lightly to the outside of the metal fuse socket.

Step 6 Place wooden dowel in the socket. Place the free end of the dowel against a firm surface and push the housing forward until it snaps into a locking position. Wipe off any excess lubricant.

Step 7 Repeat the above steps with the Load housing.

Step 8 Insert a 13/32 in. by 1-1/2 in. HRC fuse, 600 Volt 30 Amp. max. (Bussmann KTK series or equivalent), in the Load side housing. CAUTION: WHEN THE FUSE IS FULLY SEATED NOT MORE THAN 1/16 IN. OF THE FUSE BARREL WILL BE VISIBLE BETWEEN THE FUSE END CAP AND THE HOUSING. DO NOT APPLY LUBRICANT ON THE FUSE.

Step 9 Plug the Load side and Line side housings together. CAUTION: WHEN PROPERLY MATED THE SEAM BETWEEN THE HOUSINGS SHOULD NOT EXCEED 1/32 IN.

Step 10 The connection is now complete. For best results anchor the Line side wire, so that if the Load side wire is pulled (perhaps someone has knocked over a pole), the kit will come apart.

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NOTES