Underground Equipment

BARE CRAB JOINTS FOR JOINING BARE NEUTRAL CABLES

FJB Series

- Used for joining bare underground neutral cables.
- Made from pure seamless copper tubing.
- Tin-plated to resist corrosion.
- Corrugated reducing adapters may be used when smaller cable is required.

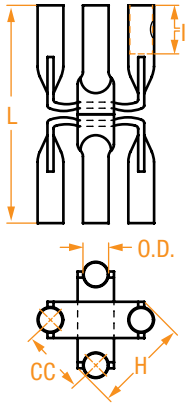


Figure 1

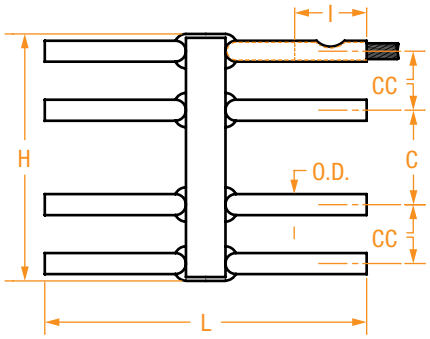


Figure 2

PART NUMBER	CABLE SIZE	FIGURE	# OF OUTLETS	# OF INDENTS	DIMENSIONS IN INCHES					
					I	H	L	C	CC	O.D.
FJB4/0-2W	4/0	2	4	1	2.0	3-3/16	6-7/16	–	2-3/16	0.687
FJB4/0-3W	4/0	2	6	1	2.0	7-1/16	6-7/16	3-7/8	2-3/16	0.687
FJB4/0-4W	4/0	2	8	1	2.0	9-1/4	6-7/16	3-7/8	2-3/16	0.687
CJB4/0-4W	4/0	1	8	2	2.0	3-1/2	9	–	2-3/16	0.687
CJB350-4W	350	1	8	2	2.5	3-3/4	9	–	2-1/2	0.875
FJB500-2W	500	2	4	2	2.5	3-15/16	7-1/2	–	2-3/8	1.062
FJB500-3W	500	2	6	2	2.5	8-3/16	7-1/2	4-1/4	2-3/8	1.062
FJB500-4W	500	2	8	2	2.5	10-9/16	7-1/2	4-1/4	2-3/8	1.062
CJB500-4W	500	1	8	2	2.5	3-3/4	8-3/4	–	2-3/4	1.062
CJB500-5W	500	1	10	2	2.5	4	9	–	2-3/4	1.062

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

INSULATED CRAB JOINTS

FJI Series

- Provides a means for connecting several cables at one common junction.
- Corrugated adapters allow a wide variety of cables to be used.
- Made from pure copper.
- Tin-plated to resist corrosion.
- Installation is done by “rolling back” the insulation over the cable sockets; inserting the cable into the sockets and crimping it. The insulation is then returned to its original position covering the socket.
- Eliminates bulky, time-consuming crotch taping.
- Insulated with an EPDM rubber for optimum electrical and mechanical properties.

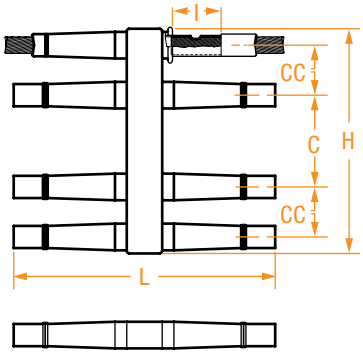


Figure 1

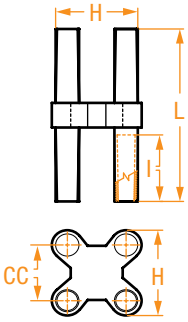


Figure 2

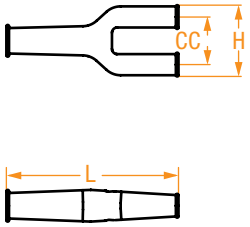


Figure 3

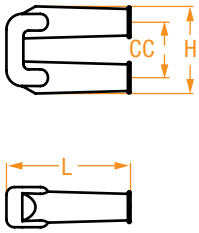


Figure 4

PART NUMBER	CABLE SIZE	FIGURE	# OF OUTLETS	# OF INDENTS	DIMENSIONS IN INCHES				
					I	H	L	C	CC
FJI4/0-2W	4/0	1	4	1	2.0	3-11/16	8-3/4	–	2-3/16
FJI4/0-3W	4/0	1	6	1	2.0	7-9/16	8-3/4	3-7/8	2-3/16
FJI4/0-4W	4/0	1	8	1	2.0	9-3/4	8-3/4	3-7/8	2-3/16
FJI4/0-5W	4/0	1	10	1	2.0	13-1/2	8-3/4	3-1/2	2-1/2
FJI4/0-6W	4/0	1	12	1	2.0	16	8-3/4	3-1/2	2-1/2
BIC4/0-4W	4/0	2	8	1	2.0	4	8-3/4	–	3
FJI500-(2)4/0	500 - 4/0	3	3	2	2.5	3	8-1/4	–	1-3/4
FJI500-U	500	4	2	2	3.5	4-1/4	6	–	2-3/4
FJI500-2W	500	1	4	2	2.5	4-3/8	12-5/8	–	2-3/8
FJI500-3W	500	1	6	2	2.5	8-5/8	12-5/8	4-1/4	2-3/8
FJI500-4W	500	1	8	2	2.5	11	12-5/8	4-1/4	2-3/8
FJI500-5W	500	1	10	2	2.5	14-1/2	12-5/8	3-3/4	2-1/2
FJI500-6W	500	1	12	2	2.5	17	12-5/8	3-3/4	2-1/2
FJI750-2W	750	1	4	2	2.5	4-3/4	13	–	2-1/2
FJI750-3W	750	1	6	2	2.5	9	13	4-1/2	2-1/2
FJI750-4W	750	1	8	2	2.5	12	13	4-1/2	2-1/2
FJI750-5W	750	1	10	2	2.5	16	13	4-1/2	2-1/2

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

INSULATED CRAB JOINTS – NO TAPE TYPE

FJINT Series

- Provides a means for connecting several cables at one common junction.
- No Tape Type Insulated Crab Joints provide an extension of free rubber at the end of the cable socket, which makes a water-tight fit over the cable insulation.
- Eliminates bulky, time-consuming crotch taping.
- Corrugated adapters allow a wide variety of cables to be used.
- Made from pure copper.
- Tin-plated to resist corrosion.
- Insulated with an EPDM rubber for optimum electrical and mechanical properties.

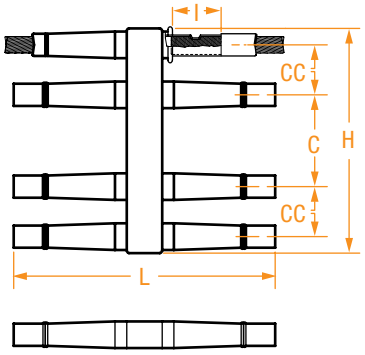


Figure 1

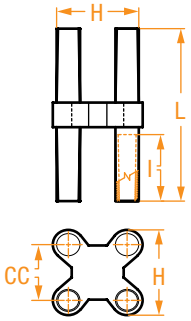


Figure 2

PART NUMBER	CABLE SIZE	FIGURE	# OF OUTLETS	# OF INDENTS	DIMENSIONS IN INCHES				
					I	H	L	C	CC
FJINT4/0-2W	4/0	1	4	1	2.0	3-11/16	9-1/2	–	2-3/16
FJINT4/0-3W	4/0	1	6	1	2.0	7-9/16	9-1/2	3-7/8	2-3/16
FJINT4/0-4W	4/0	1	8	1	2.0	9-3/4	9-1/2	3-7/8	2-3/16
BJINT4/0-4W	4/0	2	8	1	2.0	4	10-1/4	–	3
FJINT4/0-5W	4/0	1	10	1	2.0	13-1/2	9-1/2	3-1/2	2-1/2
FJINT4/0-6W	4/0	1	12	1	2.0	16	9-1/2	3-1/2	2-1/2
FJINT500-2W	500	1	4	2	2.5	4-1/4	11-1/2	–	2-3/8
FJINT500-3W	500	1	6	2	2.5	8-1/4	11-1/2	4-1/4	2-3/8
FJINT500-4W	500	1	8	2	2.5	10-3/4	11-1/2	4-1/4	2-3/8
FJINT500-5W	500	1	10	2	2.5	14-1/2	11-1/2	3-3/4	2-1/2
FJINT500-6W	500	1	12	2	2.5	17	11-1/2	3-3/4	2-1/2

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

FUSIBLE CRAB JOINTS – TOWER JOINTS

TWJ Series

- Provides limiter protection for six or eight cables at one common junction.
- For 125/216V applications only.
- Eliminates bulky, time-consuming crotch taping.
- Each cable is attached to its own separate fusible section.
- The fusible elements are made from pure copper seamless tubing and tin-plated.
- The elements are encased in a high-temperature shell, which provides separate arcing chambers for each fusible section.
- Corrugated adapters allow a wide variety of cables to be used.
- Insulated with an EPDM rubber for optimum electrical and mechanical properties.

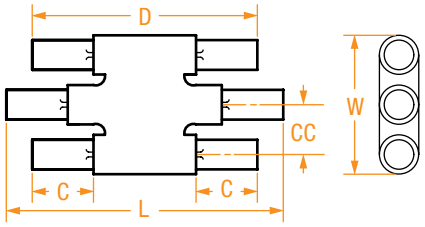


Figure 1

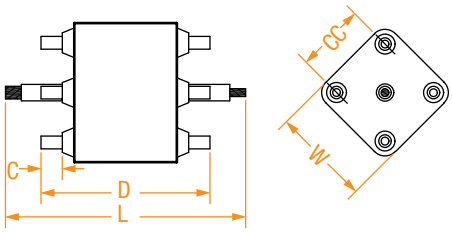


Figure 2

PART NUMBER	CABLE SIZE	FIGURE	# OF INDENTS	DIMENSIONS IN INCHES				
				C	L	D	CC	W
TWJ4/0-5*	4/0	2	1	2	18	10-1/2	3-1/4	5-11/16
TWJ500-3	500	1	2	2-7/8	15-7/16	10-7/8	2-5/16	6-7/16
TWJ500-5	500	2	2	3	20	13-1/2	3-9/16	6-3/16

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

* TWJ4/0-5 has an unfused center cable port designed for 500 mcm copper cable. The outer cable ports are fused (limitered) and designed for 4/0 cable.

TOWER JOINT ACCESSORIES – CABLE END CAPS & SHELLS

TWJA Series

- Cable end caps are used to insulate the center cable of the fusible crab type “TWJ.”
- An EPDM rubber is used for optimum electrical and mechanical properties.

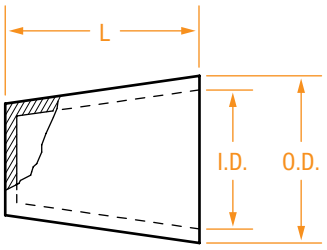


Figure 1

PART NUMBER	CABLE SIZE	FIGURE	DIMENSIONS IN INCHES		
			L	I.D.	O.D.
CC500	500	1	2-3/8	27/32	1-1/4

HIGH-TEMPERATURE FILLER SHELL

TWJA Series

- High-temperature filler shells are used with fusible crab joints type “TWJ.”
- These shells prevent cable insulation damage due to the heat generated from the connections.

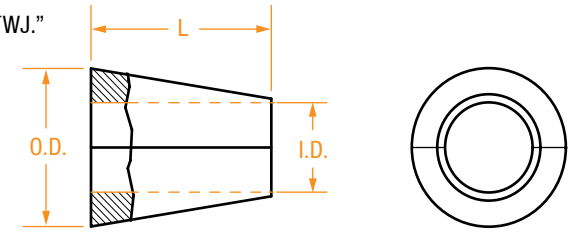


Figure 2

PART NUMBER	CABLE SIZE	FIGURE	DIMENSIONS IN INCHES		
			L	O.D.	I.D.
AS4/0	4/0	2	2-3/4	2-1/8	3/4
AS500/3	500	2	3	1-13/16	1-1/8
AS500-5	500	2	3	2-3/16	1-1/8

TOWER JOINT ACCESSORIES – INSULATING SLEEVES & CAPS

TWJS Series

- Dead-end insulating caps are used to cap unused outlets of fusible crab joints.
- This cap holds the filler shell in place and reduces the amount of hand taping.
- An EPDM rubber is used for optimum electrical and mechanical properties.

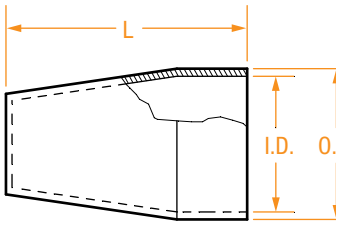


Figure 1

PART NUMBER	CABLE SIZE	FIGURE	DIMENSIONS IN INCHES		
			L	I.D.	O.D.
TWJC4/0	4/0	1	4-1/4	2-1/8	2-1/2
TWJC500-3	500	1	4-1/4	1-3/4	2-1/4
TWJC500-5	500	1	4-9/16	2-5/32	2-1/2

INSULATING SLEEVES FOR USE WITH "TWJ" SERIES FUSIBLE CRAB JOINTS

TWJS Series

- Insulating sleeves are used to hold the filler shell in place and reduces the amount of hand taping.
- An EPDM rubber is used for optimum electrical and mechanical properties.

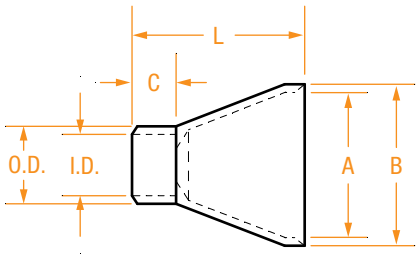


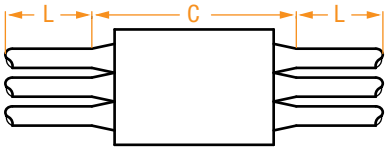
Figure 2

PART NUMBER	CABLE SIZE	FIGURE	DIMENSIONS IN INCHES					
			L	A	B	C	I.D.	O.D.
TWJS4/0	4/0	2	6-3/16	2-1/8	2-1/2	1-3/4	1-3/4	1-1/8
TWJS500-3	500	2	6-3/16	1-3/4	2-1/4	1-3/4	1-5/32	1-1/2
TWJS500-5	500	2	6-7/8	2-5/32	2-1/2	1-3/4	1-5/32	1-1/2

FUSIBLE CRAB JOINTS WITH PIGTAILS

CJLP Series

- Installation is as easy as making a cable-to-cable butt splice.
- Provides limiter protection for six, eight or 12 cables at one common junction.
- Eliminates bulky, time-consuming crotch taping.
- Each cable is attached to its own separate fusible section.
- The fusible elements are made from pure copper seamless tubing and hot-tinned.
- The elements are encased in a high-temperature shell, which provides separate arcing chambers for each fusible section.
- Insulated with an EPDM rubber for optimum electrical and mechanical properties.
- For 125/216V applications only.



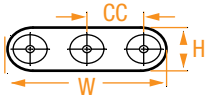


Figure 1

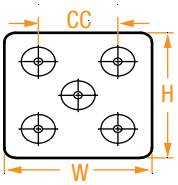


Figure 2

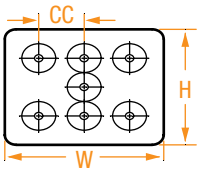


Figure 3

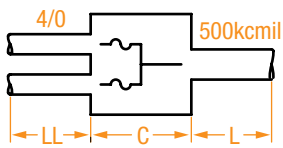
PART NUMBER	CABLE SIZE	FIGURE	DIMENSIONS IN INCHES				
			C	L	H	W	CC
CJLP500-3W	500	1	14-1/2	21	2-1/2	7	2-1/2
CJLP500-5W	500	2	17-5/8	21	6-1/2	6-1/2	3-1/2
CJLP500-7W	500	3	19	21	6	7	2-1/4

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

* For 18" cable lengths, add "S" to the part number (example: CJLPS500-3W is a 3-way crab joint with 18" cable). 21 inches is the standard cable length.

CRAB JOINTS WITH PIGTAILS

- Installation is as easy as making a cable-to-cable butt splice.
- Eliminates bulky, time-consuming crotch taping.
- Insulated with an EPDM rubber for optimum electrical and mechanical properties.
- When fusible elements are used, the elements are made from pure copper seamless tubing and tin-plated.
- The fusible elements are encased in a high-temperature shell, which provides separate arcing chambers for each fusible section.



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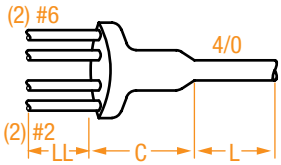

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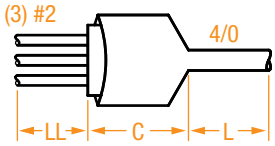

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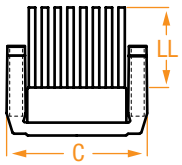


Figure 4

PART NUMBER	CABLE SIZE	CABLE SIZE # OF CABLES IN ()	FIGURE	DIMENSIONS IN INCHES		
				C	L**	LL*
SJ573-0536*	500	(2) 4/0	1	5	9 1/2	19 1/2
SJ573-0171	4/0	(2) #2 & (2) #6	2	4 1/2	6	6
SJ1420	4/0	(4) #4 Solid	2	5	9	8
SJ573-0346	4/0	(3) #2	3	4 3/4	24	16
SJ4/0-(6)1/0	4/0	(6) 1/0	2	–	–	–
SJ573-0569	(2) 500	(6) #2	4	8	–0–	11
SJ573-0551	(2) 500	(8) #2	4	11	–0–	11
SJ350AL-4/0-8W	(2) 350 AL	(8) 4/0 AL	4	12	–0–	–0–
SJ573-0668	–	(3) #2	See photo	2	–	6
SJ573-0676	–	(4) #2	See photo	2	–	6
SJ573-0692	–	(5) #2	See photo	2	–	6

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

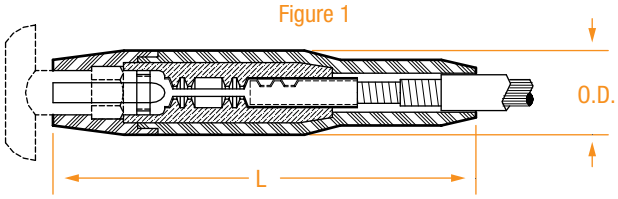
–0– indicates a cable port, rather than a cable length.
* The two (2) 4/0 cables are limitered. 125/216V applications only.
** Cable lengths given are standard, contact the factory for different lengths.

MOLE
LIMITER ASSEMBLY

RMLA Series

- Mole limiter assemblies are complete units that include a fusible element, a high-temperature filler shell and an insulating sleeve.
- Can be ordered as a complete assembly or individual components.
- For 125/216V applications only.

Figure 1



Complete Assemblies

PART NUMBER	CABLE SIZE	# OF INDENTS	DIMENSIONS IN INCHES	
			L	OD
RMLA4/0	4/0	1	7-1/2	1-7/8
RMLA500	500	2	12	2.40

Mole Limiter Element Only

PART NUMBER	CABLE SIZE	# OF INDENTS	DIMENSIONS IN INCHES		
			L	STUD OD	SOCKET OD
RML4/0	4/0	1	6	.52	.68
RML500	500	2	8-3/8	.81	1.05

Mole Limiter Shell Only

PART NUMBER	CABLE SIZE	# OF INDENTS	DIMENSIONS IN INCHES	
			L	OD
RMLSHELL-4/0	4/0	1	5-7/16	1.47
RMLSHELL-500	500	2	7	1.8

Mole Limiter Sleeve Only

PART NUMBER	CABLE SIZE	# OF INDENTS	DIMENSIONS IN INCHES		
			L	OD	ID
RMLSLV-4/0	4/0	1	6-7/16	1-7/8	.92
RMLSLV-500	500	2	12	2.40	1.27

CABLE-TO-CABLE IN-LINE LIMITER

CCLA Series

- Cable-to-Cable Limiter Assemblies are complete units that include a cable-to-cable fusible element, a high-temperature filler shell and an insulating sleeve.
- This one-piece design is easy install and use.
- For 125/216V applications only.

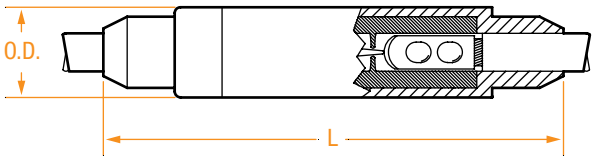
PART NUMBER	CABLE SIZE	# OF INDENTS*	DIMENSIONS IN INCHES	
RUBBER INS.			L	O.D.
CCLA-IN-500	500	2	13	2-1/8

* Number of indents refers to the number of crimps (min) to make on each side of the limiter using a nested indenter tool.

CABLE-TO-CABLE LIMITER ASSEMBLY

CCLA Series

- Cable-to-Cable Limiter Assemblies are complete units that include a cable-to-cable fusible element, a high-temperature filler shell and an insulating sleeve.
- When ordering individual components, refer to the following pages.
- The “CCLAP” limiters are designed for use on paper-insulated cable and feature an oil-tight seal.
- For 125/216V applications only.

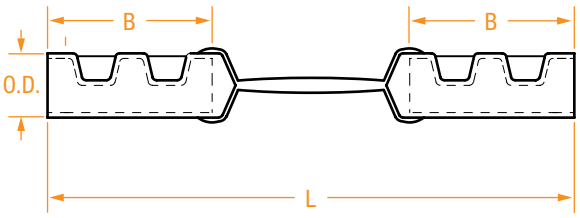


PART NUMBER		CABLE SIZE	# OF INDENTS	DIMENSIONS IN INCHES	
RUBBER INS.	PAPER INS.			L	O.D.
CCLA4/0	CCLAP4/0	4/0	1	8-1/4	1-1/2
CCLA250	CCLAP250	250	1	8-1/4	1-1/2
CCLA300	CCLAP300	300	2	12-1/8	2-1/2
CCLA350	CCLAP350	350	2	12-1/8	2-1/2
CCLA400	CCLAP400	400	2	12-1/8	2-1/2
CCLA500	CCLAP500	500	2	12-1/8	2-1/2
CCLA7500	CCLAP750	750	2	12-1/8	2-1/2

CABLE-TO-CABLE LIMITERS

CCL Series

- Made of pure copper.
- Tin-plated dipped for corrosion resistance.
- These connectors combine the functions of fuse and a connector.
- Designed to clear faults great enough to cause cable damage, while not clearing minor overloads.
- The “CCLP” fuses are designed for use on paper-insulated cable and feature an oil-tight seal.
- For 125/216V applications only.



PART NUMBER		CABLE SIZE	DIMENSIONS IN INCHES		
RUBBER INS.	PAPER INS.		O.D.	B	L
CCL4/0	CCLP4/0	4/0	11/16	1-3/4	6-3/8
CCL250	CCLP250	250	3/4	1-7/8	6-3/8
CCL300	CCLP300	300	13/16	2	6-3/4
CCL350	CCLP350	350	7/8	2	6-3/4
CCL400	CCLP350	400	31/32	2-1/8	7
CCL500	CCLP500	500	1-1/16	2-7/8	8-3/4
CCL750	CCLP750	750	1-5/16	2-7/8	9

TWO-PIECE CABLE-TO-CABLE LIMITER INSULATING SLEEVES

LS Series

- Cable-to-cable insulating sleeves are used to hold the high-temperature shell and to minimize the need for hand taping.
- Molded from EPDM rubber, these sleeves have excellent mechanical and electrical properties.

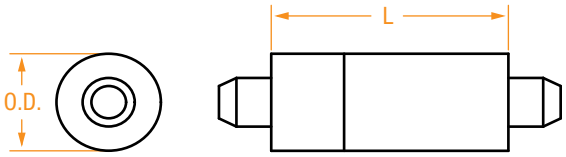


Figure 1

PART NUMBER	CABLE SIZE (RANGE)	FIGURE	DIMENSIONS IN INCHES	
			O.D.	L
LS-250	4/0 TO 250	1	1-1/2	8-1/4
LS-2PC-500	300 TO 500	1	2-1/2	12-1/8
LS-2PC-750	750	1	2-1/2	12-1/8

HIGH-TEMPERATURE FILLER SHELL FOR CABLE-TO-CABLE LIMITERS

ALS Series

- High-temperature shells provide an arcing chamber for the limiter element under overload conditions.

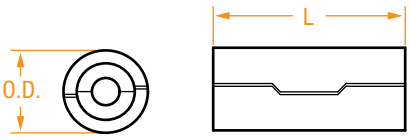


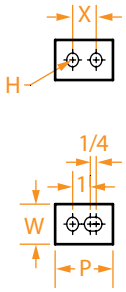
Figure 2

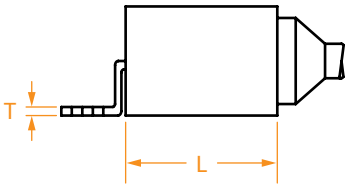
PART NUMBER	CABLE SIZE (RANGE)	FIGURE	DIMENSIONS IN INCHES	
			O.D.	L
ALS250	4/0 TO 250	2	1-3/8	6-1/2
ALS500	300 TO 500	2	1-7/8	8
ALS750	750	2	2-1/16	9

LIMITER LUG ASSEMBLY

CLLA Series

- Limiter lug assemblies are complete units that are comprised of a fusible element, a high-temperature filler shell and an insulating sleeve.
- When ordering individual components, refer to the following pages.
- The “CLLAP” limiters are designed for use on paper-insulated cable and feature an oil-tight seal.
- For 125/216V applications only.





PART NUMBER		CABLE SIZE	FIGURE	DIMENSIONS IN INCHES					
RUBBER INS.	PAPER INS.			L	W	X	H	P	T
CLLA4/0N	CLLAP4/0N	4/0	1	10	1	1-3/4	9/16	2-7/16	9/64
CLLA4/0-A	CLLAP4/0-A	4/0	2	9-3/4	1	1	7/16	2-3/16	9/64
CLLA250N	CLLAP250N	250	1	10	1-1/8	1-3/4	9/16	2-7/16	5/32
CLLA250-A	CLLAP250-A	250	2	9-3/4	1-1/8	1	7/16	2-3/16	5/32
CLLA300N	CLLAP300N	300	1	10-7/8	1-3/16	1-3/4	9/16	2-9/16	5/32
CLLA300-A	CLLAP300-A	300	2	10-3/8	1-3/16	1	7/16	2-5/16	5/32
CLLA350N	CLLAP350N	350	1	10-7/8	1-5/16	1-3/4	9/16	2-9/16	3/16
CLLA350-A	CLLAP350-A	350	2	10-3/8	1-5/16	1	7/16	2-5/16	3/16
CLLA400N	CLLAP400N	400	1	10-3/4	1-7/16	1-3/4	9/16	2-9/16	3/16
CLLA400-A	CLLAP400-A	400	2	10-1/2	1-7/16	1	7/16	2-5/16	3/16
CLLA500N	CLLAP500N	500	1	11-3/4	1-1/2	1-3/4	9/16	3	7/32
CLLA500-A	CLLAP500-A	500	2	11-1/2	1-15/16	1	7/16	2-3/4	1/4
CLLA750N	CLLAP750N	750	1	11-3/4	1-15/16	1-3/4	9/16	3	1/4
CLLA750-A	CLLAP750-A	750	2	11-1/2	1-15/16	1	7/16	2-3/4	1/4

LIMITER LUGS

- Made of pure copper.
- Tin-plated to resist corrosion.
- These connectors combine the functions of fuse and a connector.
- Designed to clear faults great enough to cause cable damage, while not clearing minor overloads.
- The “CLLP” and “CLLPL” fuses are designed for use on paper-insulated cable and feature an oil-tight seal.
- For 125/216V applications only.

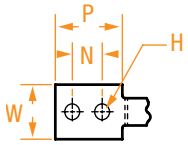


Figure 1

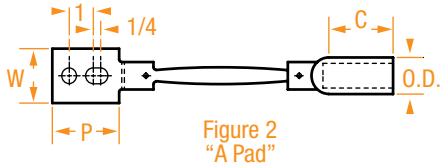


Figure 2
“A Pad”

PART NUMBER		CABLE SIZE	DIMENSIONS IN INCHES							
RUBBER INS.	PAPER INS.		L	C	W	P	H	N	T	O.D.
CLL4/0-N	CLLP4/0-N	4/0	8-1/2	1-7/8	1	2-7/16	9/16	1-3/4	9/64	11/16
CLL4/0-A	CLLP4/0-A	4/0	8-1/2	1-7/8	1	2-7/16	7/16	1	9/64	11/16
CLL250-N	CLLP250-N	250	8-1/2	1-7/8	1-1/8	2-7/16	9/16	1-3/4	5/32	3/4
CLL250-A	CLLP250-A	250	8-1/2	1-7/8	1-1/8	2-7/16	7/16	1	5/32	3/4
CLL300-N	CLLP300-N	300	9	2	1-3/4	2-9/16	9/16	1-3/4	5/32	13/16
CLL300-A	CLLP300-A	300	9	2	1-3/4	2-9/16	7/16	1	5/32	13/16
CLL350-N	CLLP350-N	350	9	2	1-5/16	2-9/16	9/16	1-3/4	3/16	7/8
CLL350-A	CLLP350-A	350	9	2	1-5/16	2-9/16	7/16	1	3/16	7/8
CLL400-N	CLLP400-N	400	9-1/4	2-1/8	1-7/16	2-9/16	9/16	1-3/4	3/16	31/32
CLL400-A	CLLP400-A	400	9-1/4	2-1/8	1-7/16	2-9/16	7/16	1	3/16	31/32
CLL500-N	CLLP500-N	500	10-1/4	2-9/16	1-1/2	3	9/16	1-3/4	7/32	1-1/16
CLL500-A	CLLP500-A	500	10-1/4	2-9/16	1-1/2	3	7/16	1	7/32	1-1/16
CLL750-N	CLLP750-N	750	10-1/4	2-9/16	1-15/16	3	9/16	1-3/4	1/4	1-5/16
CLL750-A	CLLP750-A	750	10-1/4	2-9/16	1-15/16	3	7/16	1	1/4	1-5/16

LIMITER LUG ACCESSORIES – INSULATING SLEEVES & SHELLS

LLS Series

- Limiter lug insulating sleeves are used to hold the high-temperature filler shell and to minimize the need for hand taping.
- Molded from EPDM rubber, these sleeves have excellent mechanical and electrical properties.

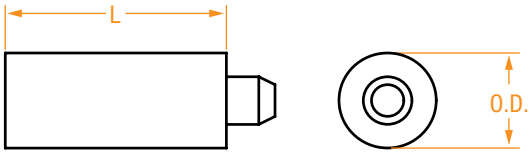


Figure 1

PART NUMBER	CABLE SIZE (RANGE)	FIGURE	DIMENSIONS IN INCHES	
			O.D.	L
LLS4/0	4/0 to 250	1	7/8	6-5/8
LLS500	300 to 500	1	1-11/32	8-1/2
LLS750	750	1	1-1/2	8-1/2

HIGH-TEMPERATURE FILLER SHELLS FOR LIMITER LUGS

ALLS Series

- High-temperature shells provide an arcing chamber for the limiter element under overload conditions.

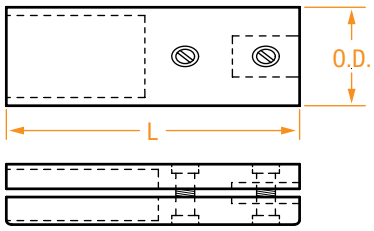


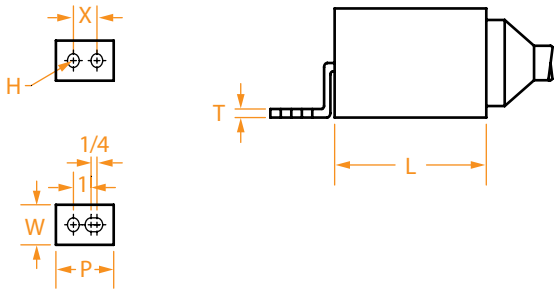
Figure 2

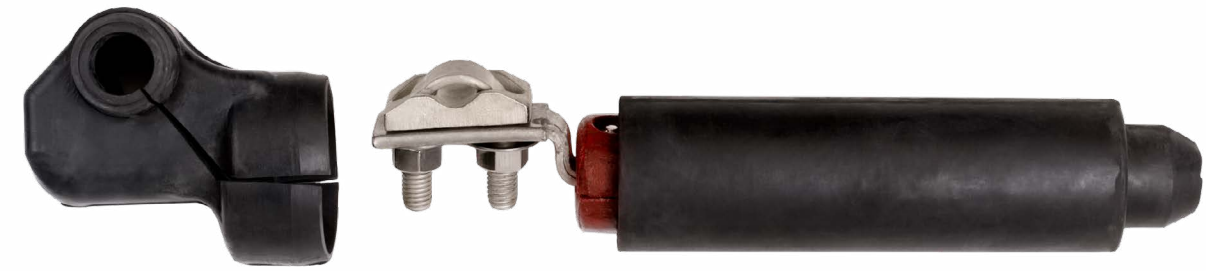
PART NUMBER	CABLE SIZE (RANGE)	FIGURE	DIMENSIONS IN INCHES	
			O.D.	L
ALLS250	4/0 TO 250	2	1-7/16	5-11/16
ALLS500	300 TO 500	2	1-7/8	7-1/8
ALLS750	750	2	1-7/8	7-1/2

RING BUS
LIMITER LUG ASSEMBLY

CLLA-UBOLT Series

- Ring Bus Limiter Lug assemblies are complete units that are comprised of a fusible element, a high-temperature filler shell, an insulating sleeve, U-bolt and saddle and rubber hood.
- Facilitates connection to secondary network "ring bus"
- Protects network secondary cable with fusible element contained within a high-temperature filler shell
- For 125/216V applications only.





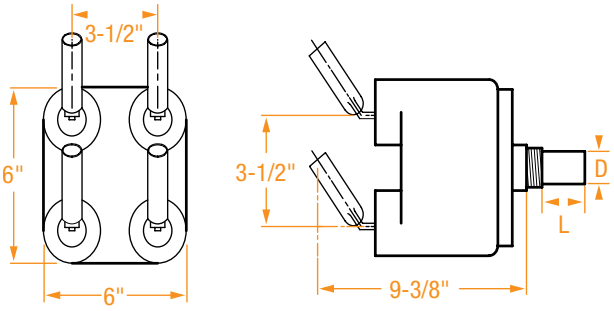
PART NUMBER*	CABLE SIZE	DIMENSIONS IN INCHES					
RUBBER INS.		L	W	X	H	P	T
CLLA4/0N-UBOLT	4/0	10	1	1-3/4	9/16	2-7/16	9/64
CLLA250N-UBOLT	250	10	1-1/8	1-3/4	9/16	2-7/16	5/32
CLLA300N-UBOLT	300	10-7/8	1-3/16	1-3/4	9/16	2-9/16	5/32
CLLA350N-UBOLT	350	10-7/8	1-5/16	1-3/4	9/16	2-9/16	3/16
CLLA400N-UBOLT	400	10-3/4	1-7/16	1-3/4	9/16	2-9/16	3/16
CLLA500N-UBOLT	500	11-3/4	1-1/2	1-3/4	9/16	3	7/32
CLLA750N-UBOLT	750	11-3/4	1-15/16	1-3/4	9/16	3	1/4

* Each Ring Bus Assembly is available with "A" pad. To order, replace "N" with "A". See page UG15 for more information about "A" pad limiter lugs.

NETWORK PROTECTOR TERMINALS

NPT Series

- Network protector terminals are designed for use on network protectors.
- Terminals available with built-in cable limiters (limitered) or without (non-limitered).
- The fusible elements are made of pure copper and tin-plated for corrosion resistance.
- The element is enclosed in a high-temperature shell which provides separate arcing chambers for each fusible section.
- The terminals are molded with silicone rubber for optimum electrical properties, high-temperature capabilities and low-compression set.



PART NUMBER	NETWORK PROTECTOR MANUFACTURER	CABLE SIZE	DRAWING NO.	# OF CABLE PORTS	FIGURE	LIMITERED OR NON-LIMITERED	DIMENSIONS IN INCHES	
							B (L)	D
NPT523-0925 (was NPT500A)	Richards 313NPs & Westinghouse	500	MN-EO2167-B	4	1	Limitered **	1-7/8	1-1/4
312-1316-00	Richards 313NPs & Westinghouse	500	MN107447	4	1	Non-Limitered	1-7/8	1-1/4
ze	Richards 313NPs & Westinghouse	750	MN106980	6	2	Limitered **	2-1/8	3-3/4
312-1315-00*	Richards 313NPs & Westinghouse	500	MN106147	4 2-hole spades	4	Limitered **	1-7/8	1-1/4
312-1315-01*	Richards 313NPs & Westinghouse	500	MN106147	4 2-hole spades	4	Non-Limitered	1-7/8	1-1/4
312-1268-00	Richards 313NPs & Westinghouse	500	MN101003	4	3	Limitered **	1-7/8	1-1/4
312-1269-00	Richards 313NPs & Westinghouse	500	MN101003	4	3	Non-Limitered	1-7/8	1-1/4
NPT523-0909 (was NPT500B)	Richards 137NPs & General Electric	500	MN-EO2167-B	4	1	Limitered **	1-1/4	1-1/4
312-1330-00	Richards 137NPs & General Electric	500	MN111240	4	1	Non-Limitered	1-1/4	1-1/4

* Terminal supplied with four rubber sleeves, four two-hole 500 mcm copper lugs and hardware.
** For 125/216V applications only.

Figure 1

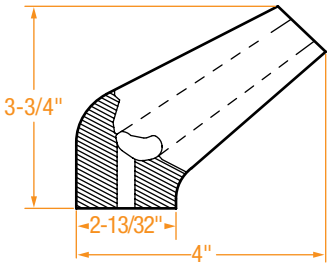
Figure 2

Figure 3
Terminal supplied with four rubber boots.

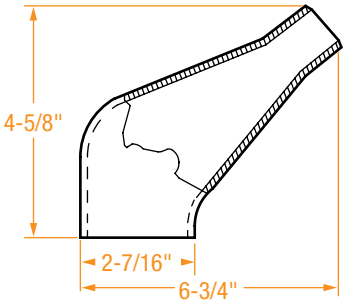
Figure 4
Terminal supplied with four rubber sleeves
Shown, 4 CL18-2N (500 mcm Cu lugs) and hardware.

ACCESSORIES FOR NETWORK PROTECTOR TERMINALS

High-Temperature Shell



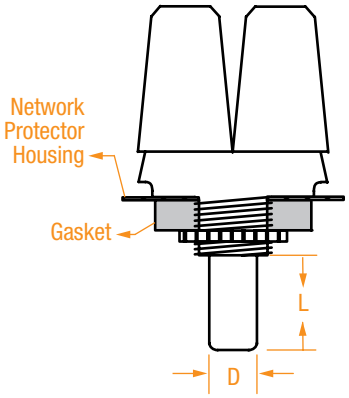
Insulating Sleeve



PART NUMBER	CABLE	SHELL OR SLEEVE
HTS-500	500 kcmil cable	High Temperature Shell
HTS-750	750 kcmil cable	High Temperature Shell
ES-500	500 kcmil cable	Insulating Sleeve
ES-750	750 kcmil cable	Insulating Sleeve

DISCONNECT NETWORK PROTECTOR TERMINALS

- The Richards disconnect network protector terminals are designed for fast and easy installations. The disconnect legs on the following page are crimped onto the system cable and then plugged into the terminal. The disconnect leg forms a water-tight seal around the terminal, so there is no taping.
- Disconnect network protector terminals are designed for use on General Electric or Westinghouse network protectors.
- The terminals are molded with silicone rubber for optimum electrical properties, high-temperature capabilities and low-compression set.
- Disconnect legs, shown on the next page, come limitered or unlimitered, which eliminates the need to externally limiter each cable.

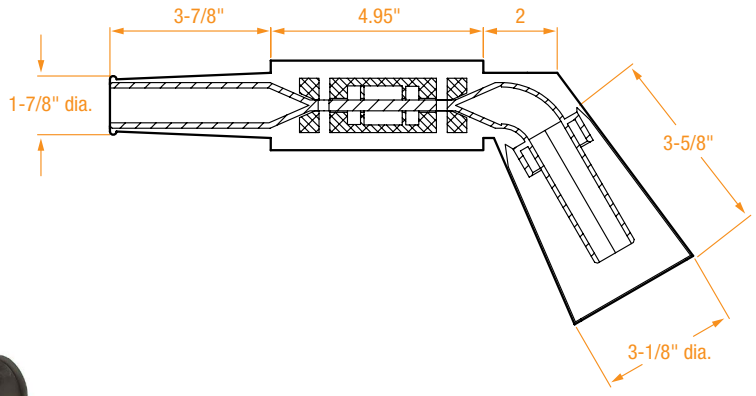


PART NUMBER	NETWORK PROTECTOR MANUFACTURER	CABLE SIZE	DRAWING NUMBER	NP TYPE	# OF POSITIONS	DIMENSIONS IN INCHES	
						L	D
312-1228-00	Richards 313NPs & Westinghouse	500	L9821	313NP, 2250 A	4	2-3/4	1-3/4
312-1228-00	Richards 313NPs & Westinghouse	500	L9821	313NP, 2250 A	8	2-3/4	3-3/4
312-1200-00	Richards 313NPs & Westinghouse	500	MN100984	313NP, 1875A	4	2-3/4	1-1/4
312-1265-00	Richards 313NPs & Westinghouse	500	MN100919	313NP wall mount, 2500 & 3500A	8	1-9/16	2-3/4
312-1270-00	Richards 313NPs & Westinghouse	500	MN100918	313NP 2500 & 3500 A	8	2-5/8	2-3/4
237-1229-00	Richards 137NPs & General Electric	500	MN103252	MG8, 1875A	4	1-1/4	1-3/4
312-1228-00	Richards 137NPs & General Electric	500	L9821	313NP	4	2-3/4	1-3/4
237-1221-00	Richards 137NPs & General Electric	500	MN101210	MG8 – 3500A	8	1-5/8	3-3/4
237-1245-00	Richards 137NPs & General Electric	500	MN105056	MG14 – 4500A	8	2-1/8	3-3/4
237-1234-10	Richards 137NPs & General Electric	500	MN105533	Special	4	1-1/8	1-1/4

DISCONNECT LEGS FOR DISCONNECT NETWORK PROTECTOR TERMINALS

RDL Series

- The disconnect legs are available fused or unfused, straight or angled.
- Made of pure copper.
- Accepts 500 kcmil cable.
- Accessories available when using the disconnect.

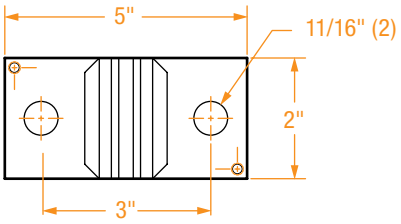


PART NUMBER	DISCONNECT LEG TYPE	
RDL-FA500	Fused *	Angled
RDL-US500	Unfused	Straight
RDL-UA500	Unfused	Angled

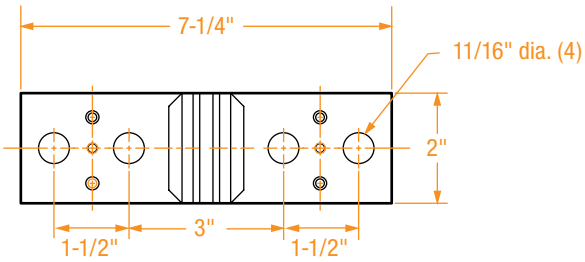
* For 125/216V applications only.

PROTECTOR FUSES – LOW-LOSS "S" FUSE

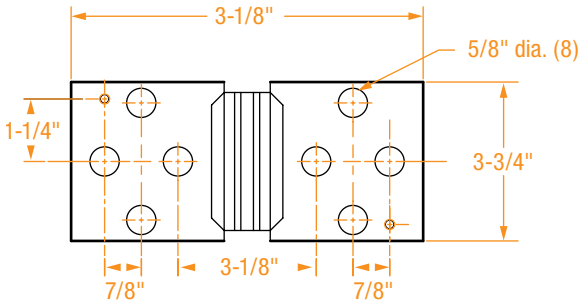
- LLF-KA fuses are to be used on 125/216V network protectors.
- LLF-KA fuses are made from silver-plated copper with a tin or cadmium overlay in the element.
- LLF-KA fuses are "low loss" meaning they radiate a limited amount of heat until they approach their melting temperature.



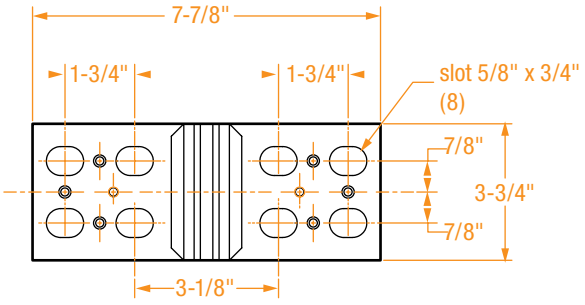
LLF-2KA
2,000 Amperes



LLF-2.25 KA
2,250 Amperes



LLF-3KA/LLF-4KA
3,000/4,000 Amperes
(Same hole configuration
for both sizes)

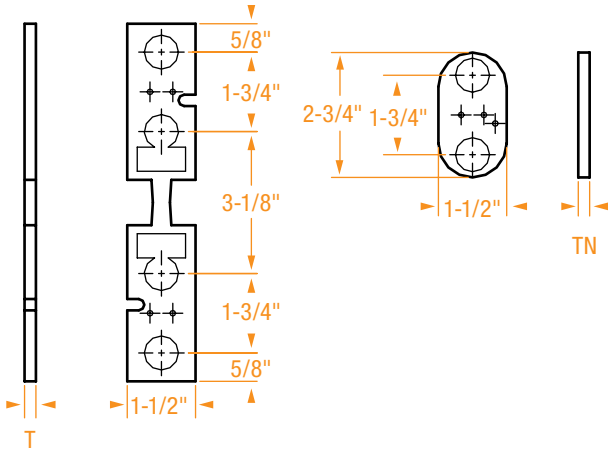


LLF-5KA
5,000 Amperes

NETWORK PROTECTOR FUSES – "Z" FUSE

NPF-Q Series

- Network protector fuses are used for backup. They are designed to coordinate with the protector relay and should not blow on a network feeder fault before the relays have time to trip the protector. However, in case the protector fails to open, the fuses must blow in time to prevent transformer damage.
- Fuses are made of pure copper and are available with tin or silver plating depending on the application.
- Time current curves are available upon request.



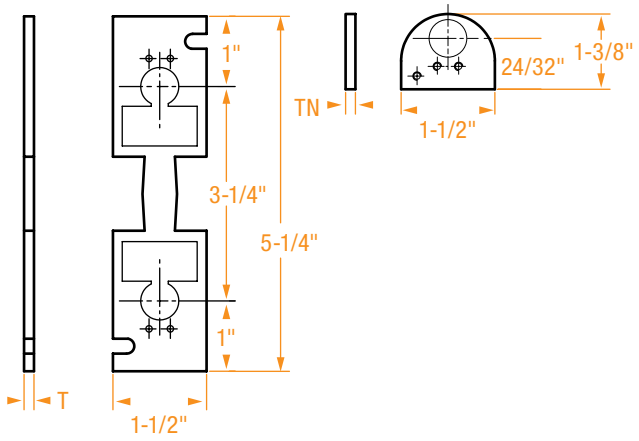
PART NUMBER	TRANSFORMER FULL LOAD (NORMAL) AMPERES	FUSE "T" DIMENSIONS IN INCHES	WASHER "TN" DIMENSIONS IN INCHES
NPF-5-Q	270	.050	28/64
NPF-7.5-Q	400	.075	26/64
NPF-11-Q	600	.110	24/64
NPF-15-Q	800	.150	21/64
NPF-22.5-Q	1200	.225	17/64
NPF-25-Q	1333	.250	15/64
NPF-30-Q	1600	.300	12/64
NPF-37.5-Q	2000	.375	8/64
NPF-44-Q	2500	.440	4/64
NPF-50-Q	3000	.500	N/A

Fuse cover is available for 125/216V applications. The part number is 312-3120-00.

NETWORK PROTECTOR FUSES – "Y" FUSE

NPF-L Series

- Network protector fuses are designed to coordinate with the network protector relay and should not blow on a network feeder fault before the relay has time to trip the protector. However, in case the protector fails to open, the fuses must blow in time to prevent transformer damage.
- Fuses are made of pure silver-plated copper.
- For network protectors with two bolt-fuse mountings.
- Fuse mounting enclosure is available for 125/216V network-protector applications.
- Time-current curves available upon request.



PART NUMBER	TRANSFORMER FULL LOAD (NORMAL) AMPERES	FUSE "T" DIMENSIONS IN INCHES	WASHER "TN" DIMENSIONS IN INCHES
NPF-11-L	800	.110	3/8
NPF-15-L	1200	.150	5/16
NPF-22.5-L	1600	.225	1/4
NPF-25-L	1875	.250	15/64
NPF-30-L	2000	.300	3/16
NPF-37.5-L	2500	.375	1/8
NPF-44-L	2825	.438	1/16
NPF-50-L	3000	.500	N/A
NPF-50-L	3500	.500	N/A

Fuse cover is available for 125/216V applications. The part number is 312-3120-00.

LEAD ALLOY NETWORK PROTECTOR FUSES – LAMINATED TYPE – STANDARD SPEED

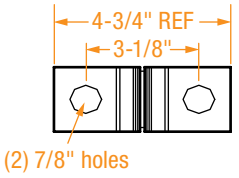


Figure 1

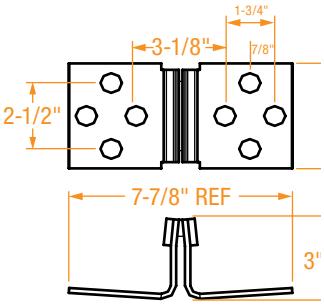


Figure 2

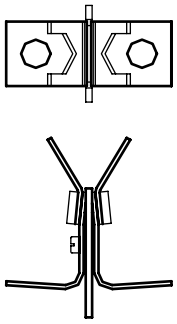


Figure 3

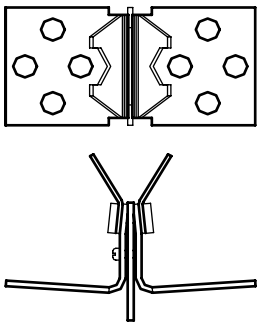


Figure 4

PART NUMBER		AMP.	VOLTAGE	OEM EQUIV. (OPEN/ VENTILATED)	OEM EQUIV. (SUBMERSIBLE/ NEMA 1A)	FIGURE
OPEN/VENTILATED ENCLOSURE	SUBMERSIBLE/ NEMA 1A ENCLOSURE					
312-3200-00	312-3201-00	800	120/208	1173006	1173007	1
312-3250-00	312-3251-00	800	277/480	1254871	1254872	3
312-3201-00	312-3202-00	1200	120/208	1173007	1173008	1
312-3251-00	312-3252-00	1200	277/480	1254872	1300550	3
312-3202-00	312-3203-00	1600	120/208	1173008	1173010	1
312-3252-00	312-3253-00	1600	277/480	1300550	1300551	3
312-3204-00	312-3205-00	1875	120/208	1173009	1173011	1
312-3254-00	312-3255-00	1875	277/480	1346424	14A5795G06	3
312-3110-00	312-3208-00	2500	120/208	1346917	1247325	2
312-3259-00	312-3260-00	2500	277/480	1491538	1332318	4
312-3208-00	312-3209-00	2825	120/208	1247325	1291274	2
312-3260-00	312-3261-00	2825	277/480	1332318	1615572	4
312-3208-00	312-3211-00	3000	120/208	1247325	12A3822G07	2
312-3260-00	312-3263-00	3000	277/480	1332318	15A4106G04	4
312-3209-00	312-3211-00*	3500	120/208	1291274	12A3822G07	2
312-3261-00	312-3263-00*	3500	277/480	1615572	15A4106G04	4

* This fuse to be used only in a submersible 3500 Ampere unit.

LEAD ALLOY NETWORK PROTECTOR FUSES – LAMINATED TYPE – TIME LAG

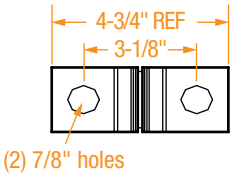


Figure 1

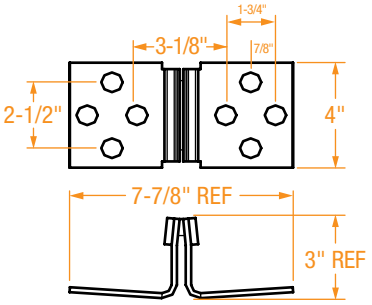


Figure 2

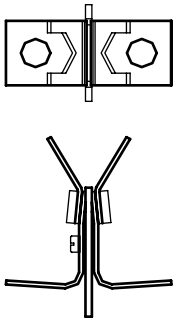


Figure 3

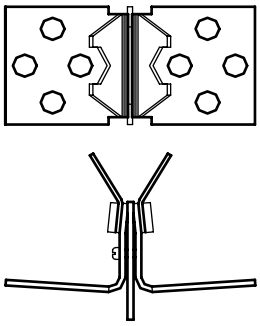


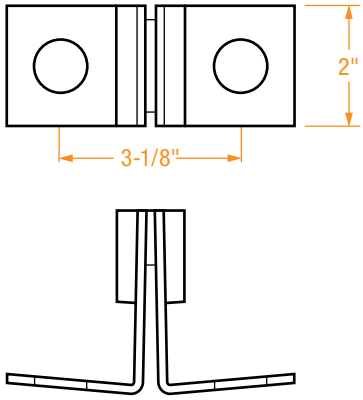
Figure 4

PART NUMBER		AMP.	VOLTAGE	OEM EQUIV. (OPEN/ VENTILATED)	OEM EQUIV. (SUBMERSIBLE/ NEMA 1A)	FIGURE
OPEN/ VENTILATED ENCLOSURE	SUBMERSIBLE/ NEMA 1A ENCLOSURE					
312-3300-00	312-3301-00	800	120/208	1019506	1019507	1
312-3500-00	312-3501-00	800	277/480	1300576	1300577	3
312-3301-00	312-3302-00	1200	120/208	1019507	1019508	1
312-3501-00	312-3502-00	1200	277/480	1300577	1300578	3
312-3302-00	312-3303-00	1600	120/208	1019508	1019510	1
312-3502-00	312-3503-00	1600	277/480	1300578	1300579	3
312-3304-00	312-3100-00	1875	120/208	1019509	1019511	1
312-3305-00	312-3306-00	1875	277/480	–	–	3
312-3308-00	312-3309-00	2500	120/208	12A3822G06	1649110	2
312-3506-00	312-3507-00	2500	277/480	–	405D312G01	4
312-3309-00	312-3311-00	2825	120/208	1649110	–	2
312-3507-00	312-3511-00	2825	277/480	405D312G01	–	4
312-3309-00	312-3310-00	3000	120/208	1649110	1649797	2
312-3507-00	312-3508-00	3000	277/480	405D312G01	405D312G03	4
312-3310-00		3500	120/208	1649797	–	2
312-3508-00		3500	277/480	405D312G03	–	4

LEAD ALLOY NETWORK PROTECTOR FUSES – NON-LAMINATED TYPE (SINGLE LAYER)

NF Series

- Made from silver-plated copper and tin/lead solder.
- May be used at 125/216V or 277/480V.
- NF fuses have a lower loss, and a lower operating temperature than the equivalent copper link fuses.
- Time-current curves available upon request.



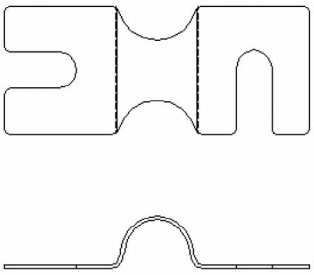
PART NUMBER	NETWORK PROTECTOR RATING
NF-2	800
NF-3	1200
NF-4	1600
NF-5	1875
NF-6	2000
NF-7*	2500
NF-10*	3000
NF-10*	3500

* Have two NEMA-spaced holes on each side.

COPPER LINK FUSES

NWP Series

- Made from silver-plated copper.
- May be used at 125/216V or 277/480V.
- The most inexpensive network-protector fuse available.
- Time-current curves available upon request.

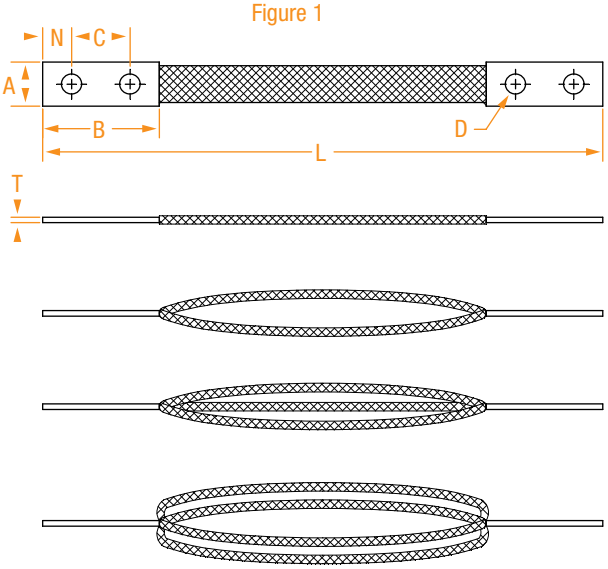


PART NUMBER	NETWORK-PROTECTOR RATING
NWP-7	800
NWP-6	1200
NWP-5	1600
NWP-5	1875
NWP-4	2000
NWP-3	2500

COPPER BRAIDS

- Made of flexible pure copper braid.
- Designed to compensate for misalignment or equipment, dampen vibrations and take up linear expansion and contraction.
- Pads can be drilled to any specification.
- For special lengths and drillings, contact the factory.

Figure 1



PART NUMBER	RATING	DIMENSIONS IN INCHES						
		A	L	B	D	N	C	T
CB504-0530	900A	1-3/4	9-1/4	3	3/4	3/4	1-1/2	3/4
CB570-2774	1200A	2	13-1/2	3-1/8	9/16	11/16	1-1/2	7/8
CB183030	–	2	32	2-1/2	1/2	9/16	N/A one-hole	1/8
CB396271	–	1	1" x 15' copper wire mesh					
CB396740	–	1	1" x 100' copper wire mesh					

SECONDARY SPADES

TRSS Series

- Designed to fit onto pad mount transformer's secondary studs.
- The "clamp-on" design offers a solid and reliable connection, while not damaging the transformer stud.
- Made of solid copper or aluminum.
- The threaded studs and nuts are made of stainless steel.
- Tin-plated to resist corrosion.
- Available in an assortment of shapes and sizes for any transformer stud size.
- Spaced according to NEMA standards.

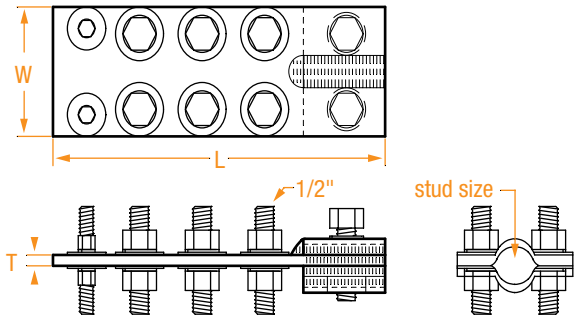


Figure 1

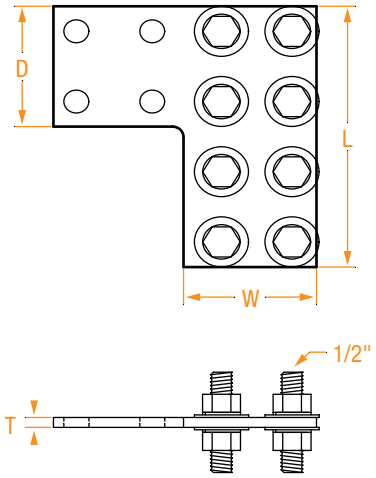


Figure 2

PART NUMBER	MATERIAL	FIGURE	DIMENSIONS IN INCHES				
			L	T	W	D	STUD SIZE
TRSS-C100	Cu	1	8-1/2	1/4	3	–	5/8
TRSS-C101	Cu	1	8-1/2	1/4	3	–	1
TRSS-C102	Cu	1	6-3/4	1/2	3	–	5/8
TRSS-A200	Al	2	6-1/2	1/2	3-1/16	3	four-hole NEMA Pad
TRSS-A201	Al	2	4-5/8	1/2	3	3-1/8	two-hole NEMA Pad

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.

SET SCREW CONNECTORS

- Made of aluminum alloy.
- Used on pad-mounted transformers.
- Accepts a range of conductor sizes – from #8 to 4/0.
- Two-hole NEMA pad.
- Comes with a plastic cover.

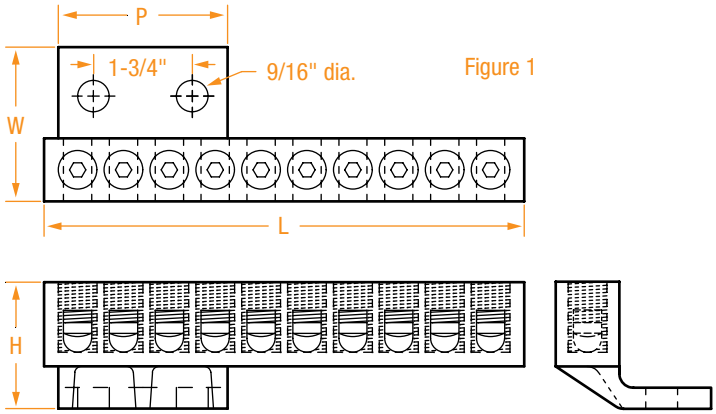
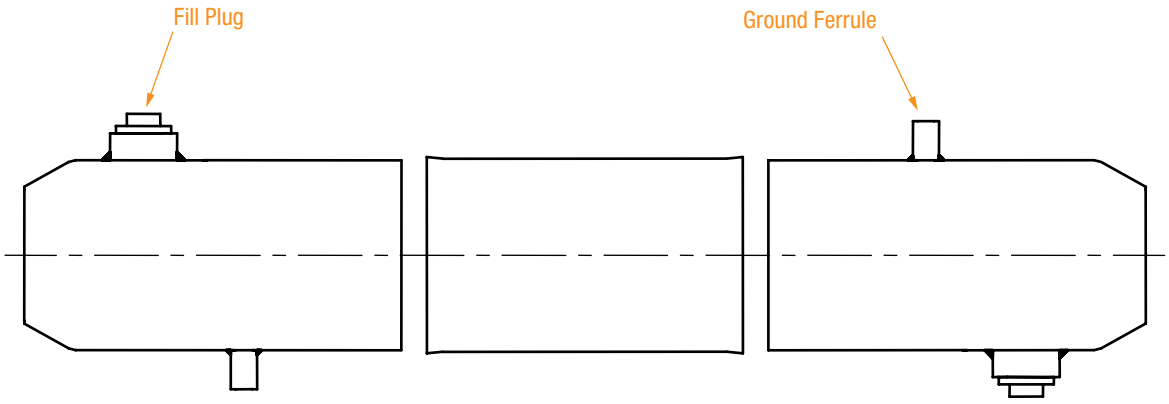


Figure 1

PART NUMBER	DIMENSIONS IN INCHES			
	L	H	W	P
SSCRW10-12-1	8-1/2	2-1/4	2-3/4	3

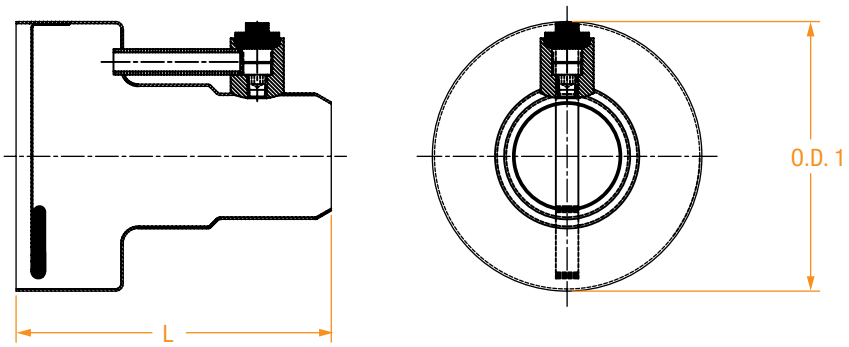
JOINT CASINGS

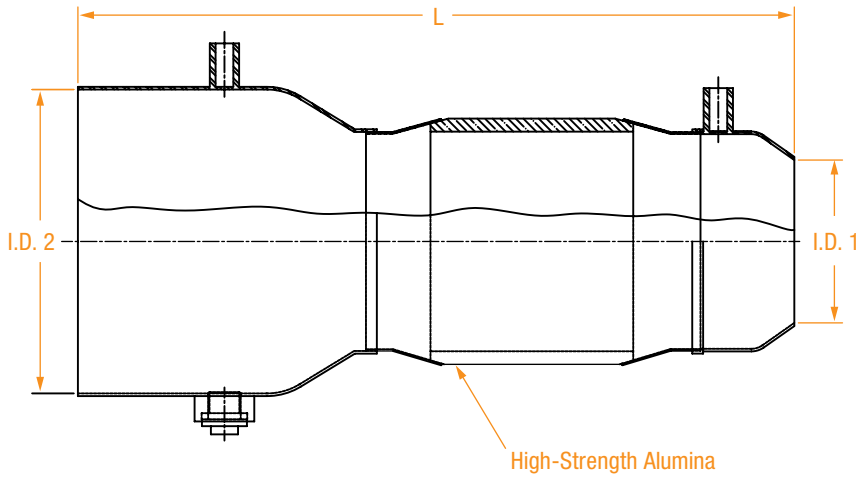
- Used on low pressure oil filled transmission cable — 69kV, 138kV and 345kV.
- Made from spun copper.
- Fill plugs allow addition of oil or compound.



Available with inside diameters of 5, 7 & 9 inches.

FOR OTHER SIZES, CONTACT YOUR SALES REPRESENTATIVE OR THE FACTORY.





CABLE RACK ARMS

- Made of galvanized steel.
- Used to support underground cables, splices, crab joints and other accessories in manholes and vaults.

Figure 4

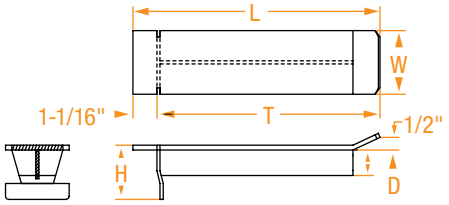


Figure 1

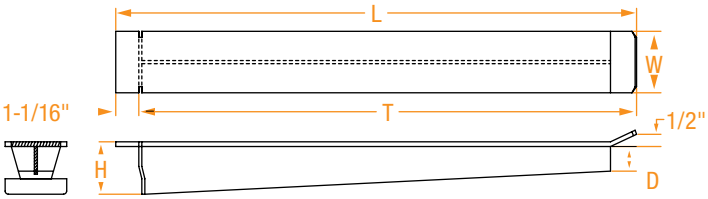
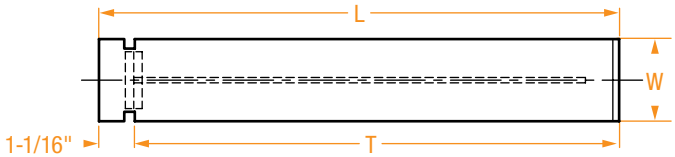


Figure 2



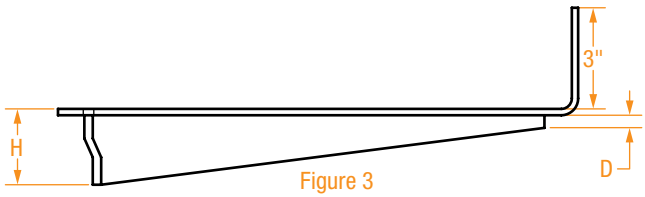


Figure 3

Cable Rack Arms

PART NUMBER*	FIGURE	DIMENSIONS IN INCHES			
		L	T	H	D
RA-1W	1	9-11/16	8-5/8	2-7/16	1
RA-2W	2	13-13/16	12-3/4	2-7/16	3/8
RA-3W	2	21-3/16	19-9/16	2-7/16	1/2
RA-1W-90	3	10	9-15/16	2-7/16	3/8
RA-2W-90	3	15-1/4	12-3/4	2-7/16	3/8
RA-3W-90	3	21-3/16	20-1/16	2-7/16	3/8

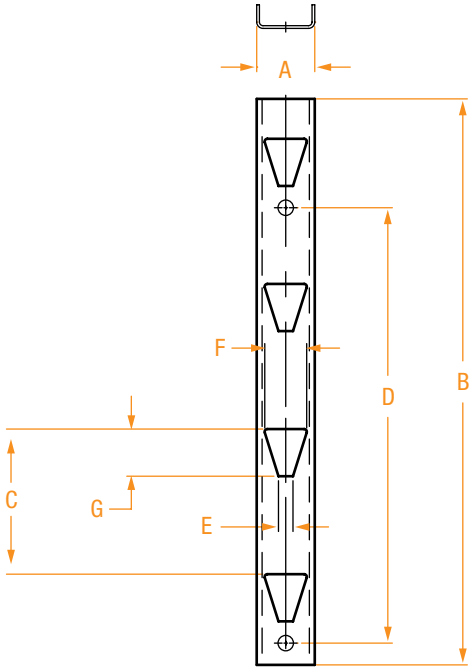
Rack Arm Covers

PART NUMBER	FIGURE	DIMENSIONS IN INCHES			
		L	T	H	D
RA-1W-C	4	9	–	4.5	–
RA-2W-C	4	13	–	4.5	–

* Add "-A" for the rack arms assembled with the covers.

STANCHIONS

- Made of galvanized steel.
- Used to support cables in manholes.
- Rack arms available in three different sizes.



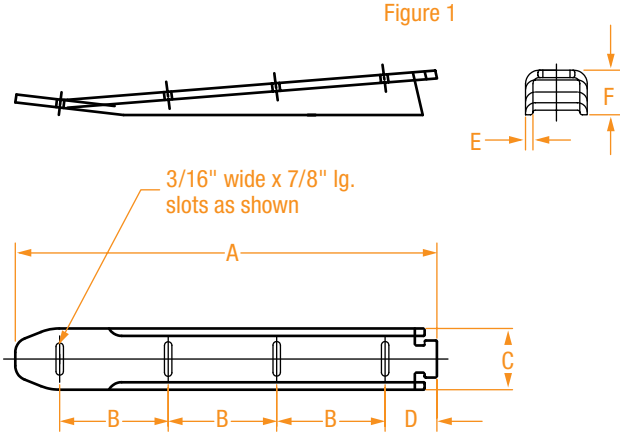
PART NUMBER	# OF SLOTS	DIMENSIONS IN INCHES						
		A	B	C	D	E	F	G
003-0346	1	4	9	–	6-3/4	1	2-29/32	3-1/4
003-0353	2	4	17-1/4	8	10	1	2-29/32	3-1/4
003-0379	2	4	19	10	10	1	2-29/32	3-1/4
003-0387	2	4	21	12	10	1	2-29/32	3-1/4
003-0395	3	4	25-3/4	8	23-1/4	1	2-29/32	3-1/4
003-0437	4	4	32	8	23-1/4	1	2-29/32	3-1/4
003-0445	4	4	39	10	30	1	2-29/32	3-1/4
003-0452	4	4	45	12	30	1	2-29/32	3-1/4
003-0460*	6	4	48	8	23-1/4 & 16*	1	2-29/32	3-1/4
003-0478*	6	4	59	10	20 & 29-1/2*	1	2-29/32	3-1/4

* Two “D” dimensions are given because there are three mounting holes. The first dimension is from the top hole to the center mounting hole. The second dimension is from the center hole to the bottom mounting hole.

STANDARD CABLE RACK ARMS

- Made from galvanized steel channel.
- Epoxy coated.
- Fits standard cable racks.

Figure 1



PART NUMBER	# OF SLOTS	DIMENSIONS IN INCHES					
		A	B	C	D	E	F
SRA-4	2	4-1/2	2-1/4	1-1/2	1-7/16	3/16	1-1/4
SRA-7	3	8	2-3/4	1-1/2	1-1/4	3/16	1-1/4
SRA-10*	4	10-11/16	2-3/4	1-1/2	1-5/16	3/16	1-1/8
SRA-14	5	14-1/2	2-3/4	1-1/2	2-1/2	3/16	1-5/8

* This size has one 1/2" diameter hole between the 2nd and 3rd slots.

PIGTAIL PLUG

PTP Series

- Designed to provide a permanently installed waterproof 115V NEMA 5-15R receptacle for underground application.
- Constructed with 2 ft. of 2/0 copper wire for connection to the 115V source and 2 lengths of #12 wire for the neutral and ground.
- Preassembled internal connection to the receptacle is enclosed in a polyurethane potting material to prevent oil or water infiltration through the wire strands.
- The 2/0 hot leg is designed to provide a rigid but bendable support for the entire receptacle.
- The cap is sealed water tight with 2 Buna-N O-rings. A deep grooved finish on both the cap and body affords positive grip even when wearing dielectric gloves.
- Connection to the 115V source can be accomplished with a mechanical vise connector or compression sleeve onto an available crab leg. Ground and neutral connections can utilize a mechanical vise connector or compression terminal lug.

PART NUMBER	LENGTH OF 4/0 SOURCE CABLE (INCHES)	LENGTH OF #12 NEUTRAL AND GROUND CABLES (INCHES)
PTP-1	12	24

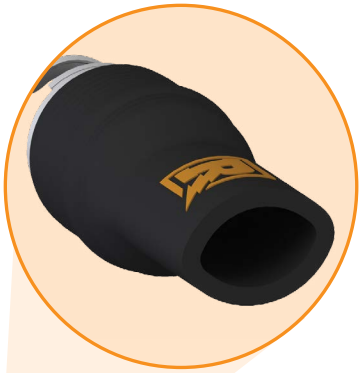
* Ends of Neutral and Ground wires can be connected to using a 4/0 crimp connector

SECONDARY COLD-SHRINK SPLICE

PSCS Series

- Available in several sizes, for use on secondary cable, at secondary voltages (below 600V).
- Molded from high-strength silicone rubber, resistant to tearing and abrasion.
- Eliminates the need for a blow-torch in confined spaces.
- Two short ribbon-cores allow for easy removal, even in tight spaces.
- When the core is removed, the splice "automatically" creates a watertight seal. No additional steps or parts required.
- Oval cross-section of the splice has been engineered to make installation easy while still providing excellent heat dissipation for the connector underneath.

PART NUMBER	CABLE SIZE
PSCS-12	4/0
PSCS-18	500MCM
PSCS-23	750MCM



Cutaway A: Oval cross-section reduces friction, which is particularly helpful when sliding the splice on the cable.

Splice before installation.

Cutaway B: Splice tightly conforms to connector's shape resulting in excellent heat dissipation.

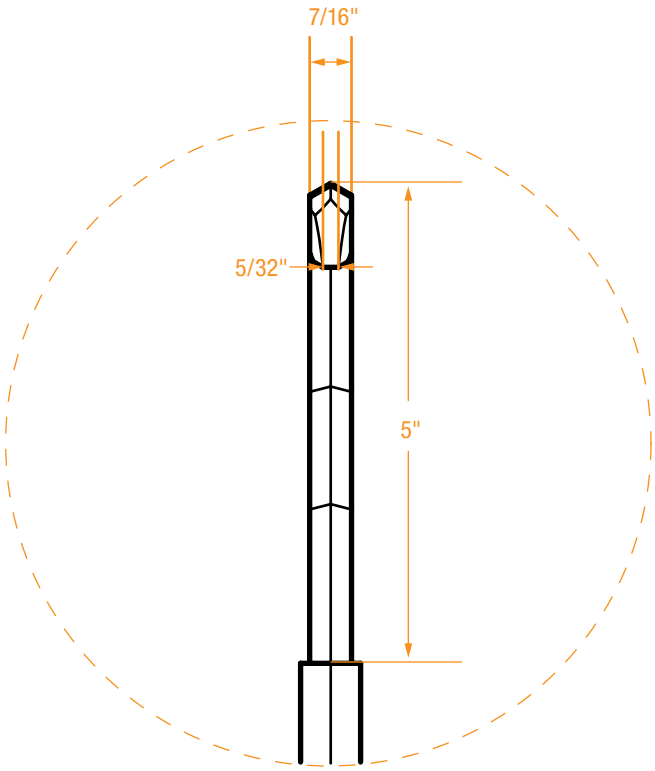
Installed
Both cores are removed with ease and splice shrinks down to form a watertight seal.

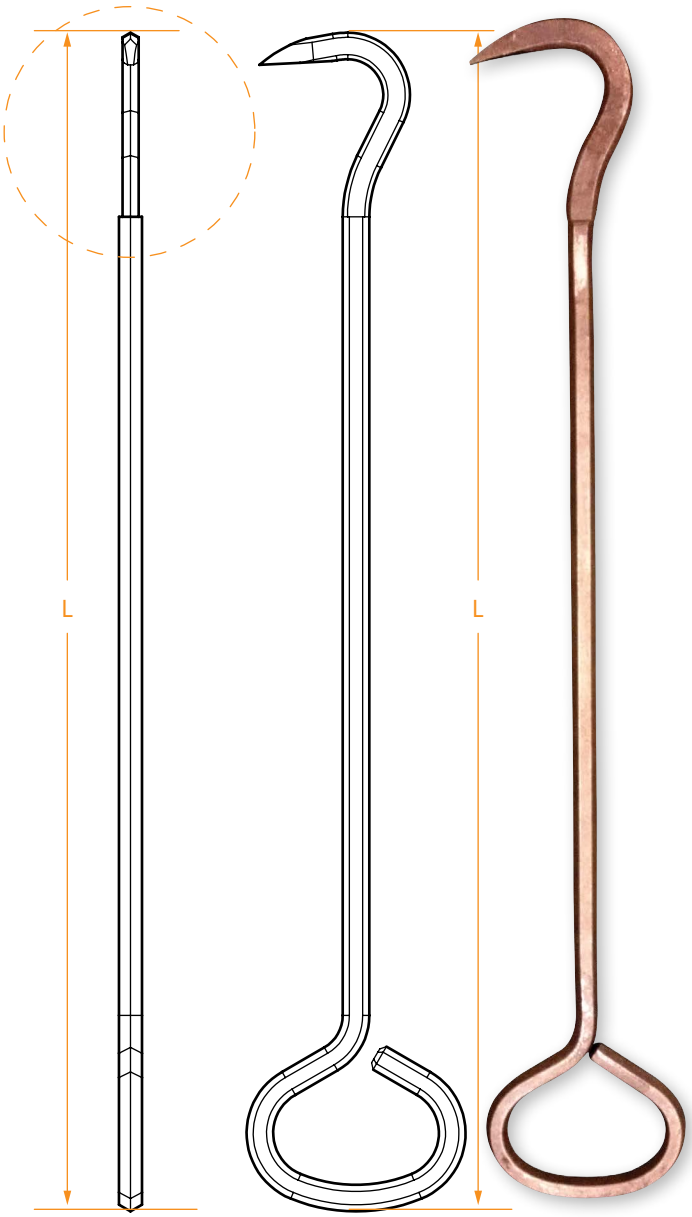
Splice:

LIFTING HOOKS

RLH Series

- Made from hot-forged steel.
- Heat treated for a hard, durable tip.
- Lightly coated with rust preventative oil.
- The hook head is thinner than the shaft to fit into vault entrance covers.





PART NUMBER	L
RLH-1	24
RLH-2	28
RLH-3	32
RLH-4	36

INSULATED T-WRENCH

- Insulated T-Wrench is commonly used to work on Network Protectors.
- Layer of red insulation underneath black top-coat of insulation provides visual indication of worn or damaged insulation.
- Allows work to be performed at a great distance than by doing the same operation by hand.

PART NUMBER	DESCRIPTION
312-1903-00	INSULATED T-WRENCH, 3/4" x 32”
312-1903-10	INSULATED T-WRENCH, 3/4"x 53 1/2
312-1903-20	INSULATED T-WRENCH, 3/4" x 36"
312-1903-30	INSULATED T-WRENCH, 3/4" x 22"
312-1947-00	INSULATED T-WRENCH 9/16" x 32