SPLICES

STRAIGHT TWO WAY JOINT3/C, PAPER INSULATED, SHIELDED, LEAD COVERED CABLE

I. INSTALLATION INSTRUCTIONS

I.1. PRECAUTIONS:

I.1.1. Expansion bends must be made in the cables to allow for cable movement while in service.

I.1.2. Avoid bending the cable to a radius less than the minimum recommended by the cable manufacturer.

I.1.3. The curvature of the cables, beyond the straight portion of the joint, must be such that the lead sleeve can be pushed back out of the way during the splicing operations.

I.1.4. Keep splicing materials and tools at the surrounding temperature or above to prevent moisture from condensing on their surfaces.

I.1.5. The insulating tape is to be wrapped as tight as possible to obtain a hard, solid splice. There should not be more than one tape break in any layer of tape.

II. INSTALLATION PROCEDURE:

II.1. PREPARING THE CABLE ENDS:

II.1.1. Train the cables into their final positions allowing the ends to overlap.

II.1.2. If the cable has a protective jacket, remove it to expose the lead sheath for 4" beyond the indicated wipe.

II.1.3. Make two circumferential reference marks on each cable sheath.

II.1.3.1. 1st: At the center of the joint.

II.1.3.2. 2nd: "A" inches from the first reference mark.

II.1.4. Cut the cables at the first reference mark. The cables should butt together after cutting.

II.1.5. Scrape both ends of the lead sleeve for 3" and apply stearine flux to the scraped portions.

II.1.6. Clean the interior of the lead sleeve with solvent and clean, dry rags. Clean the surface of the cable sheath where the sleeve will rest during the splicing operations.

II.1.7. Slip the sleeve over the cable so it rests on the clean portion of the sheath.

II.1.8. Scrape the cable sheaths for 3" beyond the second reference mark and apply stearine flux to the scraped portion.

II.1.9. Make a circumferential score not more than half way through the cable sheath at the second reference mark.

II.1.10. Slit the cable sheath from the score to the cable end. Take care not to damage the underlying cable insulation.

II.1.11. Remove the sheath by pulling the slit edge directly away from the cable axis. A small natural "bell" should form at the sheath edge.

II.1.12. Remove any binder tapes and fillers to the end of the lead sheath.

II.1.13. Bind the conductors with cotton tape at the end of the lead sheath to prevent breaking of the insulation when the conductors are spread.

II.2. APPLYING THE CONNECTOR:

II.2.1. Bind the cable insulation "E" plus 5/8" from the end of the cable.

II.2.2. Remove the cable insulation and any strand shielding, binder tapes or separator tapes down to the bare conductor strands for "E" plus 1/2" from the end of the cable.

II.3. SOLDER CONNECTOR:

II.3.1. Clean the exposed conductor strands and apply soldering flux.

II.3.2. Clean the interior of the connector with solvent and clean, dry rags.

II.3.3. Slip the connector over the conductors with the slot up. Butt the conductors together at the center of the connector. Squeeze the ends of the connector onto the conductors.

II.3.4. Tightly wrap cotton tape around the connector at the ends of the connectors and over the adjacent insulation.

II.3.5. Apply the soldering flux in the slot of the connector. Tin the connector and conductor and solder the connector to the conductors. While the solder is still plastic, close the connector slot.

II.3.6. Remove the cotton tape and dress the connector and conductor. The connector surface must be smooth and free from burrs or projections.

II.4. COMPRESSION CONNECTOR:

II.4.1. Slip the connector over the conductors. Butt the conductors together at the center of the connector.

II.4.2. Press the connector onto the conductor according to the press manufacturer's instructions.

II.4.3. Fill the connector indents with filler compound.

II.4.4. Trim the connector shield so it is 1/4" shorter than the straight section of the connector and overlaps slightly when wrapped around the connector.

II.4.5. Tightly wrap the shield around the connector. Solder the overlapped edge of the shield.

II.4.6. Dress the soldered edge of the shield.

II.4.7. Flush the connector with hot oil (230 degrees F).

II.4.8. Cover the connector with insulating tape until the insulation buildup is started.

II.5. STEPPING THE INSULATION:

II.5.1. Count the tapes in the cable insulation using a piece of excess cable. Note any changes in thickness of the tapes. Determine the number of tapes to be removed per step by dividing the number of tapes by the number of steps.

II.5.2. Remove the cable shielding (metallic tape, metalized paper tape or carbon black) to the dimension shown on the drawing. Trim the shielding to form a smooth straight edge.

II.5.3. Mark the cable with twine where the stepping is to begin. Remove the number of tapes per step as determined above at the dimensions shown on the drawing. A piano wire with weights at the ends, looped around the cable will facilitate this operation. The tapes are torn against the wire.

II.5.4. As each step is completed secure the insulation at the top of the step with twine and protect it with a serving of cotton tape.

II.5.5. Applying The Tape:

II.5.6. Remove the protective covering as the insulation is applied. Do not expose any more of the insulation than necessary for taping.

II.5.7. Fill in the spaces at the ends of the connector with 3/4" wide insulating tape.

II.5.8. Apply half-lapped layers of insulating tape over the stepping, the previously applied insulating tape and the connector up to the level of the cable insulation.

II.5.9. Remove one layer of cable insulation to the cable shielding end.

II.5.10. Apply half-lapped layers of insulating tape to the dimensions shown on the drawing to complete insulation of the joint.

II.5.11. Cover the insulating tape with shielding braid. Apply the braid half-lapped on the tapered portions of the joint and butt-lapped on the cylindrical portion. Extend the braid over the cable shielding for 1/2".

II.5.12. Solder the adjacent turns of braid together in three axial strips. Solder tack the braid to the cable shielding.

II.5.13. Flush the shielding braid with hot oil (230 degrees F).

II.5.14. Bind the conductors together at the center of the joint with saturated webbing.

II.5.15. Assembling The Sleeve:

II.5.16. Slip the lead sleeve into position and center it with respect to the joint.

II.5.17. Beat down the ends of the sleeve to fit around the cable sheath.

II.5.18. Limit the wipes by applying paper pasters to the cable sheath 1" from the sleeve and to the sleeve 1" from the tapered ends.

II.5.19. Seal the sleeve to the cable sheath with a wiped joint at each end.

II.5.20. Filling The Sleeve:

II.5.21. Cut a "V" shaped filling hole 3" from each end of the sleeve.

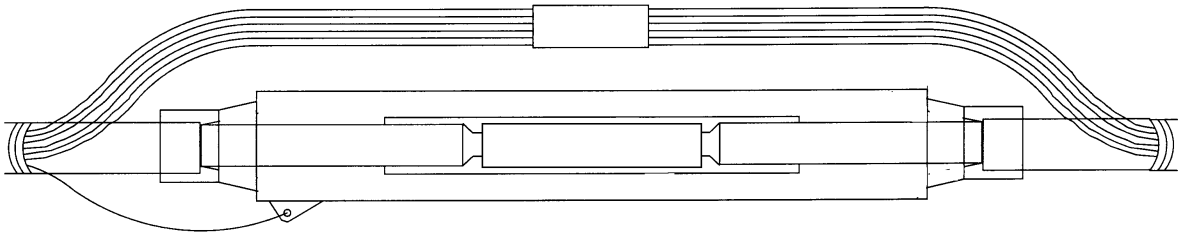
II.5.22. Heat the compound to temperature indicated on the tab label. Do not exceed this temperature.

II.5.23. Fill the sleeve with compound. Allow the compound to cool and make a second filling.

II.5.24. Beat down the filling holes and seal them with bar solder.

UVSS
UWSS
URSS

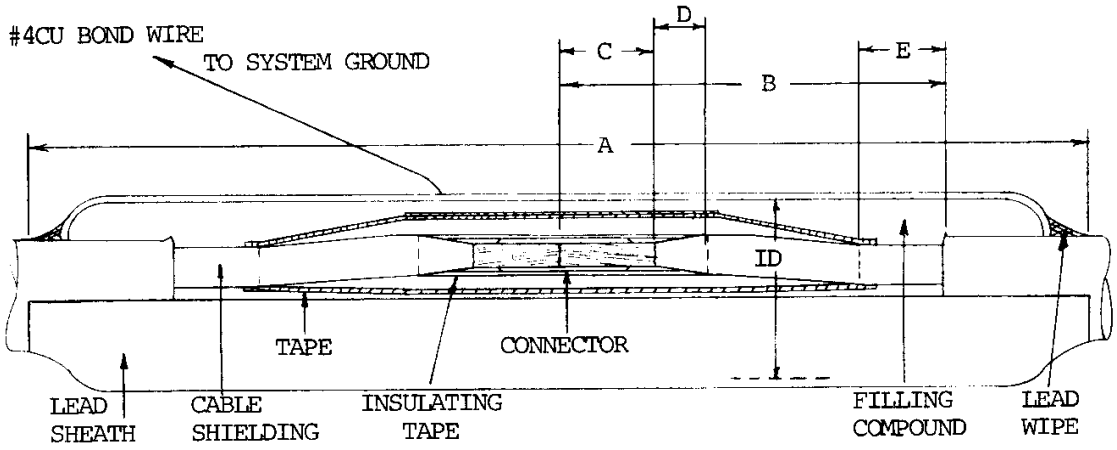
STRAIGHT PREMOULDED SOLID DIELECTRIC SPLICE (MAINTENANCE)



MATERIAL DESCRIPTION				
VOLTAGE	**PLATE**	**SPLICE**	**NEUTRAL CONNECTOR**	**DESCRIPTION**
25 kV	**UVSS*2**	SPLST005	CNNCP021	2-2AL STRAIGHT SPLICE
	UVSS*2–1/0	SPLST006	CNNCP021	2-1/0AL STRAIGHT SPLICE
	UVSS*1/0	SPLST007	CNNCP021	1/0-1/0AL STRAIGHT SPLICE
	UVSS*350	SPLST008	CNNCP021	350-350AL/CU STRAIGHT SPLICE
	UVSS*1000	SPLST010	CNNCP021	1000-1000AL/CU STRAIGHT SPLICE
13.2 kV	**UWSS*400**	SPLST004	CNNCP021	400-400CU STRAIGHT SPLICE
	UWSS*750	SPLST011	CNNCP021	750-750CU STRAIGHT SPLICE
4 kV	**URSS*750**	SPLST003	CNNCP021	400-400CU STRAIGHT SPLICE

URSL

LEAD SPLICE FOR PAPER CABLE, STRAIGHT



Dimensions						
CABLE SIZE	**A**	**B**	**C**	**D**	**E**	**ID**
400 KCM	24”	10”	1/2 Connector + 3/8”	1-1/2”	3”	4-1/2”

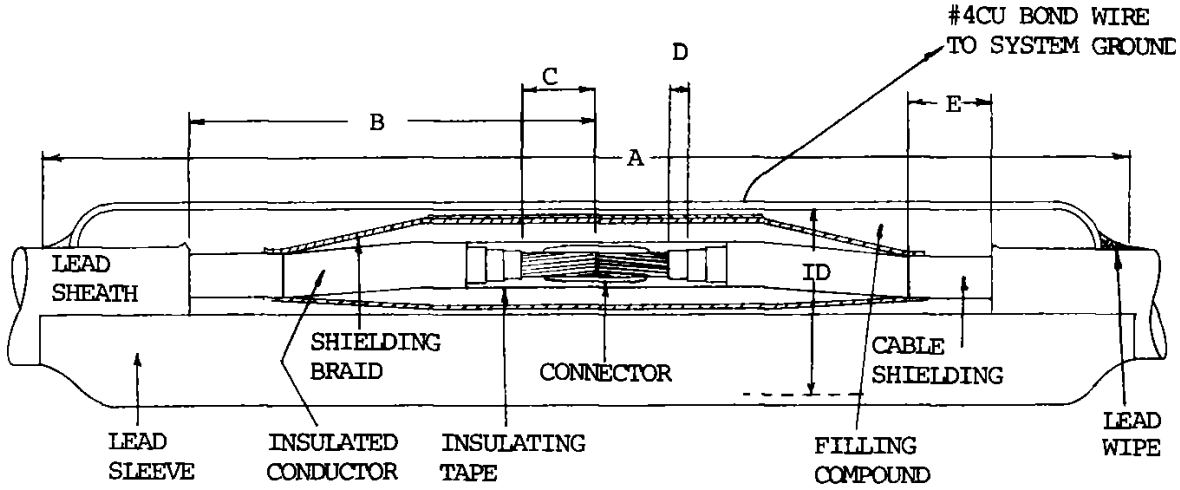
Option	**Cable Size In**	**Cable Size Out**	**Voltage**
URSL*400	400–3/C	400–3/C	4.16KV

URSL*400		
ITEM	**QUANTY**	**DESCRIPTION**
COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
ADCMI010	1	COMPOUND INSULATING 2 GAL.
CNNSO013	3	CONNECTOR SPLIT SOLDER 400MCM CU
INSCA001	6	INSULATOR, CABLE RACK
PIPLE007	22	PIPE LEAD 4–1/2 IN. ID
SOLTL002	20	SOLDER 40/60 1.5 LB BAR
TAPEL003	4	TAPE FIBERMAT
TAPEL004	4	TAPE, ARC/FIRE PROOFING
TAPEL014	1	TAPE CU SHIELDING BRAID TINNED

OTHER OPTIONS:
URSL* 2/0, URSL* 4/0, URSL* 500, URSL* 500T

UWSL

LEAD SPLICE KIT FOR PAPER CABLE STRAIGHT

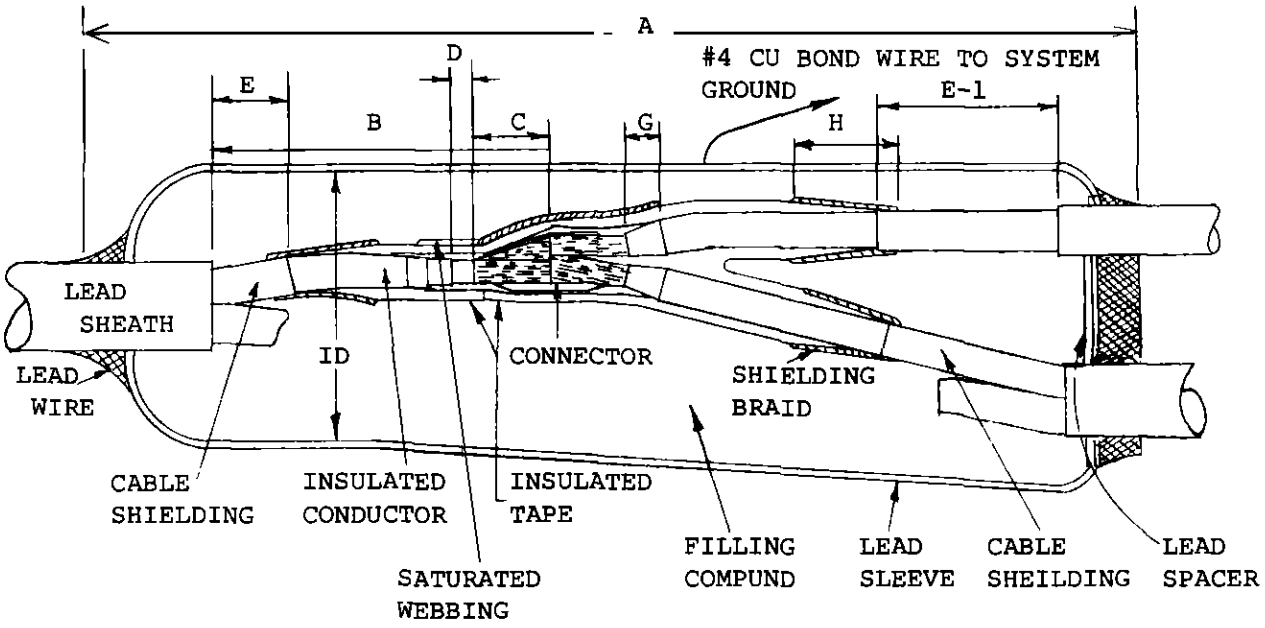


DIMENSIONS						
CABLE SIZE	**A**	**B**	**C**	**D**	**E**	**ID**
1/0AWG	24”	10”	1/2 Connector + 3/8”	3/4”	3”	4”
400KCM	24”	10”	1/2 Connector + 3/8”	3/4”	3”	5”
750KCM	28”	12”	1/2 Connector + 3/8”	3/4”	3”	6”

13.2 kV			
Option	**Cable Size In**	**Cable Size Out**	**Voltage**
UWSL1/0	1/0–3/C	1/0–3/C	13.2 kV
UWSL400	400–3/C	400–3/C	13.2 kV
UWSL750	750–3/C	7500–3/C	13.2 kV

UWSL

LEAD SPLICE FOR PAPER CABLE, BRANCH OR Y



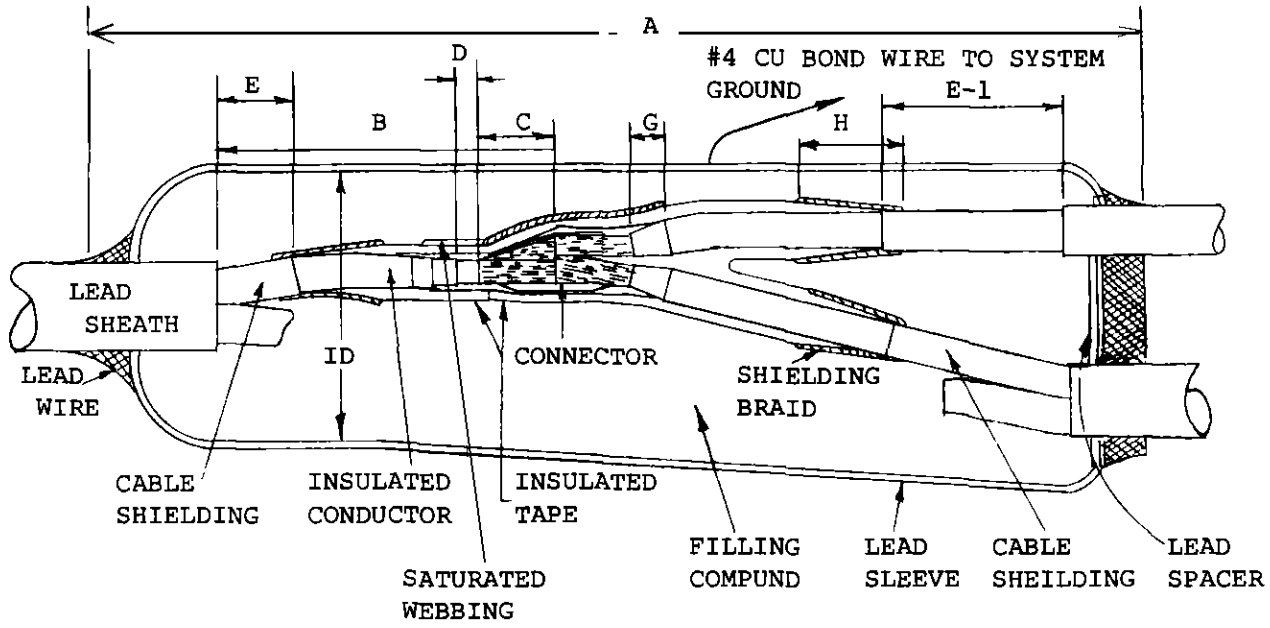
DIMENSIONS									
CABLE SIZE	**A**	**B**	**C**	**D**	**E**	**E-1**	**G**	**H**	**ID**
400KCM 400KCM B 1/0AWG	26”	10” & 12”	1/2 CONNECTOR + 3/8”	3/4”	3”	4”	1-1/2”	3”	5-1/2”
1/0AWG 1/0AWG Y 1/0AWG	26”	10” & 12”	1/2 CONNECTOR + 3/8”	3/4”	3”	4”	1-1/2”	3”	5-1/2”

OPTION	CABLE SIZE IN	CABLE SIZE OUT	TAP	TYPE OF SPLICE
UWSL1/0	400–3/C	400–3/C	1/0–3/C	BRANCH
UWSL400	750–3/C	750–3/C	400–3/C	BRANCH
UWSL750	1/0–3/C	1/0–3/C	1/0–3/C	Y
UWSL750	400–3/C	400–3/C	400–3/C	Y

13.2 kV			
PLATE	**Item**	**QTY**	**Description**
UWSL*400B	COBCO028	5	CONDUCTOR BARE COPPER NO.4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR HALF DUPLEX SOLDER 400–400–1/0
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 5–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB. BAR
	TAPEL003	6	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED
UWSL*750B	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR HALF DUPLEX SOLDER 750–750–400
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	30	PIPE LEAD 6–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	10	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED
UWSL*1/0Y	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR HALF DUPLEX 1/0–1/0–1/0
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 4–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	5	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED
UWSL*400Y	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR HALF DUPLEX SOLDER 400–400–400
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 4–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	5	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED

UWSL

LEAD SPLICE FOR PAPER CABLE, 1 WAY / 4 WAY



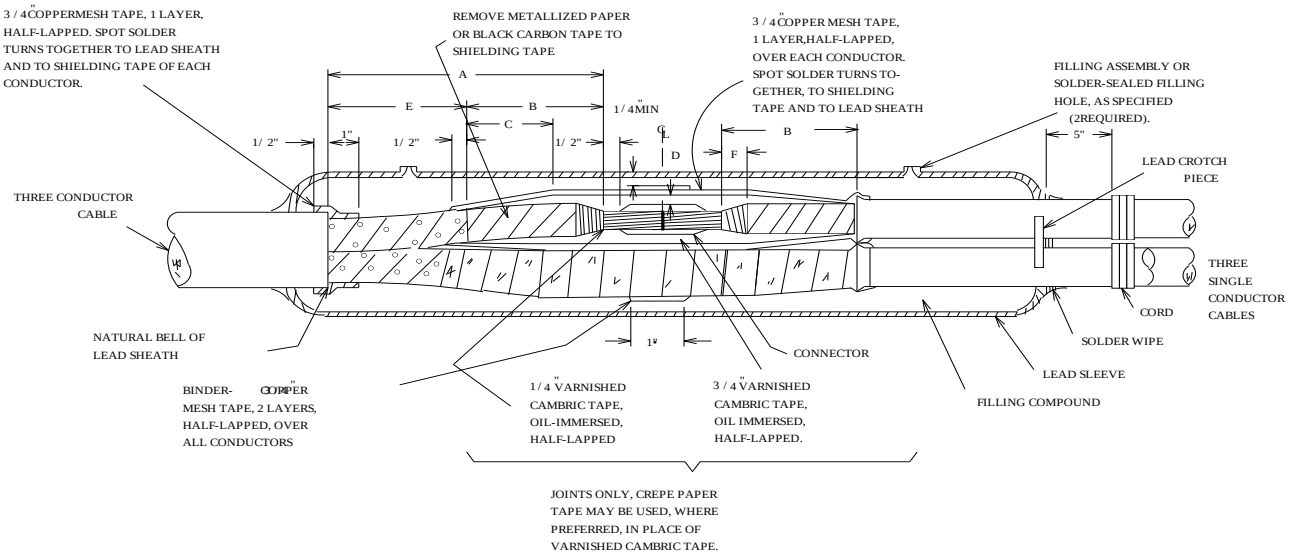
DIMENSIONS									
CABLE SIZE	**A**	**B**	**C**	**D**	**E**	**E-1**	**G**	**H**	**ID**
400KCM 400KCM B 1/0AWG	26”	10” & 12”	1/2 CONNECTOR + 3/8”	3/4”	3”	4”	1-1/2”	3”	5-1/2”
1/0AWG 1/0AWG Y 1/0AWG	26”	10” & 12”	1/2 CONNECTOR + 3/8”	3/4”	3”	4”	1-1/2”	3”	5-1/2”

OPTION	CABLE SIZE IN	CABLE SIZE OUT	TAP	TYPE OF SPLICE
UWSL*400W	400–3/C	400–3/C	3–1/0–1/C	1 WAY / 4 WAY
UWSL*1/0W	1/0–3/C	1/0–3/C	3–1/0–1/C	1 WAY / 4 WAY

13.2 kV			
PLATE	**ITEM**	**QTY**	**DESCRIPTION**
UWSL*400W	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR HALF DUPLEX 400–400–1/0
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 4–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	6	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED
UWSL*1/0W	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR HALF DUPLEX SOLDER 1/0–1/0–1/0
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 5–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	5	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED

UWSL

LEAD SPLICE FOR PAPER CABLE, TRIFURCATING



DIMENSIONS							
VOLTAGE RATING	**A**	**B**	**C**	**D**	**D**	**E***	**F**
15 kV	**9 "- 11"**	**6"**	**3"**	**P 3/8"**	**VC 7/16"**	**3"- 5"**	**3/4"**

"D" COLUMN: P – For Paper Insulated Cable
VC – For Varnished Cambric Insulated Cable

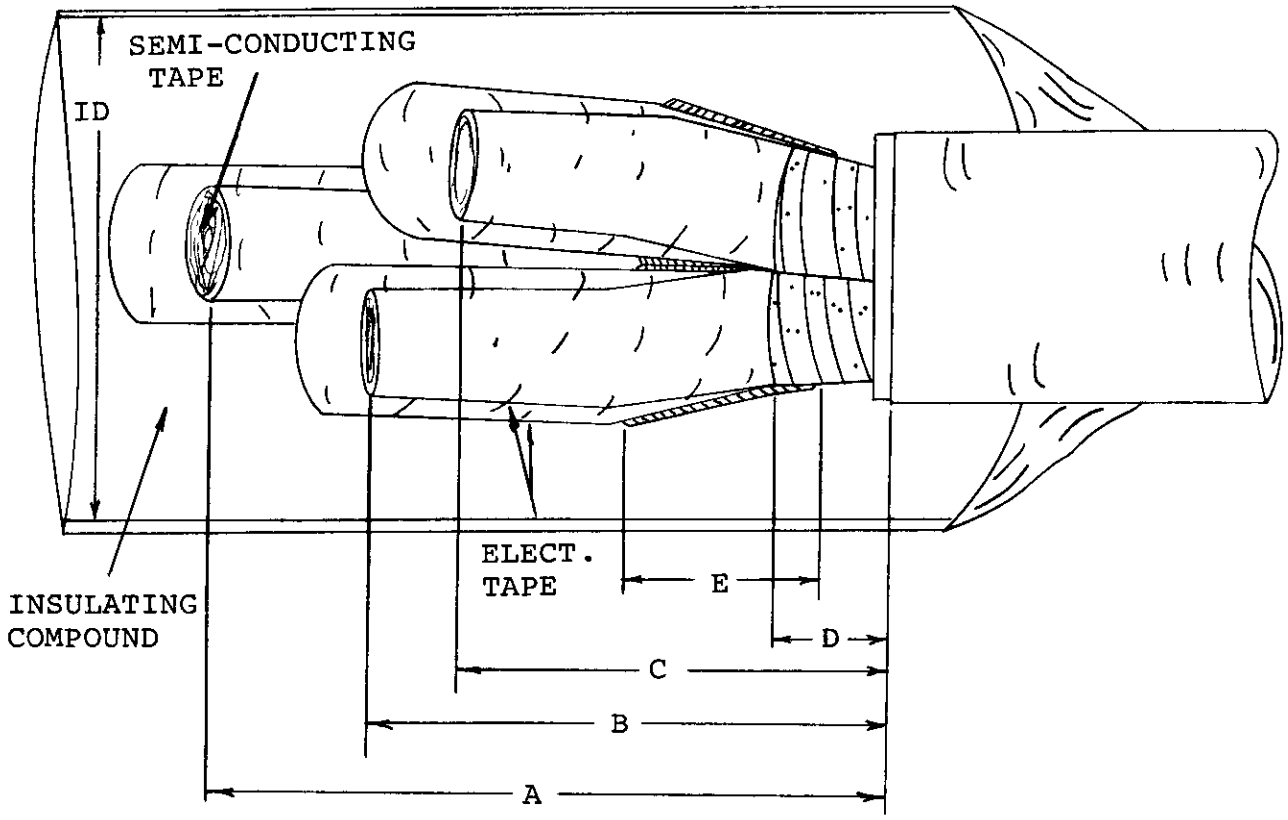
"e" COLUMN: The Upper Limit Applies To Larger Cables

OPTION	CABLE SIZE IN	CABLE SIZE OUT
UWSL*1/0T	1/0–3/C	(3) 1/0–1/C
UWSL*400T	400–3/C	(3) 400–1/C
UWSL*750T	750–3/C	(3) 750–1/C

13.2 KV			
PLATE	**ITEM**	**QTY**	**DESCRIPTION**
UWSL*1/0T	COBCO 028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI 010	1	COMPOUND INSULATING 2 GAL.
	CNNSO ___	3	CONNECTOR SPLIT SOLDER 1/0 CU
	INSCA 001	6	INSULATOR, CABLE RACK
	PIPLE ___	26	PIPE LEAD 4 IN. ID
	SOLTL 002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL 003	6	TAPE FIBERMAT
	TAPEL 004	6	TAPE, ARC/FIRE PROOFING
	TAPEL 014	1	TAPE CU SHIELDING BRAID TINNED
UWSL*400T	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR SPLIT SOLDER 400CM CU
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 5–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	5	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	5	TAPE CU SHIELDING BRAID TINNED
UWSL*750T	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	CNNSO___	3	CONNECTOR SPLITSOLDER 750MCM CU
	INSCA001	6	INSULATOR, CABLE RACK
	PIPLE___	26	PIPE LEAD 6–1/2 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	5	TAPE FIBERMAT
	TAPEL004	6	TAPE, ARC/FIRE PROOFING
	TAPEL014	1	TAPE CU SHIELDING BRAID TINNED

UWSL

LEAD SPLICE FOR PAPER CABLE HOT BUTT



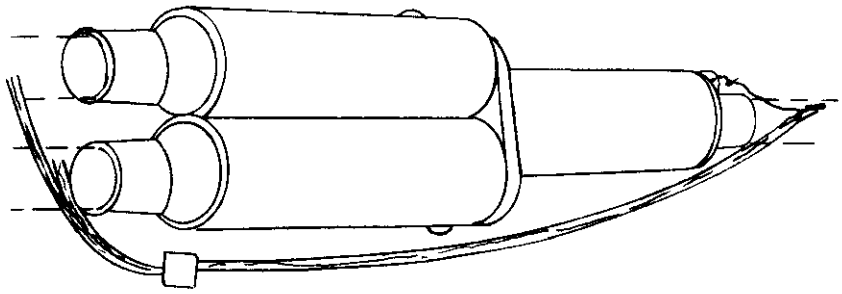
DIMENSIONS						
CABLE SIZE	**A**	**B**	**C**	**D**	**E**	**ID**
1/0AWG	14”	12”	10”	3”	3”	4”
400KCM	14”	12”	10”	3”	3’	5”
750KCM	16”	14”	12”	3’	3’	6”

OPTION	CABLE SIZE IN
UWSL*1/0HB	1/0–3/C
UWSL*400HB	400–3/C
UWSL*750HB	750–3/C

13.2 KV			
PLATE	**ITEM**	**QTY**	**DESCRIPTION**
UWSL*1/0HB	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI 010	1	COMPOUND INSULATING 2 GAL.
	PIPLE___	18	PIPE LEAD 3 IN. ID
	SOLTL 002	5	SOLDER 40/60 1.5 LB BAR
	TAPEL 003	3	TAPE FIBERMAT
UWSL*400HB	COBCO028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	PIPLE___	18	PIPE LEAD 5 IN. ID
	SOLTL002	5	SOLDER 40/60 1.5 LB BAR
	TAPEL003	3	TAPE FIBERMAT
UWSL*750HB	COBCP028	5	CONDUCTOR BARE COPPER NO. 4 SOL SOFT DRAWN
	ADCMI010	1	COMPOUND INSULATING 2 GAL.
	PIPLE___	26	PIPE LEAD 6 IN. ID
	SOLTL002	25	SOLDER 40/60 1.5 LB BAR
	TAPEL003	5	TAPE FIBERMAT

UVSY

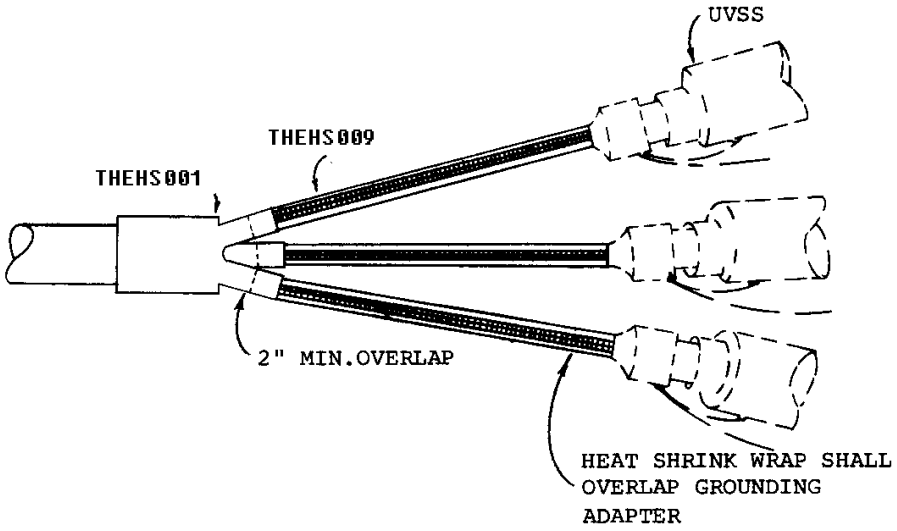
PRIMARY WYE SPLICE 200 AMPS PREMOULDED UVSY, MAINTENANCE ONLY



ITEM	QUANTITY	DESCRIPTION
SPLWY 002 (OBSOLETE)	**1**	**ALUMINUM "Y" SPLICE 2AL/CU**

UVST

PRIMARY SPLICE, BREAKOUT, PILC

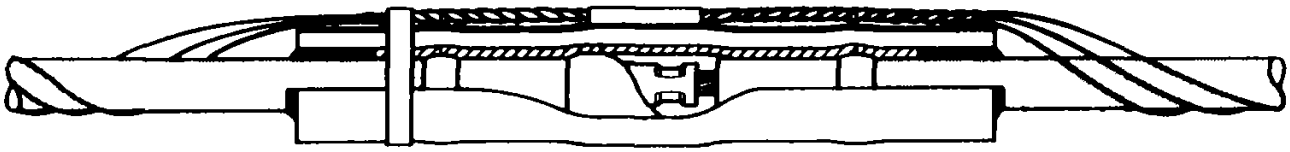


NOTE:
SPLICES(PLATE UVSS) TO BE CALLED FOR IN ADDITION TO THIS PLATE.

ITEM	QUANTITY	DESCRIPTION
THEHS 001	1	HEAT SHRINK BREAKOUT
THEHS 009	3	HEAT SHRINK WRAP

UVSH

PRIMARY SPLICE KIT, STRAIGHT, HEAT SHRINK

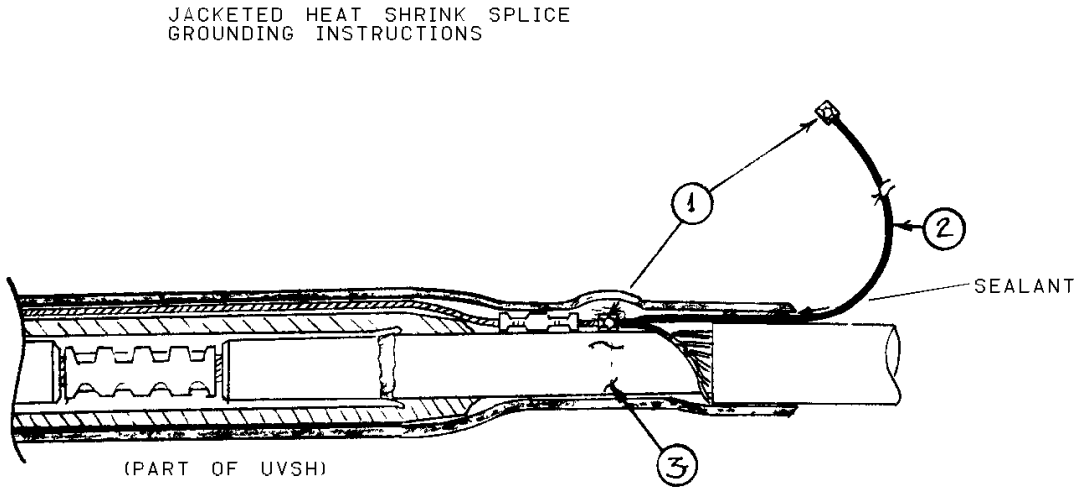


25KV CONCENTRIC NEUTRAL CABLE SPLICE		
OPTION	**QUANTITY**	**SPLICE KIT**
UVSH*1/0	1	SPLST007 with 2 THEHS008
UVSH*1/0-T	1	SPLTR101 with THEHS008
UVSH*350	1	SPLSH 003
UVSH*1000	1	SPLSH 004

15KV FLAT STRAP NEUTRAL CABLE SPLICE		
OPTION	**QUANTITY**	**SPLICE KIT**
UVSH*750	1	SPLIN001

UVSH

JACKETED HEAT SHRINK SPLICE GROUNDING



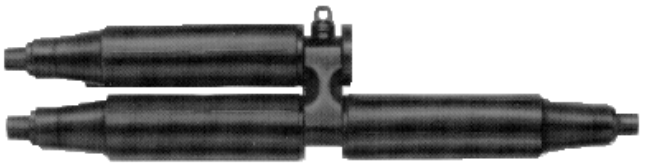
ITEM ID	QUANTITY	DESCRIPTION
CNNSB001	2	SPLIT BOLT CONNECTOR, #6-#2
COBCO028	10	CONDUCTOR, BARE COPPER, NO. 4 SOL, SOFT DRAWN
TAPEL009	1	TAPE, VINYL
TAPHS003	1	TAPE, HEAT SHRINK, SEALANT

INSTRUCTIONS:
Before installing overall splice jacket, attach No.4 sol copper ground lead to twisted concentric wires with split bolt connector. Lay connector flat against the cable and wrap with vinyl tape to cover and protect splice jacket from any sharp edges. Apply sealant tape around No. 4 bare copper conductor in the area where cable jacket and splice jacket overlap. Shrink splice jacket. Connect second split bolt connector to manhole ground lead.

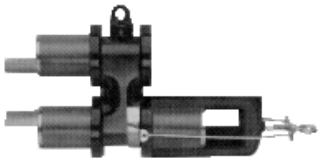
UVSY–
15*1, 15*2, 15*3, 15*5, 15*6, 15*7

PRIMARY 15KV WYE SPLICE 600 AMPS

DEADBREAK
SEPARABLE WYE
SPLICE



SEPARABLE
WYE-JOINT
THREE - WAY
SHOWN WITHOUT
CABLE BOOTS



INSULATED CAP SHOWN

PLATE EXAMPLE	ITEM ID	QTY	DESCRIPTION
UVSY-15*1	SPLWY003	1	15KV, 600 AMPS, 3 WAY INSULATED BUS BAR WITH TEST POINT. (750-750-1/0)
UVSY-15*2	SPLWY004	1	15KV, 600 AMPS, 3 WAY INSULATED BUS BAR WITH TEST POINT. (750-750-350)
UVSY-15*3	SPLWY008	1	15KV, 600 AMPS, 3 WAY INSULATED BUS BAR WITH TEST POINT. (1/0-1/0-1/0)
UVSY-15*5	SPLWY004	1	15KV 600 AMPS WYE SPLICE 750 FLAT STRAP
UVSY-15*6	SPLWY009	1	15KV, 600 AMPS, 3 WAY INSULATED BUS BAR WITH TEST POINT. (750-750-750)
UVSY-15*7	SPLWY007	1	15KV, 600 AMPS, 3 WAY INSULATED BUS BAR WITH TEST POINT. (750-1/0-1/0)

NOTE:
The operating accessory can be plated on an individual basis as needed:
Insulated cap with bail: I.SPLWY005

INSULATED CAP WITH BAIL

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