

TOP VIEW

REV.	ALTERATION	E.C.N.	DATE	BY
A	ANCHOR BOLT DETAIL ADDED BASEPLATE WAS 1 1/2 THK		09/22/98	AA
B	ANCHOR BOLT DETAIL ADDED		02/20/99	AA

ANCHOR BOLT DETAIL	ANCHOR BOLT DETAIL
ANCHOR BOLT DETAIL	ANCHOR BOLT DETAIL

Attn:
Martha
4 pages

SPECIAL
POLE TOP

K205 MARQUIS
LUMINAIRE
PAINT: TAUPE

K430-S-8' SCROLL ARM
C/W DECORATIVE SCROLL
PAINT: TAUPE

1" LUMINOUS
DUPLEX RECEPTACLE C/W
WEATHERPROOF COVERPLATE
PAINT: TAUPE

(2) BARRIER ARM
(1) 1/2" ALUM. PIPE C/W
EAST ALUM. BARRIER BALLS
PAINT: TAUPE

LUMINAIRE SPECIFICATIONS

CATALOGUE NO. K205 C/P III-250H003
QUANTITY: 111
GLOBE MAT'L: GLASS
ICO CLASSIFIC: TYPE III
WATTAGE: 250W
LIGHT SOURCE: METAL HALIDE
LINE VOLTAGE: 240V
ARM: K430-S-8'
OPTIONS:

LUMINAIRE MODIFICATIONS

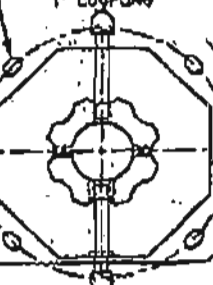
QUANTITY: 111
GLOBE MAT'L: GLASS
ICO CLASSIFIC: TYPE III
WATTAGE: 175W
LIGHT SOURCE: METAL HALIDE
LINE VOLTAGE: 240V
ARM: K430-S-8'
OPTIONS:

POLE SPECIFICATIONS

CATALOGUE NO. KTH25-C-E40-BF
C/W AB & BA & DR
QUANTITY: 111
SECTION: FLUTED OCTAGONAL
COLOUR: PEARL GRAY
FINISH: ETCHED
POLE TOP: 6 1/4" FL/PL
POLE RHT: 8" FL/PL
POLE LENGTH: 25' 0"
APPROX WEIGHT: 3,950 lbs.

(1) 1 1/4" x 2" SLOT ON A
25' 0" BOLT HOLE

1" COUPLING

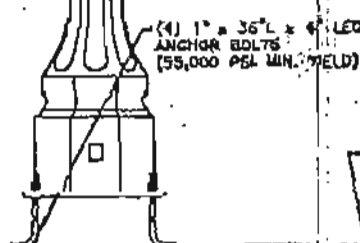


1" COUPLING
DUPLEX RECEPTACLE
K430-S-8'
NAMEPLATE

BASEPLATE DETAIL

NOT 22" SQ. x 1 1/2 THK GALV STEEL
CUSTOMER APPROVAL:

ANCHOR BOLT DETAIL



APPROX
DIRECTION

2 3/8" x 8" RECESSED
K430-S-8' COVERPLATE
(PAINT: TAUPE)
C/W GROUNDWIRE &
ALLENHEAD SCREWS

NAMEPLATE

ITEM 449

Submission #130

NOTE:

POLE/ARMS/FIXTURES TO WITHSTAND
155 mph WINDS WITH 180 mph GUSTS



KING LUMINAIRE

COMPANY INC.

21823-1

21823-1

DRAWING NAME

DWG NUMBER

DATE

DWG BY

REV

APPROVAL DWG

21823-1

09/02/98

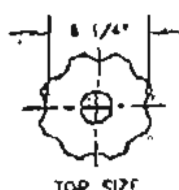
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B

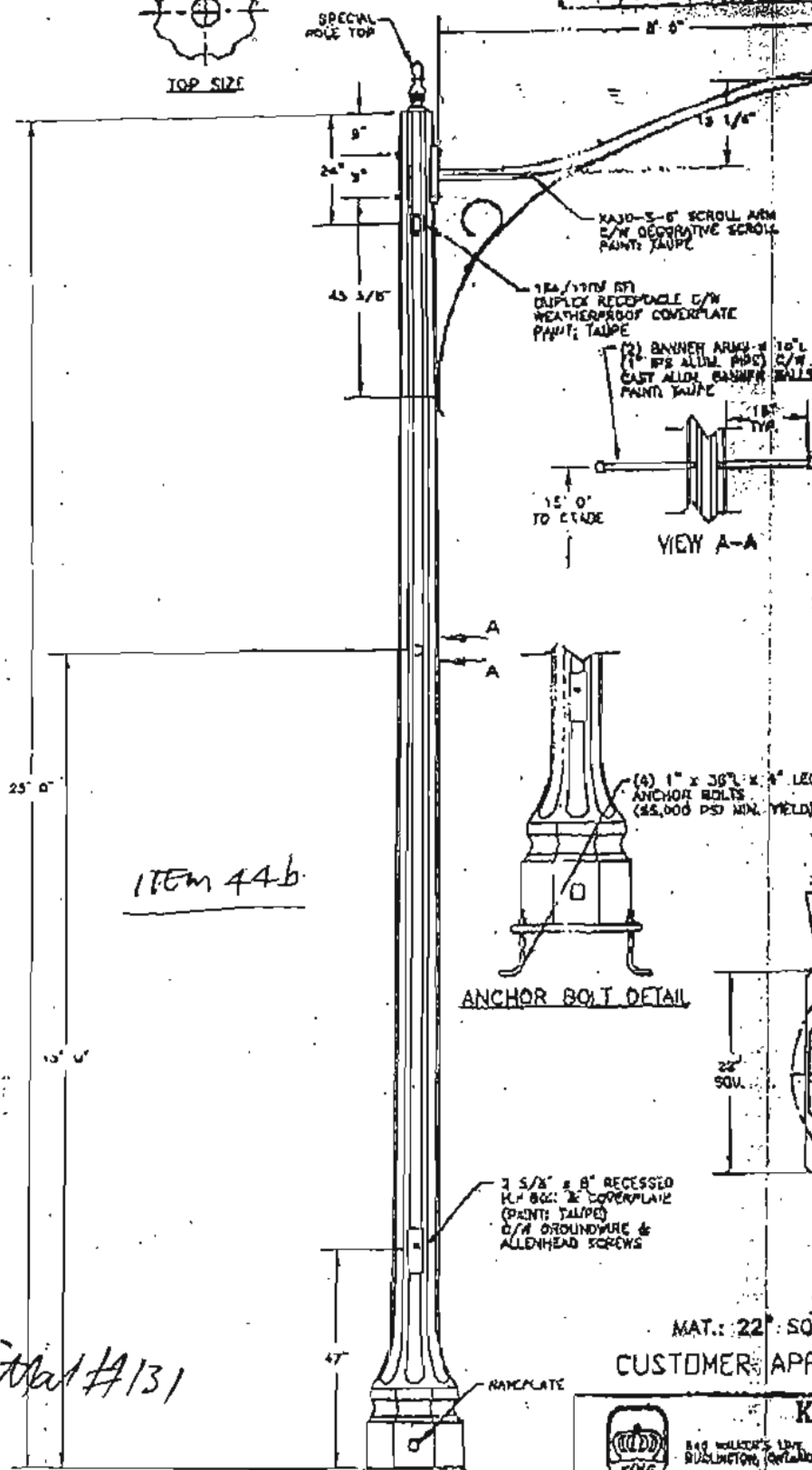
PROJECT/CUSTOMER

GUAM

VO-ORDER/21823

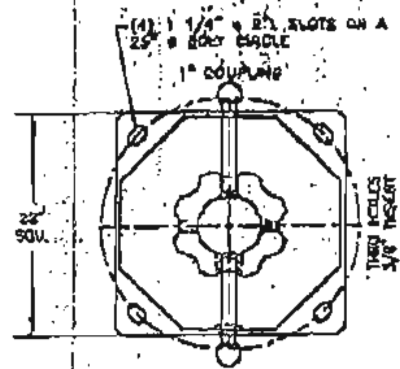
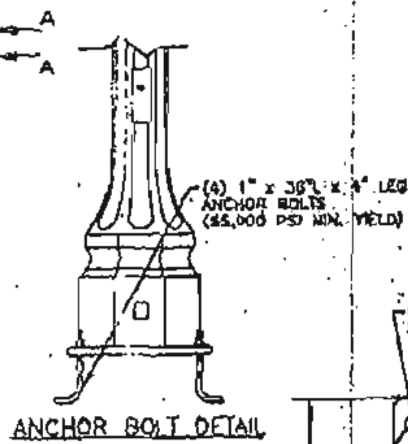


REV.	ALTERATION	E.C.N.	DATE	BY
A	ANCHOR BOLT DETAIL ADDED BASE PLATE WAS 1 1/2" THK		08/22/98	AA
B	ANCHOR BOLT DETAIL ADDED		09/28/98	AA



LUMINAIRE SPECIFICATIONS
 CATALOGUE NO. K205-EGP-III-250MMOD
 QUANTITY 25
 GLOBE MAT'L GLASS
 (E3 CLASSIFIED) TYPE III
 WATTAGE 250W
 LIGHT SOURCE METAL HALIDE
 LINE VOLTAGE 240V
 ARM K205-3-8'

POLE SPECIFICATIONS
 CATALOGUE NO. KTH02B-0-E40-SP
 QUANTITY 25
 SECTION FLUTED OCTAGONAL
 FINISH ETCHED
 POLE TOP 6 1/4" L x 1/4" FL
 POLE BUTT 21" FL x 1/4" FL
 POLE LENGTH 25' 0"
 APPROX WEIGHT 1,350 lbs.



MAT.: 22" SQ. x 1 1/2" THK. GALV. STEEL

CUSTOMER APPROVAL

KING LUMINAIRE
 COMPANY INC.
 810 MILLIKEN LANE, P.O. BOX 17
 BURLINGTON, ONTARIO, CANADA L7R 3G8
 P.O. BOX 346 JEFFERSON, MISSOURI 64131
 U.S.A. 41017

DRAWING NAME	DWG NUMBER	DATE	DWG BY	REV.
APPROVAL DWG	21823-2	09/02/98	AA	B

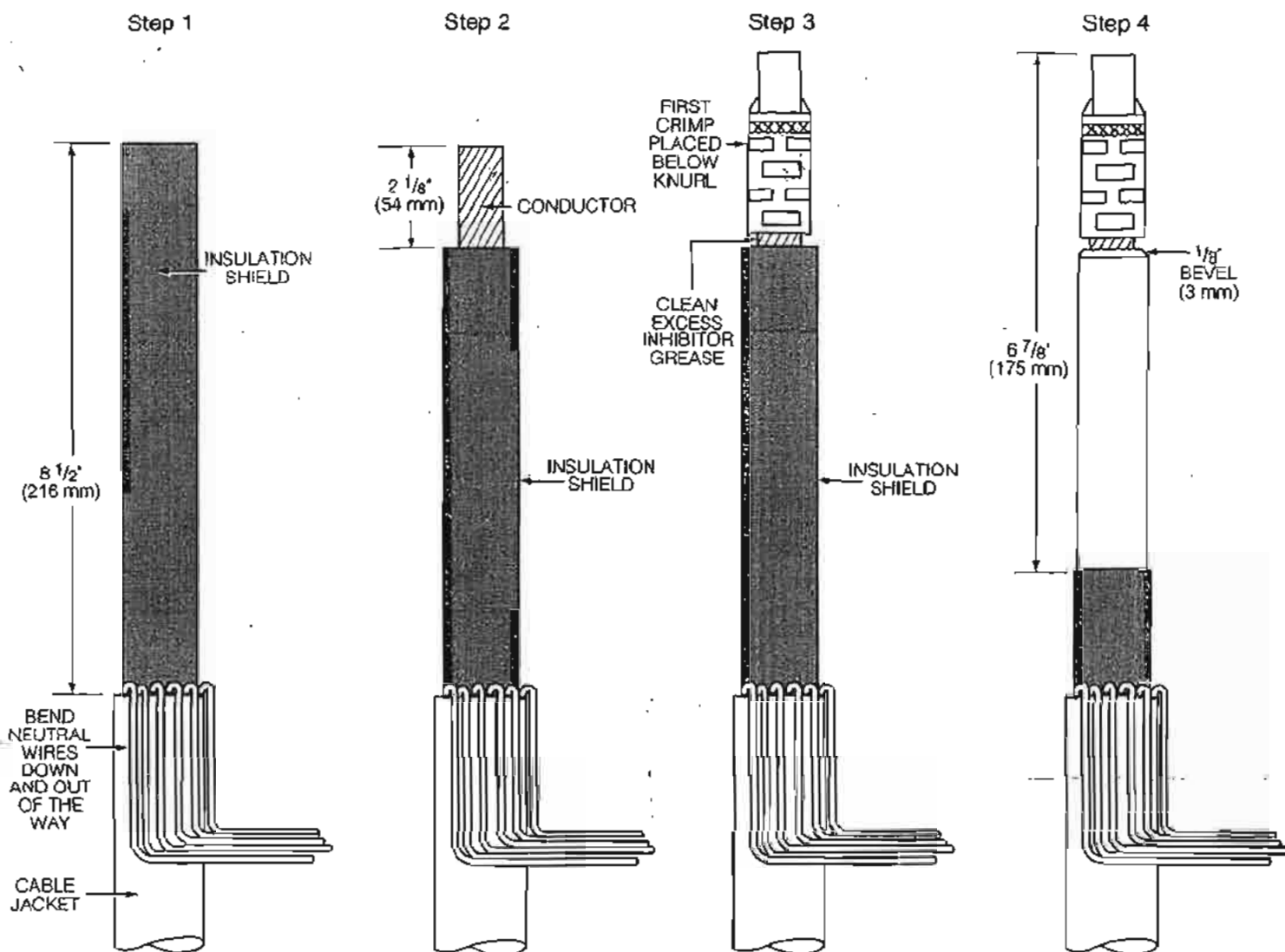
PROJECT/CUSTOMER: GUAM

KI-ORDER 21823

NOTE:
 POLE/ARMS/FIXTURES TO WITHSTAND
 155 mph WINDS WITH 180 mph GUSTS

Submitted #131

ITEM 44b



PREPARATION OF CONCENTRIC NEUTRAL CABLE

NOTE: If concentric neutral cable is not being used, follow cable preparation directions in shield adapter kit.

Step 1

Measure down from top of the cable $8\frac{1}{2}"$.

Remove cable jacket (if jacketed cable is used) to expose neutral wires.

Unwind neutral wires.

Step 2

Measure down from the top of the cable $2\frac{1}{8}"$.

Remove the insulation and conductor shield to expose the bare conductor. Take care not to nick the conductor.

Step 3

Clean the exposed conductor using a wire brush.

Place the coppertop (bimetal) connector on the conductor. Make sure the threaded hole in connector faces the apparatus bushing.

Crimp the connector in place using a tool and die combination listed in Table 1. Start crimping just below the knurled line and rotate each successive crimp to prevent bowing. Do not overlap crimps. Place as many crimps on the connector as will fit.

Clean excess inhibitor grease from coppertop connector by wiping toward threaded eye.

Smooth any sharp edges on the crimp connector surface.

Step 4

Measure down from the top of the connector $6\frac{7}{8}"$.

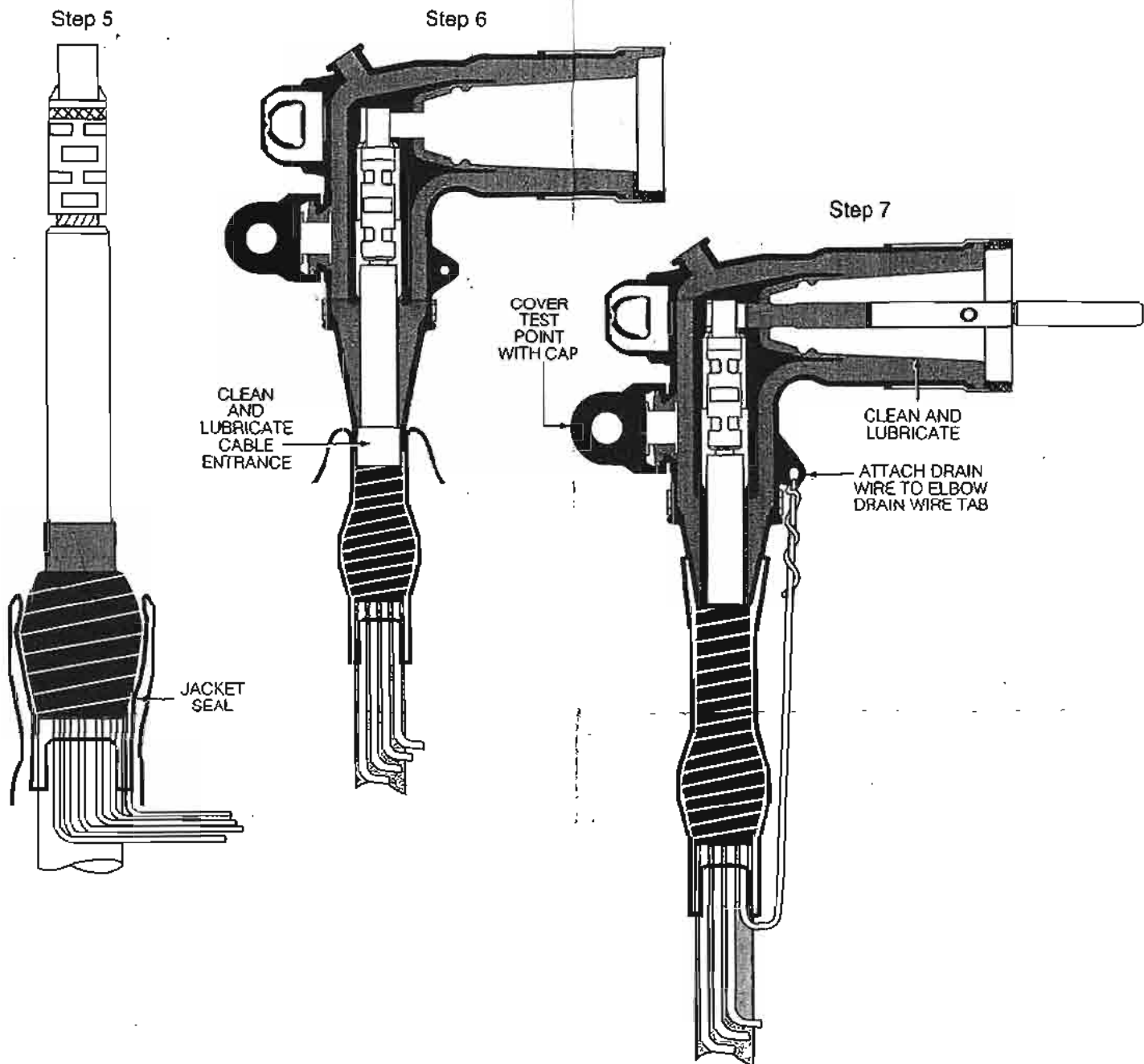
Remove the insulation shield. Take care not to nick or gouge insulation.

Place a $\frac{1}{8}"$ bevel on the insulation to ease elbow installation.

Step 5

Apply a suitable jacket seal over the jacket and exposed neutral wires.

If a Cooper Power Systems jacket seal is used, follow instructions supplied with the jacket seal kit.



ELBOW AND LOADBREAK PROBE INSTALLATION

Step 6

Clean insulation with a lint free cloth saturated with a cleaning solution. Wipe insulation toward insulation shield.

Apply a thin coating of supplied lubricant to the insulation.

Clean and lubricate the cable entrance of the elbow.

Place elbow on cable. With a twisting motion, push elbow onto cable until threaded eye of coppertop connector is aligned with the elbow.

Step 7

By hand, thread loadbreak probe into threaded eye of coppertop connector. A thin layer of silicone lubricant applied to the back section of probe (not on threads) can aid in installation.

NOTE: If installing a POSI-BREAK™ Elbow, be sure to use a POSI-BREAK probe with black insulating sleeve.

When tight, use the provided installation tool to properly torque the loadbreak probe. Proper torque is applied when the tool achieves a 180° permanent set.

NOTE: If a different installation tool is used it must apply a torque of 100 to 120 lbf-in (11.0-13.5 N-m).

Clean and lubricate bushing and elbow interface areas with a thin even coating of the silicone lubricant provided.

Attach a drain wire lead to the drain wire eye of the elbow.

TABLE 1
Crimp Chart

CONNECTOR		5/8" DIAMETER					3/4" DIAMETER				
CONDUCTOR SIZE		NO. 4 THRU 2/0 STRANDED					3/0 - 4/0 STRANDED				
BURNDY	TOOL	Y34	Y35 OR Y39		MD6		Y34	Y35 OR Y39		MD6	
	DIE	A243	U243	UBG	W243	WBG	U247	U247	U467	W247	
		A25AR	U25ART	U687	BG NOSE	W687	A27AR	U27ART			
SOMERSET (T AND B)	TOOL	UT-3		UT-5		UT-15		UT-5		UT-15	
	DIE	5/8"		TV		54 H		TV		66	
KEARNEY	TOOL	0			H-1, H-2, H-3			0		H-1, H-2, H-3	
	DIE	5/8" NOSE	820		9/16"			737	747	737	747
ALCOA	TOOL	12A					12A				
	DIE	B24 EA					B39 EA				
ANDERSON TOOL		VC-5, VC-6					VC-5, VC-6				
EEI - REFERENCE		8A					10A				

CAUTION: The operator should always use personal protective equipment (insulated gloves, hotstick and eye protection) whenever operating the elbow. The operator should always be in the best possible operating position, providing firm footing and enabling a secure grasp of the hotstick, while maintaining positive control of the elbow before, during and immediately after operation. If there is any question regarding the operator's operating position, de-energize the elbow before operation. The operator should not be looking directly at the connector during the moment of circuit interruption or connection.

OPERATING INSTRUCTIONS

Do not connect two different phases of a multiple-phase system. Before closing a single-phase loop, make certain both ends of the loop are the same phase.

Loadmake Operation

1. Area must be clear of obstructions or contaminants that would interfere with the operation of the loadbreak elbow.
2. Securely fasten a hotstick to the pulling eye.
3. Place the loadbreak elbow over the bushing, inserting the white arc follower of the probe into the bushing approximately 2 1/2" until a slight resistance is felt.
4. Immediately thrust the elbow onto the bushing with a fast, firm, straight motion, with sufficient force to latch the elbow to the bushing.
5. Push again on the elbow with the hotstick, and then pull gently to make sure that it is secure.

Fault Close

1. It is not recommended that operations be made on known faults.
2. If a fault is experienced, both the elbow connector and the bushing must be replaced.

Loadbreak Operation

1. Securely fasten a hotstick to the pulling eye.
2. Without exerting any pulling force, slightly rotate the connector clockwise to break surface friction between the elbow and bushing.
3. Withdraw the connector from the bushing with a fast, firm, straight motion, being careful not to place the connector near a ground plane.
4. Place connector on an appropriate accessory device, following the operating instructions for that accessory.
5. Place an insulated protective cap with drain wire attached to system ground on any exposed energized bushing using a hotstick.

COOPER Power Systems

Deadbreak Apparatus Connectors

COOPER Power Systems

Service Information

600 A 15 and 25 kV Class BOL-T™ Connector Assembly Installation Instructions

S600-10-2

Contents

General	1
Installation	2
Prepare the Cable	2
Install BOL-T™ T-Body with Matting Parts	4
Install BOL-T Connector onto Apparatus	
Bushing	4
Splice Assembly Instructions	5

CAUTION: The Cooper Power Systems 600 A BOL-T terminator is designed to be operated in accordance with normal safe operating procedures. These instructions are not intended to supersede or replace existing safety and operating procedures. Terminators must be de-energized during operation or maintenance. Visible break and adequate grounding must be provided before cable work proceeds. Ensure that the terminator is rated for the intended application before it is installed.

BOL-T terminators should be installed and serviced only by personnel familiar with good safety practice and the handling of high-voltage electrical equipment.

NOTE: For drain wire or tape shield cable, use a Cooper Power Systems premolded Drain Wire Shield Adapter, Tape Shield Adapter or equivalent. Install adapter per instructions included with product.

CAUTION: Optional Capacitive Test Point Operating Instructions: Use only voltage indicating instruments specifically designed for test points. Use of conventional voltage sensing devices may provide false readings.

The test point must be dry and free of contaminants when taking voltage measurements. After measurements are taken: clean, dry, and lubricate the test point cap with silicone grease and assemble to the test point.

Fault Indicators: When using fault indicating devices on the test point, follow instructions provided with the indicator.

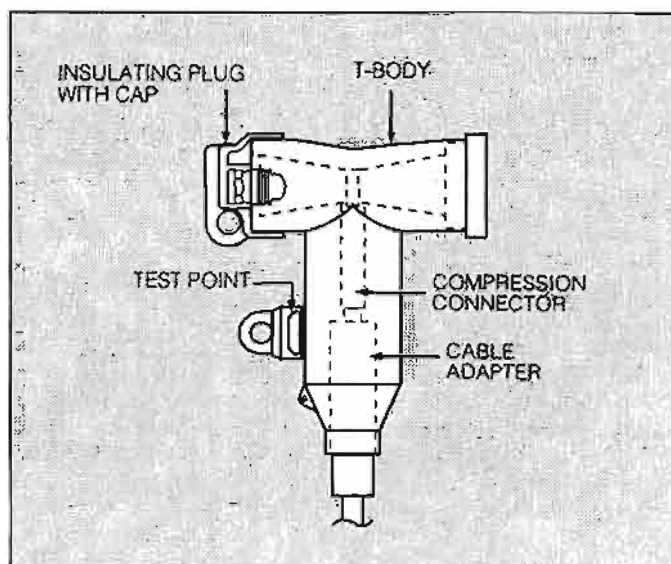


Figure 1.
Line Illustration of 15 kV 600 A BOL-T connector.

EQUIPMENT REQUIRED

- BOL-T Connector Assembly Kit including:
 - T-Body
 - Cable Adapter
 - Insulating Plug with Cap
 - Compression Connector
 - Silicone Lubricant
 - Instruction Sheet
- Tools
 - Torque Wrench
 - 5/16" Hex Wrench For Splice Applications

GENERAL

The Cooper Power Systems 600 A, 15 and 25 kV Class BOL-T deadbreak connectors are used to terminate high-voltage underground cable on deadfront apparatus such as transformers, switches, and switchgear. They are fully shielded, submersible, and meet the requirements of IEEE Standard 386 – "Separable Insulated Connector Systems".

These instructions do not claim to cover all details or variations in the equipment, procedure, or process described, nor to provide directions for meeting every contingency during installation, operation, or maintenance. When additional information is desired to satisfy a problem not covered sufficiently for the user's purpose, please contact your Cooper Power Systems sales engineer.

PREPARE THE CABLE

Step 1.

TRAIN CABLE.

- Position cable vertically so that it is centered between apparatus bushing and parking pocket, parallel to, and 7" (178 mm) from apparatus frontplate.
- The cable should be properly secured to support the cable weight and limit side to side movement.
- Provide adequate cable slack for cable movement between standoff bushing and apparatus bushing.
- Cut cable 1.75" (45 mm) from centerline of bushing. (Refer to Figure 2.)

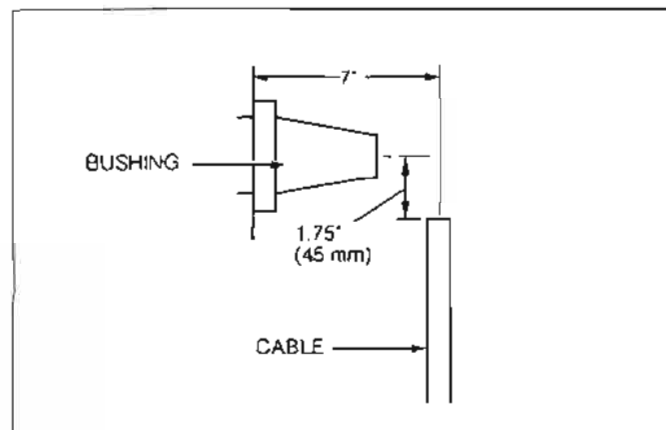


Figure 2.
Line illustration for cable training.

Step 2.

REMOVE CONCENTRIC NEUTRAL WIRES AND/OR JACKET.

- Measure 13" (330 mm) from end of cable. (Refer to Figure 3.)
 - If jacketed neutral cable, remove jacket to 13" dimension.
 - If unjacketed neutral cable, bind neutral wires using (3) wraps of tape at 13 inch dimension.
- Allow enough extra concentric neutral wires to connect ground after installation and allow movement to insulated standoff bushing.

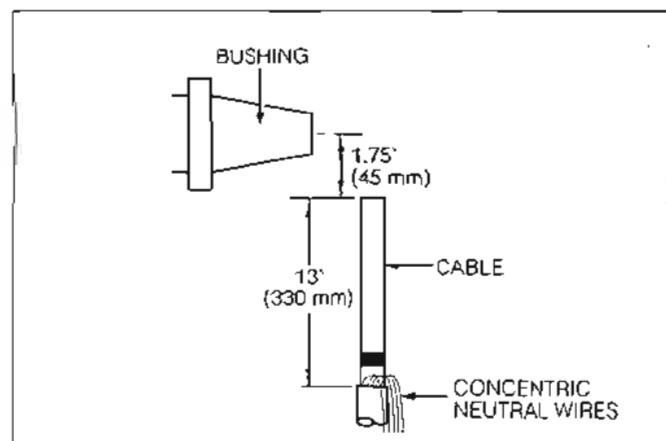


Figure 3.
Line illustration of removing concentric neutral wires.

Step 3.

REMOVE INSULATION SHIELD.

- Find cable size in Table 1.
- NOTE: Stripback length is dependent on cable size.**
- Dimension "L" is length of insulation shield to be removed for cable size. (Refer to Figure 4.)
- Remove insulation shield to length indicated in Table 1.
- NOTE: Do not nick insulation.**

TABLE 1
Stripback Dimensions

Conductor Size AWG (all types)	Insulation Shield Stripback Length "L"
#1, #2, 1/0, 2/0, 3/0, 4/0, 250, (300 compact) kcmil	9.25" (235 mm)
(300 concentric), 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 900, 1000 kcmil	9.75" (247 mm)

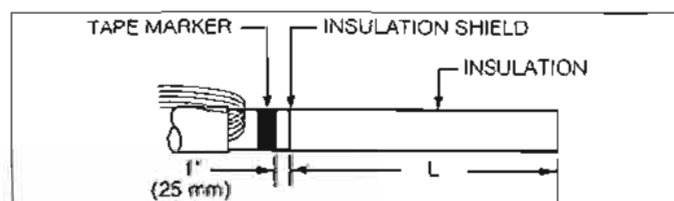


Figure 4.
Line illustration of cable stripback length.

Step 4.

PUT TAPE MARKER IN PLACE.

- Measure 1" (25 mm) from end of insulation shield. (Refer to Figure 4.)
- Wrap two turns of tape to serve as marker.

Step 5.

REMOVE CONDUCTOR INSULATION.

- NOTE: Do not pencil cable.**
- Find cable size in Table 2.
- NOTE: Stripback length is dependent on cable size.**
- Remove insulation exposing bare conductor to length specified in Table 2. (Refer to Figure 5.)
- NOTE: Do not unwind conductor strands.**

TABLE 2
Bare Conductor Length

Conductor Size AWG (all types)	Bare Conductor Length
#1, #2, 1/0, 2/0, 3/0, 4/0, 250, (300 compact) kcmil	3.75 - 4.06" (95 - 103 mm)
(300 concentric), 350, 400, 450, 500, 550, 600, 650, 700, 750, 800, 900, 1000 kcmil	4.35 - 4.63" (111 - 119 mm)

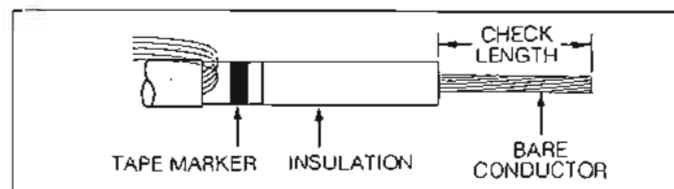


Figure 5.
Line illustration of bare conductor length.

Step 6.

BEVEL INSULATION.

- Remove sharp edge of insulation by beveling at a 45° angle for approximately 0.25" (6 mm). (Refer to Figure 6.)

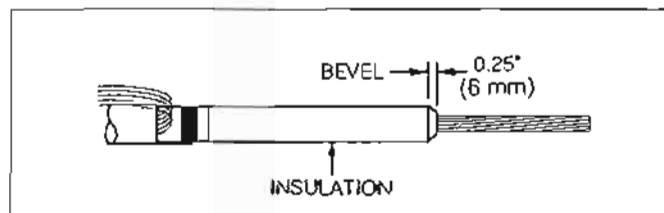


Figure 6.
Line illustration of insulation bevel.

Step 7.

CLEAN INSULATION.

- Clean insulation thoroughly with solvent-dampened rag, wiping from conductor end toward insulation shield. (Refer to Figure 7.)
NOTE: Do not apply solvent directly to cable.
- Ensure that all traces of conductive residue are removed.

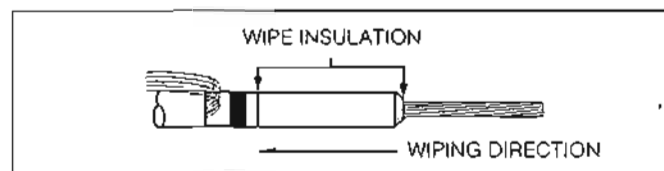


Figure 7.
Line illustration of insulation cleaning.

Step 8.

LUBRICATE AND INSTALL CABLE ADAPTER.

- Lubricate exposed cable insulation.
- Lubricate inside of cable adapter.
- Slide small end of cable adapter over cable, using twisting motion until small end is flush with tape marker. (Refer to Figure 8.)

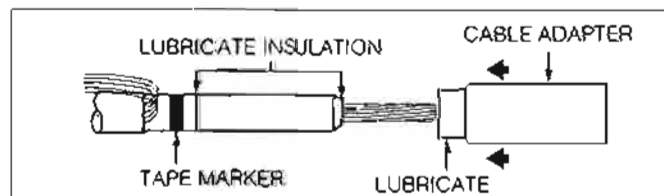


Figure 8.
Line illustration of insulation cable adapter.

Step 9.

INSTALL COMPRESSION CONNECTOR.

- Wire brush conductor only if it is aluminum.

- Remove protective cap plug from compression connector.
- Insert conductor completely into compression connector and rotate connector to distribute inhibitor.
NOTE: Cable conductor must bottom on inside of compression connector.
- Align flats of compression connector to the apparatus bushing for minimum conductor strain.
- Refer to Table 3 for crimp tool and die to be used.
- Make first crimp at the first line below shoulder of compression connector. (Refer to Figure 9.)
- Rotate each successive crimp 90° on compression connector and allow 0.125" (3 mm) between crimps. Install as many crimps as possible.
- Wipe excess inhibitor from connector and adapter surfaces.

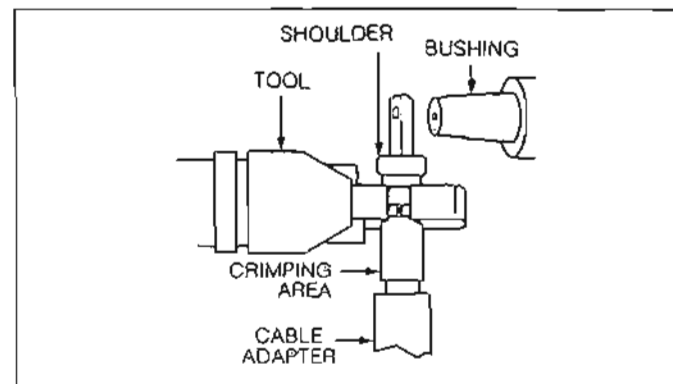


Figure 9.
Line illustration of crimping area.

Step 10.

CHECK DIMENSIONS.

- Check length from end of compression connector to top of cable adapter.
- Length should be between 6.25" and 7.25" (159 and 184 mm). (Refer to Figure 10.)

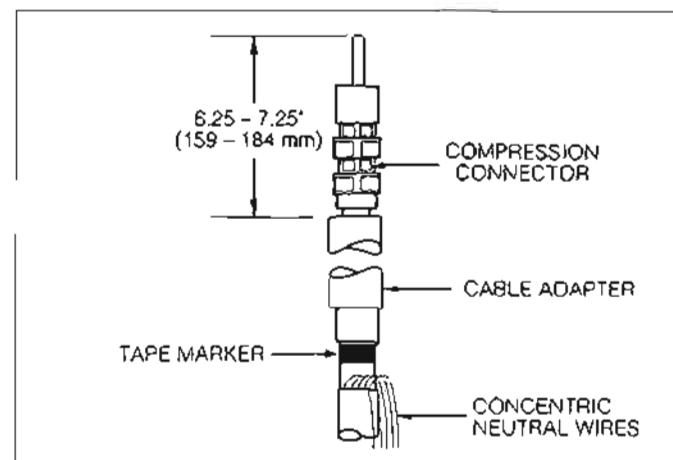


Figure 10.
Line illustration for dimensional check.

TABLE 3
Compression Connector Crimp Chart

Connector Outer Diameter	Connector size AWG		Burdyn			Kearney			Alcoa				T&B
	Concentric Or Compressed	Compact Or Solid	Tool Y35 DIE	Tool Y45L DIE	Tool Y48B DIE	Tool H-1 DIE	Tool H-2 DIE	Tool H-25 DIE	Tool 12A, 12H DIE	Tool 60A DIE	Tool, F1 H, H2, H2H DIE	Tool 100A DIE	Tools UT-15 DIE
0.850	#2 #1 1/0 2/0 3/0	#1 1/0 2/0 3/0 4/0	U28ART (5)	U28ART* (5)		840 845	840		B74AH B39EA				
						1-1/8-1	1-1/8-1		B13AH				
1.15	4/0 250 350	250 300 400	U31ART (5)	U31ART* (5)	C31AR (5)	1-1/8-2	1-1/8-2		B80EA				15C96R
1.32	400 450 500 600 650,700	450 500,550 600 700 750,800	U34ART (5)	U34ART (5)	C34AR (5)		1-5/16	1-5/16	B20AH				
							1-15/16-H	1-15/16-H	14AH	6020AH	4420AH	10020AH	15C106R
1.62	700,750	900		S40ART (5)	C40AR (5)			1-1/2		6024AH	4424AH	10024AH	15C140R
1.84	900 1000	1000 -		S44ART (5)	C44AR (5)			1-3/4		6030AH	4430AH	10030AH	15C150R

NOTE: These are crimp recommendations ONLY. For complete assembly instructions, see installation instructions included with mating component parts.

* Requires Adapter Number 6515.

() Indicates Number of Crimps.

INSTALL T-BODY AND MATING PARTS

Step 11.

INSTALL T-BODY.

- Clean and lubricate outside of cable adapter with lubricant supplied.
- Clean and lubricate inside of T-Body with lubricant supplied.
- Slide T-Body onto cable until compression connector eye is centered in 600 A interfaces. (Refer to Figure 11.)
NOTE: If test point T-Body is used, ensure test point is opposite frontplate side of T-Body.
- Insure end of cable adapter is flush with the tape marker. Remove tape marker from cable.

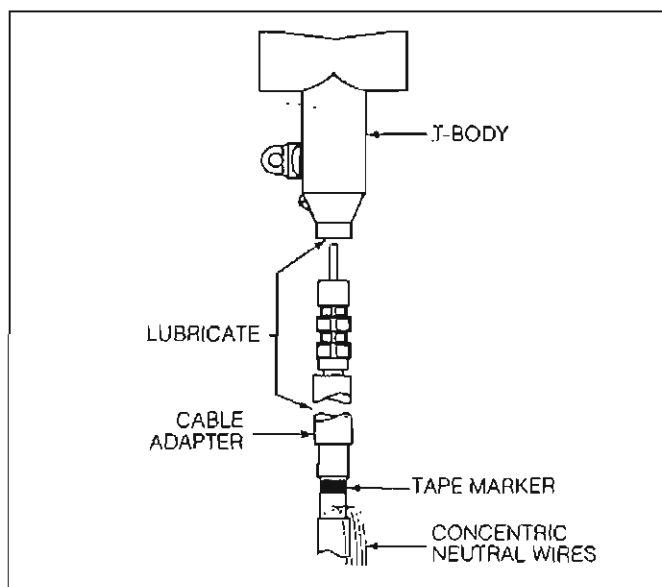


Figure 11.
Line illustration of T-Body Installation.

Step 12.

INSTALL MATING PARTS.

NOTE: Use only the symmetrical aluminum or copper stud in separable splice & BOL-T applications. Do not use the non-symmetrical T-OP II stud.

- Clean and lubricate mating interfaces of T-Body and mating parts (i.e., insulating plug, reducing well plug or deadbreak tap plug). (Refer to Figure 12.)

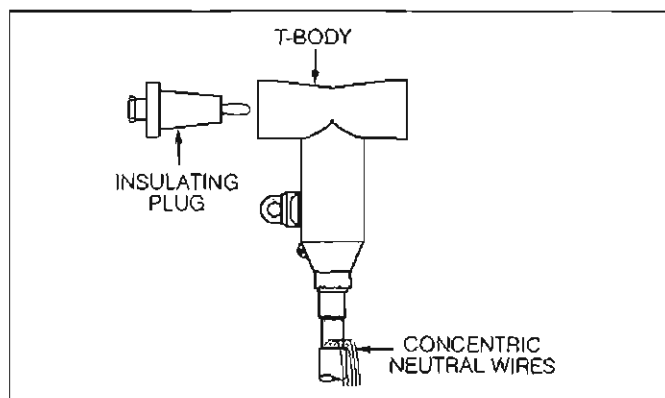


Figure 12.
Line illustration of Insulating plug installation.

- Insert deadbreak insulating plug into T-Body, lining up the hole in the compression connector with the stud on the mating part.

NOTE: If the stud is not factory installed, it should be threaded into the deadbreak insulating plug by hand and torqued to 55 ft.-lbs.

INSTALL BOL-T CONNECTOR ONTO APPARATUS BUSHING

Step 13.

ASSEMBLE BOL-T CONNECTOR ONTO APPARATUS BUSHING.

- Clean and lubricate mating interfaces of apparatus bushing and T-Body with lubricant supplied.

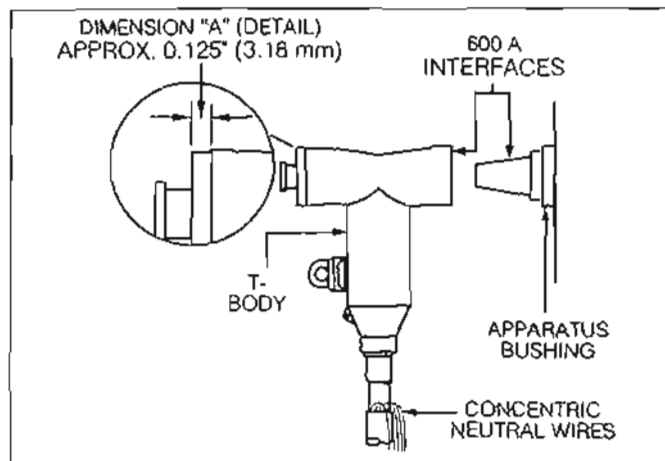


Figure 13.
Line illustration of BOL-T connector installation onto apparatus bushing.

- Tighten insulating plug to apparatus bushing using torque wrench and 1-inch socket. Tighten plug clockwise to 55 ft-lbs of torque. (Refer to Figure 13.)
NOTE: Seating is correct when dimension "A" is achieved. If a reducing well plug or deadbreak tap plug is used instead, they must be tightened to 55 ft-lbs.

Step 14.

CAP THE INSULATING PLUG.

- Clean and lubricate inner surface of insulating plug cap with lubricant supplied. (Refer to Figure 14.)
- Attach hot stick onto cap ring.
- Push cap onto insulating plug until it snaps into place.

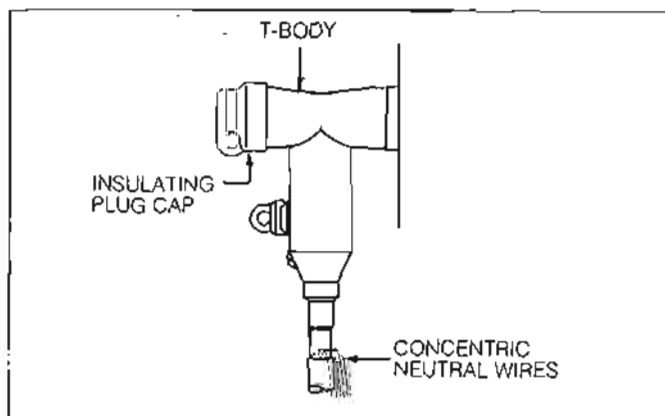


Figure 14.
Line illustration of installing the insulating plug cap.

NOTE: A reducing well plug or deadbreak tap plug requires an insulated mating apparatus on the 200 A interface. To cap the 200 A interface, follow instructions supplied with apparatus used.

Step 15.

GROUND SYSTEM.

- Connect tie-off tab of T-Body with at least one strand of drain wire to cable concentric neutral wires or to common ground point. (Refer to Figure 15.)

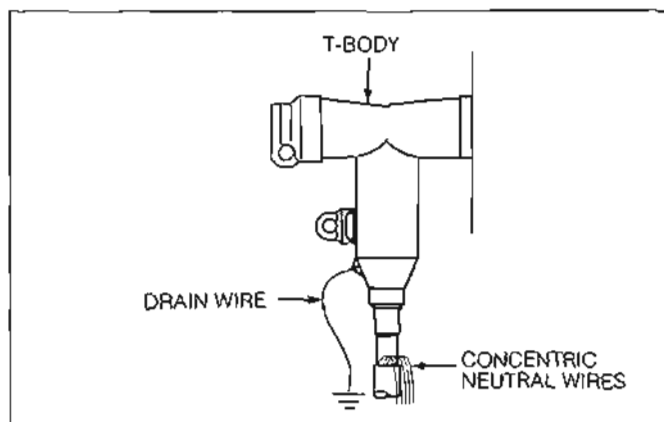


Figure 15.
Line illustration of grounding.

MULTI-TAP SEPARABLE SPLICE ASSEMBLY INSTRUCTIONS

NOTE: Use only the symmetrical aluminum or copper stud in separable splice applications. Do not use the non-symmetrical T-OP II stud.

- To assemble a separable splice prepare all cable following steps #2 through #11.

NOTE: Before any component is installed, clean and lubricate, using the grease provided or an approved alternate, all mating interfaces (i.e. T-bodies, insulating plugs, connector plugs, and cable adapters).

- Obtain first insulating plug, if a stud is not factory installed, hand thread a 5/8" stud into the insulating plug and torque to 55 ft-lbs using a crows foot type wrench (1/2" open end) and torque wrench. Insert the insulating plug into the first T-body, lining up the hole in the compression connector with the 5/8" stud.

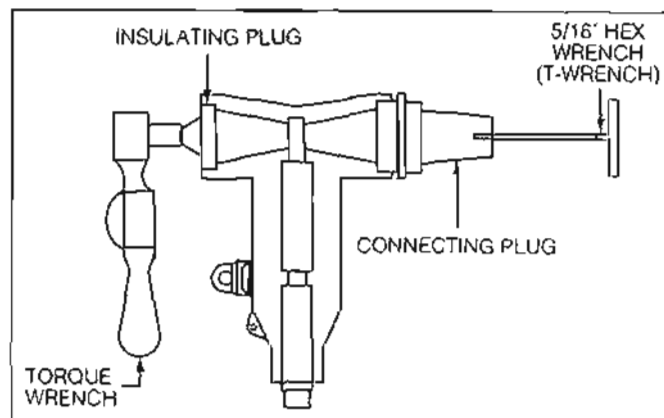


Figure 16.
Line illustration of splice assembly.

- Insert the connecting plug into the open interface of the first T-body and hand tighten to the 5/8" stud of the insulating plug.
- Secure the connecting plug by inserting a 5/16" hex style wrench (HD625, T-wrench, or customer supplied alternate), into the hex hole at the base of the connector plug threads. Use a torque wrench to tighten the insulating plug to 55 ft-lbs. (Refer to Figure 16.)
- Insert the interface of the connecting plug into the interface on the second T-body.
- To assemble an additional splice tap, obtain a second connecting plug. If stud is not factory installed, hand thread a 5/8" stud into one end and torque in to 55 ft-lbs.
- Install the stud end of the connector plug into the open interface of the second T-body. Hand thread the connector plug to the previously installed connector plug. Secure the first insulating plug with a 1" wrench. Insert a 5/16" hex shaft with socket drive tool (HD625, or customer supplied alternate), into the 5/16" hex hole at the base of the connector plug threads. Connect a torque wrench to hex shaft tool, while keeping first insulating plug secure, torque the second connector plug to 55 ft-lbs. (Refer to Figure 17.)
- Repeat the assembly procedure used to install the second connector plug and T-body for each additional splice tap.
- Obtain the second insulating plug. If stud has not been factory installed, hand thread a 5/8" stud into the insulating plug and torque to 55 ft-lbs.
- Install the second insulating plug, with stud, into the open interface of the last T-body. Hand thread the insulating plug into the connector plug.
- Secure the first insulating plug using a 1" wrench. Using a 1" socket on a torque wrench tighten the second insulating plug to 55 ft-lbs. (Refer to Figure 18.)
- Clean and lubricate the inner surface of two insulating plug caps with the lubricant supplied.
- Push the caps onto the insulating plugs until they snap into place.
- Connect one strand of the cable concentric neutral wire to the tie-off tab of each T-body.

Note: If splice is disassembled, all connector plugs and insulating plugs should be completely removed, cleaned, regreased, and reassembled following the above procedure to ensure connection points are properly torqued.

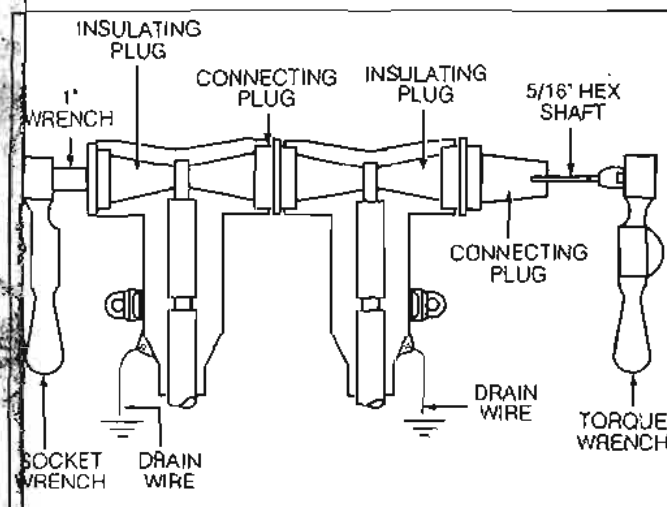


Figure 17.
Line illustration of multi-tap splice assembly.

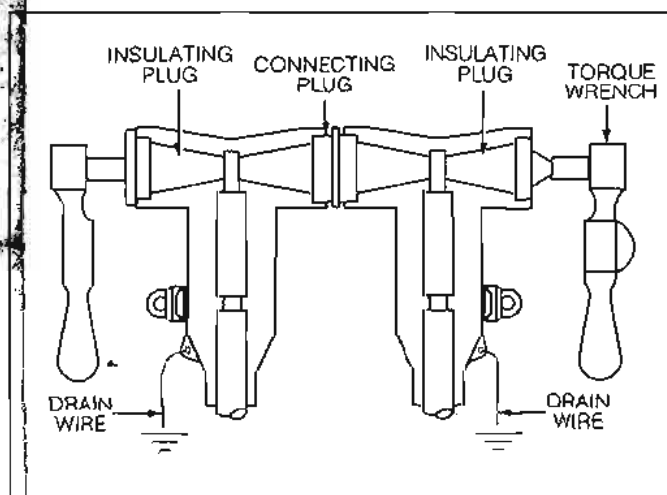


Figure 18.
Line illustration of second insulating plug installation.

COOPER Power Systems

Installation Instructions 655/675LR and K655/K675LR Deadbreak Elbow Connectors

CONTENTS: Elbow, Cable Adapter, Compression Lug, Insulating Plug, Lubricant, Stud Prepack, Crimp chart, Installation Instructions.

The 655/675LR and K655/K675LR connectors are designed to: 1) provide fully shielded, fully submersible deadfront cable connections to high voltage apparatus and 2) provide a means to splice and tap 600-ampere (655/K655LR) or 900-ampere (675/K675LR) systems. The connectors are rated for use on 15kV and 25kV class systems respectively.

DANGER

All apparatus must be de-energized during installation or removal of part(s). For loadbreak products follow operating instructions. All deadbreak connectors must be de-energized before operating. All 200A deadbreak connectors must be mechanically secured with balls when connected.

All apparatus must be installed and operated in accordance with individual user, local, and national work rules. These instructions do not attempt to provide for every possible contingency.

Do not touch or move energized products by hand. Excess distortion of the assembled product may result in its failure.

Contact with solvents, transformer oil, motor oil and similar substances will degrade jacket conductivity

and insulation level if not immediately wiped off.

Inspect parts for damage, rating and compatibility with mating parts.

This product should be installed only by competent personnel trained in good safety practices involving high voltage electrical equipment. These instructions are not intended as a substitute for adequate training or experience in such safety practices.

Failure to follow these instructions will result in damage to the product and serious or fatal injury.

If this product is supplied with a protective shipping cover(s), remove this shipping cover(s) and replace with the appropriate HV insulated cap(s) or connector(s) before submerging or energizing the circuit.

FOR MORE INFORMATION ON PARTS, INSTALLATION RATINGS AND COMPATIBILITY, CALL THE NEAREST ELASTIMOLD OFFICE.

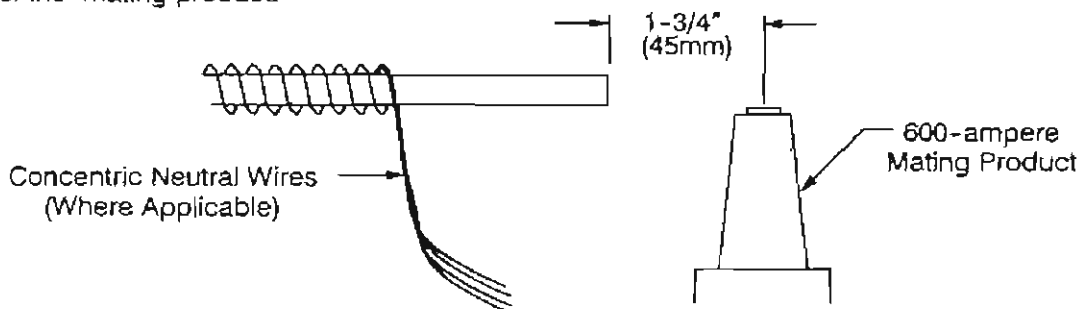
IMPORTANT

1. Check contents of package to insure they are complete and undamaged.
2. Check all components to insure proper fit with cable and/or mating products.
3. Read entire installation instructions before starting.
4. Have all required tools at hand and maintain cleanliness throughout the procedure.

GENERAL INSTRUCTIONS

STEP 1

Position the cable so it is located in the final assembled position with enough slack to provide adequate clearance for removing the elbows. For concentric neutral cable, unwind the concentric neutral wires. Cut the cable 1-3/4" (45mm) from center line of the mating product.



STEP 2

Clean the outer surface of the cable a distance of 24" (610mm) or up to the bent back concentric neutral wires.



ELASTIMOLD

STEP 3 CABLE PREPARATION Follow the STEPS A, B or C that apply to the cable being prepared.

A. If a 20MA or 21MA grounding device or 800ECS Jacket Cable Seal is being used, refer to the Installation Instructions supplied with those products for removal of cable outer jacket, shield connection and grounding.

B. UNISHIELD* AND LEAD SHEATH CABLE

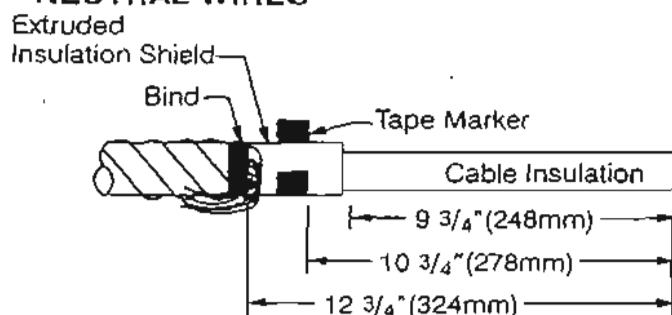
For UNISHIELD* or LEAD SHEATH cable a 10TL cable shield adapter is required. Refer to the Installation Instructions supplied with the 10TL cable shield adapter for cable preparation.

*Unishield is a registered Trade Mark of ANACONDA WIRE and CABLE COMPANY.

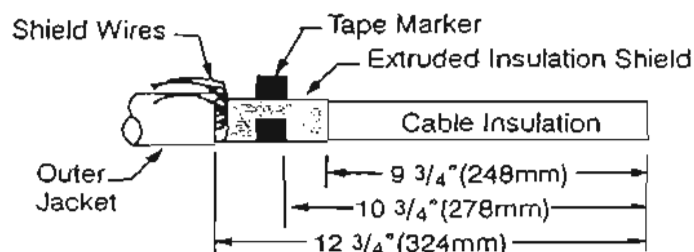
C. JACKETED AND NON-JACKETED CABLE

Remove the outer jacket (where applicable) and prepare cable as shown.

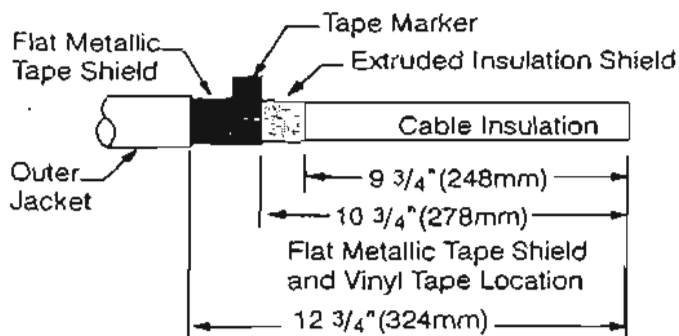
1. NON-JACKETED CONCENTRIC NEUTRAL WIRES



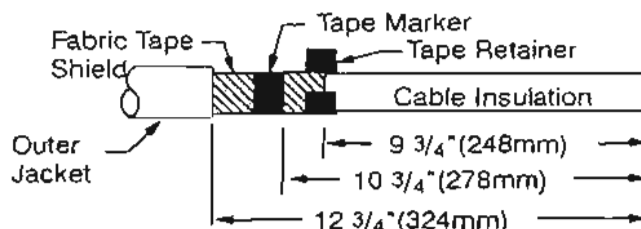
2. JACKETED SHIELD WIRES



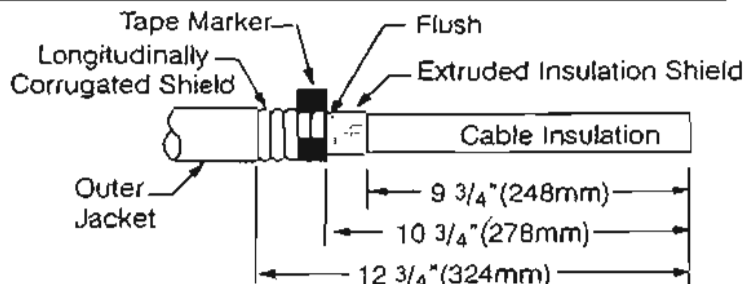
3. JACKETED FLAT METALLIC TAPE SHIELD



4. JACKETED FABRIC TAPE SHIELD

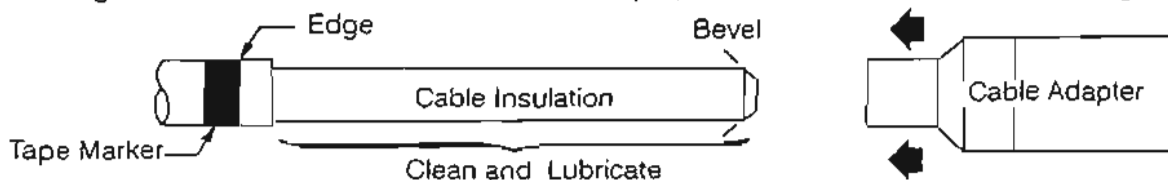


5. JACKETED LONGITUDINALLY CORRUGATED SHIELD



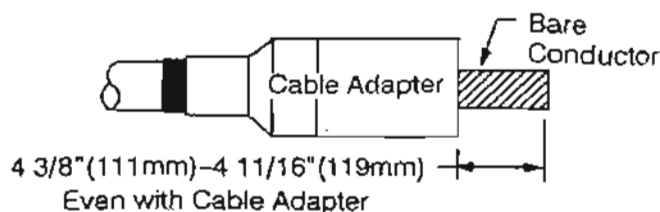
STEP 4 CABLE ADAPTER

Bevel the end of the cable insulation at a 45° angle, approximately 1/4" (6mm) back. Thoroughly clean, then lubricate cable insulation always working toward cable insulation shield. Install cable adapter, small end first, until it is flush with the edge of the tape marker.



STEP 5 CONDUCTOR

Remove the protruding cable insulation by cutting it even with the end of the cable adapter. Do not cut or nick the cable adapter or the conductor. The length of exposed conductor should be between $4\frac{3}{8}"$ to $4\frac{11}{16}"$. Otherwise redo assembly.

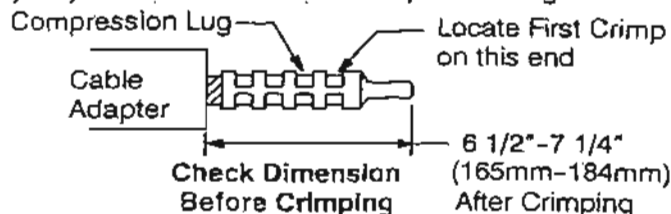


STEP 6 COMPRESSION LUG

Copper Conductor: Fully insert conductor into compression Lug.

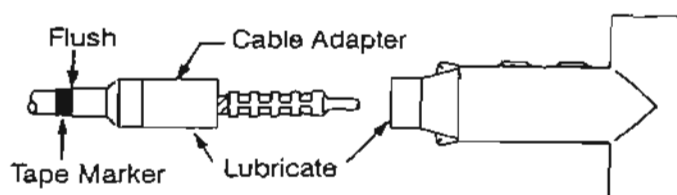
Aluminum Conductor: Wire brush conductor and immediately fully insert conductor into compression lug.

Measure the "Check Dimension" before crimping. This dimension should be less than $6\frac{1}{2}"$ otherwise redo assembly. Crimp the compression lug following the crimping instructions supplied with the lug. Wipe all excess inhibitor from compression lug and cable adapter surface after crimping. The distance from the end of the compression lug to the cable adapter after crimping should be between $6\frac{1}{2}"$ to $7\frac{1}{4}"$ (165mm - 184mm). Otherwise redo assembly.



STEP 7 ELBOW

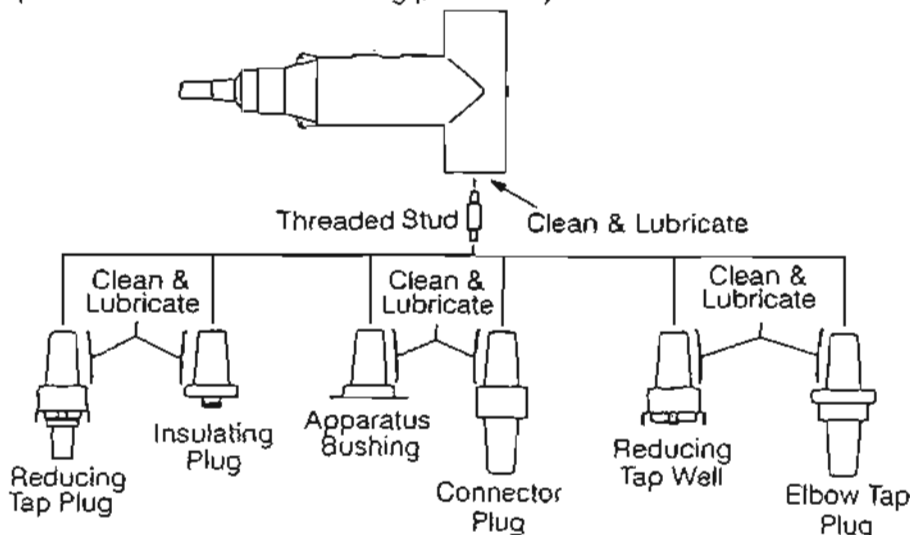
Lubricate cable adapter and inside of elbow cable entrance. Install elbow onto cable adapter until the elbow can not advance further. Make sure cable adapter is still flush with tape marker. If not, reposition cable adapter. Remove tape marker.



STEP 8 MATING PRODUCTS

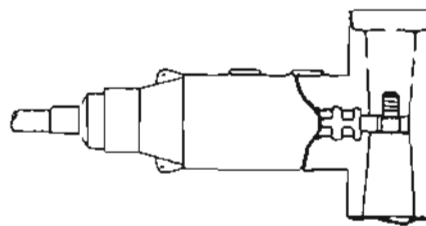
DO NOT CONNECT OR DISCONNECT MATING PRODUCTS WHILE ENERGIZED.
DO NOT ENERGIZE WHILE DISCONNECTED.

Remove protective caps from the elbow and the mating part. Hand tighten the threaded stud supplied with the elbow into mating part, if the mating part is not equipped with a stud. Clean and lubricate both the elbow and the mating part with lubricant supplied. (Keep surfaces of elbow and mating part clean.)



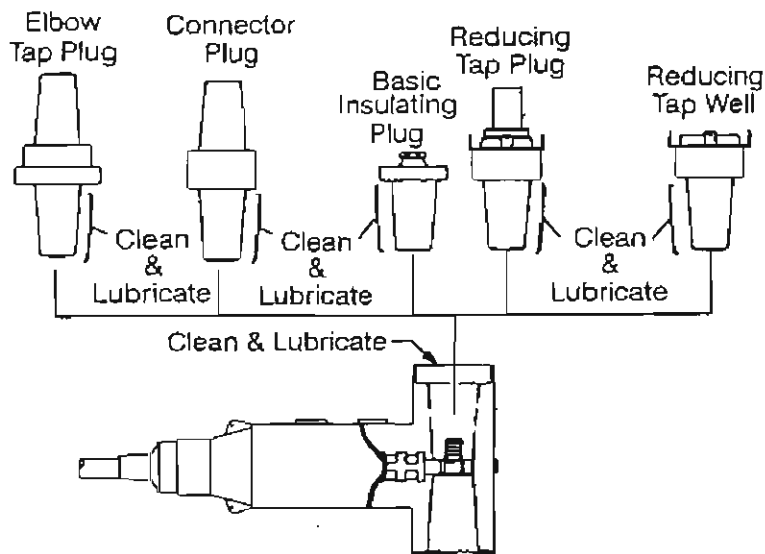
STEP 9

Push elbow onto mating part, lining up the hole in the compression lug with the stud on the mating part.



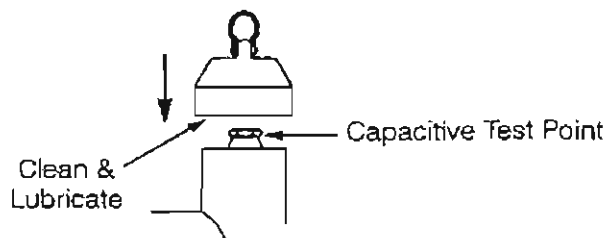
STEP 10

Clean and lubricate the mating part for the opposite end of the elbow. Insert the mating part into the elbow. Engage the threads and hand tighten. Torque mating part according to the instructions supplied with the mating part.



STEP 11

If an insulating plug is used as a mating part, clean and lubricate inner surface of the voltage detection cap and place on elbow. Push down hard until cap snaps into place. Follow voltage test directions below.

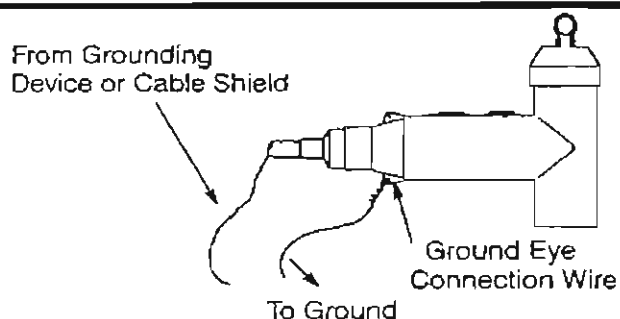


STEP 12

Insert one end of a piece of wire with ampacity at least equivalent to No. 14 AWG Copper through the grounding eye and twist to make a small loop. Do Not damage the eye. Connect wire to ground using a suitable connector.

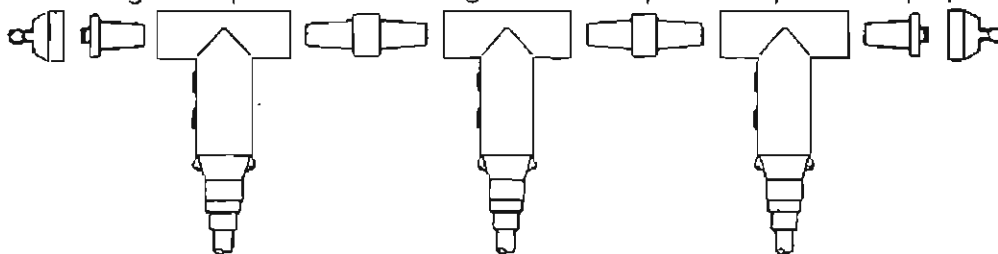
The shield of the cable must be grounded. Ground according to the instructions supplied with the grounding device. If no grounding device is used, the shield must be grounded through an alternate method.

It is also recommended that the jacket of the cable be waterproofed at this point to prevent moisture from entering the cable.



STEP 13

CAUTION: When constructing 600amp L-Kits be sure to tighten each component to specified torque per instructions provided.



VOLTAGE TEST

The ELASTIMOLD deadbreak elbow connector is equipped with an integral capacitance test point that can be used to establish whether or not the circuit is energized. When using the test point, complete the following steps:

1. Remove test point cap with a hotstick. When removing cap, PEEL OFF AT AN ANGLE rather than pulling directly in line with the test point assembly.

WARNING: THE VOLTAGE TEST POINT IS A CAPACITANCE DEVICE, IT IS NOT DIRECTLY CONNECTED TO THE CONDUCTOR. Do not use conventional voltage measuring equipment. Follow the manufacturer's directions for the meter that is used. Test with a suitable sensing device, made for use with separable connectors manufactured with capacitive test points, to determine if cable is energized. Contamination, moisture, dirt, etc. around the test point or use of the wrong measuring equipment can provide a false "no voltage" indication on an energized elbow. To prevent serious or fatal injury treat the elbow as energized until the "no voltage" test point indication is confirmed by other means.

3. After voltage detection has been made, clean and lubricate the inside surface of the cap with silicone grease and replace it on the test point.

COMPRESSION CONNECTOR CRIMP CHART

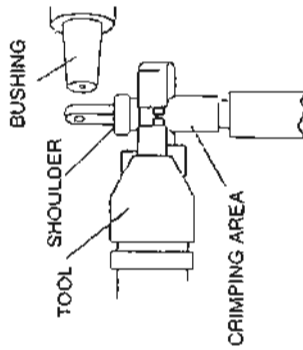
Refer to Catalog Section 600-46

CRIMPING TOOLS AND DIES RECOMMENDED FOR
RTE® BOL-T, T-OP-II AND PUSH-OP CONNECTOR SYSTEMS

* Requires Adapter Mo. 6315
() Indicates Number of Crimps

Connector Outer Diameter	Connector Size (awg or kcmil)		BURNDY		KEARNEY			ALCOA				T & B		GREENLEE
	Concentric or Compressed	Compact or Solid	Tool Y35 Die	Tool Y45L Die	Tool Y48B Die	Tool H-1 Die	Tool H-2 Die	Tool H-25 Die	Tool 12A, 12AH Die	Tool 60A Die	Tool F1, H, H2, H2H Die	Tool 100A Die	Tool UT-15 Die	
0.850	#2	#1	U28ART (5)	U28ART (5)		840 845	840 845 Wide		874AH B39EA					Tool44598, Dieless Crimping Press
	1/0	2/0												
	2/0	3/0												
	3/0	4/0												
	4/0	250												
1.15	250	300	U31ART (5)	U31ART (5)	C31AR (5)	1-1/8-1 1-1/8-2	1-1/8-1 1-1/8-2		B13AH B80EA				15C96R	Dieless
	300	350												
	350	400												
	400	450												
	450	500												
1.32	500	600	U34ART (5)	U34ART (5)	C34AR (5)	1-5/16 1-5/16-H	1-5/16 1-5/16-H	1-5/16 1-5/16-H	820AH 14AH	6020AH	4420AH	10020AH	15C106R	Dieless
	600	700												
	650, 700	750, 800												
	700, 750	900	-	S39ART S40ART (5)	C39AR C40AR (5)			1-1/2		8024AH	4424AH	10024AH	15C140R	
	900	1000		S44ART (5)	C44AR (5)			1-3/4		6030AH	4430AH	1003AH	15C150R	
1.84	900 1000	-												Dieless

These are Crimp Recommendations ONLY. For complete assembly instructions, see Installation Instructions included with mating component parts.



Install Compression Connector

- Wire brush conductor.
- Remove protective cap from compression connector.
- Insert conductor completely into compression connector and rotate connector to distribute inhibitor.
- Align flaps of compression connector and apparatus bushing for minimum conductor strain.
- Make first crimp 1/2 inch (13 mm) below shoulder of connector.
- Rotate each successive crimp 90° on compression connector.
- Utilize as many crimps as die width will allow without overlapping.



**PD WIRE
& CABLE**

**phelps
dodge**
Thailand Ltd

REV. 03 DATE: JULY 1, 2002

SPECIFICATION

FOR

**15 kV COPPER CONDUCTOR, XLPE INSULATION,
COPPER WIRE SHIELD AND PVC JACKET**

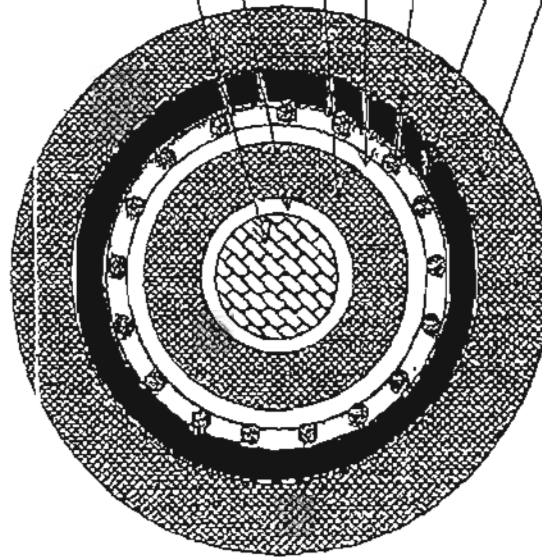
(PER ICEA S-66-524)



**CROSS-SECTION- DRAWING & CONSTRUCTION OF
15 kV Cu/XLPE/Copper Wire Shield/PVC Jacket Single Core**

**phelps
dodge**
The Standard

No.	Description
1	Annular Stranded Copper Conductor (Soft Drawn)
2	Extended Semi-Conducting XLPE
3	XLPE Insulation
4	Semi-Conducting XLPE
5	Copper Wire Shield
6	& Copper Tape
7	Polyester Tape
7	PVC Jacket



REVISION : 1

DATED: MAY 22, 2002

DRAWING NO. EX0801

DRAWING NOT TO SCALE



**PD WIRE
& CABLE**

**phelps
dodge**
Thailand Limited

1.5 kV HXLP / Copper wire shield / PVC

SPEC ICEA S-66-524

PHELPS DODGE THAILAND LIMITED

Table 1

	unit	500 MGM
Diameter of Conductor (Approx.)	inch	0.787
No. of cdr. wires (Min.) / Dia. of each wire (Approx.)	mils	37 / 126
S/C Cdr. thickness (Min. / Avg)	mils	20
Insulation thickness (Min. / Avg)	mils	220
Diameter over Insulation (Approx.)	inch	1.3
Semi-conducting Insulation thickness (Min. Avg)	mils	50
Total area of Cu wire shield (Nom.)	circ. mils	169780
No. of Cu wires / Dia. of each wire	AWG	26 / 12
PVC Outer Jkt. thickness (Min. Avg)	mils	80
Overall diameter (Approx.)	inch	1.85

* 3/C Direct Burial



**PD WIRE
& CABLE**

**phelps
dodge**
Thailand Branch

REV. 03 DATE: JULY 1, 2002

SPECIFICATION

FOR

**15 kV ALUMINUM CONDUCTOR, XLPE INSULATION,
COPPER WIRE SHIELD AND PVC JACKET**

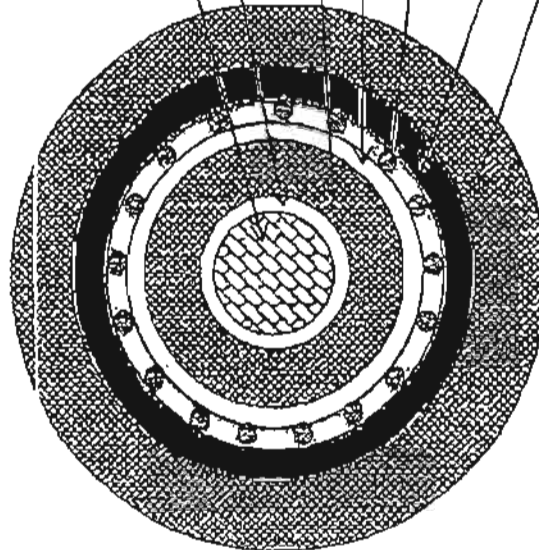
(PER ICEA S-66-524)



**CROSS-SECTION- DRAWING & CONSTRUCTION OF
15 kV AI/XLPE/Copper Wire Shield/PVC Jacket Single Core**

**phelps
dodge**
Thailand Limited

No.	Description
1	Stranded Aluminum Alloy (350 Class 3/4) Hard Drawing
2	Semi-Conducting Tape
3	& Extruded Semi-Conducting XLPE
4	XLPE Insulation
5	Semi-Conducting XLPE
6	Copper Wire Shield & Copper Tape
7	Polyester Tape PVC Jacket



REVISION : 2

DATED: July 1, 2002

DRAWING NO. EX002

DRAWING NOT TO SCALE


**PD WIRE
& CABLE**
**phelps
dodge**
 Thailand Limited

15 kV HXLP / Copper wire shield / PVC
SPEC ICEA S-88-524
PHELPS DODGE THAILAND LIMITED
Table 1

		unit	2 AWG	20 AWG
Diameter of Conductor (Approx.)		inch	0.283	0.394
No. of cdr. wires (Min.) / Dia. of each wire (Approx.)		mils	7 / 104	19 / 94
S/C Cdr. thickness (Min. Avg)		mils	15	15
Insulation thickness (Min. Avg)		mils	220	220
Diameter over Insulation (Approx.)		inch	0.787	0.906
Semi-conducting Insulation thickness (Min. Avg)		mils	30	30
Total area of Cu wire shield (Nom.)		circ. mils	41070	82140
No. of Cu wires / Dia. of each wire		AWG	10 / 14	20 / 14
PVC Outer Jkt. thickness (Min. Avg)		mils	80	80
Overall diameter (Approx.)		Inch	1.26	1.38

* 3/C Direct Burial



**PD WIRE
& CABLE**

**phelps
dodge**
Thailand Limited

REV. 03 DATE: JULY 1, 2002

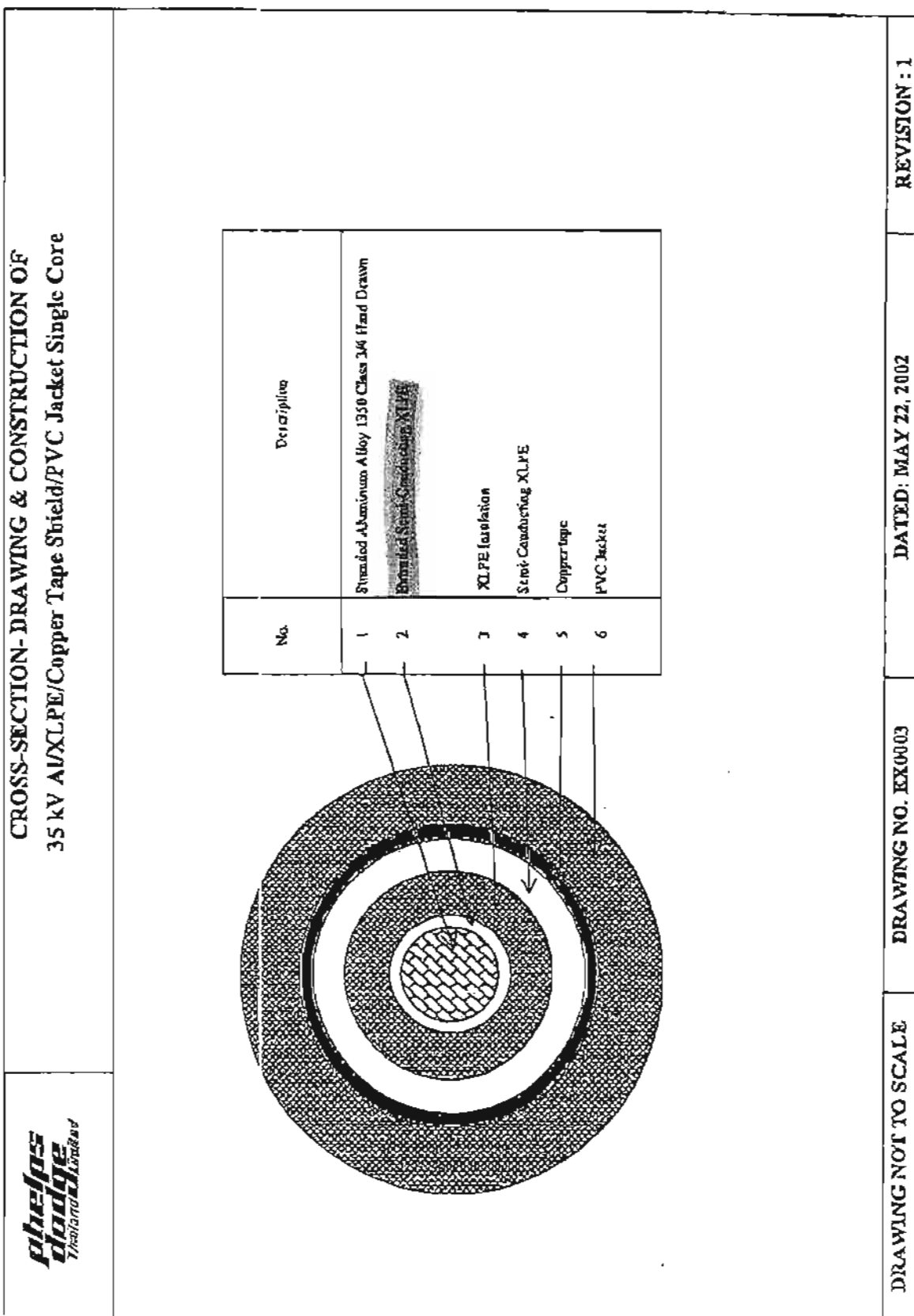
SPECIFICATION

FOR

**35 kV ALUMINUM CONDUCTOR, XLPE INSULATION,
COPPER TAPE SHIELD AND PVC JACKET**

(PER ICEA S-66-524)







**PD WIRE
& CABLE**

**phelps
dodge**
Thailand Limited

35 kV Al / XLPE / Cu tape shield / PVC

Spec. ICEA S-66-524

PHELPS DODGE THAILAND LIMITED

Technical Data

		Rated Voltage	
	unit	35 kV Al/XLPE/PVC 1x500 MCM /	
Diameter of Conductor (Approx.)	inch	0.868	
No. of cdr. wires (Min.) / Dia. of each wire (Approx.)	mils	61 / 106 /	
S/C Cdr. thickness (Min. Avg)	mils	25	
Insulation thickness (Min. Avg)	mils	353	
Diameter over Insulation (Approx.)	inch	1.85	
Semi-conducting Insulation thickness (Min. Avg)	mils	50	
Thickness of Cu tape (Nom)	mils	5	
PVC Jkt thickness (Min. Avg)	mils	110	
Overall diameter (Approx.)	inch	2.09	

* 3/C Direct Burial

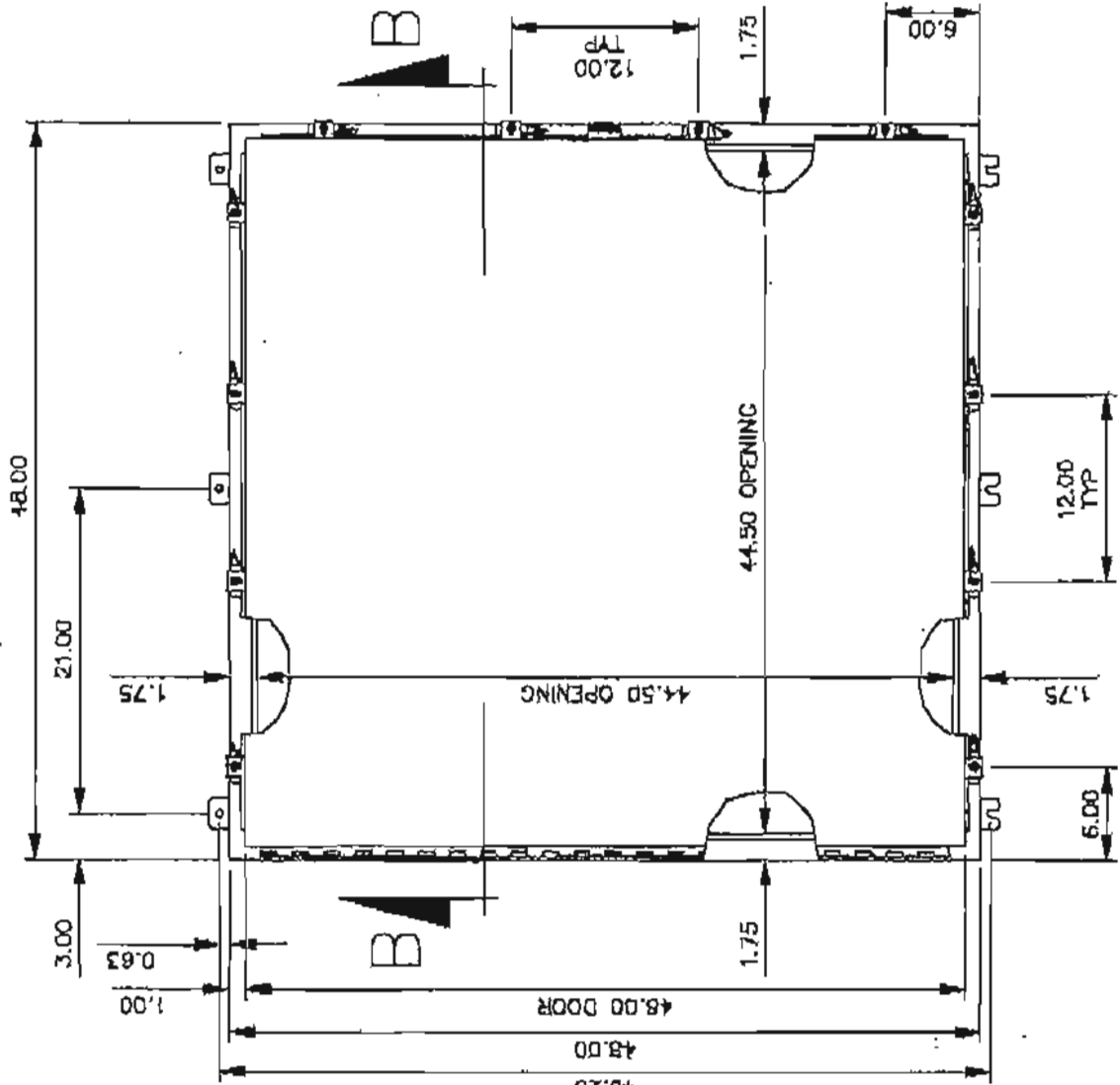
R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P. O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671) 632-8187/632-7471

1 floor 2



FRONT

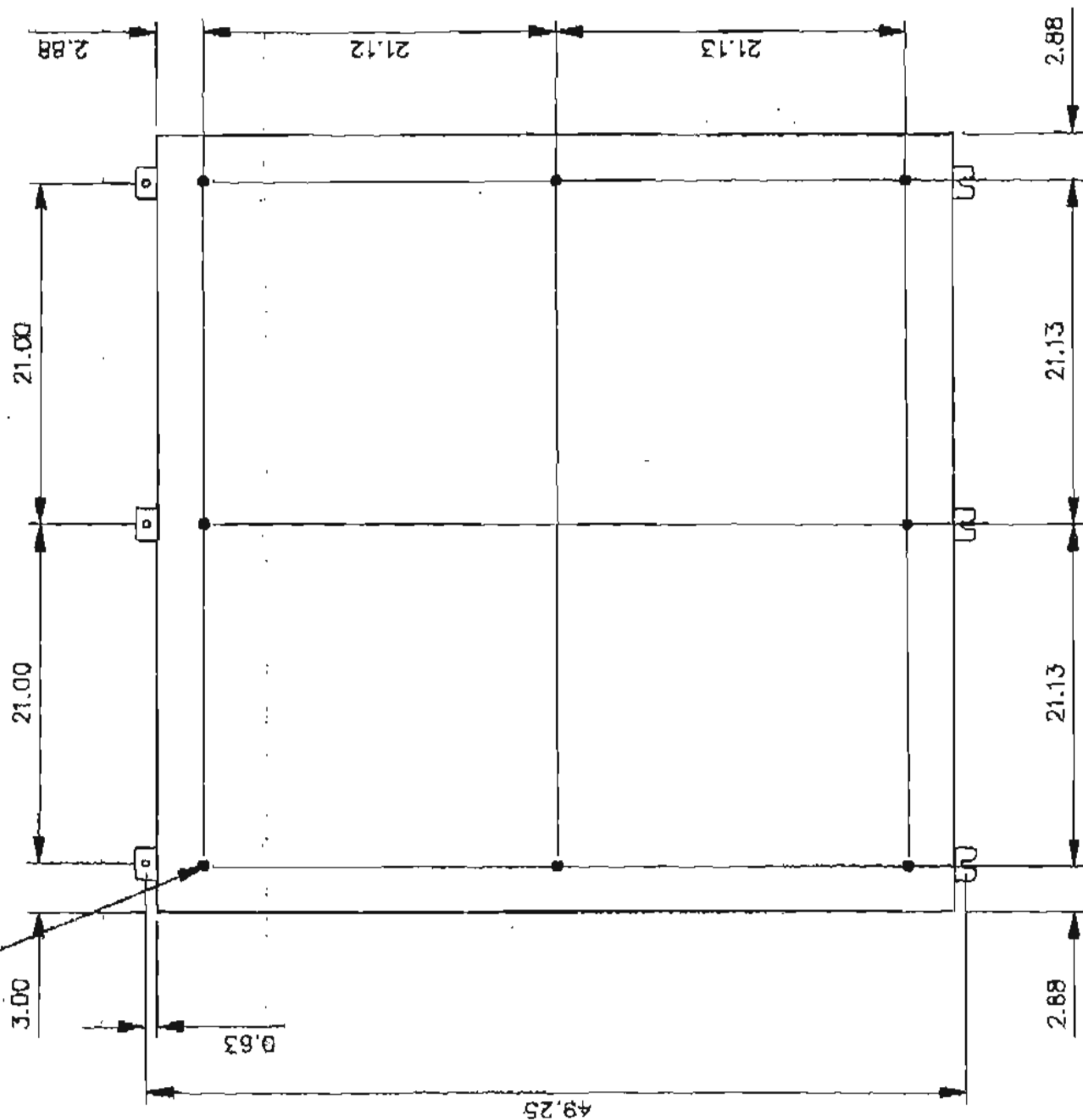
SIDE

PANEL 1 DS
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NO. 407

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R & D MARKETING

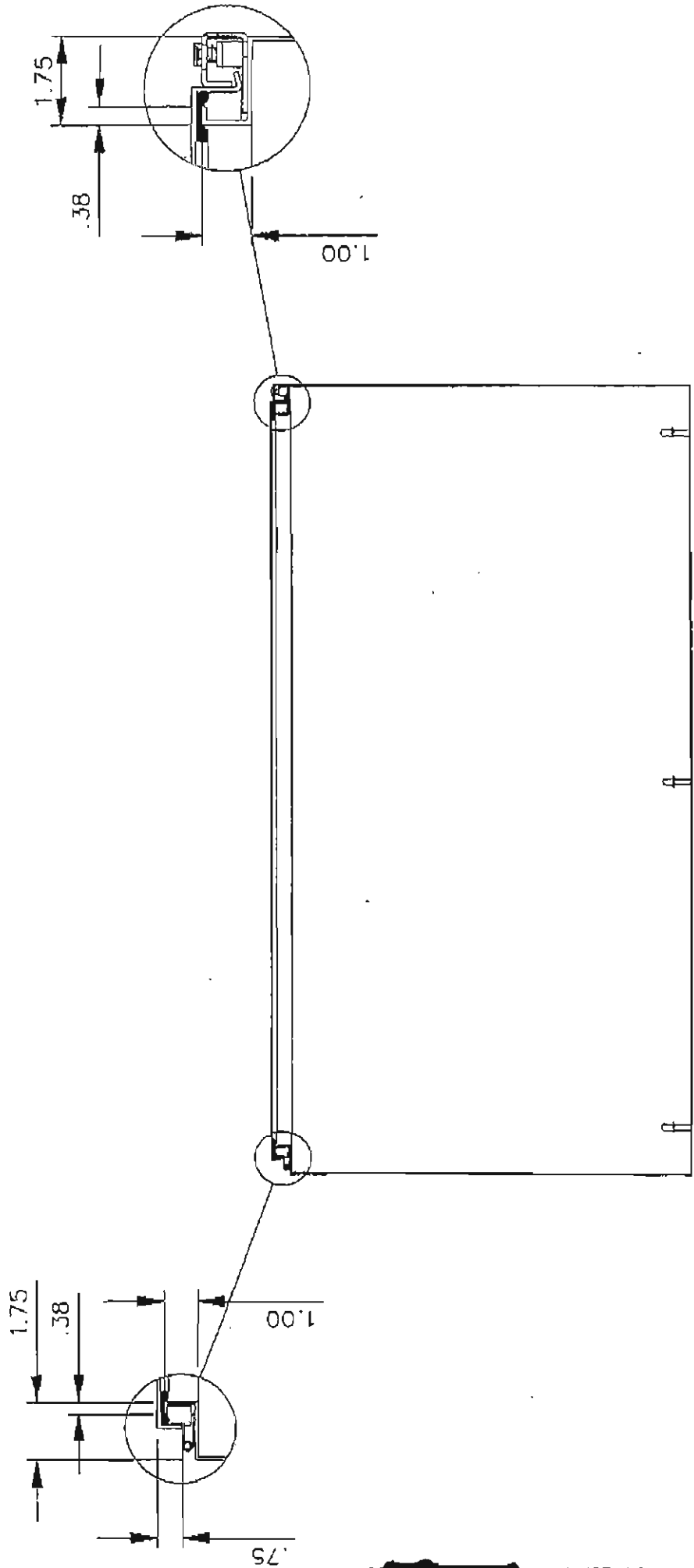
#11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P.O. BOX 5824, AGANA, GUAM 96932

TEL/FAX NO. 1671)632-8887/632-7471

SECTION A-A

SECTION B-B



January 2003
Cat. 1, Ref. No. 108331

PRL1a

For Item 711 & 712 2.1 & 2.19

Product Description

- 240V AC maximum.
- 3-phase 4-wire, 3-phase 3-wire, 1-phase 3-wire, 1-phase 2-wire.
- 400 ampere maximum mains.
- 100 ampere maximum branch breakers.
- Bolt-on or plug-on branch breakers.
- Factory assembled.
- Refer to Page 14-3 for additional information.



Type PRL1a

Application Description

- Lighting and appliance branch panelboard.
- Fully rated or series rated.
- Interrupting ratings up to 200 kA symmetrical.
- Suitable for use as Service Entrance Equipment, when specified on the order.
- See Pages 14-3 through 14-16 for additional information.

Standards and Certifications

- UL 67, UL 50.
- Federal Specification W-P-115c.
- Refer to Page 14-3 for additional information.

Options and Accessories

- Refer to Page 14-42.

Layout and Sizing

- Refer to Page 14-18.

Product Selection

Formula Pricing: Base Price + Branch Circuits + Modifications = Total Price U.S. \$

Table 14-18. Base Prices — PRL1a

Ampere Rating	Interrupting Rating (kA Sym.) 240V AC	Breaker Type	Price U.S. \$		
			3Ph 4W	1Ph 3W, 1Ph 2W	3Ph 3W
Main Lug Only					
100	—	—	613.	602.	522.
225	—	—	670.	555.	574.
400	—	—	1,092.	815.	957.

Main Breaker

Ampere Rating	Interrupting Rating (kA Sym.) 240V AC	Breaker Type	Price U.S. \$	Price U.S. \$	Price U.S. \$
100	10	BAB	1,117.	885.	1,023.
100	18	EHD	1,344.	1,096.	1,255.
100	22	QBHW	1,198.	944.	1,105.
100	65	ED	1,784.	1,507.	1,630.
100	65	FD	2,030.	1,753.	1,876.
100	100	EDH	2,178.	1,858.	1,925.
100	100	HFD	2,652.	2,149.	2,496.
225	65	ED	2,366.	1,983.	2,267.
225	100	EDH	2,757.	2,331.	2,561.
250	65	JD	3,073.	2,523.	2,959.
250	100	HJD	5,480.	4,149.	5,318.
250	200	JDC	8,377.	7,149.	8,223.
400	65	DK	4,208.	3,645.	4,127.
400	65	KD	4,732.	3,896.	4,301.
400	100	HKD	6,902.	6,264.	6,756.
400	200	KDC	9,346.	7,457.	9,104.

Table 14-19. Branch Circuit Breakers — PRL1a

Bolt-on = BAB, QBHW, QBGF, QBHGF, QBGFEP, QBHGFEP, QBAF, QBAG Plug-on = HOP, QPHW, QPGF, QPHGF, QPGFEP, QPHGFEP						
Ampere Rating	Interrupting Rating (kA Sym.) 240V AC ①	Breaker Type	Price U.S. \$			
			1-Pole 120V	2-Pole 120/240V	2-Pole 240V ②	3-Pole 240V
15 - 60	10	BAB, HOP	46.	95.	191.	245.
70	10	BAB, HOP	85.	163.	269.	312.
80 - 100	10	BAB, HOP	—	189.	282.	331.
15 - 50 ③	10	QBGF, QPGF ④	313.	495.	—	—
15 - 50 ③	10	QBGFEP, QPGFEP ④	500.	791.	—	—
15 - 20	10	QBAF ①	313.	495.	—	—
15 - 20	10	QBAG ①	344.	537.	—	—
15 - 60	10	BAB-D, HOP-D ④	57.	119.	—	—
15 - 30	10	BAB-C, HOP-B ④	168.	217.	—	—
15 - 30	10	BABR ⑤	283.	519.	—	—
15 - 30	10	BABRS ⑤	305.	560.	—	—
15 - 60	22	QBHW, QPHW	95.	149.	269.	362.
70	22	QBHW, QPHW	125.	191.	333.	451.
80 - 100	22	QBHW, QPHW	—	254.	413.	539.
15 - 30	22	QBHGF, QPHGF ④	623.	988.	—	—
15 - 30	22	QBHGFEP, QPHGFEP ④	899.	1,582.	—	—
Provision	—	—	18.	35.	35.	62.

- 1-pole breakers are rated 120V AC maximum.
- 240 volt breakers must be used on 3-phase, 3-wire, 240 volt delta systems or on the high leg of a midpoint delta grounded system.
- 50 ampere devices are available as 2-pole only.
- GFCI for 5 mA personnel protection.
- GFP for 30 mA equipment protection.
- Arc fault circuit breaker.
- Arc fault circuit breaker with GFCI.
- HID (High Intensity Discharge) rated breaker.
- Switching Neutral Breaker. 1-pole device requires 2-pole space, 2-pole device requires 3-pole space.
- Delayed operated breaker.

14

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912
P. O. BOX 5624, AGANA, GUAM 96932
TEL/FAX NO. (671) 632-8187/632-7477

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912
P. O. BOX 5624, AGANA, GUAM 96932
TEL/FAX NO. (671) 632-8187/632-7477
Discount Symbol CES

Box Sizing and Selection

Assembled Circuit Breaker Panelboards

Box size and box and trim catalog numbers for all standard panelboard types are found in Table 14-20.

Instructions

- Using description of the required panelboard, select the rating and type of main required.
- Count the total number of branch circuit poles, including provisions, required in the panelboard. Do not count main breaker poles. Convert 2- or 3-pole branch breaker to single-poles, i.e., 3-pole breaker, count as 3 poles.

Determine sub-feed breaker or through-feed lug requirements.

- Select the main ampere rating section from Table 14-20.
- Select panelboard type from first column, main breaker frame, if applicable, from second column, and sub-feed breaker frame, if applicable, from the third column.
- From Step #2, determine the number of branch circuits in Column 4.
- Read box size, box and trim catalog numbers across columns to the right. Specify surface or flush mounting on the order.

Cabinets

Fronts are code-gauge steel, ANSI-61 light gray painted finish.

Boxes are code-gauge galvanized steel without knockouts. Standard depth is 5-3/4 inches (146.1 mm). Standard width is 20 inches (508.0 mm). An optional 28-inch (711.2 mm) wide box is available.

Top and Bottom Gutters

5-1/2 inches (139.7 mm) minimum.

Table 14-20. PRL1a Panelboard Sizing

Panelboard Types	Main Breaker Types and Mounting Position (H) = Horiz. (V) = Vert.	Sub-Feed Breaker Types and Mounting Position (H) = Horiz. (V) = Vert.	Maximum Number of Branch Circuits Including Provisions	Box Dimensions Inches ±1/2			Box Catalog Number	Trim Catalog Number
				H	W	D		
100 Ampere Maximum								
Main Breaker	BAB, OBHW (H)	—	15	36	20	5-3/4	YS2036	LT2036S or F
		—	27	43	20	5-3/4	YS2048	LT2048S or F
		—	39	43	20	5-3/4	YS2048	LT2048S or F
		—	42	60	20	5-3/4	YS2060	LT2060S or F
Main Lugs or Main Breaker	EHD, FD, HFD (V)	—	18	36	20	5-3/4	YS2036	LT2036S or F
		—	30	43	20	5-3/4	YS2048	LT2048S or F
		—	42	43	20	5-3/4	YS2048	LT2048S or F
Main Lugs or Main Breaker with 100A Thru-Feed Lugs or Sub-Feed Breaker	EHD, FD, HFD (V)	EHD, FD, HFD (V)	18	43	20	5-3/4	YS2048	LT2048S or F
			30	43	20	5-3/4	YS2048	LT2048S or F
			42	60	20	5-3/4	YS2060	LT2060S or F
225 Ampere Maximum								
Main Lugs or Main Breaker	ED, EDH, FD, HFD (V)	—	18	36	20	5-3/4	YS2036	LT2036S or F
		—	30	43	20	5-3/4	YS2048	LT2048S or F
		—	42	43	20	5-3/4	YS2048	LT2048S or F
		JD, HJD, JDC (V)	18	60	20	5-3/4	YS2060	LT2060S or F
			30	60	20	5-3/4	YS2060	LT2060S or F
			42	72	20	5-3/4	YS2072	LT2072S or F
Main Lugs or Main Breaker with 225A Thru-Feed Lugs or Sub-Feed Breaker	EHD, FD, HFD, ED, EDH (V)	EHD, FD, HFD, ED, EDH (V)	18	43	20	5-3/4	YS2048	LT2048S or F
			30	43	20	5-3/4	YS2048	LT2048S or F
			42	60	20	5-3/4	YS2060	LT2060S or F
		JD, HJD, JDC (V)	18	60	20	5-3/4	YS2060	LT2060S or F
			30	72	20	5-3/4	YS2072	LT2072S or F
			42	72	20	5-3/4	YS2072	LT2072S or F
400 Ampere Maximum								
Main Lugs or Main Breaker	DK, KD, HKD, KDC (V)	—	18	60	20	5-3/4	YS2060	LT2060S or F
		—	30	60	20	5-3/4	YS2060	LT2060S or F
		—	42	72	20	5-3/4	YS2072	LT2072S or F
Main Lugs or Main Breaker with 225A Thru-Feed Lugs or Sub-Feed Breaker	DK, KD, HKD, KDC (V)	EHD, FD, HFD, ED, EDH (V)	18	60	20	5-3/4	YS2060	LT2060S or F
			30	72	20	5-3/4	YS2072	LT2072S or F
			42	72	20	5-3/4	YS2072	LT2072S or F
Main Lugs or Main Breaker with 400A Thru-Feed Lugs or Sub-Feed Breaker	DK, KD, HKD, KDC (V)	JD, HJD, JDC, DK, KD, HKD, KDC (V)	18	72	20	5-3/4	YS2072	LT2072S or F
			30	90	20	5-3/4	YS2090	LT2090S or F
			42	90	20	5-3/4	YS2090	LT2090S or F

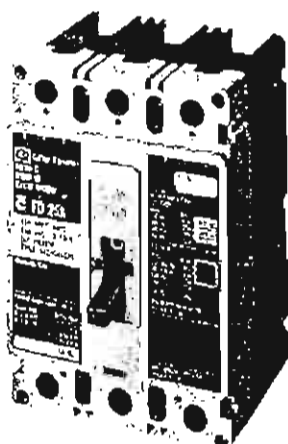
1. Metric box dimensions:

Box Catalog Number	Dimensions in mm		
	Height	Width	Depth
YS2036	914.4	508.0	146.1
YS2048	1219.2	508.0	146.1
YS2060	1524.0	508.0	146.1
YS2072	1828.8	508.0	146.1
YS2090	2286.0	508.0	146.1

2. Smaller panelboard box sizes are available if required. Contact Eaton's Cutler-Hammer for application information.

R & D MARKETING

#11 OEDEDO PLAZA BLDG., OEDEDO GUAM 96912
P.O. BOX 5624, AGANA, GUAM 96932
TEL/FAX NO. (671)632-8187/632-7477



Typical Series C F-Frame Breaker

- All Series C F-frame circuit breakers are HACR rated.
- All circuit breakers 10 through 50 amperes are suitable for HID (high intensity discharge) use.
- All F-frame circuit breakers are suitable for reverse feed use.

Interrupting Capacity Ratings**UL489 Interrupting Capacity Ratings**

Circuit Breaker Type	Number of Poles	Interrupting Capacity (Symmetrical Amperes) (kA)						Page Number
		Volts Ac (50/60 Hz)				Volts Dc		
		240	277	480	600	125	250 F D	
ED	2, 3	65	—	—	—	10	—	32
EDH	2, 3	100	—	—	—	10	—	32
EDC	2, 3	200	—	—	—	10	—	32
EHD	1	—	14	—	—	10	—	32
	2, 3	18	—	14	—	—	10	32
FDB	2, 3, 4	18	—	14	14	—	10	32
FD	1	—	25	—	—	10	—	32
	2, 3, 4	65	—	25	13	—	10	32
HFD	1	—	65	—	—	10	—	33
	2, 3, 4	100	—	65	25	—	22	33
FDC	2, 3, 4	200	—	100	25	—	22	33

IEC 157-1 (P1) Interrupting Capacity Ratings (P1)

Circuit Breaker Type	Number of Poles	Interrupting Capacity (Symmetrical Amperes) (kA)						Page Number
		Volts Ac (50/60 Hz)				Volts Dc D		
		220, 240	380, 415	440	500	125	250 F D	
ED	2, 3	65	—	—	—	10	—	32
EDH	2, 3	100	—	—	—	10	—	32
EDC	2, 3	200	—	—	—	10	—	32
FDB	2, 3, 4	18	14	14	14	—	10	32
FD	1	25	—	—	—	10	—	32
	2, 3, 4	65	35	35	13	—	10	32
HFD	1	65	—	—	—	10	—	33
	2, 3, 4	100	65	65	25	—	22	33
FDC	2, 3, 4	200	100	100	35	—	22	33

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P.O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671)632-8187/632-7477

- ⊗ Dc ratings apply to substantially non-inductive circuits.
- ⊗ 2-pole circuit breaker, or two poles of 3-pole circuit breaker.
- ⊗ Time constant is 3 milliseconds minimum at 10 kA and 8 milliseconds minimum at 22 kA.

Series C® F-Frame

Types ED, EDH, and EDC Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units Suitable for Reverse Feed

Maximum Continuous Ampere Rating @ 40°C	240 Vac Maximum, 125 Vdc					
	55 kAIC @ 240 Vac		100 kAIC @ 240 Vac		200 kAIC @ 240 Vac	
	Type ED		Type EDH		Type EDC Current Limiting	
	2-Pole	3-Pole	2-Pole	3-Pole	2-Pole	3-Pole
	Catalog Number (Includes Terminals on Load End Only)					
100	ED2100	ED3100	EDH2100	EDH3100	EDC2100	EDC3100
125	ED2125	ED3125	EDH2125	EDH3125	EDC2125	EDC3125
150	ED2150	ED3150	EDH2150	EDH3150	EDC2150	EDC3150
175	ED2175	ED3175	EDH2175	EDH3175	EDC2175	EDC3175
200	ED2200	ED3200	EDH2200	EDH3200	EDC2200	EDC3200
225	ED2225	ED3225	EDH2225	EDH3225	EDC2225	EDC3225

Instruction Leaflet/FRED Number 29C101

Type EHD Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Maximum Continuous Ampere Rating @ 40°C	277 Vac Maximum, 125 Vdc		480 Vac Maximum, 250 Vdc	
	14 kAIC @ 277 Vac		14 kAIC @ 480 Vac	
	Type EHD			
	1-Pole		2-Pole	
			3-Pole	
Catalog Number (Includes Terminals on Load End Only)				
10①	EHD1010	EHD2010	EHD3010	
15	EHD1015②	EHD2015	EHD3015	
20	EHD1020②	EHD2020	EHD3020	
25	EHD1025	EHD2025	EHD3025	
30	EHD1030	EHD2030	EHD3030	
35	EHD1035	EHD2035	EHD3035	
40	EHD1040	EHD2040	EHD3040	
45	EHD1045	EHD2045	EHD3045	
50	EHD1050	EHD2050	EHD3050	
60	EHD1060	EHD2060	EHD3060	
70	EHD1070	EHD2070	EHD3070	
80	EHD1080	EHD2080	EHD3080	
90	EHD1090	EHD2090	EHD3090	
100	EHD1100	EHD2100	EHD3100	

Instruction Leaflet/FRED Number 29C101

Type FD Thermal-Magnetic Circuit Breakers with Non-Interchangeable Trip Units

Maximum Continuous Ampere Rating @ 40°C	500 Vac Maximum, 250 Vdc			277 Vac Maximum, 125 Vdc		600 Vac Maximum, 250 Vdc		
	14 kAIC @ 500 Vac			25 kAIC @ 277 Vac		25 kAIC @ 480 Vac		
	Type FDS			Type FD				
	2-Pole	3-Pole	4-Pole	1-Pole	2-Pole	3-Pole	4-Pole	
	Catalog Number (Includes Terminals on Load End Only)							
100	FD82010	FD83010	FD84010	FD1010	-	-	-	
15	FD82015	FD83015	FD84015	FD1015	FD2015	FD3015	FD4015	
20	FD82020	FD83020	FD84020	FD1020	FD2020	FD3020	FD4020	
25	FD82025	FD83025	FD84025	FD1025	FD2025	FD3025	FD4025	
30	FD82030	FD83030	FD84030	FD1030	FD2030	FD3030	FD4030	
35	FD82035	FD83035	FD84035	FD1035	FD2035	FD3035	FD4035	
40	FD82040	FD83040	FD84040	FD1040	FD2040	FD3040	FD4040	
45	FD82045	FD83045	FD84045	FD1045	FD2045	FD3045	FD4045	
50	FD82050	FD83050	FD84050	FD1050	FD2050	FD3050	FD4050	
60	FD82060	FD83060	FD84060	FD1060	FD2060	FD3060	FD4060	
70	FD82070	FD83070	FD84070	FD1070	FD2070	FD3070	FD4070	
80	FD82080	FD83080	FD84080	FD1080	FD2080	FD3080	FD4080	
90	FD82090	FD83090	FD84090	FD1090	FD2090	FD3090	FD4090	
100	FD82100	FD83100	FD84100	FD1100	FD2100	FD3100	FD4100	
110	FD82110	FD83110	FD84110	FD1110	FD2110	FD3110	FD4110	
125	FD82125	FD83125	FD84125	FD1125	FD2125	FD3125	FD4125	
150	FD82150	FD83150	FD84150	FD1150	FD2150	FD3150	FD4150	
175	-	-	-	-	FD2175	FD3175	FD4175	
200	-	-	-	-	FD2200	FD3200	FD4200	
225	-	-	-	-	FD2225	FD3225	FD4225	

Instruction Leaflet/FRED Number 29C101

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P.O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671)632-8187/632-7477

- ① Not UL listed. 5 kAIC interrupting rating.
- ② UL listed for SWD applications, see NEC Article 240-83 (d).

QUICKLAG Industrial Circuit Breakers Bolt-on

Description

Built and Listed to UL 489

QUICKLAG Circuit Breakers
Bolt-on TypeType BA: 10-125 Amperes,
10,000 AICType QBHW: 15-125 Amperes,
22,000 AICType HBAX: 15-100 Amperes,
42,000 AICType HBAW: 15-30 Amperes,
65,000 AIC

QUICKLAG Type BA 1-Pole



QUICKLAG Type BA 2-Pole



QUICKLAG Type BA 3-Pole

Breaker Catalog Numbers

For Item 7-11/7-12

Continuous Amperes Rating at 40°C	Catalog Number		240 Vac	240 Vac
	1-Pole②	2-Pole②		
	120/240 Vac	120/240 Vac	240 Vac	240 Vac

QUICKLAG Type: BA 10,000 Ampere I.C. Thermal-Magnetic Breakers

10	BAB1010	BAB2010	BAB2010H	BAB3010H
15	BAB1015③	BAB2015	BAB2015H	BAB3015H
20	BAB1020③	BAB2020	BAB2020H	BAB3020H
25	BAB1025	BAB2025	BAB2025H	BAB3025H
30	BAB1030	BAB2030	BAB2030H	BAB3030H
35	BAB1035	BAB2035	BAB2035H	BAB3035H
40	BAB1040	BAB2040	BAB2040H	BAB3040H
45	BAB1045	BAB2045	BAB2045H	BAB3045H
50	BAB1050	BAB2050	BAB2050H	BAB3050H
55	BAB1055	BAB2055	BAB2055H	BAB3055H
60	BAB1060	BAB2060	BAB2060H	BAB3060H
70	BAB1070	BAB2070	BAB2070H	BAB3070H
80	-	BAB2080	BAB2080H	BAB3080H
90	-	BAB2090	BAB2090H	BAB3090H
100	BAB1100	BAB2100	BAB2100H	BAB3100H
110	-	BAB2110	-	-
125	-	BAB2125	-	-

QUICKLAG Type: QBHW 22,000 Ampere I.C. Thermal-Magnetic Breakers

15	QBHW1015③	QBHW2015	QBHW2015H	QBHW3015H
20	QBHW1020③	QBHW2020	QBHW2020H	QBHW3020H
25	QBHW1025	QBHW2025	QBHW2025H	QBHW3025H
30	QBHW1030	QBHW2030	QBHW2030H	QBHW3030H
35	QBHW1035	QBHW2035	QBHW2035H	QBHW3035H
40	QBHW1040	QBHW2040	QBHW2040H	QBHW3040H
45	QBHW1045	QBHW2045	QBHW2045H	QBHW3045H
50	QBHW1050	QBHW2050	QBHW2050H	QBHW3050H
55	QBHW1055	QBHW2055	QBHW2055H	QBHW3055H
60	QBHW1060	QBHW2060	QBHW2060H	QBHW3060H
70	QBHW1070	QBHW2070	QBHW2070H	QBHW3070H
80	-	QBHW2080	QBHW2080H	QBHW3080H
90	-	QBHW2090	QBHW2090H	QBHW3090H
100	-	QBHW2100	QBHW2100H	QBHW3100H
110	-	QBHW2110	-	-
125	-	QBHW2125	-	-

QUICKLAG Type: HBAX 42,000 Ampere I.C. Thermal-Magnetic Breakers

15	HBAX1015③	HBAX2015	-	HBAX3015H
20	HBAX1020③	HBAX2020	-	HBAX3020H
25	HBAX1025	HBAX2025	-	HBAX3025H
30	HBAX1030	HBAX2030	-	HBAX3030H
35	HBAX1035	HBAX2035	-	HBAX3035H
40	HBAX1040	HBAX2040	-	HBAX3040H
45	HBAX1045	HBAX2045	-	HBAX3045H
50	HBAX1050	HBAX2050	-	HBAX3050H
55	HBAX1055	HBAX2055	-	HBAX3055H
60	HBAX1060	HBAX2060	-	HBAX3060H
70	HBAX1070	HBAX2070	-	HBAX3070H
80	-	HBAX2080	-	HBAX3080H
90	-	HBAX2090	-	HBAX3090H
100	-	HBAX2100	-	HBAX3100H

QUICKLAG Type: HBAW 65,000 Ampere I.C. Thermal-Magnetic Breakers

15	HBAW1015③	HBAW2015	-	HBAW3015H
20	HBAW1020③	HBAW2020	-	HBAW3020H
25	HBAW1025	HBAW2025	-	-
30	HBAW1030	HBAW2030	-	-

Shipping Data

Poles	Carton Quantity	Approximate Weight Lbs. (Kgs)	Dimensions inches (mm)
1	24	9.000 (4.09)	12.500 (317.50) x 7.500 (190.50) x 5.000 (127.00)
2	18	9.000 (4.09)	12.500 (317.50) x 7.500 (190.50) x 5.000 (127.00)
3	8	9.000 (4.09)	12.500 (317.50) x 7.500 (190.50) x 5.000 (127.00)

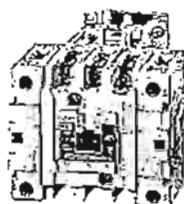
- ① All products UL and CSA listed.
- ② All products 15-100A are HACR rated.
- ③ Switching duty rated for 120 Vac fluorescent light applications.
- ④ For special low-magnetic breaker order BAB1015L1 or BAB1020L1.

R & D MARKETING

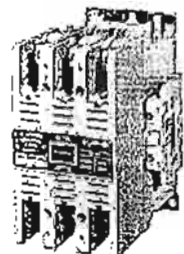
11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912
P.O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671) 632-8187/632-7477

Electrically Held, Mechanically Held, Magnetically Latched



60A, 5-Pole Electrically Held



100A, 3-Pole Electrically Held



30A, 4-Pole Magnetically Latched

Description

Lighting contactors are designed to provide a safe, convenient means for local or remote switching of tungsten (incandescent filament) or ballast (fluorescent and mercury arc) lamp loads. They are also suitable for other loads such as low pressure and high pressure sodium lamp loads and other non-motor (resistive) loads. They are not recommended for most sign flashing loads.

These lighting contactors are designed to withstand the large initial inrush currents of tungsten lamp loads without contact welding. They are fully rated and do not require derating.

Loads

Ballast Lamps — Fluorescent, Mercury Vapor, Metal Halide Sodium Vapor, Quartz — 600V maximum.

Filament Lamps — Incandescent, Infrared, Heating — 480V maximum, line to line; 277V maximum line to neutral.

Resistance Heating — Radiant and convection heating, furnaces and ovens.

Auxiliary Contacts

Electrically Held Contactors — Include a NO maintaining auxiliary contact mounted on the right side of the contactor. The 10 – 60A devices will accept additional auxiliary contacts on the top (front) and/or sides. The 100 – 400A sizes will accept side mounted auxiliaries only.

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Magnetically Latched Contactors	3-10
Combination Lighting Contactors	3-15
Cover Mounted Controls	3-18
Wiring Diagrams	3-19

Mechanically Held and Magnetically Latched — Holding circuit auxiliary contact, if needed, is not included and should be added separately as an option.

Cover Mounted Pilot Devices

ON/OFF and HAND/OFF/AUTO are available as options — see Page 3-18.

UL/CSA

- UL Listed — File Number E44424, Guide Number NRNT
- CSA Certified

Approximate Dimensions and Shipping Weights

See Pages 12-1 – 12-4.

for item 7-11/7-12

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912
P. O. BOX 5624, AGANA, GUAM 96932
TEL/FAX NO. (671)632-8187/632-7477

Electrically Held

For Item 7-11/7-12

Class ECL03 — NEMA Rated (Continued)

Maximum Ampere Rating (1)	Number of Poles	Frame Size	Magnet Coil Voltage 50/60 Hz (2)	NEMA 1 General Purpose		NEMA 2B Rainproof		NEMA 3B Weather-Resistant and Non-Fire-Retardant		NEMA 3C Weather-Resistant and Non-Fire-Retardant		NEMA 4X Dust-Tight Industrial (NEMA 3B-2)		Open Type (Electrically Held Lighting Commutator)	
				Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	*
60	1	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301A2A D1E2A D1B2A D1H2A D1C2A D1D2A	\$ 426	ECL0302A2A D2E2A D2B2A D2H2A D2C2A D2D2A	\$ 564	ECL0304A2A D4E2A D4B2A D4H2A D4C2A D4D2A	\$ 676	ECL0308A2A D8E2A D8B2A D8H2A D8C2A D8D2A	\$ 904	ECL0308A2A D8E2A D8B2A D8H2A D8C2A D8D2A	\$ 904	CN250N2AB GN2EB GN2BB GN2HB GN2CB GN2DB	
	2	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301A3A D1E3A D1B3A D1H3A D1C3A D1D3A	451	ECL0302A3A D2E3A D2B3A D2H3A D2C3A D2D3A	509	ECL0304A3A D4E3A D4B3A D4H3A D4C3A D4D3A	564	ECL0308A3A D8E3A D8B3A D8H3A D8C3A D8D3A	580	ECL0308A3A D8E3A D8B3A D8H3A D8C3A D8D3A	580	CN250N3AB GN3EB GN3BB GN3HB GN3CB GN3DB	
	3	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301A4A D1E4A D1B4A D1H4A D1C4A D1D4A	564	ECL0302A4A D2E4A D2B4A D2H4A D2C4A D2D4A	701	ECL0304A4A D4E4A D4B4A D4H4A D4C4A D4D4A	1152	ECL0308A4A D8E4A D8B4A D8H4A D8C4A D8D4A	701	ECL0308A4A D8E4A D8B4A D8H4A D8C4A D8D4A	701	CN250N4AB GN4EB GN4BB GN4HB GN4CB GN4DB	
	4	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301A5A D1E5A D1B5A D1H5A D1C5A D1D5A	814	ECL0302A5A D2E5A D2B5A D2H5A D2C5A D2D5A	941	ECL0304A5A D4E5A D4B5A D4H5A D4C5A D4D5A	1442	ECL0308A5A D8E5A D8B5A D8H5A D8C5A D8D5A	941	ECL0308A5A D8E5A D8B5A D8H5A D8C5A D8D5A	941	CN250N5AB GN5EB GN5BB GN5HB GN5CB GN5DB	
	6	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301A6A D1E6A D1B6A D1H6A D1C6A D1D6A	899	ECL0302A6A D2E6A D2B6A D2H6A D2C6A D2D6A	1108	ECL0304A6A D4E6A D4B6A D4H6A D4C6A D4D6A	1632	ECL0308A6A D8E6A D8B6A D8H6A D8C6A D8D6A	1108	ECL0308A6A D8E6A D8B6A D8H6A D8C6A D8D6A	1108	— — — — — —	
	9	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301A9A D1E9A D1B9A D1H9A D1C9A D1D9A	1074	ECL0302A9A D2E9A D2B9A D2H9A D2C9A D2D9A	1250	ECL0304A9A D4E9A D4B9A D4H9A D4C9A D4D9A	1682	ECL0308A9A D8E9A D8B9A D8H9A D8C9A D8D9A	1250	ECL0308A9A D8E9A D8B9A D8H9A D8C9A D8D9A	1250	— — — — — —	
	10	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301AAA D1EAA D1BAA D1HAA D1CAA D1DAA	1161	ECL0302AAA D2EAA D2BAA D2HAA D2CAA D2DAA	1301	ECL0304AAA D4EAA D4BAA D4HAA D4CAA D4DAA	1728	ECL0308AAA D8EAA D8BAA D8HAA D8CAA D8DAA	1301	ECL0308AAA D8EAA D8BAA D8HAA D8CAA D8DAA	1301	— — — — — —	
	12	65 mm	110/120 208 220/240 277 440/480 550/600	ECL0301ABA D1EBA D1BBA D1HBA D1CBA D1DBA	1832	ECL0302ABA D2EBA D2BBA D2HBA D2CBA D2DBA	1911	ECL0304ABA D4EBA D4BBA D4HBA D4CBA D4DBA	2432	ECL0308ABA D8EBA D8BBA D8HBA D8CBA D8DBA	1911	ECL0308ABA D8EBA D8BBA D8HBA D8CBA D8DBA	1911	— — — — — —	

① The listed ampere ratings are based on a maximum load voltage of 480V for tungsten lamp applications and 600V for ballast or mercury vapor type applications.

② Suitable for outdoor application when properly installed.
③ 208 and 277V coils are 60 Hz only.

R & D MARKETING

11 DEDÉO PLAZA BLDG., DEDÉO GUAM 96912
P. O. BOX 5624, AGANA, GUAM 96932
TEL/FAX NO. (671)632-8187/632-7477

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*Prices — Consult Sales Office
Discount Schedule 1CD-1C

Electrically Held

For Item 7-41/7-12

Class ECL03 — NEMA Rated (Continued)

Maximum Ampere Rating ①	Number of Poles	Frame Size	Magnet Coil Voltage 50/60 Hz ②	NEMA 1 General Purpose		NEMA 3R Rainproof		NEMA 4X Watertight and Dust-Tight Stainless Steel		NEMA 12 Dust-Tight Industrial (NEMA 3R) ③		Open Type Electrically Held Lighting Contactors	
				Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	Price	Catalog Number	*
20	2	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1A2A B1E2A B1B2A B1H2A B1C2A B1D2A	\$ 194.	ECL03B2A2A B2E2A B2B2A B2H2A B2C2A B2D2A	\$ 376.	ECL03B4A2A B4E2A B4B2A B4H2A B4C2A B4D2A	\$ 403.	ECL03B8A2A B8E2A B8B2A B8H2A B8C2A B8D2A	\$ 376.	CN35BN2AB BN2EB BN2BB BN2HB BN2CB BN2DB	
	3	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1A3A B1E3A B1B3A B1H3A B1C3A B1D3A	213.	ECL03B2A3A B2E3A B2B3A B2H3A B2C3A B2D3A	395.	ECL03B4A3A B4E3A B4B3A B4H3A B4C3A B4D3A	422.	ECL03B8A3A B8E3A B8B3A B8H3A B8C3A B8D3A	395.	CN35BN3AB BN3EB BN3BB BN3HB BN3CB BN3DB	
	4	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1A4A B1E4A B1B4A B1H4A B1C4A B1D4A	270.	ECL03B2A4A B2E4A B2B4A B2H4A B2C4A B2D4A	451.	ECL03B4A4A B4E4A B4B4A B4H4A B4C4A B4D4A	478.	ECL03B8A4A B8E4A B8B4A B8H4A B8C4A B8D4A	451.	CN35BN4AB BN4EB BN4BB BN4HB BN4CB BN4DB	
	5	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1A5A B1E5A B1B5A B1H5A B1C5A B1D5A	329.	ECL03B2A5A B2E5A B2B5A B2H5A B2C5A B2D5A	489.	ECL03B4A5A B4E5A B4B5A B4H5A B4C5A B4D5A	516.	ECL03B8A5A B8E5A B8B5A B8H5A B8C5A B8D5A	489.	— — — — — —	
	6	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1A6A B1E6A B1B6A B1H6A B1C6A B1D6A	388.	ECL03B2A6A B2E6A B2B6A B2H6A B2C6A B2D6A	526.	ECL03B4A6A B4E6A B4B6A B4H6A B4C6A B4D6A	553.	ECL03B8A6A B8E6A B8B6A B8H6A B8C6A B8D6A	526.	CN35BN6AB BN6EB BN6BB BN6HB BN6CB BN6DB	
	9	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1A9A B1E9A B1B9A B1H9A B1C9A B1D9A	549.	ECL03B2A9A B2E9A B2B9A B2H9A B2C9A B2D9A	683.	ECL03B4A9A B4E9A B4B9A B4H9A B4C9A B4D9A	710.	ECL03B8A9A B8E9A B8B9A B8H9A B8C9A B8D9A	683.	CN35BN9AB BN9EB BN9BB BN9HB BN9CB BN9DB	
	10	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1AAA B1EAA B1BAA B1HAA B1CAA B1DAA	610.	ECL03B2AAA B2EAA B2BAA B2HAA B2CAA B2DAA	746.	ECL03B4AAA B4EAA B4BAA B4HAA B4CAA B4DAA	733.	ECL03B8AAA B8EAA B8BAA B8HAA B8CAA B8DAA	746.	— — — — — —	
	12	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1ABA B1EBA B1BBA B1HBA B1CBA B1DBA	670.	ECL03B2ABA B2EBA B2BBA B2HBA B2CBA B2DBA	808.	ECL03B4ABA B4EBA B4BBA B4HBA B4CBA B4DBA	835.	ECL03B8ABA B8EBA B8BBA B8HBA B8CBA B8DBA	808.	CN35BN12AB BN12EB BN12BB BN12HB BN12CB BN12DB	
20	45 mm	110/120 208 220/240 277 440/480 550/600	ECL03B1ACA B1ECA B1BCA B1HCA B1CCA B1DCA	1058.	ECL03B2ACA B2ECA B2BCA B2HCA B2CCA B2DCA	1334.	ECL03B4ACA B4ECA B4BCA B4HCA B4CCA B4DCA	1399.	ECL03B8ACA B8ECA B8BCA B8HCA B8CCA B8DCA	1334.	— — — — — —		

① The listed ampere ratings are based on a maximum load voltage of 480V for tungsten lamp applications and 600V for ballast or mercury vapor type applications.

② Suitable for outdoor application when properly installed.

③ 208 and 277V coils are 60 Hz only.

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Cover Mounted Controls Page 3-18
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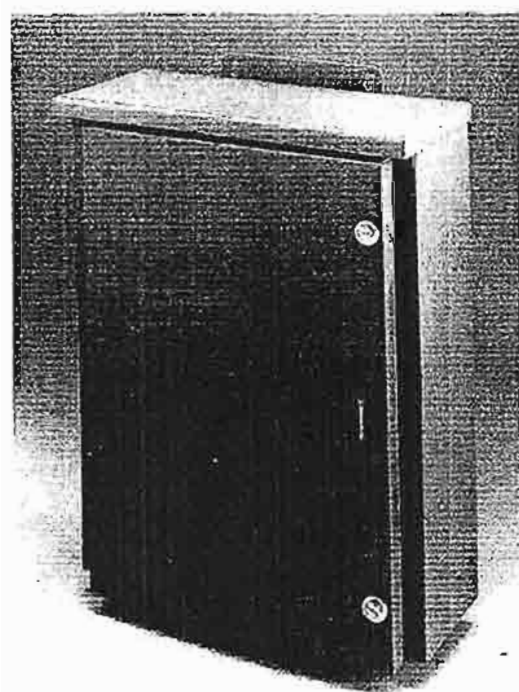
R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912
P. O. BOX 5624, AGANA, GUAM 96932
TEL/FAX NO. (671) 632-8187/632-7477

*Prices — Consult Sales Office
Discount Schedule 1CD-1C

Type 3R Large Enclosures Continuous Hinge Cover

Data Sheet



Application

- Used as wiring boxes, junction and pull boxes
- Protects against falling rain, sleet and external ice formation

Construction

- Enclosure and door are fabricated from code gauge steel, (see table)
- Enclosure standard without knockouts
- Door is secured to the body with a continuous hinge and stainless steel pin on one side and captive screws on the opposite side
- Door has padlock hasp with sealing hole provision
- #10-32 tapped hole provision for optional ground lug kit
- .375-16 collar studs are furnished for mounting optional panel
- External mounting feet are provided for secure wall mounting

Standards

- UL 50 listed, Type 3R
- CSA C22.2 No. 40 certified, Type 3R
- Conforms to NEMA standard for Type 3R

Finish

- Wash and phosphate undercoat
- ANSI 61 gray polyester powder finish

Accessories

- Panels
- Ground lug kit
- Touch-up paint
- See Accessories section

Enclosure Catalog Number	Enclosure Size			D	Gauge	Panel Catalog Number	Panel Size	
	Height A	Width B	Depth C				Height	Width
12166RHC	16.00	12.00	6.00	5.00	16	N1612P	13.00	9.00
16166RHC	16.00	16.00	6.00	9.00	16	N1616P	13.00	13.00
16206RHC	20.00	16.00	6.00	9.00	16	N2016P	17.00	13.00
20208RHC	20.00	20.00	8.00	13.00	16	N2020P	17.00	17.00
20248RHC	24.00	20.00	8.00	13.00	16	N2420P	20.87	16.87
24248RHC	24.00	24.00	8.00	17.00	14	N2424P	20.87	20.87
24308RHC	30.00	24.00	8.00	17.00	14	N3024P	26.87	20.87
243612RHC	36.00	24.00	12.00	17.00	14	N3624P	32.87	20.87
303012RHC	30.00	30.00	12.00	27.00	14	N3030P	26.87	26.87
303612RHC	36.00	30.00	12.00	27.00	14	N3630P	32.87	26.87
304212RHC	42.00	30.00	12.00	27.00	14	N4230P	38.87	26.87
363612RHC	36.00	36.00	12.00	27.00	14	N3636P	32.87	32.87
364212RHC	42.00	36.00	12.00	27.00	14	N4236P	38.87	32.87
364812RHC	48.00	36.00	12.00	27.00	14	N4836P	44.87	32.87
366012RHC	60.00	36.00	12.00	27.00	14	N6036P	56.87	32.87

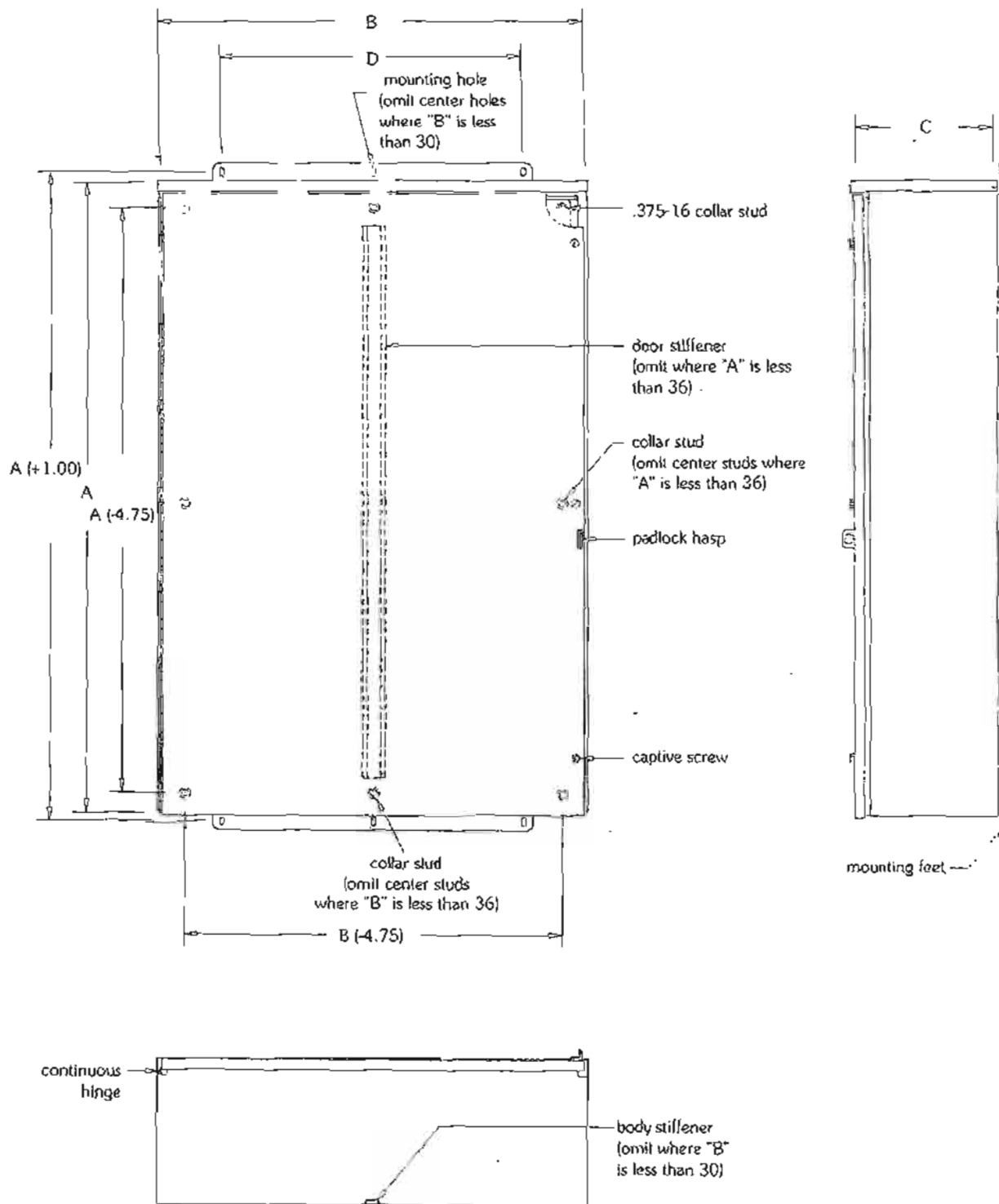
For
item
2-3
2.3a

B-Line

Notes: B-Line Systems can provide cutouts, holes, hubs, special sizes and other custom modifications. Electrogalvanized or hot dip galvanized finishes are also available. Consult the factory for your special requirements.
Data subject to change without notice.

Type 3R Large Enclosures Continuous Hinge Cover

Illustration Sheet



Notes: All dimensions are in inches.
Data subject to change without notice

B-Line

Type 3R
Enclosures

January 2003
2. Ref. No. 008691

10250T Series, Class I Division 2 Stations

Class I Division 2 10250T Heavy-Duty 30.5 mm Control Stations

Product Description

- 10250T Series operators
- Factory sealed contact blocks
- Die-cast, polyester or stainless steel enclosures
- Approved for NEC Class I Division 2, Groups B, C and D or Class I Zone 2 Group IIB plus Hydrogen type hazardous locations



*Die Cast Enclosure with One Pushbutton — Aluminum Jumbo Mushroom Red-Engraved EMER. STOP
Catalog Number 10250T7007*



*Polyester Enclosure with Two Pushbuttons — Flush Green and Extended Red
Catalog Number 10250T7023P*



*Stainless Steel Enclosure with One Red Pilot and Two Pushbuttons — Flush Green and Extended Red
Catalog Number 10250T7033S*

Table 47-20. Product Selection — Complete 10250T Assembled Stations — UL (NEMA) 4, 4X, 12, 13; NEC Class I Division 2, Groups B, C and D

Operator	Contact Symbol	Button Type/Color	Legend Marking	Die Cast Enclosure		Polyester Molded Enclosure		Stainless Steel Enclosure	
				Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
One Pushbutton		Flush/Green	START	10250T7003	146.	10250T7003P	146.	10250T7003S	213.
		Extended/Red	STOP	10250T7005	150.	10250T7005P	150.	10250T7005S	217.
		Alum. Jumbo Mushroom/Red	EMER. STOP (Engraved Button)	10250T7007	177.	10250T7007P	177.	10250T7007S	244.
		Flush/Black	No Legend	10250T7009	144.	10250T7009P	144.	10250T7009S	211.
Two Pushbuttons		Flush/Green	START	10250T7023	229.	10250T7023P	229.	10250T7023S	297.
		Extended/Red	STOP						
		Flush/Black	No Legend	10250T7025	225.	10250T7025P	225.	10250T7025S	292.
One Pilot Light Two Pushbuttons		120V AC Red	No Legend	10250T7033	317.	10250T7033P	317.	10250T7033S	424.
		Flush/Green	START						
		Extended/Red	STOP						
3-Position Selector Switch		120V AC Red	No Legend	10250T7035	313.	10250T7035P	313.	10250T7035S	420.
		Flush/Black							
		Flush/Black							
One Pushbutton Maintained		Maintained Knob/Black	HAND/OFF/AUTO	10250T7011	204.	10250T7011P	202.	10250T7011S	271.
		Maintained Knob/Black	No Legend	10250T7013	202.	10250T7013P	204.	10250T7013S	271.
		Push-Pull w/Jumbo Mushroom/Red	EMER. STOP (Engraved Button)	10250T7019	194.	10250T7019P	194.	10250T7019S	260.



UL773 C22.2-177
E59121 LR38068

Request Energy Controls
Specifier Guide
for more
information

5 Year
Warranty

K4500 Series

Locking-Type Mounting, Thermal Type

Easy to install, just plug in and twist. This series is equipped with standard 3-prong NEMA locking-type plug connections. Incorporates K4000 style thermal switch for reliable long life performance.

Size - 3-3/4" (9.5 cm) high, 3" (7.6 cm.) diameter.
Shipping Weight - 3/4 lb. (.34 kg)

Model Number	Watts Tungsten	Ballast	AMPS Tungsten	Ballast	Volts
K4521	1800	1000 VA	15	8.3 VA	120
K4524**	3100	1700 VA	15	8.3 VA	208
K4522	3600	2000 VA	15	8.3 VA	240
K4533**	4100	2300 VA	15	8.3 VA	277
K4535**	7200	4000 VA	15	8.3 VA	480

** Not CSA certified.

ACCESSORIES FOR LOCKING-TYPE CONTROLS

Pole Bracket Adapter.

Model K122 - 105 to 480 volts;
for use with K1200, K4500
or LC4500 Series locking-type
controls. K121 - receptacle only.

Shorting Cap

Model K4500 - 105 to 480
volts; replaces locking-
type photo control in
complete circuit



UL773



E59121

C22.2-55



LR38068

5 Year
Warranty

K1100, K1200 Series

Relay Type Photo Controls With Adjustable Stem or Locking-Type Mounting

This series features "instant ON/OFF switching" in two mounting types. Series K1100- Equipped with an adjustable stem for mounting at almost any angle up to 80 degrees. Models equipped with three 6" color coded leads.

Series K1200- Easy to install using NEMA twist and lock type plug connection. Models are equipped with 2400 volt open type spark gap arresor and standard 3-prong connector.

Size - K1100 Series- 5-3/4" (14.6 cm.) high, 3" (7.6 cm.) diameter, 1/2"-14 NPT stem; K1200 Series- 3-3/4" (9.5 cm.) high, 3" (7.6 cm.) diameter.

Activation - 1 FC "ON"; 3 - 10 FC "OFF".

Shipping Weight - 3/4 lb. (.34 kg).



Integral Housing and Lens Solid Brass Terminals

3 Year
Warranty



UL773 C22.2-55



E59121



LR38068

Request Energy Controls
Specifier Guide
for more
information.

LC4500 Series

Low Cost Locking-Type, Thermal Type

The LC4500 Series provides low cost reliable control for street lighting and other applications requiring a NEMA twist and lock type plug connection. Models LC4523 and LC4536 provide for control of dual (208 to 277 volt) loads and multi-volt (120 to 277 volt) loads respectively. An integral housing and lens, with UV protection, keeps moisture out and ensures long life. Models are backed by a three year warranty

Activation - .5 FC minimum "ON"; 15 FC maximum "OFF"

Size - 2-3/4" (7.0 cm) high, 3" (7.6 cm.) diameter.

Color - Translucent with color coded band for voltage identification.

Shipping Weight - 2 lb. (.09 kg).

Model Number	Watts Tungsten	Ballast	Volts
LC4521C	1800	1000 VA	120
LC4523	1700-2700	1700-2700 VA	208-277
LC4535**	1000	4000 VA	480
LC4536C	1000-2300	1000-2300 VA	120-277
LC4521LA	1000	1000 VA	120
LC4523LA	1700-2300	1700-2300 VA	208-277
LC4535LA**	1000	4000 VA	480
LC4536LAC	1000-2300	1000-2300 VA	120-277

LA Models equipped with 2400 volt open type spark gap arresor

** Not CSA certified

UL773A



E42722

C22.2-55



LR38068

5 Year
Warranty



Model Number	Watts Tungsten	Ballast	Volts
K1121	1800	1800	105-130
K1122	1800	1800	210-240
K1221	1800	1800 VA	105-130
K1222	1800	1800 VA	210-240












Loadcenter Options and Accessories (Continued)

3

GBK14

BRGBK39512

Table 3-92. Ground Bar Kits

Description (See Legend)	Length Inches (mm)	Ordering Quantity *	Catalog Number	Price U.S. \$ Each
	2.54 (64.5)	1	GBK5 †	11.70
	3.59 (91.2)	1	GBK520 †	14.40
	4.29 (109.0)	1	GBK10 ‡	13.10
	5.34 (135.6)	1	GBK1020 ‡	16.40
	4.61 (117.1)	1	GBK13 †	14.30
	5.69 (144.6)	1	GBK14 †	15.50
	6.74 (171.2)	1	GBK1420 †	19.00
	8.14 (206.8)	1	GBK21 ‡	20.70
	9.19 (233.4)	1	GBK2120 ‡	22.00
	5.78 (146.8)	1	BRGBK39512 ‡	15.70
	1.84 (46.7)	1	GB4NM ‡	9.75

- † Must be purchased in multiples of ordering quantities indicated.
 ‡ Distance between mounting holes is 1-3/4 inches (44.5 mm).
 † For 1- and 3-phase 400 and 600 ampere applications.
 ‡ Distance between mounting holes is 2-11/32 inches (59.5 mm).
 † For non-metallic enclosures. Snaps into molded base.

Ground Bar Legend

- (3) #14 - #10 Cu/Al or (1) #14 - #4 Cu/Al
 ■ (1) #6 - 2/0 Cu/Al
 □ (1) #14 - #6 Cu/Al or (2) #14 - #12 Cu/Al
 ▨ (1) 1/8 - 14 or (3) #10 - 12 Cu/Al
 ○ (1) #14 - 1/0 Cu/Al or (3) #14 - #10 Cu/Al
 ○ (1) #6 - 14 Cu/Al or (2) #1/0 - 14 Cu/Al
 ● Mounting Hole

For item 3

4/10

Technical Data and Specifications

Residential/Commercial/New York City Loadcenters, Unit Enclosures — Box Sizes

Note: Box sizes do not include covers/fronfs.

Table 3-107. Residential Loadcenters — NEMA Type 1 Indoor

Box Size	Dimensions in inches			Dimensions in mm		
	Height	Width	Depth	Height	Width	Depth
A1	15	11-1/4	3-3/4	381.0	285.8	95.3
B1	18-3/4	14-5/16	3-7/8	425.5	363.5	98.4
B2	18-3/4	14-5/16	3-7/8	476.3	363.5	98.4
C1	21	14-5/16	3-7/8	533.4	363.5	98.4
C2	23	14-5/16	3-7/8	584.2	363.5	98.4
C4	27	14-5/16	3-7/8	685.8	363.5	98.4
O1	29-1/8	14-5/16	3-7/8	739.8	363.5	98.4
G1	34-1/8	14-5/16	3-7/8	866.8	363.5	98.4
L1	39	14-5/16	3-7/8	990.6	363.5	98.4
L2	45	14-5/16	3-7/8	1143.0	363.5	98.4
2	8-5/8	5	3-1/2	219.1	127.0	88.9
3	9-7/16	4-1/2	3	239.7	114.3	76.2
4	13	11	3-9/16	330.2	279.4	90.5
5	9-7/16	4-1/2	3	239.7	114.3	76.2
6	12	6-7/8	4-1/2	304.8	174.6	114.3
7	13	11	3-9/16	330.2	279.4	90.5
9	14-1/2	6-1/2	3-1/2	368.3	165.1	88.9

Table 3-108. Residential Loadcenters — NEMA Type 3R Outdoor

Box Size	Dimensions in inches			Dimensions in mm		
	Height	Width	Depth	Height	Width	Depth
B1R	18-3/4	14-5/16	5-3/16	425.5	363.5	131.8
B2R	18-3/4	14-5/16	5-3/16	476.3	363.5	131.8
C3R	25	14-5/16	5-3/16	635.0	363.5	131.8
D1R	29-1/8	14-5/16	5-3/16	739.8	363.5	131.8
G1R	34-1/8	14-5/16	5-3/16	866.8	363.5	131.8
L1R	39	14-5/16	5-3/16	990.6	363.5	131.8
L2R	45	14-5/16	5-3/16	1143.0	363.5	131.8
2R	8-5/8	5	3-1/2	219.1	127.0	88.9
3R	9-7/16	4-1/2	3	239.7	114.3	76.2
4R	13	11	3-9/16	330.2	279.4	90.5
5R	9-7/16	4-1/2	3	239.7	114.3	76.2
6R	11-3/4	6-1/2	4-1/2	298.5	165.1	114.3
7R	13	11	3-9/16	330.2	279.4	90.5
8R	27	10-1/2	4-3/4	685.8	266.7	120.7
9R	14-1/4	6-1/2	4	362.0	165.1	101.6
C1R	21	14-5/16	5-3/16	533.4	363.5	131.8

Table 3-109. Commercial Loadcenters — NEMA Type 1 Indoor

Box Size	Dimensions in inches			Dimensions in mm		
	Height	Width	Depth	Height	Width	Depth
19	44	16-5/32	6-1/4	1117.6	410.4	158.8
20	44	16-5/32	6-1/4	1117.6	410.4	158.8
22	54	16-7/32	6-5/16	1371.6	412.0	160.3
24	66-1/2	16-7/32	6-5/16	1689.1	412.0	160.3

Table 3-110. Commercial Loadcenters — NEMA Type 3R Outdoor

Box Size	Dimensions in inches			Dimensions in mm		
	Height	Width	Depth	Height	Width	Depth
42	38	16-5/16	8-3/8	965.2	414.3	161.9
43	44	16-5/16	8-3/8	1117.6	414.3	161.9
46	54	16-5/16	8-3/8	1371.6	414.3	161.9
47	66-9/16	16-5/16	8-3/8	1690.7	414.3	161.9

Table 3-111. New York City Loadcenters — NEMA Type 1 Indoor

Box Size	Dimensions in inches			Dimensions in mm		
	Height	Width	Depth	Height	Width	Depth
A	38	18-1/8	5	965.2	460.4	127.0
B	44	18-1/8	5	1117.6	460.4	127.0
C	66-1/2	18-1/8	6-1/4	1689.1	460.4	158.8

Table 3-112. Types ECB and ECC Unit Enclosures — NEMA Type 1 Indoor

Dimensions in inches			Dimensions in mm		
Height	Width	Depth	Height	Width	Depth
23-1/4	6-7/8	4-1/2	590.6	225.4	114.3

Table 3-113. Types ECB and ECC Unit Enclosures — NEMA Type 3R Outdoor

Dimensions in inches			Dimensions in mm		
Height	Width	Depth	Height	Width	Depth
23-11/16	9-5/16	6-7/16	601.7	236.5	138.1

For item 3

8/10

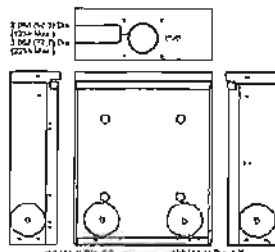
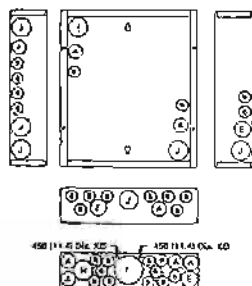
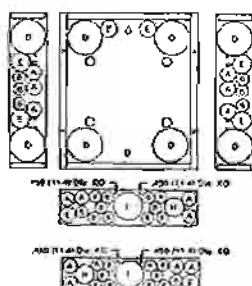
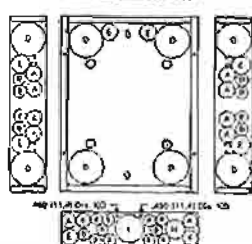
January 2003
Vol. 1, Ref. No. 100831

Technical Data and Specifications

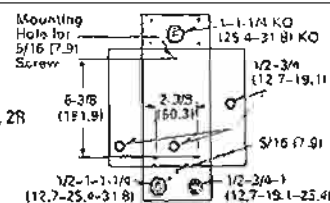
Residential Loadcenter Knockouts — Dimensions in Inches (mm)

Knockouts for Box Sizes A1, B1, B2, C1, C2, C4,
D1, G1, L1, L2, B1R, B2R, C1R, C3R, D1R, G1R,
L1R, L2R

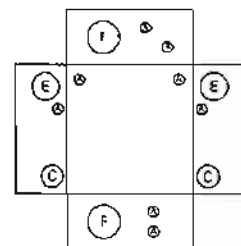
Code	Diameter in Inches				Diameter in mm			
A	1/2	3/4	—	—	12.7	19.1	—	—
B	1/2	—	—	—	12.7	—	—	—
C	1/2	1-1/4	1-1/2	2	12.7	31.8	38.1	50.8
D	1-1/4	1-1/2	2	2-1/2	31.8	38.1	50.8	63.5
E	1/2	3/4	1	—	12.7	19.1	25.4	—
F	1/2	3/4	1	1-1/2	12.7	19.1	25.4	38.1
G	1-1/4	1-1/2	2	—	31.8	38.1	50.8	—
H	1/2	3/4	1	1-1/4	12.7	19.1	25.4	31.8
I	1	1-1/4	1-1/2	2	25.4	31.8	38.1	50.8
J	1	1-1/4	1-1/2	—	25.4	31.8	38.1	—

Outdoor Boxes
B1R, B2R, C1R,
C3R, D1R, G1R,
L1R, L2RIndoor Boxes
A1Indoor Boxes
B1, B2Indoor Boxes
C1, C2, C4, D1,
G1, L1, L2Knockouts for Box Sizes 3, 4, 5, 6,
7, 9, 2R, 3R, 4R, 5R, 6R, 7R, 8R, 9R

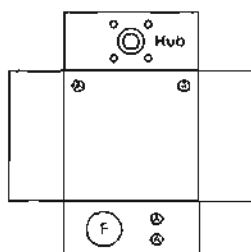
Code	Diameter in Inches				Diameter in mm			
A	1/2	—	—	—	12.7	—	—	—
B	1/2	3/4	—	—	12.7	19.1	—	—
C	1/2	3/4	1	—	12.7	19.1	25.4	—
D	1/2	3/4	1	1-1/4	12.7	19.1	25.4	31.8
E	3/4	1	1-1/4	—	19.1	25.4	31.8	—
F	3/4	1	1-1/4	1-1/2	19.1	25.4	31.8	38.1
G	1	1-1/4	1-1/2	—	25.4	31.8	38.1	—
H	1	1-1/4	1-1/2	2	25.4	31.8	38.1	50.8
I	1-1/4	1-1/2	2	—	31.8	38.1	50.8	—



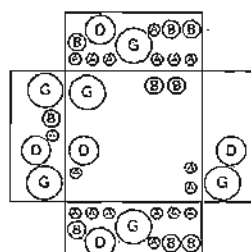
Box 3



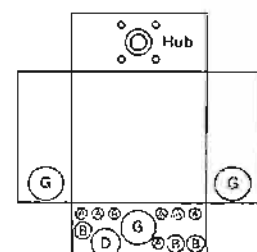
Box 3R



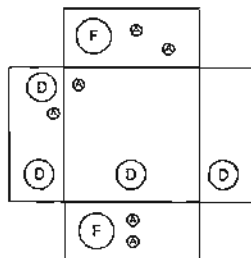
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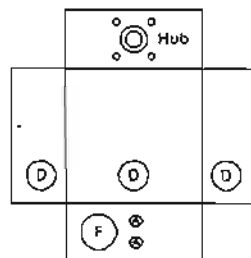
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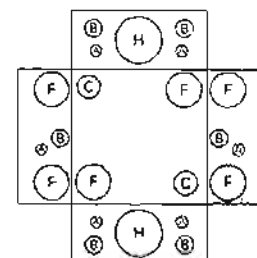
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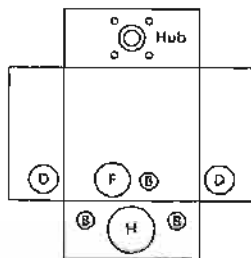
Box 5R



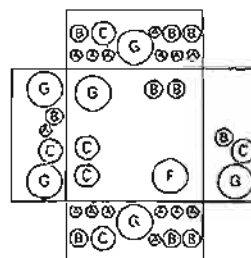
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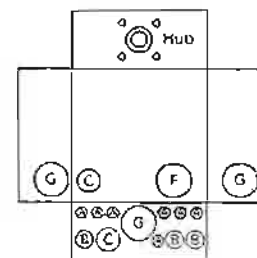
Box 6R



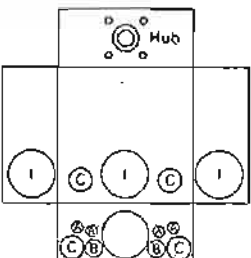
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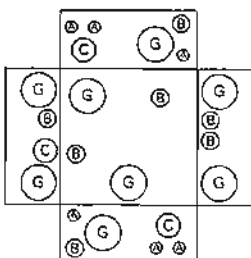
Box 7R



Box 8R



Box 9



Box 9R

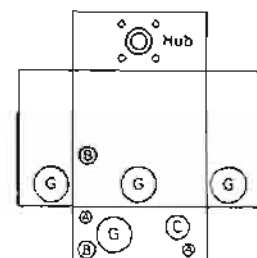


Figure 3-23. Residential NEMA Type 1 Indoor and NEMA Type 3R Outdoor Enclosures

SPECIFICATION CRITERIA AND COMPARISON DATA

POLES

Lighting Poles: SC 250 CR2 CBE BBG PDA QTY 173 TYPE I SKYCAST
Lighting Poles: SC 250 CR2 CBE BBG P QTY 26 TYPE II SKYCAST

SPEC REQUIREMENTS

SUBMITTAL DATA

SPLN CONCRETE

COMPLIED

WIND FORCE 155MPH

GUSTS 185MPH

COMPLIED

POLE HEIGHT FROM GROUND LEVEL
25FT

COMPLIED

ARM TYPE I 4FT & 175 WATT MH
LUMINAIRE

COMPLIED

ARM TYPE II 8FT & 250 WATT MH
LUMINAIRE

COMPLIED

POLE DESIGN SIMILAR TO
KNG LUMINAIRE ALL DIMENSIONS

COMPLIED

OTHER REQUIREMENT OF
DIV 16 FOR EXTERIOR LIGHTING
FIXTURES & BRACKETS

COMPLIED

NEC & NEMA REQUIREMENTS

COMPLIED

FIXTURES

Pendant Luminaries: DRG #CP0725-A QTY 173 TYPE I CYCLONE
DRG #CP0726-A QTY 26 TYPE II CYCLONE

DRG #CP0724 Vertical Height: 27-1/16"
Globe Dia: 13-11/16"

CORROSION PROTECTION REQUIRMENTS COMPLIED

ALUMINUM-REFLECTOR SURFACES
ALZAK PROCESS

COMPLIED

PLASTIC SHIELDING MIN 0.125

COMPLIED

IES CLASSIFIED TYPE III

COMPLIED

LINE VOLTAGE 240 VOLTS
SINGLE PHASE, 60HZ, CWA, MH, HID BALLASTS

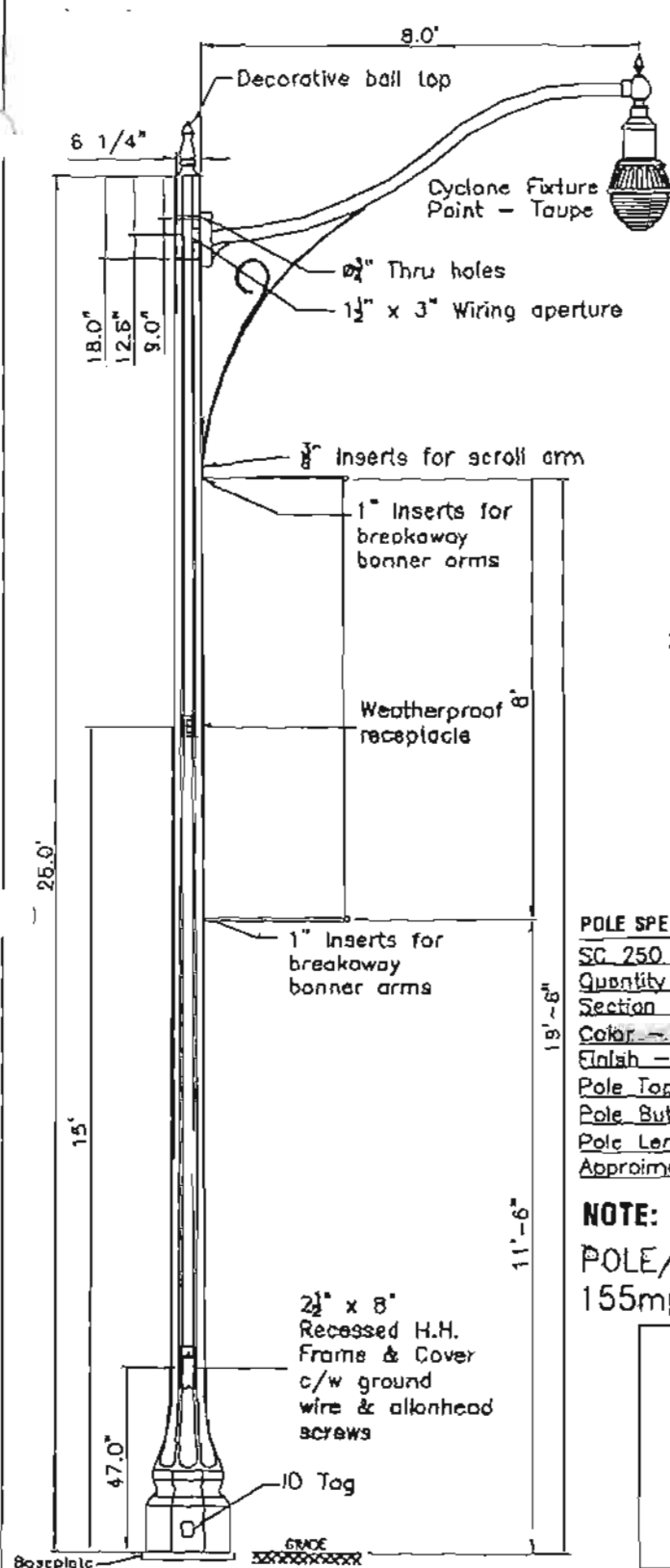
LAMPS

240 VOLT SINGLE PHASE
60 HZ 250 WATTS 23000 - LUMENS & 175 WATTS

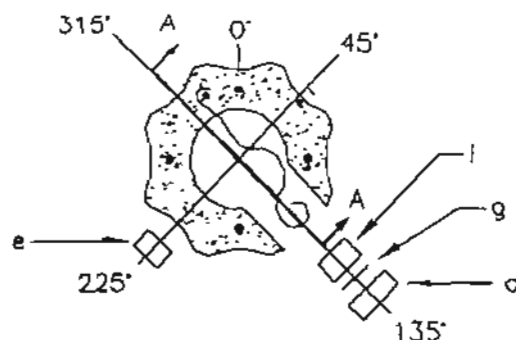
13000 LUMENS

COMPLIED

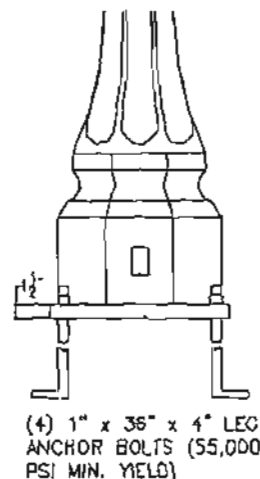
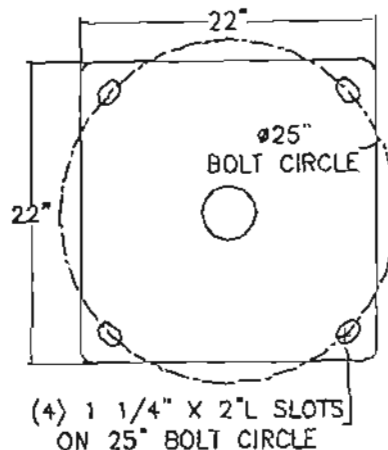
M250 CU 6/CS 1/SKU & M175 CU 6/CS 1/SKU Quantities include 10% as spares.



CROSS-SECTION @ FRAME



BASEPLATE DETAIL



POLE SPECIFICATIONS:

SC 250 CR2 GGF BBG P

Quantity - 26

Section - Fluted Octagonal

Color - Guam Grey c/w Capseal X75 (as per sample)

Finish - Etched

Pole Top - 6 1/4" FL/FL

Pole Butt - 21.0" FL/FL

Pole Length - 25.0'

Approximate Weight - 2130lbs

NOTE:

POLE/ARMS/FIXTURE TO WITHSTAND
155mph WINDS WITH 180mph GUSTS

APPROVED
FOR PRODUCTION

ISSUED: _____ INITIALS: _____



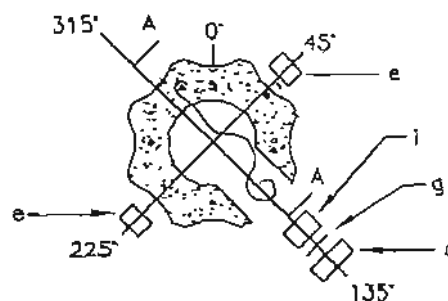
299 Brock Road South
Guelph, Ontario
Canada
N1H 6H9
Tel: (519) 763-3210
Fax: (519) 763-6565
1-888-731-POLE (7653)

POLE TYPE: 25.0' ROSEMOUNT II

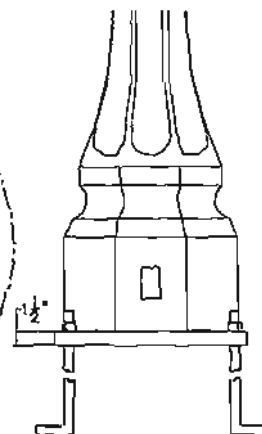
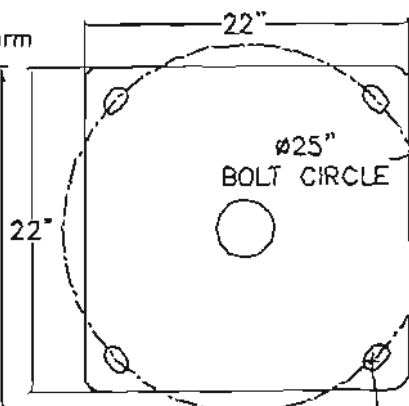
AVON INTERNATIONAL - Type II
PROJECT: Tumon Project Phase II in Guam

DRAWN BY: OJP	CHECKED BY: UK	JOB#: NA	DATE: Oct 17/02
SPEC.: QUAM	REV#: 000	DWG#: SC 078 CR2 CBE BBG P	

CROSS-SECTION @ FRAME



BASEPLATE DETAIL



(4) 1 1/4" X 2" L SLOTS
ON 25" BOLT CIRCLE

(4) 1" X 36" X 4" LEG
ANCHOR BOLTS (55,000
PSI MIN. YIELD)

POLE SPECIFICATIONS:

SC 250 CR2 GGE BBG PDA

Quantity - 173

Section - Fluted Octagonal

Color = Guam Grey c/w Capseal X75 (as per sample)

Finish - Etched

Pole Top - 6 1/4" FL/FL

Pole Butt - 21.0" FL/FL

Pole Length - 25.0'

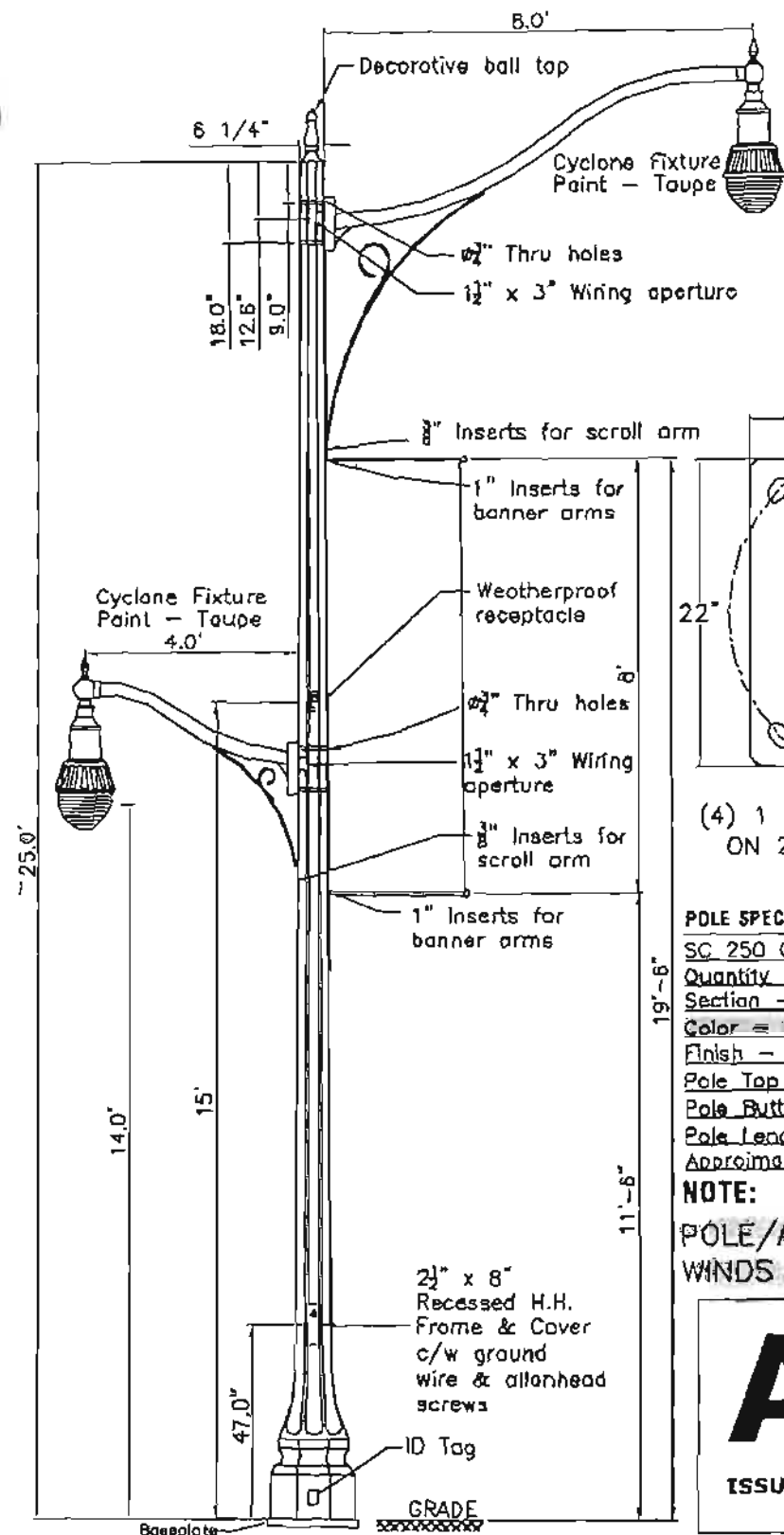
Approximate Weight - 21,300 lbs

NOTE:

POLE/ARMS TO WITHSTAND 155mph
WINDS WITH 180mph GUSTS

APPROVED
FOR PRODUCTION

ISSUED: _____ INITIALS: _____

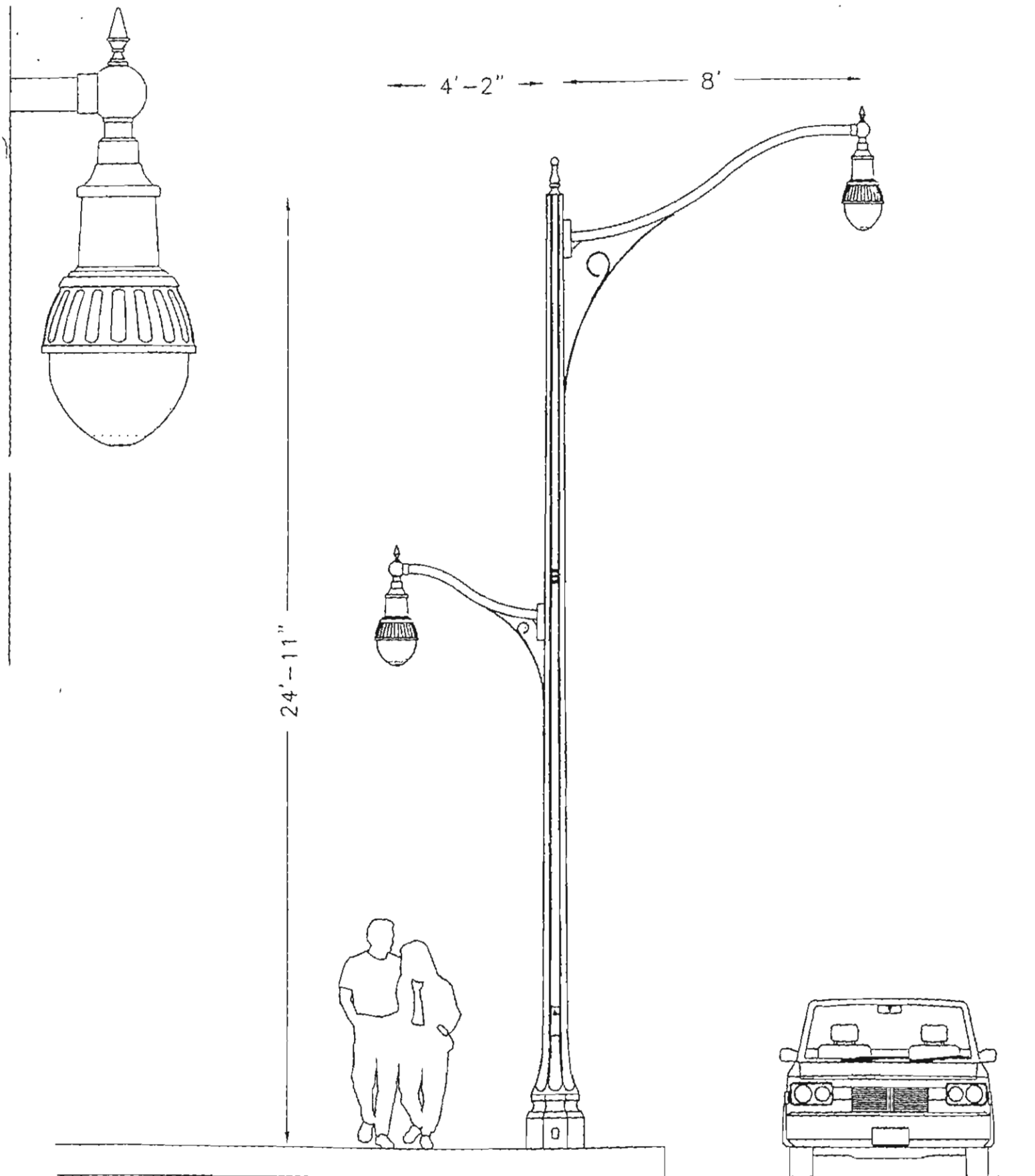


299 Brock Road South
Guelph, Ontario
Canada
N1H 6H9
Tel: (519) 763-3210
Fax: (519) 763-8655
1-888-731-POLE (7653)

POLE TYPE: 25.0' CLASS C ROSEMOUNT II

AVON INTERNATIONAL - Type I
PROJECT: Tumon Project Phase II in Guam

DRAWN BY: DJP	CHECKED BY: UK	JOB#: NA	DATE: Oct. 17/02
SPEC: GUAM DOUBLE	REV#: 000	OWG#: SC 078 CR2 CBE BBG PDA	



kpc@guamcell.net

From: "Ramon S. Amado" <alc@guamcell.net>
To: "KINDEN GUAM" <kpc@guamcell.net>
Sent: Friday, January 24, 2003 10:08 AM
Attach: Guam6.JPG; Guam7.JPG
Subject: PLUMBIRIZER PHOTO

Attn: CHRIS DALMACIO -

CHRIS -

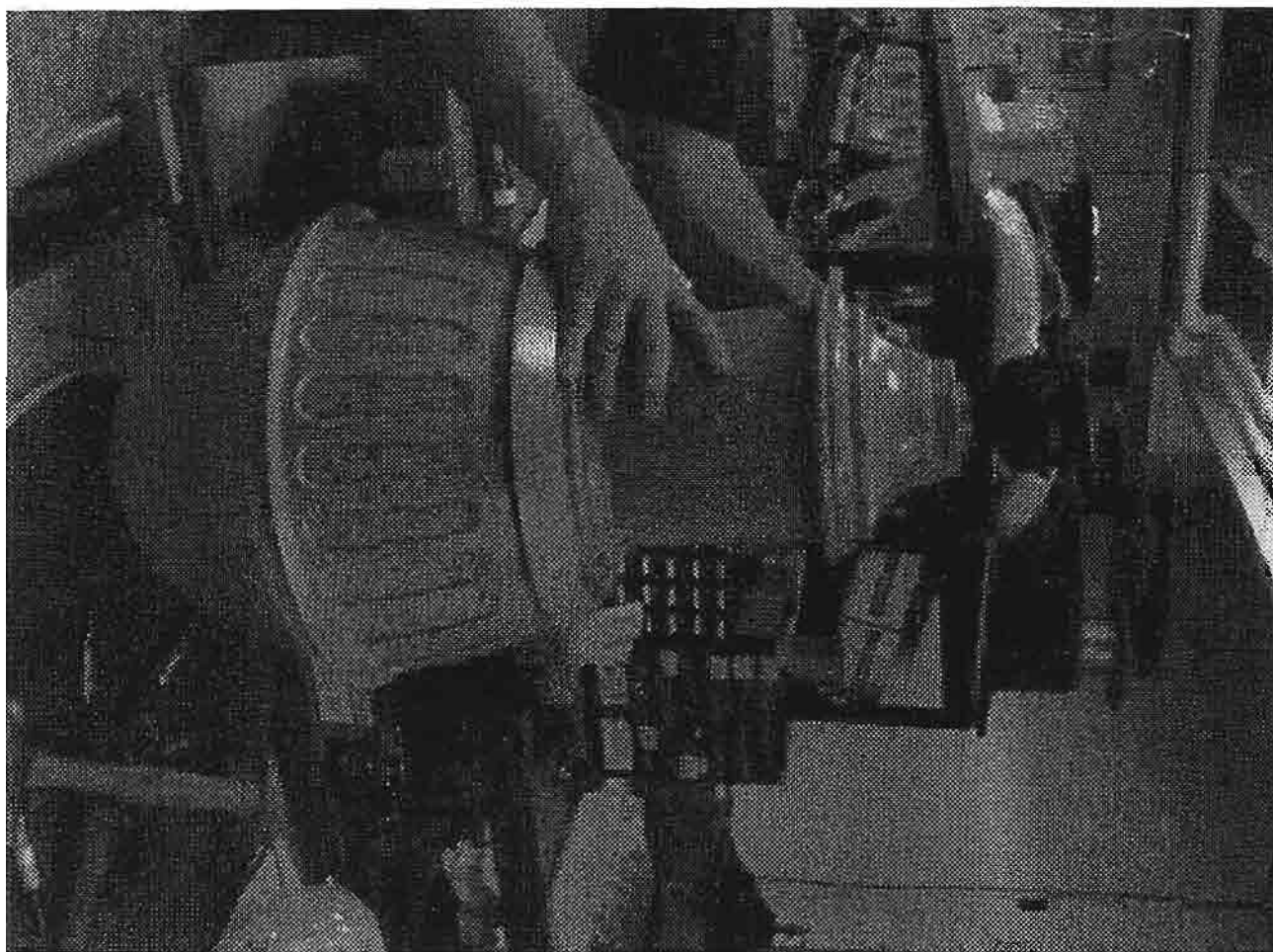
Forwarded herewith are photo's received from CYCLONE LIGHTING showing compatibility with existing plumbirizer.

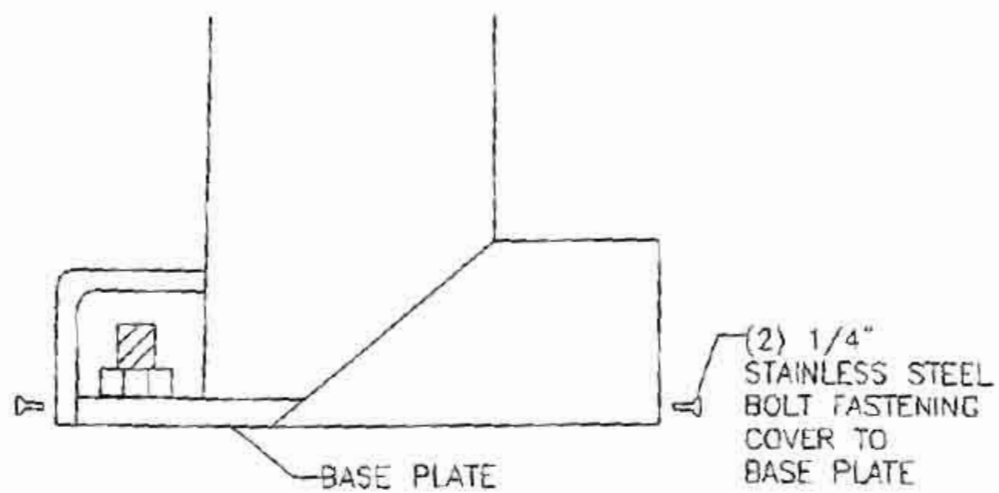
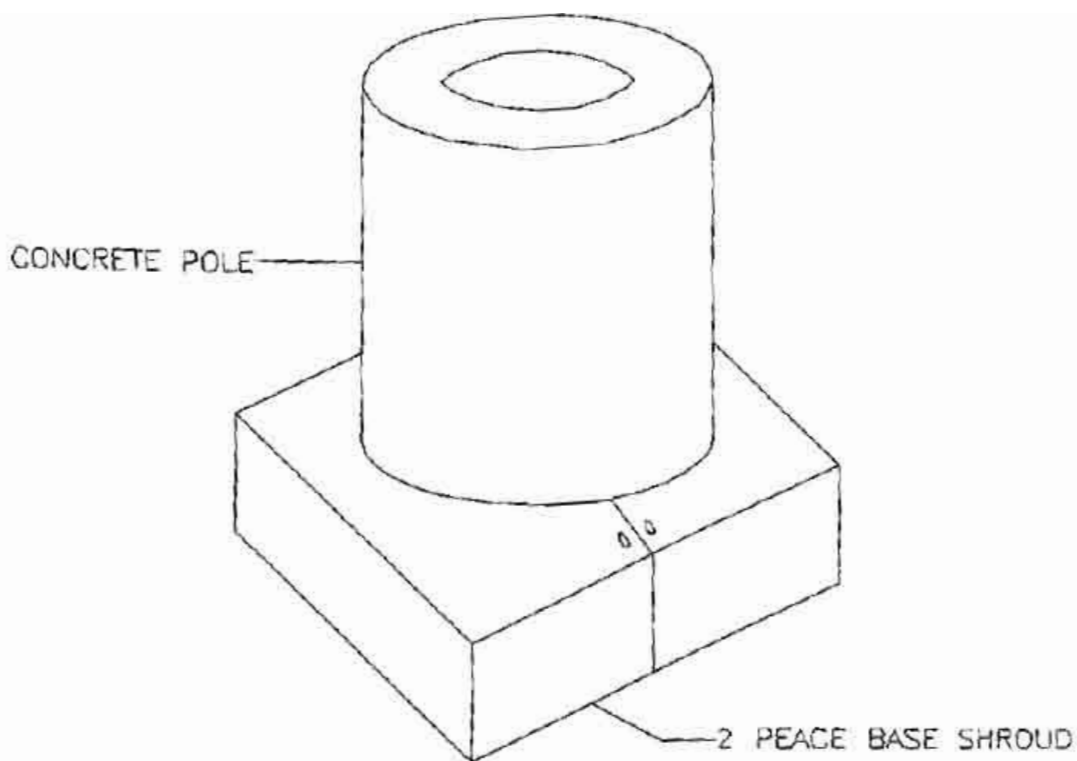
Regards,

RAMON A.



1/27/03





299 Brock Road South
Guelph, Ontario
Canada
N1H 6H9
Tel: (519) 763-3210
Fax: (519) 763-8655
1-888-731-POLE (7653)

DRAWING NAME: BASE SHROUD

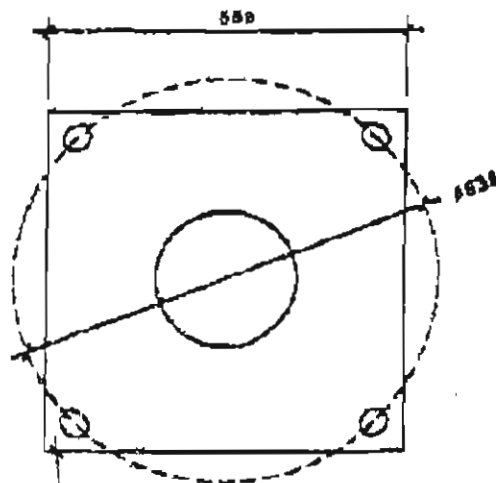
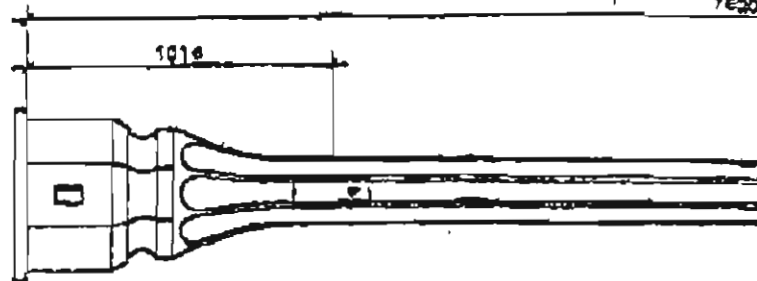
FILE PATH: /Poles/Specs/Sky Cast/Guom

SCALE: NTS Dimensions in (mm) unless stated otherwise

DRAWN BY: [signature]

3/7

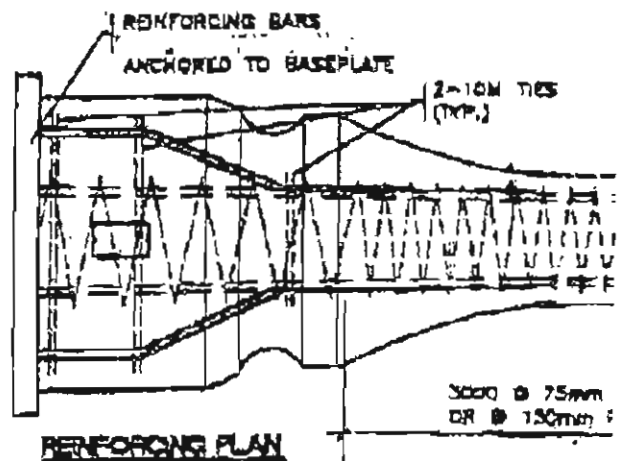
7E20



BASEPLATE IS 52mm THICK TYPE 46W

ANCHOR BOLTS #25.4" TYPE 307 LENGTH 800mm

(ANCHOR BOLTS: 1" ϕ X 36" L, ASTM A-307)



REINFORCING PLAN

DESIGN

REINFORCEMENT

PRESTRESS STRAND NUMBER & DIAMETER (mm)

4-13



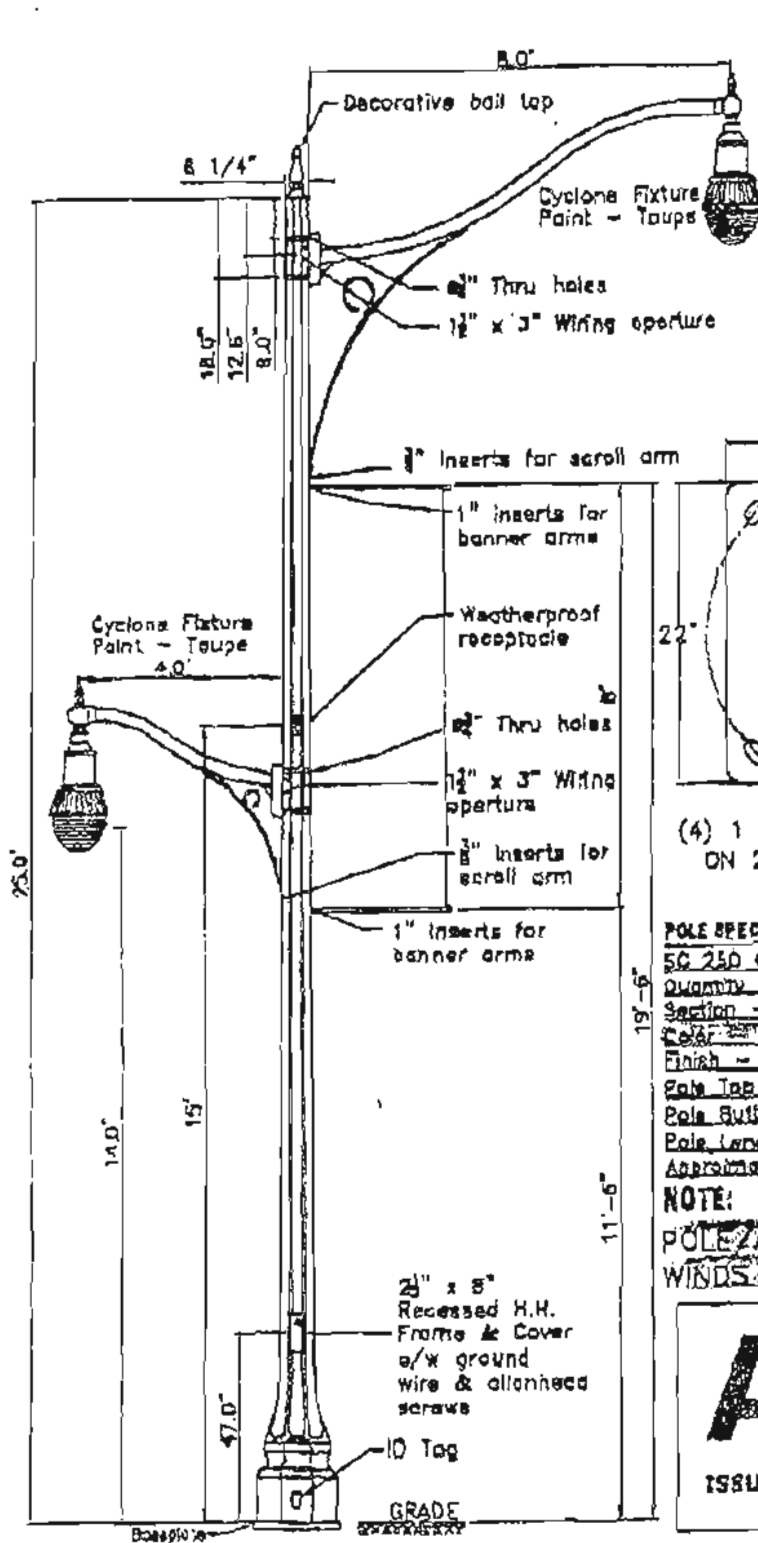
The Walter Fedy Partnership

300 DELICENT AVE. W. ST. LOUIS, MO 63103
PHONE (314) 575-2800 FAX (314) 575-3400

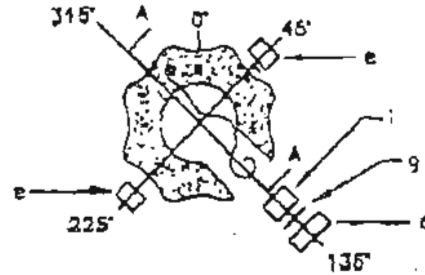
PRESTRESSED CONCRETE POLE
DESIGN FOR SKYCAST INC.

7.6m - ROSEMOUNT I POLE PROJECT TUMON PHASE I GUAM

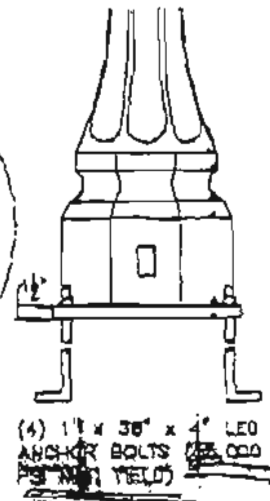
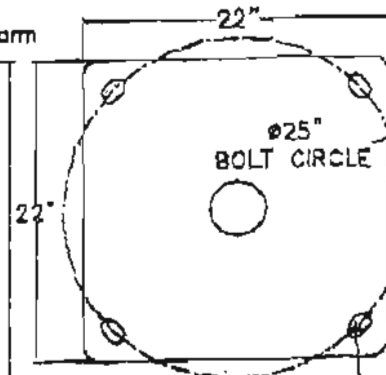
NOV 16 '02 01:03PM ALC



CROSS-SECTION @ FRAME



BASEPLATE DETAIL



(4) 1 1/4" X 2" L SLOTS
ON 25" BOLT CIRCLE

(4) 1 1/4" X 3/8" X 4" LEO
ANCHOR BOLTS (AS PER
YIELD)

POLE SPECIFICATIONS:

5C 250 CR2 GGF B90 PDA
Quantity - 173
Section - Fluted Octagonal
Color - Medium Gray w/ Crossed X75 (as per sample)
Finish - Etched
Pole Top - 6 1/4" B/P
Pole Butt - 21.0" B/P
Pole Length - 25.0'
Approximate Weight - 2130lbs

NOTE:

POLE ARMS TO WITHSTAND 155mph?
WINDS WITH 180mph GUSTS?

APPROVED
FOR PRODUCTION

ISSUED: _____ INITIALS: _____



238 Brock Road South
Oshawa, Ontario
Canada
M1H 5H9
Tel: (519) 763-2210
Fax: (519) 763-8655
1-888-721-7655 (7655)

POLE TYPE: 25.0' CLASS D ROSEMOUNT II

AVON INTERNATIONAL - Type I
PROJECT: Tumon Project Phase II in Guam

DRAWN BY: DJP	CHECKED BY: UK	DATE: Oct. 17/02
SPEC: GUAM DOUBLE	REV: 1	DWG#: SC 076 CR2 C82 S80 PDA

6/7

A307-00 Standard Specification for Carbon Steel Bolts and Studs, 60 000 PSI Tensile Strength

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1. Scope

1.1 This specification covers the chemical and mechanical requirements of three grades of carbon steel bolts and studs in sizes 1/4 in. (6.35 mm) through 4 in. (104 mm). The fasteners are designated by "Grade" denoting tensile strength and intended use, as follows:

Grade Description Grade A Bolts and studs having a minimum tensile strength of 60 ksi (414 MPa) and intended for general applications, Grade B Bolts and studs having a tensile strength of 60 to 100 ksi (414 to 690 MPa) and intended for flanged joints in piping systems with cast iron flanges, and Grade C Nonheaded anchor bolts, either bent or straight, having properties conforming to Specification A 36 (tensile strength of 58 to 80 ksi (400 to 550 MPa)) and intended for structural anchorage purposes.

1.1.1 The term studs includes stud stock, sometimes referred to as threaded rod

1.2 This specification does not cover requirements for machine screws, thread cutting/forming screws, mechanical expansion anchors or similar externally threaded fasteners.

1.3 Suitable nuts are covered in Specification A563. Unless otherwise specified, the grade and style of nut for each grade of fastener, of all surface finishes, shall be as follows:

Fastener Grade and Size Nut Grade and Style A A, C, 1/4 to 1 1/2 in. A, hex A, C, over 1 1/2 to 4 in. A, heavy hex B, 1/4 to 4 in. A, heavy hex A Nuts of other grades and styles having specified proof load stresses (Specification A 563, Table 3) greater than the specified grade and style of nut are also suitable.

1.4 The values stated in inch-pound units are to be regarded as the standard. The values given in parentheses are for information only.

1.5 Supplementary Requirement S1 of an optional nature is provided, which describes additional restrictions to be applied when bolts are to be welded. It shall apply only when specified in the inquiry, order, and contract.

2. Referenced Documents

A36/A36M Specification for Carbon Structural Steel

A370 Test Methods and Definitions for Mechanical Testing of Steel Products

A563 Specification for Carbon and Alloy Steel Nuts

A706/A706M Specification for Low-Alloy Steel Deformed Bars for Concrete Reinforcement

A751 Test Methods, Practices, and Terminology for Chemical Analysis of Steel Products

B695 Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel

7/7

D3951 Practice for Commercial Packaging
F606 Test Methods for Determining the Mechanical Properties of Externally and Internally Threaded Fasteners, Washers, and Rivets
F1470 Guide for Fastener Sampling for Specified Mechanical Properties and Performance Inspection
ANSI/ASME Standards:
A153 Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
B1.1 Unified Screw Threads
B18.2.1 Square and Hex Bolts and Screws B 18.24.1
^REFDOCTITLE: Part Identifying Number (PIN) Code System
Military Standard:
MIL-STD 105 Single Sampling Plan for Normal Inspection

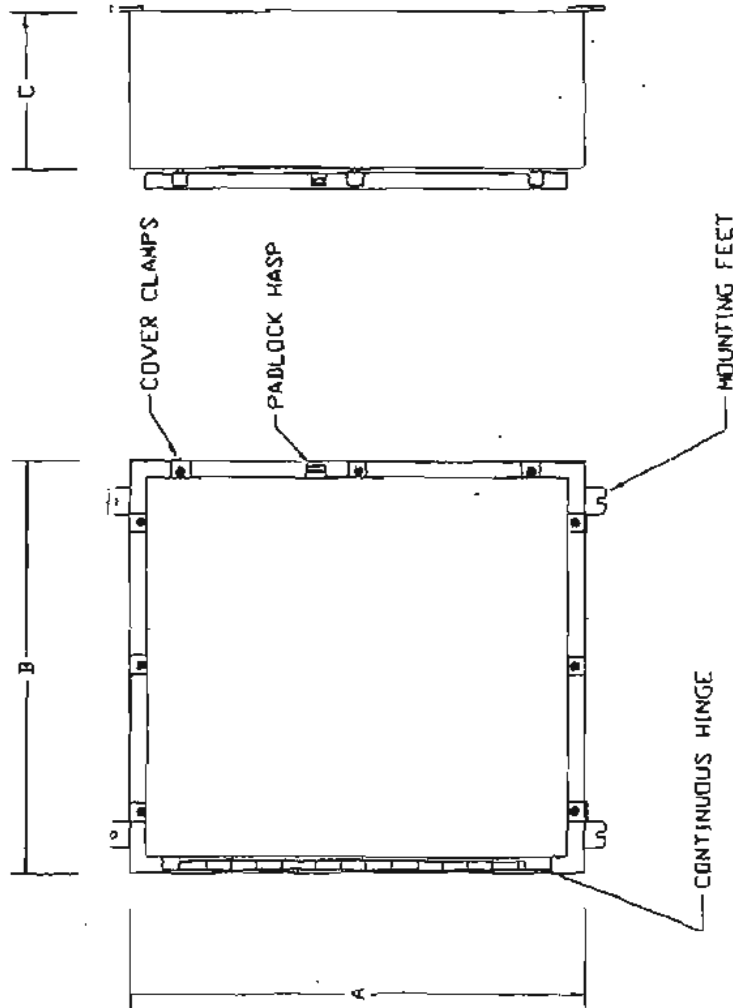
Index Terms

bolts; carbon steel; steel; studs

TYPE 4X SINGLE DOOR WALL MOUNT ENCLOSURE

ITEM 3A

COVER TO HAVE COVER CLAMPS



MOUNTING PANEL
YES Y 12 GA GALV.
NO _____

DIM: 'A' 13 x 'B' 16 x 'C' 8

MATERIAL:

STEEL

STAINLESS STEEL ☒

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P.O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671) 652-8767/632-7471

TYPE 4X HINGE COVER

GAYLORD MFG. CO.

1730 E. WHITMORE AVE.

P.O. BOX 547

CERES, CA. 95307

PH. (209) 538-3313

FAX (209) 538-8638

DESIGN BY	DWG. NO.	SCALE
KH		NONE
CHKD BY	N4XHC	DATE
WL		

NOTES: ENCLOSURE MADE FROM 14 GA. 304 #4 STAINLESS STEEL
ANSI 61 GREY POLYURETHANE
SINGLE DOOR UP TO 42" WIDE
ENCLOSURE BUILT TO UL SPECS.

8/1/10

2 Circuits 20 Amperes

4, 6 and 8 Circuits 125 Amperes

2 Circuits 125 Amperes



Surface



Flush



Surface No Door



Flush With Door



Surface



Flush



Outdoor



Outdoor



Outdoor



1-Phase — Main Lug Loadcenters

Table 3-68. 1-Phase 3-Wire — 120/240V AC — Insulated/Bondable Neutral

Main Amperage Rating	Maximum Number 3-inch (25.4 mm) Spaces	Circuits	Type of Enclosure	Type of Trim	Box Size	Wiring Diagram Figure Number	Wire Size Range Cu/Al 60°C or 75°C for Main Lugs	Loadcenter Catalog Number	Price U.S. \$
70	2	4	Indoor	Surface No Door	5	1	#10 - #2	BR24L70SP-00	49.00
	2	4	Indoor	Surface No Door	5	1		BR24L70SP-01	52.00
	2	4	Outdoor	—	5R	1		BR24L70SP-02	95.50
	2	4	Indoor	Flush No Door	5	1		BR24L70FP-00	49.00
	2	4	Indoor	Flush No Door	5	1		BR24L70FP-01	52.00
125	2	4	Indoor	Surface No Door	6	1	#14 - 1/0	BR24L125SP-00	61.50
	2	4	Outdoor	—	6R	1		BR24L125SP-01	105.00
	2	4	Outdoor	—	6R	1		BR24L125SP-02	111.00
	2	4	Outdoor	—	6R	1		BR24L125SP-03	116.00
	2	4	Indoor	Flush No Door	6	1		BR24L125FP-00	61.50
	4	8	Indoor	Surface No Door	7	2	#14 - 1/0	BR48L125SP-00	75.50
	4	8	Indoor	Surface No Door	7	2		BR48L125SP-01	90.50
	4	8	Outdoor	—	7R	2		BR48L125SP-02	131.00
	4	8	Indoor	Flush No Door	7	2		BR48L125FP-00	75.50
	4	8	Indoor	Flush With Door	7	2		BR48L125FP-01	102.00
	4	8	Indoor	Flush No Door	7	2		BR48L125FP-02	90.50
	6	12	Indoor	Surface No Door	7	3	#14 - #1	BR612L125SP-00	91.50
	6	12	Indoor	Surface No Door	7	3		BR612L125SP-01	101.00
	6	12	Indoor	Surface With Door	7	3		BR612L125SP-02	103.00
	6	12	Indoor	Surface With Door	7	3		BR612L125SP-03	113.00
	6	12	Outdoor	—	7R	3		BR612L125SP-04	141.00
	6	12	Indoor	Flush No Door	7	3	#14 - #1	BR612L125FP-00	93.00
	6	12	Indoor	Flush No Door	7	3		BR612L125FP-01	103.00
	6	12	Indoor	Flush With Door	7	3		BR612L125FP-02	105.00
	6	12	Indoor	Flush With Door	7	3		BR612L125FP-03	117.00
	6	12	Outdoor	—	7R	3		BR612L125FP-04	141.00
	8	16	Indoor	Surface No Door	7	4	#14 - #1	BR816L125SP-00	116.00
	8	16	Indoor	Surface No Door	7	4		BR816L125SP-01	130.00
	8	16	Indoor	Surface With Door	7	4		BR816L125SP-02	130.00
	8	16	Indoor	Surface With Door	7	4		BR816L125SP-03	141.00
	8	16	Outdoor	—	7R	4		BR816L125SP-04	204.00
	8	16	Indoor	Flush No Door	7	4	#14 - #1	BR816L125FP-00	116.00
	8	16	Indoor	Flush No Door	7	4		BR816L125FP-01	130.00
	8	16	Indoor	Flush With Door	7	4		BR816L125FP-02	130.00
	8	16	Indoor	Flush With Door	7	4		BR816L125FP-03	149.00
	8	16	Outdoor	—	7R	4		BR816L125FP-04	141.00

① Ground bar kits priced separately.
See Page 3-52.

- For 24-circuit loadcenters use GBK5 or GBK5B Ground Bar.
- For 48, 61/2 and 91/2 circuit loadcenters use GBK10 Ground Bar.
- Ground bars mount to the left side wall of the enclosure for the 48, 61/2 and 91/2 circuit loadcenters.

② Suitable for use as service equipment when not more than two service disconnecting means are provided or when not used as a lighting and appliance panelboard (see Article 384-14 of the NEC).

③ Ground bar GBK5 is installed.

④ Raintight panels are furnished with hinged closure plates. For raintight hubs refer to Page 3-51.

⑤ For use as service entrance applications only.

⑥ Neutral/ground holes (B) #14 - 6 and

(C) #14 - 1/0 AWC Cu/Al

⑦ Neutral/ground holes (B) #14 - 8 and

(C) #14 - 2/0 AWC Cu/Al

⑧ Suitable for use as service equipment when not more than two service disconnecting means are provided or when not more than six service disconnecting means are provided and when not used as a lighting and appliance panelboard (see Article 384-14 of the NEC).

⑨ Suitable for use as service equipment when a main breaker is used or when not more than six service disconnecting means are provided and when not used as a lighting and appliance panelboard (see Article 384-14 of the NEC).

⑩ Ground bar GBK10 is installed.

⑪ CSA and UL approved.

⑫ Ground bar GBK14 is installed.

Box Size Page 3-64 through 3-68
Discount Symbol Z2-CO

January 2003
 Vol. 1, Ref. No. 100711

Circuit Breaker Product Selection

Plug-on Circuit Breakers, Types BR
10,000/22,000/42,000 Amperes
Interrupting Capacity 120V AC, 120/240V AC and 240V AC
For item 3


BR120



BR215



BR320

3

Table 3-93. Type BR Breakers, 1-Inch (25.4 mm) per Pole 120/240, 10,000, 22,000 and 42,000 AIC

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole 120/240V AC Requires One 1-Inch (25.4 mm) Space				2-Pole 120/240V AC Common Trip Requires Two 1-Inch (25.4 mm) Spaces			
		10 per Shelf Carton		5 per Shelf Carton		10 per Shelf Carton		5 per Shelf Carton	
		10 kAIC		22 kAIC		10 kAIC		22 kAIC	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
10	#14 - 4	BR110	20.20	—	—	BR210	45.75	—	—
15		BR115 ②	20.20	BRH115	44.50	BR215 ②	45.75	BRH215	92.50
20		BR120 ②	20.20	BRH120	44.50	BR220 ②	45.75	BRH220	92.50
25		BR125	20.20	BRH125	44.50	BR225 ②	45.75	BRH225	92.50
30		BR130	20.20	BRH130	44.50	BR230 ②	45.75	BRH230	92.50
35	#14 - 4	BR135	20.20	BRH135	44.50	BR235 ②	45.75	BRH235	92.50
40		BR140	20.20	BRH140	44.50	BR240 ②	45.75	BRH240 ②	92.50
45		—	—	BRH145	44.50	BR245 ②	45.75	BRH245	92.50
50		BR150	20.20	BRH150	44.50	BR250 ②	45.75	BRH250 ②	92.50
55		BR155	20.20	BRH155	44.50	BR255	45.75	BRH255	92.50
60	#4 - 1/0	BR160	20.20	BRH160	44.50	BR260	45.75	BRH260	92.50
70		BR170	43.75	BRH170	56.00	BR270	91.50	BRH270	142.00
80		—	—	—	—	BR280	132.00	BRH280	172.00
90		—	—	—	—	BR290	132.00	BRH290	178.00
100		—	—	—	—	BR2100	132.00	BRH2100	178.00
110		—	—	—	—	BR2110	274.00	BRH2110	660.00
125	#4 - 2/0	—	—	—	—	BR2125	274.00	BRH2125	660.00
150		—	—	—	—	BR2150 ②	291.00	—	—

① One pole, 1-inch (25.4 mm) per pole circuit breakers are available with high magnetic setting for switching large tungsten lamp loads.

Add suffix H to catalog number.

② Switching duty rated.

③ On the black handle breaker, add suffix "B" to the catalog number and \$4.00 to the list price to obtain a tapped molded opening for proper use with hold-down kits.

④ For use as a branch circuit breaker in 400 and 600 ampere panels only.

Note: All Type BR 1-, 2-, and 3-pole circuit breakers carry listing for HACR application.

For circuit breakers with a shunt trip, add ST suffix and obtain pricing from table on Page 3-63

R & D MARKETING

11 DEDEDO PLAZA BLDG. DEDEDO GUAM 96912

P. O. BOX 5624, AGANA, GUAM 96932

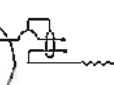
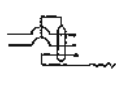
TEL/FAX NO. (671)632-8187/632-7477

(5/10)

Discount Symbol..... 22-CD

Plug-on Ground Fault Circuit Breakers, Type GFCB and GFEP 10,000/22,000 Amperes Interrupting Capacity 120V AC and 120/240V AC

Table 3-96. Type GFCB Ground Fault Circuit Breakers — 5 Milliampere —
1-Inch (25.4 mm) per Pole 120V AC or 120/240V AC, 10,000 AIC

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole 120V AC Requires One 1-Inch (25.4 mm) Space		2-Pole 120/240V AC Common Trip Requires Two 1-Inch (25.4 mm) Spaces	
		1 per Shelf Carton		1 per Shelf Carton	
		10,000 AIC		10,000 AIC	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
15	#14 - 4	GFCB115	159.	GFCB215	280.
20		GFCB120	159.	GFCB220	280.
25		GFCB125	159.	GFCB225	280.
30		GFCB130	159.	GFCB230	280.
40		GFCB140	159.	GFCB240	280.
50		—	—	GFCB250 ²	280.

¹ Available with bell alarm or auxiliary switch. See circuit breaker accessories on Page 3-62.

² For use with copper wire only.

Table 3-97. Type GFCBH Ground Fault Breakers — 5 Milliampere —
1-Inch (25.4 mm) per Pole 120V AC or 120/240V AC, 22,000 AIC



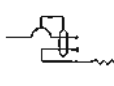
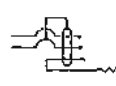
Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole 120V AC Requires One 1-Inch (25.4 mm) Space		2-Pole 120/240V AC Common Trip Requires Two 1-Inch (25.4 mm) Spaces	
		1 per Shelf Carton		1 per Shelf Carton	
		22,000 AIC		22,000 AIC	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
15	#14 - 4	GFCBH115	311.	GFCBH215	550.
20		GFCBH120	311.	GFCBH220	550.
25		GFCBH125	311.	GFCBH225	525.
30		—	—	GFCBH230	525.

Table 3-98. Type GFEP Ground Fault Equipment Protectors (30 Milliampere),
1-Inch (25.4 mm) per Pole 120V AC or 120/240V AC, 10,000 AIC

Ampere Rating	Wire Size Range Cu/Al 60°C or 75°C	1-Pole 120V AC Requires One 1-Inch Space		2-Pole 120/240V AC Common Trip Requires Two 1-Inch Spaces	
		1 per Shelf Carton		1 per Shelf Carton	
		10,000 AIC		10,000 AIC	
		Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$
15	#14 - 4	GFEP115	259.	GFEP215	455.
20		GFEP120	259.	GFEP220	455.
25		GFEP125	259.	GFEP225	455.
30		GFEP130	259.	GFEP230	455.
40		—	—	GFEP240	455.
50		—	—	GFEP250 ²	455.

² For use with copper wire only.

For Item 3



Type GFCB 1-Pole



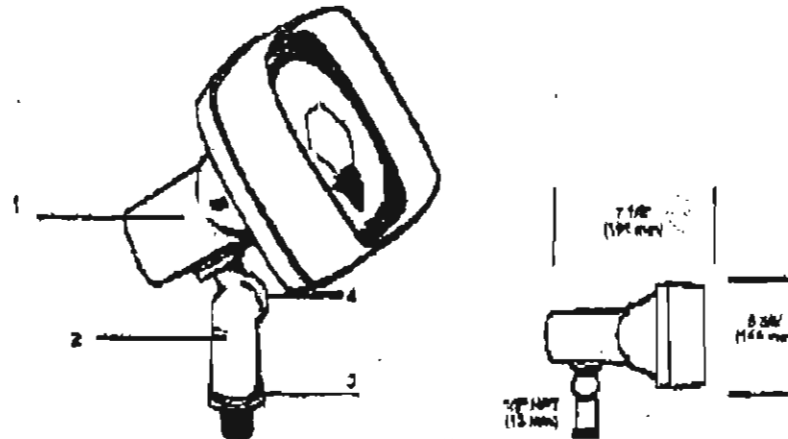
Type GFCB 2-Pole

6/10

HADCO

STREET LIGHTING
 JOB NAME TUNON RAY PROJECT
 TYPE 1020-H

CATALOG # 1020-H
SPECIFICATIONS:



Construction- Body (#1), locknut (#3), and fully rotatable mounting arm (#2) are all die cast aluminum. Fasteners (#4) are 300 series stainless steel.
Note: The mounting arm has 1/2" NPT male threads to screw on to accessory mounting stake or junction box, sold separately.

Finish- Bronze (-H) finish is thermoset powder coat. Finish suffix must be added to complete the catalog number.

Electrical- U.L. & c.U.L. listed for wet location. Socket is porcelain medium base. Fixture is 120 volt, prewired with high temperature #18 wire.

[Previous page](#)



Product Number: 14579
Order Abbreviation: 90PAR/CAP/SPL/FL30 120V
General Description: Tungsten Halogen
CAPSYLITE PAR38 Reflector
Lamp Medium Skirt Base
90Watt 120Volt Flood
Beam

Product Information

Abbrev. With Packaging Info.	90PARCAPSPLFL30 120V 15/CS 1/SKU
Approx. Lumens	1310
Average Rated Life (hr)	2500
Base	E26 Medium Skirted
Beam Angle (deg)	30
Beam Type	FL
Bulb	PAR38
Centerbeam Candlepower (cp)	3500
Class	C (gas)
Color Rendering Index (CRI)	100
Color Temperature/CCT (K)	2950
Diameter (in)	4 3/4
Ecologic	YES
Family Brand Name	CAPSYLITE® PAR38 SPL
Filament	CC-B
Maximum Overall Length - MOL (in)	5 5/16
Maximum Overall Length - MOL (mm)	135
Nominal Voltage (V)	120.00
Nominal Wattage (W)	90.00
Value Added Product	YES
Unit	EA

Product Documents, Graphs, and Images

Packaging Information



Footnotes

* In base up operation, heat may eventually deteriorate paper-lined or plastic sockets.

[Previous page](#)

[print](#)

LIGHTING AND RECEPTACLE INSULATION & CURRENT RECORD

240/120V		200A		L1-L2(V)	248	L1-NG(V)	24	L2-NG(V)	104	L1 TOTAL AMPERE	29.1	L2 TOTAL AMPERE	29.2	N TOTAL AMPERE	0	MAIN WIRE SIZE	# 3/0
PANEL NAME: SLP-18																	
MEASURE DATE: WEATHER:																	
CIRCUIT DESCRIPTION		RESISTANCE IN MEGAOHMS			BREAKER SIZE		RESISTANCE IN MEGAOHMS			CIRCUIT DESCRIPTION							
		L1-G	L2-G	NG	CHP	CTK NO	L1-G	L2-G	NG	CHP							
SPACE						1					SPACE						
STREET LIGHT		1000				3		1000			RECEPTACLE		1000				
STREET LIGHT		1000				5					RECEPTACLE		50				
STREET LIGHT		1000				7		1000			RECEPTACLE		900				
SPACE		1000				9		900			PROPERTY/LTS. COMPANY. COIL		85				
						11					STREET LIGHT						
						13					SPACE						
						15											
						17											
						18											
						21											
						23											
						25											
						27											
						29											
						31											
						33											
						35											
						37											
						39											
						41											
WITNESS	TESTER NAME	VOLTAGE		MEASURE VOLTAGE (V)		MANUFACTURE BY		TYPE OF		MANUFACTURE NO.		MANUFACTURE DATE					
DATE	DI-8	500		1-1000		MUSASHI-DEKIKI				NO. 200-001		1992					

LIGHTING AND RECEPTACLE INSULATION & CURRENT RECORD

240/200		L1-L2(V)	L1-L3(V)	L2-N(V)	L1-TOTAL AMPERE	L2-TOTAL AMPERE	N-TOTAL AMPERE	MAIN WIRE SIZE
		299.2	119.4	119.4	95.0	24.6	0	#3/0

PANEL NAME: CLP-15		MEASURE DATE:		WEATHER:	
CIRCUIT DESCRIPTION	RESISTANCE IN MEGAOHMS	CTK NO	BREAKER SIZE	RESISTANCE IN MEGAOHMS	CIRCUIT DESCRIPTION
RECEPTACLE	L1-G L2-G L3-G CAP	2	20A/1P	L1-G L2-G L3-G CAP	RECEPTACLE
STREET LIGHT	1000 1000	3	20A/1P	300 300	RECEPTACLE
STREET LIGHT	1000 1000	4	20A/1P	500 500	RECEPTACLE
STREET LIGHT	500 500	5	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	6	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	7	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	8	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	9	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	10	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	11	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	12	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	13	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	14	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	15	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	16	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	17	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	18	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	19	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	20	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	21	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	22	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	23	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	24	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	25	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	26	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	27	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	28	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	29	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	30	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	31	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	32	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	33	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	34	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	35	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	36	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	37	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	38	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	39	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	40	20A/1P	1000 1000	STREET LIGHT
STREET LIGHT	1000 1000	41	20A/1P	1000 1000	STREET LIGHT

WITNESS	TESTER NAME	VOLTAGE	MEASURE VOLTAGE (V)	MANUFACTURE BY	TYPE OF	MANUFACTURE NO.	MANUFACTURE DATE
MR. CH	CH	500	1-1000	MAUSASHI-ONENKI		NO. 200-08	1992

LIGHTING AND RECEPTACLE INSULATION & CURRENT RECORD

L1-L2(V)		L1-NG(V)		L2-NG(V)		L1 TOTAL AMPERE		L2 TOTAL AMPERE		N TOTAL AMPERE		MAIN WIRE SIZE	
240/120V		249.8		120.3		19.8		15.8		0		# 80	

CIRCUIT DESCRIPTION		RESISTANCE IN MEGOHMS			CKT NO	BREAKER SIZE	RESISTANCE IN MEGOHMS			CIRCUIT DESCRIPTION	WEATHER
		L1-G	L2-G	NG			L1-G	L2-G	NG		
SPACE					1	20A 1P				SPACE	cloudy
RECEPTACLE					3	20A 1P				STREET LIGHT	
RECEPTACLE					5	20A 1P				STREET LIGHT	
STREET LIGHT					7	20A 1P				STREET LIGHT	
STREET LIGHT					9	20A 1P				STREET LIGHT	
STREET LIGHT					11	20A 1P				STREET LIGHT	
STREET LIGHT					13	20A 1P				STREET LIGHT	
STREET LIGHT					15	20A 1P				STREET LIGHT	
STREET LIGHT					17	20A 1P				STREET LIGHT	
STREET LIGHT					19	20A 1P				STREET LIGHT	
STREET LIGHT					21	20A 1P				STREET LIGHT	
STREET LIGHT					23	20A 1P				STREET LIGHT	
STREET LIGHT					25	20A 1P				STREET LIGHT	
STREET LIGHT					27	20A 1P				STREET LIGHT	
STREET LIGHT					29	20A 1P				STREET LIGHT	
STREET LIGHT					31	20A 1P				STREET LIGHT	
STREET LIGHT					33	20A 1P				STREET LIGHT	
STREET LIGHT					35	20A 1P				STREET LIGHT	
STREET LIGHT					37	20A 1P				STREET LIGHT	
STREET LIGHT					39	20A 1P				STREET LIGHT	
STREET LIGHT					41	20A 1P				STREET LIGHT	

WITNESS	TESTER NAME	VOLTAGE	MEASURE VOLTAGE (V)	MANUFACTURE BY	TYPE OF	MANUFACTURE NO.	MANUFACTURE DATE
Mr. C. Cane	DL-8	500	1-1000	MUSASHI-DENKI		NO. 208400	1992

SLP - 10			
CIRCUIT PANEL DIRECTORY			
STREET LIGHTS GFCI OUTLET (Land Side, Left Side)	1	2	STREET LIGHTS GFCI OUTLET (Land Side, Right Side)
STREET LIGHTS (Land Side, Left Side)	3	4	PHOTOCELL/ L. CONTACTOR
PART OF CKT. 3	5	6	STREET LIGHTS GFCI OUTLET (Sea Side, Right Side)
STREET LIGHTS (Land Side, Right Side)	7	8	STREET LIGHTS GFCI OUTLET (Sea Side, Left Side)
PART OF CKT. 7	9	10	SPARE
STREET LIGHTS (Sea Side, Left Side)	11	12	STREET LIGHTS (Sea Side, Right Side)
PART OF CKT. 11	13	14	PART OF CKT. 12
MEDIAN LIGHTS (Left Side)	15	16	MEDIAN LIGHTS (Right Side)
PART OF CKT. 15	17	18	PART OF CKT. 16
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
<p><i>Note: See Street Lighting - One line diagram posted on this cabinet for circuit and street light locations.</i></p>			

SLP - 11			
CIRCUIT PANEL DIRECTORY			
STREET LIGHTS GFCI OUTLET (Ocean Side, Right Side)	1	2	STREET LIGHTS GFCI OUTLET (Land Side, Left Side)
STREET LIGHTS (Ocean Side, Right Side)	3	4	PHOTOCELL/ L. CONTACTOR
PART OF CKT. 3	5	6	STREET LIGHTS GFCI OUTLET (Land Side, Right Side)
STREET LIGHTS (Land Side, Left Side)	7	8	STREET LIGHTS GFCI OUTLET (Ocean Side, Left Side)
PART OF CKT. 7	9	10	SPARE
STREET LIGHTS (Ocean Side, Left Side)	11	12	STREET LIGHTS (Land Side, Right Side)
PART OF CKT. 11	13	14	PART OF CKT. 12
Space	15	16	MEDIAN LIGHTS (Right Side)
Space	17	18	PART OF CKT. 16
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
<p><i>Note: See Street Lighting - One line diagram posted on this cabinet for circuit and street light locations.</i></p>			

SLP - 12			
CIRCUIT PANEL DIRECTORY			
STREET LIGHTS GFCI OUTLET (Ocean Side, Right Side)	1	2	STREET LIGHTS GFCI OUTLET (Ocean Side, Left Side)
STREET LIGHTS (Ocean Side, Right Side)	3	4	PHOTOCELL/L. CONTACTOR
PART OF CKT. 3	5	6	STREET LIGHTS GFCI OUTLET (Land Side, Right Side)
STREET LIGHTS (Land Side, Right Side)	7	8	STREET LIGHTS GFCI OUTLET (Land Side, Left Side)
PART OF CKT. 7	9	10	STREET LIGHTS (See Horse Area)
STREET LIGHTS (Land Side, Left Side)	11	12	STREET LIGHTS (See Side, Left Side)
PART OF CKT. 11	13	14	PART OF CKT. 12
MEDIAN LIGHTS (Left Side)	15	16	MEDIAN LIGHTS (Right Side)
PART OF CKT. 15	17	18	PART OF CKT. 16
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
<p>Note: See Street Lighting - One line diagram posted on this cabinet for circuit and street light locations.</p>			

SLP - 13A

CIRCUIT PANEL DIRECTORY

STREET LIGHTS GFCI OUTLET (Sherwood, Left Side)	1	2	STREET LIGHTS GFCI OUTLET (Sherwood, Right Side)
STREET LIGHTS (International Mall, Right Side)	3	4	PHOTOCELL/L. CONTACTOR
PART OF CKT. 3	5	6	STREET LIGHTS GFCI OUTLET (International Mall, Right Side)
STREET LIGHTS (International Mall, Left Side)	7	8	STREET LIGHTS GFCI OUTLET (International Mall, Left Side)
PART OF CKT. 7	9	10	SPARE
STREET LIGHTS (Sherwood, Left Side)	11	12	MEDIAN LIGHTS (Left Side)
PART OF CKT. 11	13	14	PART OF CKT. 12
MEDIAN LIGHTS (Sherwood, Right Side)	15	16	MEDIAN LIGHTS (Right Side)
PART OF CKT. 15	17	18	PART OF CKT. 16
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	

Note: See Street Lighting - One line diagram posted on this cabinet
for circuit and street light locations.

SLP - 13			
CIRCUIT PANEL DIRECTORY			
STREET LIGHTS GFCI OUTLET (Land Side, Left Side)	1	2	STREET LIGHTS GFCI OUTLET (Land Side, Right Side)
STREET LIGHTS (Land Side, Left Side)	3	4	PHOTOCELL/L. CONTACTOR
PART OF CKT. 3	5	6	STREET LIGHTS GFCI OUTLET (Sea Side, Right Side)
STREET LIGHTS (Land Side, Right Side)	7	8	STREET LIGHTS GFCI OUTLET (Sea Side, Left Side)
PART OF CKT. 7	9	10	SPARE
STREET LIGHTS (Sea Side, Left Side)	11	12	STREET LIGHTS (Sea Side, Right Side)
PART OF CKT. 11	13	14	PART OF CKT. 12
MEDIAN LIGHTS (Left Side)	15	16	MEDIAN LIGHTS (Right Side)
PART OF CKT. 15	17	18	PART OF CKT. 16
	19	20	
	21	22	
	23	24	
	25	26	
	27	28	
	29	30	
<p>Note: See Street Lighting - One line diagram posted on this cabinet for circuit and street light locations.</p>			

SLP 14- PANEL CIRCUIT DIRECTORY

[illegible]

SLP 16- PANEL
CIRCUIT DIRECTORY

[illegible]

SLP 17- PANEL CIRCUIT DIRECTORY

[illegible]

SLP 18- PANEL
CIRCUIT DIRECTORY

[illegible]

Project: Tumon Bay Beautification & Infrastructure Phase II Project

Item #

Padmount Transformers, with Bushing Wells and Inserts, Radial Feed, Dead Front.
Components shall be Type 304L stainless steel base, doors and compartments.

**3-Phase, 60Hz, 13.8 KV Delta Primary, 208Y/120V Secondary, with accessories,
as per GPA Specs E-004, Rev. 3**

1	Ea.	300 KVA
3	Ea.	225 KVA
3	Ea.	150 KVA
3	Ea.	75 KVA

**Single Phase, 60Hz, 13.8 Primary, 120/240V Secondary, Delta connection,
with accessories, as per GPA Specs E-003, Rev. 4**

1	Ea.	25 KVA
12	Ea.	50 KVA
3	Ea.	100 KVA
3	Ea.	167 KVA

**1-Ea. 100 KVA Pole Mounted Transformer, 13.8 KV primary,
with accessories, 120/240V sec., per GPA Specs E-012, Rev. 4**

Far East Sales Office
205-209 Woodpark Rd
PO Box 2577, Smithfield
Sydney, NSW 2164, Australia
Phone: 61-2-8787-2786
Fax: 61-2-9609-2746
e-mail: malmaris@cooperalectrical.com.au



December 4, 2001

Guam Power Authority
Agana, Guam, 96910

SUBJECT : Certification

This is to certify that the Three Phase Padmounted Transformers that we will supply to Guam Power Authority shall be manufactured conforming to GPA specifications E-004 (Rev 3).

Thank you.

A handwritten signature in dark ink, appearing to read "Mario Almaris". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

FROM: Mario Almaris
Branch Manager

Page 1

Three-Phase Pad-mounted Compartmental Type

Electrical Apparatus

210-12

GENERAL

Cooper Power Systems three-phase pad-mounted compartmental type distribution transformers are designed to withstand all environmental hazards. The transformers are designed to meet or exceed all applicable ANSI, NEMA, IEEE standards, and NEC® and CEA specifications.

All transformers are newly manufactured and are produced expressly to meet exacting customer specifications. Many configurations and accessories are available to meet a wide range of application demands. *Transformers from stock are available for any emergency situations that may arise.*

Cooper Power Systems three-phase pad-mounted transformers are available in live-front or dead-front designs. Cooper has proven field service with pad-mounted transformers rated 45-7500 kVA, and high-voltage ratings from 2400 volts up to 46,000 volts. Designs offered include; delta and wye configurations, with single- or series-multiple combinations with either taps (for de-energized operation), or no-taps. Step-down designs are also available.

Both radial and loop feed configurations are built to ANSI standards. The dead-front bushing configurations are in accordance with ANSI C57.12.26, live-front per ANSI C57.12.22.

Cooper Power Systems transformers are built to exceed ANSI C57.12.28 for tamper resistance and for corrosion resistance. Each transformer is painted using our state-of-the-art painting system which includes eight pretreatment stages and seven coating and curing processes.

Transformer cores are manufactured from the highest quality grain oriented silicon core steel. Unlike amorphous metal cores, silicon core steel is less susceptible to ferroresonance and exhibits increasingly greater efficiency above 50% loading. Rectangular wound core construction is used offering lower losses, low excitation current, and quiet operation.

Rectangular stacked core designs are available for 1500 kVA and above.

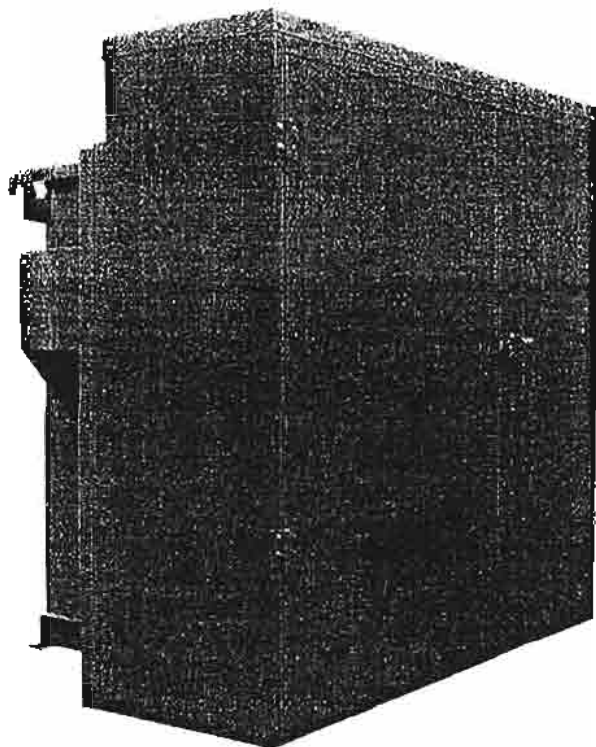


Figure 1.
Three-phase pad-mounted transformer.

The best reason to choose Cooper Power Systems three-phase transformers is that they have the lowest failure rate in the industry.

STANDARD CONNECTIONS & NEUTRAL CONFIGURATIONS

- Delta - Wye: For Delta-Wye configurations the low voltage neutral shall be a fully insulated X_0 bushing with a removable ground strap.
- Grounded Wye-Wye: For Grounded Wye-Wye configurations the high voltage neutral shall be internally tied to the low voltage neutral and brought out as the H_0X_0 bushing in the secondary compartment with a removable ground strap.
- Delta-Delta: For Delta-Delta configurations the transformer shall be provided without a neutral bushing.

- Wye-Wye: For Wye-Wye configurations the high voltage neutral shall be brought out as the H_0 bushing in the primary compartment and the low voltage neutral shall be brought out as the X_0 bushing in the secondary compartment.
- Wye-Delta: For Wye-Delta configurations the high voltage neutral shall be brought out as the H_0 bushing in the primary compartment. No ground strap shall be provided (line to line rated fusing is required).

Far East Sales Office
205-209 Woodpark Rd
PO Box 2577, Smithfield
Sydney, NSW 2164, Australia
Phone: 61-2-8787-2786
Fax: 61-2-9609-2746
e-mail: malmario@cooperlectrical.com.au



December 4, 2001

Guam Power Authority
Agana, Guam, 96910

SUBJECT : Certification

This is to certify that the Single Phase Padmounted Transformers that we will supply to Guam Power Authority shall be manufactured conforming to GPA specifications E-003 (Rev 4).

Thank you.

A handwritten signature in black ink, appearing to read "Mario Almarie". The signature is stylized with a large, sweeping "M" and a long, horizontal stroke extending to the right.

FROM: Mario Almarie
Branch Manager

Page 1

Single-Phase Pad-mounted

GENERAL

Cooper Power Systems manufactures a complete line of single-phase pad-mounted distribution transformers. They are available in standard ratings and configurations or can be customized to meet specific needs.

Single-phase transformers are available as Shrubline®, MaxiShrub®, and Ranch Runner® transformers. All of these distribution transformers are oil insulated, self-cooled, and available in loop or radial feed. These transformers are dead-front as standard, however the MaxiShrub is available in a live-front design.

Both the Shrubline and MaxiShrub versions are manufactured with ratings from 10-167 kVA. All of these transformers meet or exceed ANSI and NEMA standards.

The Shrubline is Cooper's ANSI Type-2 single-phase pad-mounted transformer. The low profile design blends visually with surroundings — shrubs, low hedges, and home air conditioners — making it ideal for residential applications.

The MaxiShrub is Cooper's ANSI Type-1 live- or dead-front pad-mounted transformer. The ANSI Type-1 frontplate arrangement allows vertical feed to the primary and secondary bushings. It is ideal for single-phase industrial and residential applications where a wide range of KVAs or heavy cabling is required.

The Ranch Runner is manufactured with ratings from 10-50 kVA. It is Rural Utilities Services (RUS) approved, and meets all ANSI requirements except frontplate arrangements. The Ranch Runner is a very compact pad-mounted transformer. Its compact design makes it ideal for irrigation, oil field and residential applications. It offers an economical design which provides standard transformer capabilities in a very compact space. This unit is shipped complete with its own poly-pad suitable for shipping and installation.

Cooper Power Systems offers poly-pads that are usable with most transformers conforming to ANSI C57.12.25 (Type-1 or Type-2). This polymer pad serves as a shipping pallet as well as an installation pad.



Figure 1.
Shrubline single-phase pad-mounted transformer.

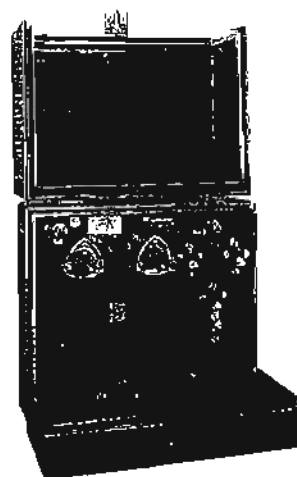


Figure 2.
MaxiShrub single-phase pad-mounted transformer.



Figure 3.
Ranch Runner single-phase pad-mounted transformer.

H 13800

V 240/120

K V 50
A

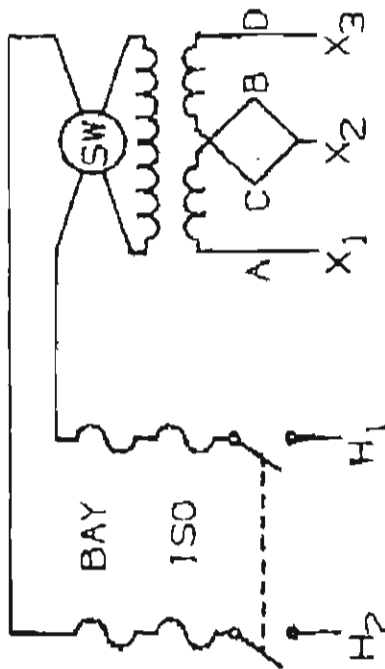
M F G
S E R

HV AL	125 BIL	TK	10 60 HZ	SUB POL.	2.2 % IZ	GAL 58 WT	939 LB
LV AL	30 BIL	SS	CLASS OA	85°C RISE	85°C	MFG DATE	

AAGZ41513850W3

NOTES: READ INSTALLATION AND OPERATING INSTRUCTIONS S201-20-1

HV TAP POSITION	1	2	3	4	5
105%	OR A	OR B	OR C	OR D	OR E
102.5%					
100%					
97.5%					
95%					



TRANSFORMER PRODUCTS
COOPER POWER SYSTEMS, WALKESHA, WI U.S.A.

COOPER

REVISIONS

PR 10588 N 02

BAR CODED
SERIAL NO.

TYPICAL DIAGRAM
FOR RADIAL FEED
TYPE, 1Ø PADMOUNT

COOPER

DISTRIBUTION TRANSFORMERS - WALKESHA, WI

NAME: NAMEPLATE

DESC: GUAM

DWG KD 07/12/93
07/12/93

PR 10588 N 02

DIMENSIONS IN INCHES UNLESS NOTED

THIS DRAWING HAS BEEN PRINTED
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REVISION WILL VOID IT.

PART
GENERATION

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205-209 Woodpark Rd
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Fax: 61-2-9609-2746
e-mail: malmario@cooperlectrical.com.au



December 4, 2001

Guam Power Authority
Agana, Guam, 96910

SUBJECT : Certification

This is to certify that the Single Phase Polemounted Transformers that we will supply to Guam Power Authority shall be manufactured conforming to GPA specifications E-012 (Rev 4).

Thank you.

A handwritten signature in black ink, appearing to read "Mario Almaro", written over a horizontal line.

Single-Phase Overhead

Note:

Transformers will be manufactured per GPA Specs E-012.

GENERAL

Cooper Power Systems manufactures a complete line of single-phase overhead-type distribution transformers. Single-phase transformers are available as conventional, protected, step-down, High BIL and as autotransformers. These transformers are available in a variety of ratings and meet or exceed the requirements of applicable ANSI and NEMA standards. Units designed per Rural Utilities Service (RUS) standards are also available.

Conventional overhead transformers are manufactured in 5-500 kVA. The completely self protected (CSP) units are rated 5-167 kVA.

CSP transformers have direct connected primary arresters, secondary breakers, and internal primary voltage fuses. This eliminates the need for separately mounted protective devices and installation economy results.

Single-phase step-down and autotransformers reduce single-phase distribution voltages to new distribution voltages. Step-down transformers are manufactured in 25-500 kVA with dual primary or secondary voltages thru 250 kV BIL. Autotransformers are manufactured in 167-5000 kVA, depending on the ratio between the primary and secondary voltages, and are available with a variety of tap arrangements.

Single-phase High BIL transformers are manufactured in 5-500 kVA and have BIL ratings from 200-250 kV.



Figure 1.
Single-phase overhead conventional transformer.

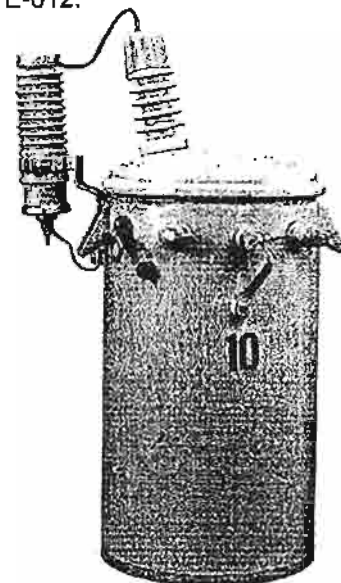


Figure 3.
Single-phase overhead completely self protected transformer.



Figure 2.
Single-phase overhead step-down transformer.

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P. O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671)632-8187/632-747†

Single-Phase Conventional Polemount

Product Scope:

kVA: 10-500

Primary Voltage: 2400-46000 V

Secondary Voltage: 120-480

Type:

Single-phase, 60 Hz, oil insulated,
self-cooled, polemount distribution
transformer.

WE OFFER : 13.8 KV PRIMARY

120/240V SECONDARY

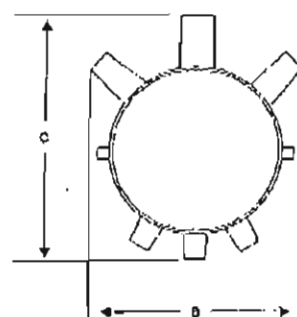
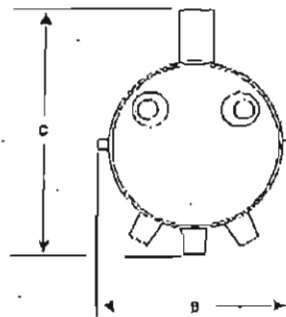
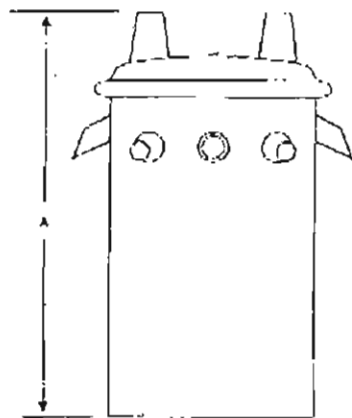
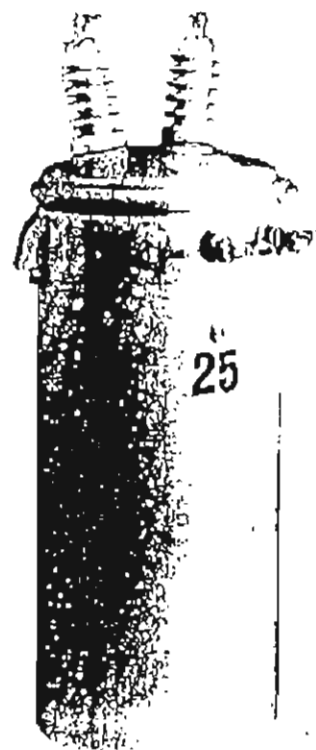
NOTE : TRANSFORMER COMPLIES TO GPA SPECS E-012

R & D MARKETING

11 DEDEDO PLAZA BLDG., DEDEDO GUAM 96912

P.O. BOX 5624, AGANA, GUAM 96932

TEL/FAX NO. (671)632-8187/632-7477



≥ 95 kV BIL and all 250-500 kVA

≤ 75 kV BIL

TYPICAL DIMENSIONS AND WEIGHTS

kVA	"A" Dim. (BIL)						"B" Dim. (BIL)				"C" Dim. (BIL)			Weight (BIL)		
	≤75	95	125	150	200	250	≤75	95	150	200-250	≤150	200	250	≤150	200	250
10	26	33	36	39		—	20"	17	—		20	—	—	240	—	—
15	28	35	38	41		—	20"	17	—		20	—	—	300	—	—
25	31	37	40	43	46	67	30"	20	24		22	30	36	400	830	1100
37	33	40	43	46	60	67	31"	20	27		24	33	36	500	975	1150
50	36	40	43	46	60	67	33"	22	27		25	33	36	600	1060	1410
75	39	44	47	50	64	71	33"	24	30		28	35	38	900	1375	1630
100	40	50	53	56	64	71	33"	24	40		31	35	38	1100	1655	1871
167	47	53	56	59	64	77	35"	35	47		37	39	40	1600	2000	2430
250	54	62	65	68	68	80	35"	35	55"		39	41	44	2000	2500	2860
333	56	64	67	70	70	80	60"	60"	60"		41	41	44	2500	3100	3570
500	58	66	69	72	75	84	63"	63"	63"		44	44	44	3200	4000	4400

*Includes sidewall mount HV Bushings

**Includes Radiators