



GUAM POWER AUTHORITY
AGANA, GUAM

Specification No. E-002

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Rev. 1 11/18/88

PREPARED BY INFORMATION SYSTEMS DEPARTMENT

GUAM POWER AUTHORITY
P.O. BOX 2977
AGANA, GUAM 96910

TRANSMISSION & DISTRIBUTION SPECIFICATION

Specification No. E-002

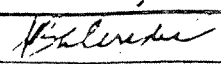
For

CONNECTORS; 15 KV LOAD BREAK

SEPARABLE INSULATED

EFFECTIVE DATE: 11/10/82

ISSUED: 

APPROVED: 



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CONNECTORS: 15 KV LOAD BREAK
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1.0 SCOPE:

1.1 This specification covers the Authority's requirements for loadbreak separable insulated connectors as noted in Table I.

2.0 CONFORMANCE TO SPECIFICATIONS:

2.1 The connectors shall meet the requirements of the following, unless otherwise specified in this specification.

2.1.1 ANSI C119.2-1974, Separable Insulated Connectors for Power Distribution Systems above 600 V and latest proposed revisions.

2.1.2 All other applicable industry standards.

2.2 Equipment purchased under this specification will be accepted under the following conditions:

2.2.1 Deviations from this specification must be approved by the Supervisor of Distribution Engineering or the Manager of Engineering, GPA and acknowledged on the Purchase Order by all applicable appendices to the specification.

2.2.2 Deviations from this specification or changes in the material, design or construction after receipt of order must be approved by the GPA Engineering Department and acknowledged by an Appendix to the specification which shall be issued by a Purchase Order Change Notice.

3.0 MINIMUM RATINGS:

3.1	System nominal voltage	13.8 KV
	Withstand impulse voltage	95 KV
	60 Hz 1 Min. withstand voltage	34 KV
	DC 15 Min. withstand voltage	53 KV
	Corona voltage level	11 KV, less than 3 picocoulombs
	Switching recovery voltage withstand (disconnectable voltage across open contacts), on 3 phase circuit	14.4 KV
	Continuous & switching current	200 Amperes
	Switching operations at 200 amp	20
	Eight hour over load current	300 Amperes



Fault-closure current	10,000 sym.rms, amperes
Short-time current (duration, cycles = 10)	10,000 sym,rms, amperes
Capacitive switching current	10 amperes

4.0 CONSTRUCTION:

- 4.1 EPDM compounds shall be peroxide-cured.
- 4.2 Maximum conductor temperatures are 90 degree C normal operations, 130 degree C emergency operation, 250 degree C short circuit operation. Transformer interface temperatures up to 150 degree C can be expected.
- 4.3 Connectors shall be compatible for use with one of the following cable designs:

<u>CONDUCTOR</u>			<u>INSULATION</u>		<u>CABLE DIAMETERS</u>	
<u>Size</u>	<u>No. of Wires</u>	<u>Mat'l</u>	<u>Mat'l</u>	<u>Avg. Th Mils</u>	<u>Dia. Over Insul. Mils</u>	<u>Dia. Over Shldg. Mils</u>
2	7	Al	XLPE or PE	220	.762	.822
2/0	19	Al	XLPE or PE	220	.884	.944

- 4.4 Elbow parts shall be interchangeable with existing (list available upon request) GPA elbow parts, including torque wrench and silicone lubricant.
- 4.5 Elbows shall be designed for 6-7/8" removal of cable shielding from extreme end of conductor compression connector, as illustrated in Figure I.
- 4.6 Elbow insulating cuff shall not be greater than 3" outside diameter.
- 4.7 Connectors shall have readily verifiable, permanent identification of vintage, no greater than by quarter and year of manufacture.
- 4.8 Connectors shall have white-black-white band voltage rating identification.



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5.0 TESTING:

- 5.1 Connectors shall have passed tests in accordance with ANSI Standard C119.2, latest proposed revisions and IEEE Standard for Testing Shielding for Molded Cable Accessories.
- 5.1.1 Test point voltage shall be checked with high impedance volt meter - Ross HiZtm Model VM 25 or approved equal.
- 5.1.2 Parts shall be examined visually and by X-ray periodically for porosity by taking the first piece molded on each shift plus enough additional pieces during the shift as required to insure continued porosity free production.
- 5.2 A certified report shall be submitted to GPA Manager of Engineering proving compliance with all the test requirements of this specification.

6.0 SHIPMENT:

- 6.1 Each connector shall be shipped in an individual protective container which will prevent damage and deformation to components.
- 6.2 Protective end plugs, caps and/or sealed plastic bags shall be provided to prevent open storage contamination.
- 6.3 Kit shall contain necessary installation items such as wrench, silicone grease, installation instructions, strip back guide, etc.

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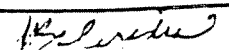
APPROVED: 



TABLE I

Load-Break Separable Insulated Connectors:

<u>STOCK NO.</u>	<u>DESCRIPTION</u>
Non-Standard	Feed thru bushing
0485	Elbow, #2 AWG solid aluminum
0486	Elbow, #2/0 AWG stranded aluminum
Non-Standard	Elbow Tee, #2/0 AWG stranded aluminum
Non-Standard	Bushing plug insert
0823	Cable Tap, 3-way
Non-Standard	Cable Tap, 3-way, unmounted
0824	Cable Tap, 4-way
Non-Standard	Cable Tap, 4-way, unmounted

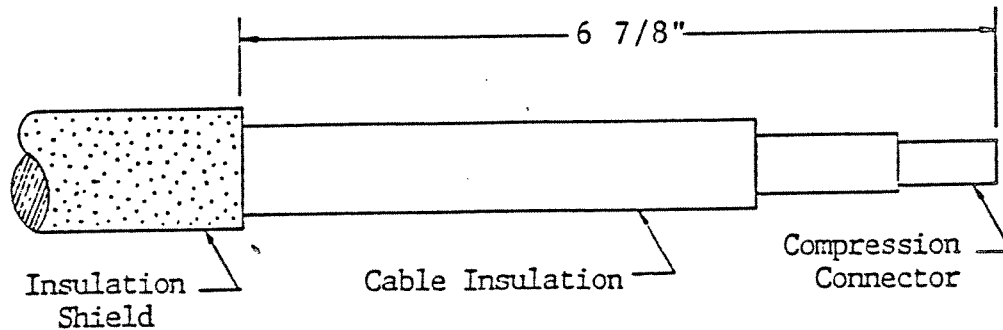


FIGURE I
SHIELD STRIPBACK DISTANCE