



GUAM POWER AUTHORITY
AGANA, GUAM

SPECIFICATION No. E-027

REVISION: 3
October 14, 2021

PREPARED BY THE ENGINEERING DEPT.

GUAM POWER AUTHORITY
P.O. BOX 2977
AGANA, GUAM 96932

TRANSMISSION & DISTRIBUTION SPECIFICATION

SPECIFICATION NO. E-027

FOR

**GROUP OPERATED, LOAD BREAK
DISTRIBUTION SWITCH
600 AMPS, THREE PHASE, OVERHEAD**

EFFECTIVE DATE: 10/14/21

ISSUED:

APPROVED:



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DISTRIBUTION SWITCH
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1.0 SCOPE

- 1.1 This specification covers GPA requirements for group operated, 600-Amp, three-phase, overhead switches to be used on the 13.8 kV 60-Hertz distribution system.
- 1.2 The switch is intended for use in tropical weather conditions with a corrosive sea air atmosphere, with wind strength of 155 MPH and subject to moderate and severe earthquakes.

2.0 APPLICABLE PUBLICATIONS

The equipment specified herein shall be designed, manufactured, assembled and tested in accordance with ANSI C37.30, ANSI 37.32, ANSI 37.33, and ANSI 37.34 including the latest revisions with respect to material, design and tests.

3.0 DEVIATIONS AND NON-CONFORMANCE REQUIREMENTS

- 3.1 Deviations from this specification or changes in the material or design after the purchase order has been placed must be approved by the GPA Engineering department and acknowledged by a Purchase Order Amendment issued by GPA.
- 3.2 Units received with deviations or non-conformances that are not acknowledged per Section 3.1 are subject to rejection. The Supplier of rejected units is responsible for any corrective action including but not limited to materials, labor and transportation necessary to dispose of or make the units conform to the specification.
- 3.3 Notification of defective units discovered before or after installation that are believed to be inherent to manufacturing problems or workmanship shall be made and forwarded to the Supplier. The description of the item, documentation of the problem, information, disposition and/or follow-up (as appropriate) that GPA expects from the Supplier will be specified. The Supplier's response shall be made within thirty (30) days unless an extension is acknowledged and approved in writing by the GPA Manager of Engineering.

4.0 SUBMITTALS

- 4.1 Shop drawings indicating details of construction and the outline of all connectors shall be submitted to GPA Engineering for review and approval. Information required includes:
 - a. Mounting dimensions
 - b. Connection diagrams
 - c. Weights
 - d. Nameplate

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- 4.2 GPA shall be allowed two (2) weeks to review and approve drawings provided in Section 4.1 without affecting the shipping date. Delays in delivery due to drawings that are disapproved during this review period are the responsibility of the Supplier.
- 4.3 Drawings returned to the Supplier as approved shall be considered authorization to proceed with the work. The approval of GPA shall in no way abrogate the requirements of this specification.
- 4.4 Instruction books shall be furnished which shall contain the description of components, parts and accessories, detailed installation instructions, complete instructions covering operation and maintenance of equipment, complete replacement parts list.
- 4.5 At least one complete set of drawings and instruction books per switch shall be provided at the time of delivery.

5.0 CERTIFIED LABORATORY TEST REPORTS

Certified tests shall be conducted in accordance with applicable standards. The Supplier shall furnish two (2) copies of certified test reports for all tests covered by this specification to the GPA Manager of Engineering within two (2) weeks of delivery.

6.0 RATINGS

The switch rating requirements are as follows:

Nominal line to line voltage (kV)	14.4
Maximum line to line voltage (kV)	17
BIL (kV)	110
Continuous Current Rating (A)	600
Interrupting Current Rating (A)	600
One-time duty cycle fault-closing Capability, rms Asymmetrical Amperes	20,000



7.0 DESIGN AND CONSTRUCTION

7.1 The switch shall be factory assembled on a one-piece galvanized steel base.

7.2 The switch shall include the following features as illustrated in Figure 1 for the Upright Mounting Configuration (Horizontal) and Figure 2 for the Tiered Outboard Mounting Configuration (Vertical).

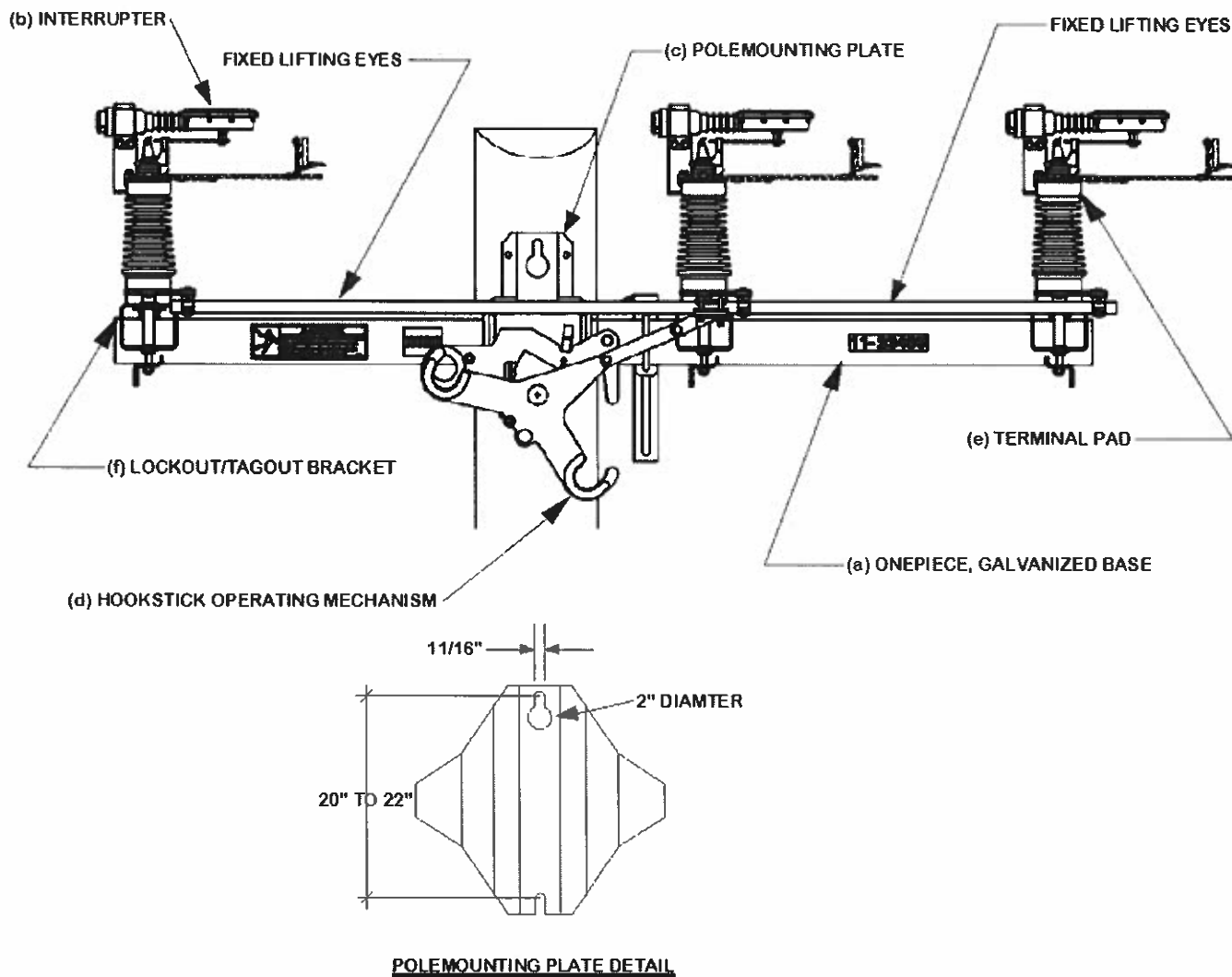


Figure 1 – Upright Mounting Configuration (Horizontal) SSOP1138

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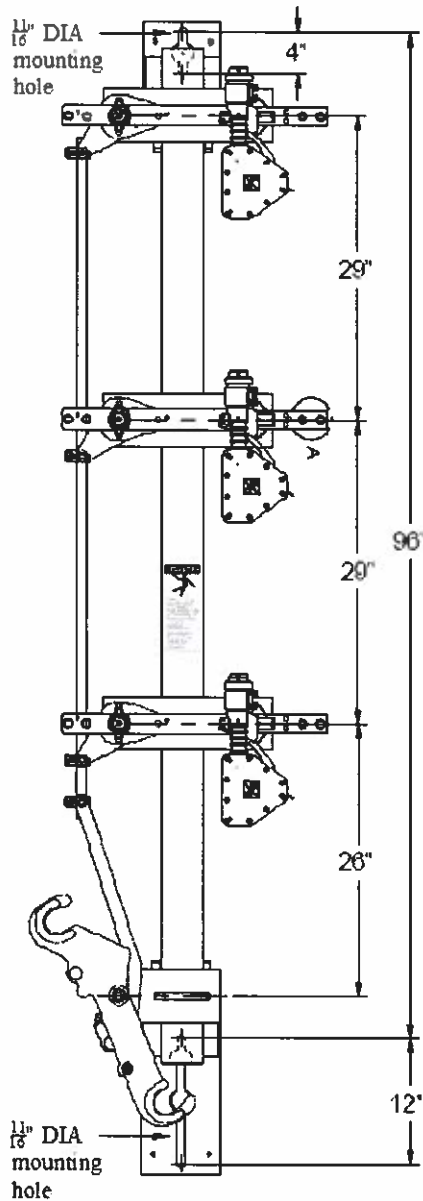


Figure 2 – Tiered outboard Mounting Configuration (Vertical) SSOP1139

- a. A one piece galvanized steel base supporting all three poles in permanent alignment.
- b. Interrupters to eliminate external flashover.

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- c. A pole mounting plate for installation on pole diameters from 8 to 20 inches. Mounting bolt provisions shall allow easy installation on pre-drilled holes on concrete poles.
 - d. A hookstick operating handle with easy access open and close pull rings that are operable from ground lever using an extension type hot stick.
 - e. Terminal pads to accommodate #2/O AWG to #500 kcmil copper or aluminum conductors.
 - f. A lockout/tagout bracket.
 - g. Fixed lifting eyes (1-1/4" diameter) to allow balanced installation
 - h. A grounding lug to accommodate No. 4 to No. 2/O AWG ground wire.
- 7.3 The centerline-to-centerline distance of mounting holes for the switch base shall be:
- a. 20-22 inches for installation on pre-drilled concrete poles for the (Horizontal) upright mounting configuration.
 - b. 92-108 inches for installation on pre-drilled concrete poles for the (Vertical) Tiered Outboard mounting configuration.
- 7.4 Terminal pad connectors shall be provided and shall be capable of accommodating #2/O AWG to 500 kcmil, 15 kV, bare, copper or aluminum primary conductor.
- 7.5 Nameplate

The switch shall be provided with a permanent nameplate showing all of the required information, including the manufacturer's name, month and year of manufacture, and the maximum voltage and current ratings.

8.0 OPERATIONS

- 8.1 The switch shall be suited for mounting upright with extra mounting pole clearance.
- 8.2 Provisions for gang operating the three-pole disconnect switch by using an extension hook stick shall be provided.

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9.0 QUALITY CONTROL

The Supplier shall have a quality control program to ensure compliance with the requirements of this specification. The program shall be documented and available for GPA's review if requested.

Documentation of the quality control program shall indicate where in the production and manufacturing process the quality checks are taken, describe the purpose of the checks, and describe the nature of the check, i.e. if check is visual only or if electrical or mechanical testing is used.

10.0 PACKING AND SHIPPING

- 10.1 The switch shall be placed and crated with suitable material to prevent damage and injury during shipment and handling operations.
- 10.2 The switch shall be securely blocked to prevent shifting during transit.
- 10.3 The Supplier shall have adequate work and inspection instructions for handling, interim storage, preservation, packaging, and shipping to protect the quality of the switch and prevent damage, loss, deterioration and substitution of products.

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