

PRODUCT STANDARD



दिनांक एवं हस्ताक्षर
SIGN & DATE

SUPERSEDES
INVENTORY NO

समशी युक्ति स्थान
का अभिलेखित संख्या है।

SUDDEN SHORT CIRCUIT SWITCH

1.0 DESCRIPTION:-

- 1.1 The intent of this specification is to define the function & design requirements of a Sudden short circuit Switch (Make Switch) to perform 3-phase sudden short circuit test on Turbo-Generators.
- 1.2 All accessories necessary for completeness of composite system should also be considered by the bidder.

2.0 TECHNICAL REQUIREMENTS:

2.1 General technical specification of the switch shall be as follows :-

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| 2.11 Rated Voltage | 15/ 17.5 KV |
| 2.12 Rated Frequency | 10-60 Hz |
| 2.13 Rated short time Withstand current (rms) | 100 KA for 1 sec or more |
| 2.14 Rated short circuit making current (peak) | 260 KA or more |
| 2.15 Power frequency test voltage | 38 kV |
| 2.16 Rated lightning impulse withstand voltage to earth | 95 KV |
| 2.17 Closing time | 14-16 m sec |
| 2.18 Closing time accuracy | within ± 0.17 m sec |
| 2.15 Opening time (in no-load operation) | 3-4 sec |
| 2.16 Number of poles | 3 |

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स्वत्वाधिकार एवं गोपनीय


सभी सूचनाएं इस दस्तावेज़ में दी गई हैं और वे भारत भारी विद्युत उपकरण लिमिटेड की संपत्ति हैं। इन सूचनाओं का उपयोग किसी भी प्रकार में, जो भी हो, बिना लिखित अनुमति के नहीं किया जाना चाहिए।

परिष्कार एवं दिनांक
SIGN & DATE

सूची नंबर एवं संख्या
INVENTORY NO

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| | | | | नाम NAME | दिनांक एवं हस्ताक्षर SIGN & DATE |
| | | | अनुवादक TRANSLATED BY | | |
| | | | निर्माणकर्ता WORKED BY | N Verma | <i>N Verma</i> |
| | | | जांचकर्ता CHECKED BY | AK Malhotra | <i>AK Malhotra</i> |
| एम्प्लॉयी AGREED DEPT | नाम NAME | दिनांक एवं हस्ताक्षर DATE & SIGNATURE | पर्यवेक्षक SUPERVISED BY | AK Malhotra | <i>AK Malhotra</i> |
| | | | अनुमोदित APPROVED | KR GUPTA (AGM/EME) | <i>KR Gupta</i> |

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| दिनांक एवं हस्ताक्षर SIGN & DATE |  | उत्पाद मानक PRODUCT STANDARD | TG 60678 | | | | | | |
| सामग्री सूची संख्या को अतिरिक्ति करता है। SUPERSEDES INVENTORY NO | | <p>- The vendor shall provide all the test certificates of the equipment.</p> <p>The complete testing scheme will be submitted by the party for approval of BHEL.</p> <p>5.0 General Notes:-</p> <p>5.1 The switch to be offered should be equipped with all the latest features.</p> <p>5.2 Detailed Technical literature i.e. Catalogues, circuit diagrams etc should be enclosed along with the offer.</p> <p>5.3 Records of Tests conducted by the switch for generator testing should also be furnished along with the offer.</p> <p>5.4 Maintenance Spares for two years trouble free operation should also be quoted as an option. The party to ensure availability of requisite spares & services for 15 years.</p> <p>5.5 Specially required tools and tackles, if any required for alignment of equipment at the site shall be supplied by the party.</p> <p>5.6 Annual Maintenance Contract (AMC) (without spares) for this switch to be quoted by the party as an Option.</p> <p>6.0 Installation and commissioning:-</p> <p>Installation and commissioning of the switch shall be in the scope of the supplier. All essential material necessary for installation of the equipment shall be arranged along with installation and operational/ maintenance manual and other required documents. This includes drawings, circuit-diagrams and all other necessary details for above purpose. All measuring instruments, special apparatus/ tools essential for installation, operation and maintenance, testing and checking the status of the equipment before and during operation shall be provided.</p> <p>Vendor shall also furnish all necessary inputs for the foundation design, suitable for the offered switch.</p> <p>7.0 Guarantee:-</p> <p>The equipment shall be guaranteed for trouble free operation for minimum 24 months from the date of commissioning. Items going defective during this period shall be repaired or replaced free of cost.</p> <p>8.0 Drawings & Data:</p> <p>8.1 <u>Documents along with the offer:-</u></p> <p>a) Complete technical details of the devices and the equipment as a whole.</p> | पृष्ठ 4 का 3 Page 3 of 4 | | | | | | |
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| दिनांक DATE | | | | | | | | | |
| सामग्री सूची संख्या INVENTORY NO | | REV 01 | <table border="1"> <tr> <td>Author</td> <td>NV</td> <td><i>Nikhil</i> 30/7/09</td> </tr> <tr> <td>Approved</td> <td>APM</td> <td><i>Shree</i> 30/7/09</td> </tr> </table> | Author | NV | <i>Nikhil</i> 30/7/09 | Approved | APM | <i>Shree</i> 30/7/09 |
| Author | NV | <i>Nikhil</i> 30/7/09 | | | | | | | |
| Approved | APM | <i>Shree</i> 30/7/09 | | | | | | | |

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| समाप्ति की तिथि को अंतिम तिथि अर्थात् ३१ | SUPERSEDES INVENTORY NO | b) Type and make of different components along with technical leaflet/ catalogues etc. c) Reference list of customers to whom similar equipment has been supplied. d) Based on the agreed specifications and technical discussions after submission of the offer, following drawings / documents shall be prepared by the party and six copies shall be submitted for approval. <ul style="list-style-type: none"> i) Overall General Arrangement Drawings (OGA) of equipment and foundation plan. ii) Detailed Schematic Diagram. iii) List of components with their type and make. | |
| COPYRIGHT AND CONFIDENTIAL. The information on this document is the property of Bharat Heavy Electrical Limited. It must not be used, directly or indirectly, in any way detrimental to the interest of the company. | 8.2 <u>Documents along with supply:-</u> <ul style="list-style-type: none"> a) Complete and final documents ----- 6 sets b) Test Certificates ----- 6 sets c) Guarantee Certificates ----- 6 sets d) O & M Manual ----- 6 sets 9.0 <u>Acceptance / Rejection:-</u> BHEL reserves the right under condition of purchase to reject any consignment which does not conform to the specifications. | | |
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