



Star Switchgears

REGULATING SMART POWER SINCE 1980



ELECTRICITY BOARD APPROVED



ISO 9001:2008 QUALITY CONTROL



CPRI TESTS APPROVED



DEDICATED SERVICE SUPPORT



www.starswitchgears.in

INTRODUCTION



Star Switchgears is a leading manufacturer of power switchgear panels providing energy-efficient solutions that help our customers effectively manage and regulate smarter power. With over 3 decades of experience we meet the complex and varying needs of customers with a wide range of products tailored precisely for each industry segments. The company has been recognized for its consistency in producing reliable and durable power protection panels across the nation.

Incepted in the year 1980 as a partnership firm by Mr. K.B. Ramachandran and Mr. A. Meeran, we are the pioneers in 11 KV Metering and Switching stations using load break switches or vacuum circuit breakers. With a clientele of over 300 large-scale industries, we have earned a renowned name in service, economy, innovative design and faster delivery of panels across India and overseas.

Today, we enjoy approvals from multiple Electricity Boards, ISO 9001:2008 Quality Control approval and Central Power Research Institute of India. Our products have undergone numerous tests conducted by CPRI and have been approved for providing safe, reliable, efficient and economic industrial grade protection panels year after year.

OUR COMMITMENT



We have dedicated service engineers on call available to visit your site for any service or maintenance requirements, on every panel supplied by us. Unlike standard build panels that assemble with joint screws we specialize in custom design panels. Our meticulous design for each panel, rendering high quality products, which keep our panels in operation for over 20 years. We are committed to using only the best raw materials that which undergo thorough scrutinizing before installation. Our tradition to use CRCA sheets with least joints helps increase the natural structural integrity and maintaining a seamless design; our seven layered powder paint treatment ensures complete protection from oxidation overtime, preventing rust formation for outdoor panels for over 20 years.

We take pride in the continued patronage of numerous Indian public service units such as Bharat Electronics Ltd, Bharat Heavy Electricals, Bharat Petroleum Corp, Hindustan Aeronautics etc., along with numerous multinational corporations of various industry segments in India.





COMPANY PROFILE

OUR TEAM



Our dedicated research and development team strive towards optimizing the most suited protection designs to handle any possible scenarios at site, ensuring protection schemes at multiple layers to safeguard your facility with uncompromised protection.

With our wide range of products and experience we have handled the most complex industries, electric utilities, defense & aeronautics industries, manufacturing plants, multistoried apartments, universities, cluster villas and hospitals.

Our manufacturing facility is well equipped with automated cutting and bending CNC machines with a well-trained team to handle challenging design requirements while maintaining industry standards.

We have developed a sophisticated infrastructure over an area of 15,000 square feet, which is certified per ISO 9001:2008 standards and under regular interval inspection to maintain quality control at all times for every product manufactured from our shop floor.

Further, we are backed with the computer-aided machines to perform precise fabrication of panel structures, listed below are machines at our shop floor:

- 80 tons Computer numerical control 3 Axis CNC Hydraulic press brake machine
- 80 tons Hydraulic power shearing machine
- 40 tons Punch press machine
- ISO certified High Voltage (up to 28KV) test environment section
- Aluminium profile triple force machine
- Drilling machines
- Drilling pedestals
- Surface grinding machines
- Quality control inspection equipments
- Air & oil cooled welding machine and compressors





MEDIUM VOLTAGE PRODUCTS

HT TARIFF METERING CUBICLE

Mandated by Electric Supply companies for industrial and commercial loads higher than 63KVA. Primarily used for energy monitoring, they come in various types : Trivector metering, Available Based Tariff metering, Dual metering for captive power plants to record import and export power generation.

These panels are housed with current transformers, potential transformers and energy meters all type tested and approved by ESCOM. Assembled with suitable bus bars and enclosed in durable 14 gauge CRCA Sheets designed to endure harsh weather conditions.



HT LOAD BREAK SWITCHES

Load break switches are used for transformer protection for loads up to 750KVA. Our LBS switches have been tested and certified at CPRI labs to withstand high current, high voltage up to 28KV yet perform flawlessly to interrupt short circuits and overload fault conditions. These compact panels replace the large outdoor pole structures exposed to dangerous risks.

Additional transformer protection with shunt trip relay can be installed for transformer winding temperature, oil temperature, Bucholz and Surge protection.



HT VACUUM CIRCUIT BREAKER

Used for loads above 500KVA, our VCBs are widely used in large industries that provide complete transformer and load protection. Equipped with alarm, trip mechanism, master trip relays, annunciators and power pack supply for secondary backup. VCB panels are made to especially handle heavy load operations yet calibrated to detect most sensitive fault conditions.

Our VCB panels are equipped with built-in transformer protection with alarm & trip mechanism for transformer winding temperature, oil temperature, Bucholz, Surge and MOG protection.



HT LBS/VCB RING MAIN UNITS

Three unit VCB/LBS 2OD with 1VL (2 incoming with 1 outgoing) are primarily designed to provide uninterrupted supply from two sources. They are made robust to handle outdoor weather conditions and provide the flexibility to isolate remote fault locations. Incoming switches are equipped with earth switches to enable safe maintenance operations at distant plant locations.



VCB & LBS combined panels

VCB Ring Main Units

HT Genset panels

HT Metering & Switching



LOW VOLTAGE PRODUCTS



AUTOMATIC POWER FACTOR CORRECTION PANEL

Inductive loads, which tend to absorb heavy inrush currents reduce power factor below allowed limits and add to large penalty charges. To compensate our APFC panel monitors load and automatically switches suitable capacitance to provide clean ideal power with unity power factor.

Harmonics, which are inherent for non-linear loads, affects the overall system degrading life of equipments. Our APFC panels with harmonic mitigation filters and advanced switching logics can reduce up to 7th level harmonics, providing ideal filtered power to safeguard sensitive loads.



LOW VOLTAGE TARIFF METERING CUBICLE

Used in multi-storied residential or commercial complexes, our low voltage metering cubicles are known for their compact design and ease of control to monitor each load sections. Along with meters panels are equipped with primary change over switches, MCCBs, Earth Fault relays and Fuses to provide multiple fault protection.

Additional autochange ACCL switches can be installed to ensure smooth transition to Diesel Generators during power failure.



POWER DISTRIBUTION BOARD

Aptly named as the main LT panel, these are customized to customers requirements. Housed with MCCB, SDF, ACBs of up to 6000A with bus coupler arrangements for flexible operations from multiple power source. We have mastered such panels to handle large industrial loads with seamless transition from different power source. Our panels are meticulously designed with multiple fault zone protection and have been in operation at the heart of heavy manufacturing industries for decades.



AUTO-MAINS FAILURE / SYNCHRONIZATION PANEL

Industries that are sensitive to power loss are dependent on multiple alternate power sources, demanding AMF/Synchronization control panels for seamless transition. Our panels are equipped with touch screen Programmable Logic Controllers with advanced programs to solve the most complicated load requirements. Battery backup arrangements are made to provide uninterrupted transition. PLCs are programmed to sense power loss, initiate and synchronize diesel power generation with no manual interruptions. Motorized switches allow remote monitoring and load handling at central control rooms.



Genset Control panels

Control Desks

PLC EB/DG control panel

Motor Control Centres



TESTIMONIALS FROM OUR CUSTOMERS:

This is to certify that M/s Star Switchgears, Bangalore has manufactured and supplied control panels valued at approx. Rs 2 crores to handle our Ferro Alloy production plant. Also, our sincere thanks to M/s Star Switchgears for the excellent support extended to the commissioning of the 2nd unit of captive power plant of 36MW.

Shri Girija Alloy & Power Pvt Ltd
Peddapuram
C.S. RAJU
Chairman

This is to certify that M/s. STAR Switchgears, have successfully completed the supply of MV Switchboards valued at Rs.85,10,529 against our PO No. BNG/CON/SBS/98-108 for the Electrification works of 22MW Co-Generation Plant of M/s Shamanur Sugars Ltd Davangere District, Karnataka

BSES Limited
SURESH KAMATH
Tech Dy Manager

This is to certify that M/s Star Switchgears, Bangalore has manufactured 5000A Aluminium Bus Ducts (12m long x 2 Nos) in our plant. It is working satisfactorily.

Bannari Amman Sugars Ltd
Senior Vice President

This is to certify that M/s Star Switchgears, Bangalore has fabricated and supplied to us 4 LT power control centres of 4000A busbar ratings with 4 Nos of 4000A 4 pole incomer ACBs and 5 Nos of bus couplers of 4000A, 4 pole ACBs of GE make. The total length of panel is 28 meters with 64 Nos of MpacT ACB feeders of 630A to 2000A ratings.

Shamanur Sugars Limited
SS BAKKESH
Managing Director

OUR CERTIFICATIONS :



BANGALORE ELECTRICITY SUPPLY COMPANY LIMITED
(Wholly owned by Government of Karnataka Undertaking)

Sub: Removal of Vendor approval for supply of 11kV HT Metering cubicles & RMU Panels by M/s Star Switchgears, Bangalore
Ref: CPRI/I & P/ 6/1/BESCOM/ 2013 dated 10.07.2014.

Approval is hereby accorded to M/s Star Switchgears, No. 6-A, 1st Stage, 1st cross, Sudhanagar, Lalbagh Road, Bangalore, as approved vendor for supply of 11kV HT Metering cubicles & RMU Panels as detailed below for Self execution works. Action plan works, Total Turnkey works / Partial Turnkey works etc., in BESCOM area.

Sl. No.	Particulars	Period of validity upto	Remarks.
1.	11kV HT metering cubicle (3 CT, 3PT)	31.07.2017	Subject to Revalidation every year
2.	11kV HT Metering Cubicle (3 CT, 3PT) with LBS/ VCB panel	31.07.2015	
3.	11kV 630A LBS & LBS panel		
4.	11kV LBS/ VCB RMU		

The approval is subject to the following conditions:-

- The prospective consumers who purchase the above equipments shall stand guarantee for the materials for a period of one year from the date of commissioning.
- The materials shall conform to the specifications as prescribed by IS/IEC/BESCOM & its amendments from time to time.
- The above equipments shall be got inspected by QA/QC/BESCOM or the concerned jurisdictional Engineers, BESCOM.
- BESCOM reserves the right to withdraw the approval in case of violations of the approved Drawing and Specifications at its discretion.
- The field officers shall comply with the directions/instructions issued by the concerned jurisdictional Engineers, BESCOM.

Dated 23.11.2012.

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

TEST REPORT
No. SC14157A
Date: 24th April, 2014

Name & Address of the Customer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Lalbagh Road Cross, Sudhanagar, Bangalore - 560 027

Name & Address of the Manufacturer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Lalbagh Road Cross, Sudhanagar, Bangalore - 560 027

Particulars of sample tested: AC Meter-enclosed switchgear & controller - 12 kV 630 A HT Metering Panel with Load Break Switch (LBS)

Condition of the sample on Receipt: New

Type: Outdoor
Designation: METERING PANEL WITH LBS WITH FUSE TRIP

Number of samples tested: One
Date (s) of test (s): 27th April, 2014
CPRI sample code no(s): SC14150380

Particulars of tests conducted: Short-time withstand current and peak withstand current tests on main circuit

Test in accordance with: Sub-clause 5.5.101 of IS 3427: 1987 / IEC 298 (1990) (Reaffirmed 2002) & IEC 62271-200:2011

Not applicable

Sampling plan: 15.4 A.M.s for 1.0 s & 40 A.M.s peak on main circuit

Deviations if any: Nil

Name of the witnessing persons: Mr. Hanseel Meenar, Senior Engineer

Other than customer's representatives: Mr. Kumar

Documents constituting this report (in words): Number of sheets: Five
Number of drawings: One
Number of photos: Three
Number of test circuit diagrams: One
Number of drawings: Four

CENTRAL POWER RESEARCH INSTITUTE
(Member of STL)

TEST REPORT
No. 04620148173238
Date: 26.03.2014

Name & Address of the Customer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Lalbagh Road Cross, Sudhanagar, Bangalore - 560 027

Name & Address of the Manufacturer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Lalbagh Road Cross, Sudhanagar, Bangalore - 560 027

Particulars of sample tested: New
Condition of the sample on Receipt: New
Designation: 11 kV, Metering Panel with LBS, 630A, 3 Phase
Serial Number: SSG M5 5-102
Number of samples tested: One only
Date (s) of test (s): 22.03.2014 to 24.03.2014
CPRI sample code no(s): HVM20140227

Particulars of tests conducted: Test in accordance with: IP 55 Category 2 Test as per IS/IEC 60529 Edition 2.1, 2001-02 Standard, Clause 13.4.
Standard / specification: Not applicable
Customer's requirement: 1. IP 55 Category 2 Test as per IS/IEC 60529 Edition 2.1, 2001-02 Standard, Clause 13.4.
2. Insulation Resistance Measurement at 500V DC and 3. Power frequency high voltage withstand test at 6.6 kV AC to be applied for one minute between all busbars shorted together and the body of 11 kV M. Metering Panel with LBS, 630A, 3 Phase Enclosure, to be conducted before and after IP 55 test.

Deviations if any: Nil

Name of the witnessing persons: Customer's representative: Mr. Hanseel M.
Other than customer's representative: Test subcontracted with address of the laboratory: None

Documents constituting this report (in words): Number of sheets: Three Only
Number of drawings: Nil
Number of photos: Nil
Number of test circuit diagrams: Nil
Number of drawings: Two only, Orig. No. STRHMS01 Sheet No. 1 of 2 and 2 of 2

Test Engineer: (Signature)

CENTRAL POWER RESEARCH INSTITUTE
(Member STL)

TEST REPORT
No. 43702014-HV2074STAR
Date: 28/04/2014

Name & Address of the customer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Sudhanagar, Bangalore - 560 027

Name & Address of the Manufacturer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Sudhanagar, Bangalore - 560 027

Particulars of Samples tested: New
Designation: 12KV 630A 3-Phase, Metering Panel With Load Break Switch.
Serial Number: SSG M55
Number of samples tested: One
Date (s) of Test(s): 25/04/2014
CPRI Sample Code Number: HVM201402203

Particulars of tests conducted: Test in accordance with standard: 1) Lightning Impulse Withstand Voltage Test, 2) Dry Power Frequency Withstand Voltage Test.
Specification: As per IEC 62271-200:2011 & IS 3427:1987 RA 2002.
Sampling Plan: Not Applicable.
Customer's requirement: Nil.
Deviations if any: Nil.

Name of the witnessing persons: Customer's representative: Shri. Hanseel M - Senior Engineer.
Other than customer's representatives: Test subcontracted with address of the laboratory: None.

Documents constituting this report (in words): Number of sheets: Four.
Number of drawings: Three only.
Number of photos: Nil.
Number of test circuit diagrams: Nil.
Number of Test Circuit Diagrams: Nil.
Number of drawings: Two. (Drawing No. 1) STRHMS01 Sheet No. 1 of 2, 2) STRHMS01 Sheet No. 2 of 2.

Test Engineer: (Signature)

CENTRAL POWER RESEARCH INSTITUTE
(Member STL)

TEST REPORT
No. DCCD - 13875
Date: 22.04.2014

Name & Address of the Customer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Lalbagh Road Cross, Sudhanagar, Bangalore - 560 027

Name & Address of the Manufacturer: M/s. Star Switchgears, No. 6-A, 1st Stage, 1st Cross, Lalbagh Road Cross, Sudhanagar, Bangalore - 560 027

Particulars of sample tested: 12KV, 630Amps, 3 Phase, HT Metering Panel with LBS

Condition of the Sample on Receipt: New

Type: Outdoor
Designation: SSG M55
Serial Number: DCCD
Number of samples tested: One
Date (s) of Test(s): 25.03.2014 and 26.04.2014
CPRI sample code no: DCCD-13875

Particulars of tests conducted: Measurement of resistance of the main circuit (Milli volt drop test) and Temperature rise test at 630Amps

Test in accordance with standard/specification: IEC 62271-200: 2011 / IEC 62271-1: 2011

Sampling plan: Nil

Customer's requirement: Measurement of resistance of the main circuit (Milli volt drop test) and Temperature rise test at 630Amps.

Deviations if any: Nil

Name of the witnessing persons: Customer's representative: Mr. Hanseel M and Mr. Kumar
Other than Customer's representative: Test subcontracted with address of the laboratory: NA

Documents constituting this report (in words): Number of Sheets: Four
Number of drawings: Nil
Number of photos: Nil
Number of test circuit diagrams: Nil
Number of Test Circuit Diagrams: Nil
Number of Drawings: Two 1) STRHMS01 Sheet 1 of 2, 2) STRHMS01 Sheet 2 of 2

Test Engineer: (Signature)

Certificate of Registration
STAR SWITCHGEARS
UNIT 1 :- STAR SWITCHGEARS, NO. 6-A, 1ST STAGE, 1ST CROSS, SUDHANAGAR, LALBAGH ROAD CROSS, BANGALORE-560027, KARNATAKA, INDIA
UNIT 2 :- STAR SWITCHGEARS, NO. 14, GROUND FLOOR, 1ST CROSS, BEGUR ROAD, BOMMANAHALLI, BANGALORE-560068 KARNATAKA, INDIA

QA CERTIFICATION SERVICES PVT. LTD.

Certify that the quality management system of the above organization has been audited and found to be in accordance with the requirements of standard as follows:

ISO 9001:2008

DESIGN, MANUFACTURING, SUPPLY AND SERVICING OF LT & HT ELECTRICAL CONTROL PANELS.

Certificate No.: 040620148173238

This certification was conducted in accordance with the QA Certification Services Pvt. Ltd. auditing and certification procedures and is subject to regular surveillance audits.

Certificate Issue Date: 4th June 2014
Date of Initial Registration: 4th June 2014
Re-Certification Period: 3 Years

Further clarifications regarding the scope of this certificate of ISO 9001:2008 certification may be obtained by consulting the Client/Supplier/Registrar.

System Certification Manager: (Signature)

QA CERTIFICATION SERVICES PVT. LTD.
This Certificate is valid for 3 years subject to regular surveillance audits.

OUR VENDORS:

We work with renowned and tested companies who adhere to industry standards and meet stringent quality requirements. Sensitive equipments like relays, plc, contactors, circuit breakers are crucial to the efficiency of our panels, we scrutinize the best in the industry for precision performance. Designing the right equipment with its precise configuration defines our strategy in quality and endurance. Some of our regular vendors are listed here:



OUR CLIENTELE :



Ever wondered how Chris Gayle could smash the ball off the stadium? well our panels help him do that! Our 11KV NET METERING PANELS are installed in Chinnaswamy Cricket stadium, worlds first solar powered cricket stadium, to effectively measure solar power generation within the stadium and to export solar power, generating additional revenue.





Star Switchgears

REGULATING SMART POWER SINCE 1980

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We can also assist you with:

- Electrical Design, Engineering & consulting services
- Installation, Testing & Commissioning of panels
- Annual maintenance services for control panels
- Rooftop or Grid tied Solar Power plant EPC
- Diesel Generators & Transformers
- Fire control panels, ventilation control systems
- LED lights and building automation systems

Visit us online to know more : www.starswitchgears.in

