

**danish**  
a unit of trust



**Delivering Innovation Everytime**

[www.danish.co.in](http://www.danish.co.in)



## A Lineage of **LEADERSHIP** with Trust

Danish Private Limited was founded in the year 1985. Today Danish takes pride to be known as one of the leading quality & trusted manufacturer & exporter of Power Equipments with a customer roster that includes power majors in India & abroad. The company currently manufactures Oil & Dry Type Power & Distribution transformers, Control Relay Panels & along with it offers Substation Automation Services. Danish has been awarded with Star Export House Status from Government of India & also is the Proud Winner of the EEPC National Award for Three years in a row for Export Excellence in the Product Group of Transformers. Danish has also been shortlisted as India's Top SME's by Dunn Bradstreet & MSME.



## QUALITY FOCUS

The company follows, maintains & monitors an extensive quality management system which is fully compliant with the latest ISO 9001:2015 requirements and is also approved & accepted by global power sector giants such as Siemens, ABB, Tata, etc to name a few. The system is developed to ensure that stringent quality standards are met in every aspect be it vendor evaluation, incoming / in-process / final inspection or service to achieve the ultimate goal of customer satisfaction. The ability to adapt to a rapidly changing economic and global environment is a result of the quality policy and personnel. The Testing Laboratory is accredited by NABL (National Accreditation Board for Testing and Calibration Laboratories), a rare achievement in the industry. Rigorous testing is carried out by advanced testing equipments in Danish Laboratories to ensure that end products meet national, international and customer standards. Further the management system also complies with the requirements of Environmental Management System ISO 14001:2015 & Occupational Health & Safety Management System OHSAS 18001:2007.

## MANUFACTURING FACILITIES & INFRASTRUCTURE

Two manufacturing facilities based in Jaipur spanning over an area of over 8000 sq meters are equipped with complete in house facilities for manufacturing & material handling to facilitate smooth and on-time production. Danish testing facility (NABL Accredited) is capable for routine tests as per IS/IEC/ANSI/BS/SANS Standards along with facilities for special tests such as Capacitance & Tan Delta, Temperature Rise & Partial Discharge tests. The two plants have a combined rolling out capacity of 2600 MVA per annum.

## HUMAN EXPERTISE GIVES US THE EDGE

Our strength is our people and their spirit. With a combination of youth & experience, they constantly innovate-be it in the area of manufacturing, research & development processes, quality control systems, customer support or information systems. Needless to say our team of qualified and experienced design engineers, software engineers and skilled design draughts men are well trained. Working with some of the world's best design and engineering technologies they, together with a team of R&D and quality control specialists have been responsible for our quality products. Product Quality, delivery, innovation & customer service have made Danish a preferred supplier to major Indian & International users. The Danish team is regularly trained to carry out precision work, to innovate and to continuously improve the way products are made.

## EXPORTS

Over 50% of our annual sales come from the International Market and thus Exports continue to be our major focus area and in turn proudly contributing to the India's growth. With exports to over 31 countries, the company has gained invaluable knowledge & experience of the International Markets and thereby comforting International clients by understanding their needs easily. Our continued hard work on the export front has awarded us to be the winners of National Award for Export Excellence in the field of Transformers for the past 3 years.



# OIL IMMERSED TRANSFORMER

Danish Transformers are known for delivering excellent performance. The expert R&D team develops one of the most advanced designs to withstand short-circuit.

## Features

- ▶ Robust design to take care of frequent short circuits.
- ▶ Utmost care in workmanship and selection of quality raw materials ensures long and maintenance free life.
- ▶ Manufactured with prime CRGO using step-lap design for low losses along with availability of Hydraulic Core Lifting Facility.
- ▶ Windings made up of Copper or Aluminum manufactured using Strip (PICC or CTC) / Wire / Foil.
- ▶ Step up and Step down transformers offered.
- ▶ Low Noise Levels
- ▶ Various rating Type-Tested for Short-Circuit, Impulse Voltage Withstand & Temperature Rise Tests at KEMA, CPRI & ERDA.
- ▶ Indoor or Outdoor Applications
- ▶ Tailor Made to meet customer requirements.
- ▶ Strong After Sales Support available across the world.
- ▶ Low Loss & Super Low Loss Transformers available.
- ▶ "STANDARD" mark Transformers (CM/L No : 8400030004) as per latest IS:1180 (2014) available with Level 1, Level 2 and Level 3 efficiency levels along with BEE Star Labeling.



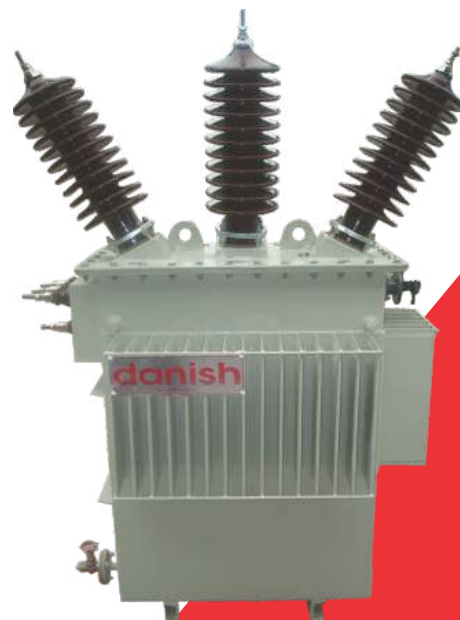
CM/L No: 8400030004

## Technical Specifications

- ▶ Ratings : 3 phase upto 66 KV 30 MVA & 1 phase upto 33 KV 167 kVA
- ▶ Frequency: 50/60 Hz
- ▶ Applicable Standards : Latest versions of IS:1180, IS:2026, IEC:60076, ANSI 57, BS, SANS
- ▶ Class of Insulation : A/B
- ▶ Cooling typically as ONAN (Oil Natural Air Natural) but also available with other High Capacity
- ▶ Cooling options such as ONAF (Oil Natural Air Force), OFAF (Oil Forced Air Forced), OFWF (Oil Forced Water Forced), KNAN or others upon request.
- ▶ Vector Group: Any as per customer requirement like Dyn11, Yzn11, Dd0, etc.
- ▶ Insulating Fluid: Mineral Oil / Silicon Oil, both inhibited & inhibited, as per IS/IEC/ANSI/BS/SANS Standards
- ▶ Biodegradable Ester Filled Transformers also offered
- ▶ Standard Accessories as per customer specifications

## Options

- ▶ Corrugated Fin Radiators or Pressed Steel Radiators
- ▶ Sealed type or Breathing type with Conservator
- ▶ CSP (Completely Self-Protected) Type
- ▶ DGPT2/DMCR multifunction device for sealed type transformers
- ▶ Tappings: Off Circuit Tap Changer with tapping range of 5, 7 or 9 positions OR On Load Tap Changer with an Automatic Voltage Regulating & Remote Tap Change Control Panel (AVR cum RTCC Panel) with tapping range from 7 to 27 positions
- ▶ Termination: Porcelain / Cycloaliphatic / Epoxy / Touch Proof Plug-in type Bushings with option of Cable Box / Bus Duct
- ▶ RTD Temperature Sensors (analog/digital) for alarm & trip, with options of 4-20 mA output or RS-485 for SCADA compatibility
- ▶ Option available with long life Maintenance free Breathers
- ▶ Tanks: Usually made of Mild Steel but also available of Stainless Steel
- ▶ Paint options for tanks such as Flow Painting (PU Paint), Powder Coating or Metallizing / Galvanization



# SPECIAL TRANSFORMER

Danish has an in-house Design & Engineering team capable of designing & manufacturing transformers for special applications such as furnace, rectifier, solar, multi-tap, etc.

## INVERTER DUTY TRANSFORMERS

- ▶ Primarily used for Solar / Wind Power Generation.
- ▶ Typical range from 1 MVA to 15 MVA.
- ▶ 3/4/5/7 Winding Inverter Duty Step up Transformers available as Oil Cooled or Dry Type Cast Resin Type.
- ▶ Designed to meet the inverter requirements in terms of vector, impedance, input voltage, etc.
- ▶ Three & Five Winding Transformers Type Tested to withstand dynamic & thermal effects resulting of a secondary Short Circuit as per IS:2026 / IEC 60076-5 from International Recognized Laboratories.
- ▶ Designed for Reduced Harmonics
- ▶ Supplied for over 2.5 GW Solar Plants with Over 550 installations across India & Internationally as well.

## CONTAINERIZED SUBSTATION TRANSFORMERS

- ▶ Oil Immersed or Cast Resin Type Transformers.
- ▶ Upto 6.3 MVA (2x3.15 MVA Transformers).
- ▶ Multi Tap HV Voltage Transformers available such as 3.3-6.6-11 kV or 11-22-33 kV.

## TRANSFORMERS FOR COMPACT/MINI SUBSTATIONS

### BOOSTER TRANSFORMERS

### FURNACE TRANSFORMERS

### RECTIFIER TRANSFORMERS





# DRY TYPE CAST RESIN TRANSFORMER

With the experience gained in manufacturing oil filled Power and Distribution Transformers, Danish also manufactures Dry Type Transformers in Cast Resin Type.

## Features

- ▶ Flame retardant and self-extinguishing.
- ▶ Low Maintenance.
- ▶ Compact & thus providing high flexibility during installation.
- ▶ High Resistance to Dynamic Circuit Stresses.
- ▶ High Impulse & High Short Circuit Strength.
- ▶ Low Partial Discharge.
- ▶ Resistant to Temperature fluctuations.
- ▶ Can be installed near to load centre thus reduction in cable loses & better voltage regulation.



## Technical Specifications

- ▶ Ratings: 3 phase upto 33 kV 10,000 kVA.
- ▶ Copper or Aluminum Wound.
- ▶ Frequency: 50/60 Hz.
- ▶ Applicable Standards: IS:11171, IEC:60726, ANSI C.12.01, BS, SANS.
- ▶ Class of Insulation: F/H.  
Cooling: AN (Air Natural), ANAF (Air Natural Air Forced)
- ▶ Standard Accessories as per customer specifications.

## Options

- ▶ Tap Changer: Off Circuit Tap Links / Changer or On Load Tap Changer with RTCC Panel.
- ▶ Enclosure: IP 21 to IP 65, with cable boxes / bus ducts as per customer requirement.
- ▶ RTD Temperature Sensors for alarm & trip, with options of 4-20 mA output or RS-485 for SCADA compatibility.



# CONTROL RELAY PANELS & SUB-STATION AUTOMATION

A dedicated team at Danish is responsible for design, engineering & manufacturing of Control & Relay Panels and providing Substation Automation Solutions.

## CONTROL & RELAY PANELS

### Range

- ▶ Panels manufactured for system voltages from 11 kV upto 400 kV offering various protection schemes.
- ▶ Line Protection C&R Panels.
- ▶ Bus Coupler C&R Panels.
- ▶ Synchronizing panels.
- ▶ Bus Bar protection Panels.
- ▶ Network control Panels for Substation Automation.



### Features

- ▶ World class Numerical Protection Relays (Differential, Distance Protection, Bus Bar, Over current, etc.) available with option of IEC 61850 protocol.
- ▶ Simplex & Duplex type panel design offered with option of Single / Double Glass Doors.
- ▶ Suitable for Indoor / Outdoor Duty.
- ▶ Power flow as per Mimic Diagram.
- ▶ Site Testing & Commissioning by expert team of Danish.
- ▶ Designed, manufactured, tested and supplied as per customer's specifications.
- ▶ Panels are fabricated using CRCA sheet with modular construction.
- ▶ Type Tested for Degree of enclosure protection IP:31 to IP:55 offered as per IS:13947.
- ▶ Fully Trained Team for complete commissioning of Control Relay Panels.
- ▶ Fully Air-Conditioned Assembly Area.
- ▶ Painting process involves Nine-tank process of pre-treatment followed by power coating .
- ▶ Approvals in most transmission utilities.

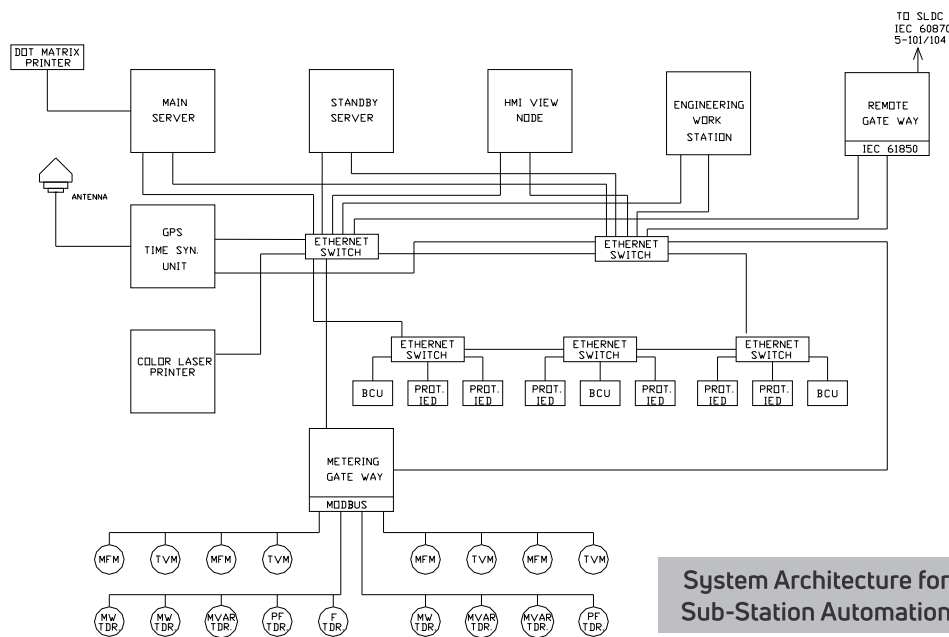


## SUB-STATION AUTOMATION SYSTEMS

Providing remote control & monitoring functions for all kind of transmission sub-transmission & distribution substations.

### Features

- ▶ New Installations & Retrofitting / Upgrading older protection & control systems with modular substation automation system providing better control & monitoring of substations.
- ▶ Bay control solutions for MV to EHV Substations.
- ▶ IEC 61850 compliant systems.
- ▶ Integrated Protection, Control, Monitoring & Automation system.



## OUR GLOBAL SUPPLIES

Over the years Danish has achieved a commendable position in the global market for its product categories, having expanded beyond the country barriers into International markets. We have been extensively exporting all our products worldwide, owing to our low production cost and high engineering quality, adding up to make us an optimum choice.



1. United Kingdom
2. United Arab Emirates
3. Bahrain
4. Iran
5. Syria
6. Oman
7. Afghanistan
8. Nepal
9. Bangladesh
10. Sri Lanka
11. Myanmar
12. Bhutan
13. Laos
14. Maldives
15. Ethiopia
16. Kenya
17. Uganda
18. Tanzania
19. Rwanda
20. Zambia
21. Malawi
22. Mozambique
23. Burundi
24. Chad
25. Nigeria
26. Benin
27. Togo
28. Ghana
29. Guinea
30. Senegal
31. Jordan
32. Vietnam

# APPRECIATIONS & ACCOLADES



## OUR ESTEEMED CLIENTELE



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CM/L No:  
8400030004



NABL Certificate  
No.: TC-5905



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