



FEDERAL ELECTRIC

SMART ELECTRIFICATION & AUTOMATION



ABOUT US

Empowering power sector with precision and innovation in manufacturing

Federal Transformers and Switchgears LLC (FTS) is a pioneering Omani enterprise dedicated to engineering excellence in the manufacturing of power and distribution transformers. Strategically situated in the Rusayl Industrial Area of Muscat, FTS is a proud subsidiary of the Federal Electric Group under The Zubair Corporation. Guided by an unwavering commitment to quality and sustainability, we hold prestigious ISO certifications—ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018—reflecting our focus on delivering products that are safe, reliable, and environmentally responsible.

Our Vision

Our vision is to deliver smart electrification solutions, including innovative products and services, to foster a sustainable society. By leveraging cutting-edge technology, we aim to empower individuals and businesses to thrive in an interconnected future.





CRAFTING SUPERIOR SOLUTIONS FOR THE GCC AND BEYOND

FTS stands at the forefront of the region's electric power distribution sector, catering to a diverse customer base across Oman and the GCC. We specialize in the engineering, design, and manufacturing of power and distribution transformers, all tailored to meet the growing complexity and demands of the energy industry.

Housed in a state-of-the-art, dust-free manufacturing facility, our production processes are powered by cutting-edge technology, rigorous quality standards, and a passion for innovation. From transformer blueprints created with advanced CAD software to type testing in world-renowned laboratories in Europe, every step reflects our dedication to precision and excellence.

WHY CHOOSE **FEDERAL** **TRANSFORMERS?**

1. Uncompromising Standards:

Our products meet the stringent requirements of international standards like IEC-60076, IEEE C57, and BS-171, ensuring unparalleled quality and performance.

2. Innovative Design:

Computerized techniques and iterative analysis guarantee optimal transformer designs.

4. Sustainability:

We use environmentally friendly materials, including biodegradable oils and dry-type resin transformers, minimizing ecological impact.

4. Quality in Focus:

All our process subjected to Quality control & Quality assurance, where all IMS requirements has been implemented in strict manner without any compromise.

Innovative Manufacturing Practices

1. Core Excellence:

Our transformer cores, made from high-permeability silicon steel, use CNC-controlled step-lap cutting for reduced no-load losses, lower noise levels, and improved efficiency.

2. High-Precision Windings:

Employing advanced machines, our HV and LV windings ensure uniform impulse distribution and resilience against surges.

3. Robust Tank Design:

Our tanks are corrosion-resistant, leak-proof, and finished with high-quality coatings, ensuring durability in the harshest environments.

4. Controlled Manufacturing:

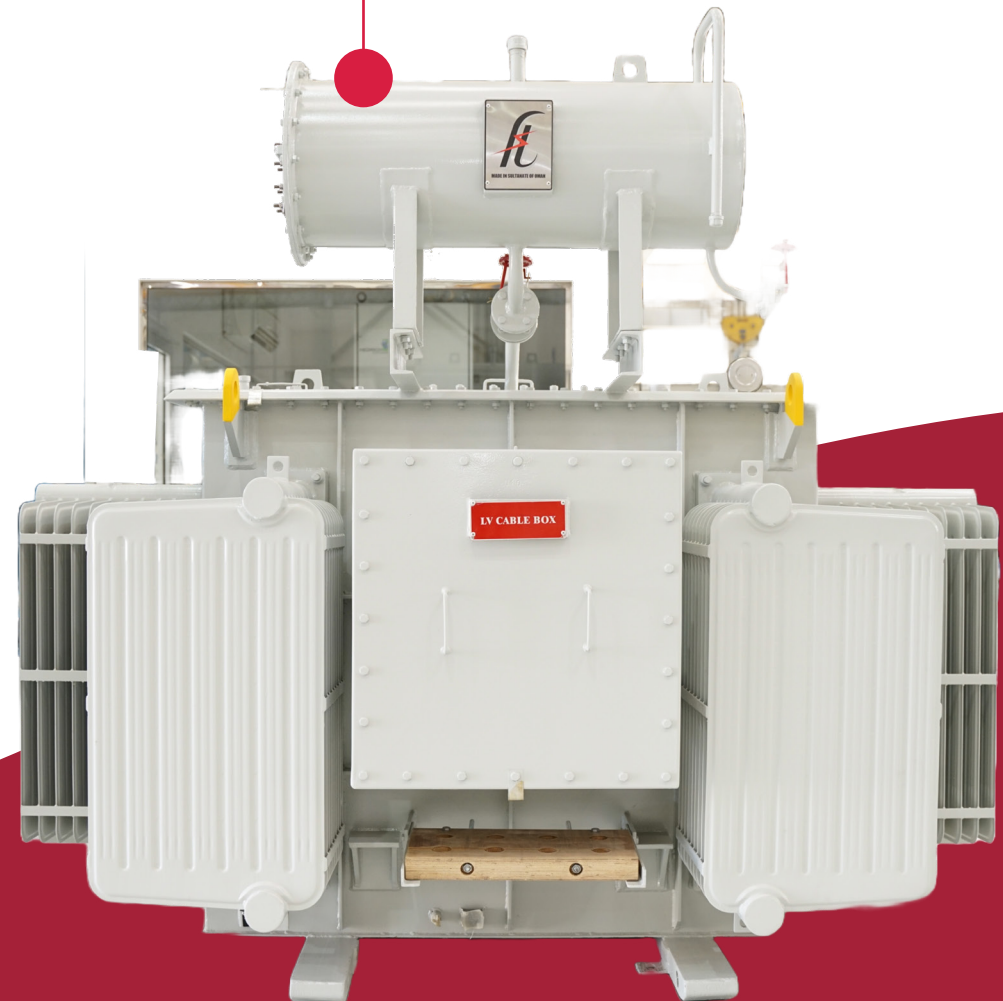
From CNC-cut cores to advanced automated winding processes, every product is crafted with meticulous attention to detail.



Conservator Type Transformers (GMT & PMT)

Key Features:

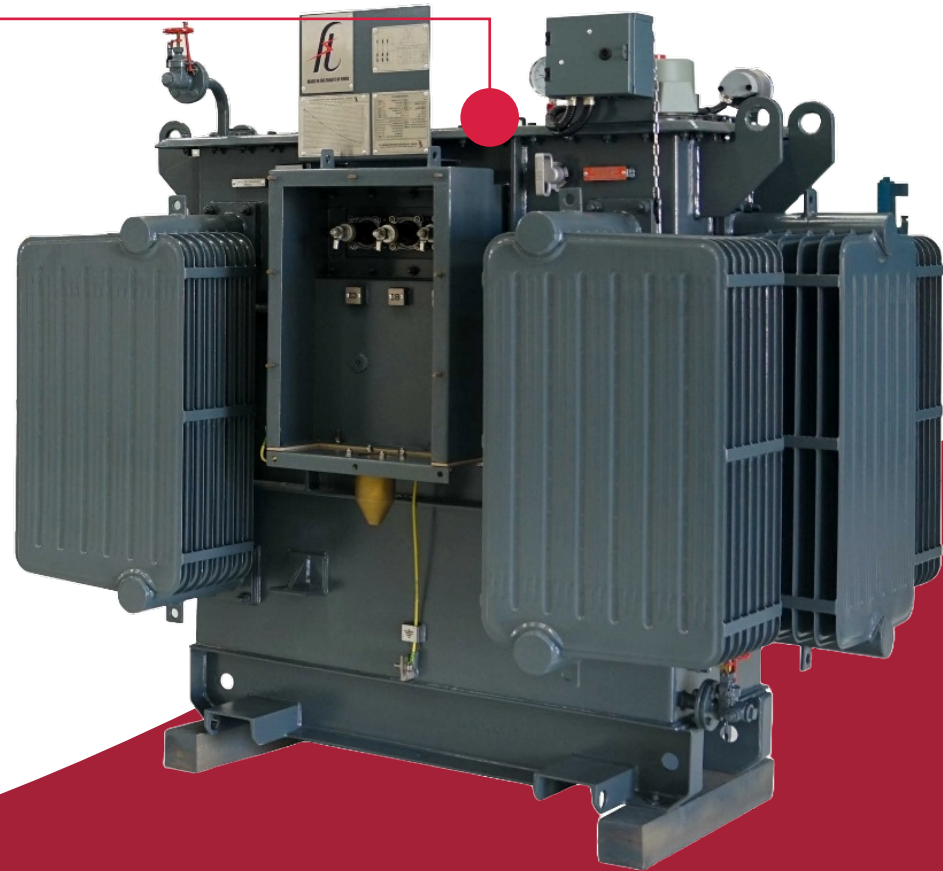
- 11kV class from 100 KVA to 4000KVA
- 33kV class From 100KVA to 20 MVA with OLTC
- All types with Mineral Oil
- Special Painting C5M/As Specified
- Biodegradable Oil option is available as per request



Hermetically Sealed Transformers

Key Features:

- 11kV class from 100 KVA to 4000KVA
- 33kV class From 100kVA to 6000kVA
- All types with Mineral Oil
- Special Painting C5M/As Specified
- Biodegradable Oil option is available as per request



Package Substations

Key Features:

- 11KV class up to 2000kVA With metal & GRP type enclosure
- 33KV class up to 6000kVA with metal type enclosure
- Our pre-assembled substations integrate transformers, Ring Main Units (RMUs), and feeder pillars to deliver a seamless, ready-to install solution.



Modern Type Compact Substations

Key Features:

- 11KV class up to 1600kVA with metal type enclosure
- Latest international specification
- Decoration for aesthetics
- Plug & play solution
- Special enclosure with better ventilation & dust trapping louvers



Successfully tested for arc resistance at KEMA, Netherlands, our sub-stations are a testament to our engineering process

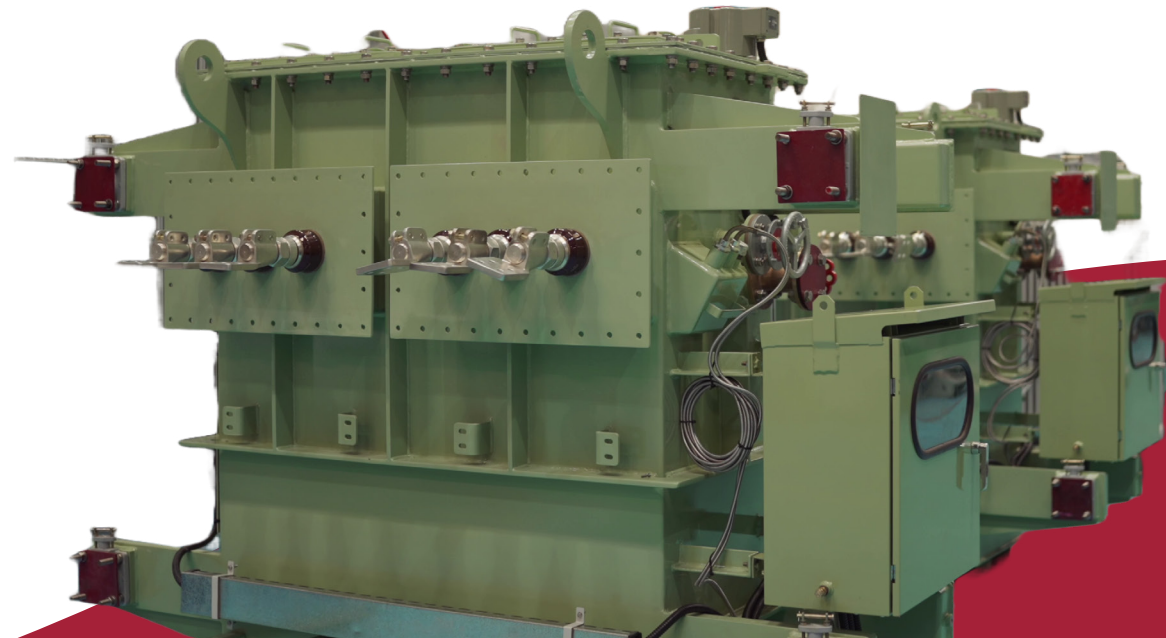
Specialized Transformers

Key Features:

Custom-designed for application

Such as

- Inverter Duty Transformers for Solar application
- Converter Duty Transformers for Well Head application 6P/12P/18P/24P
- Skid Mounted portable transformer for Oil & Gas



Dry-Type Cast Resin Transformers

Key Features:

- Up to 36KV
- Designed for High Efficiency
- Low Maintainance
- Superior Fire Safety



Power & Distribution Transformers Repairing & AMC

Key Features:

- On site repairs & Overhauls
- Factory repairs & Overhauls
- On site Condition assessment
- Annual Maintenance Contracts
- Accessories



Our Services Portfolio

Your Trusted Partner in Power Solutions

At FTS, we are committed to delivering exceptional customer service, premium-quality products, and cutting-edge solutions to meet the diverse needs of our clients. Our expertise spans the following services:

1. Annual Maintenance Contracts (AMC)

Advanced diagnostics to detect potential issues early and maximize transformer performance.

2. Condition Monitoring

Comprehensive support to ensure your transformers operate efficiently year-round.

3. Supervision of Erection, Testing & Commissioning

Expert oversight to guarantee seamless installation and startup of transformers.

4. Lifetime Assessment & Health Checks

In-depth evaluations to extend the life of your transformers and optimize reliability.

5. Oil Filtration & Filling

Specialised services to enhance transformer insulation and operational longevity.

6. Overhaul & Repair Services

Tailored solutions to restore your transformers to peak performance.

7. Partial Discharge Analysis

State-of-the-art testing to identify insulation weaknesses and prevent failures.

8. Rewinding & Reengineering

Custom transformer modifications designed to meet evolving operational demands.

9. High-Quality Transformer Spares

A wide range of spare parts to support the seamless functioning of your equipment.

Let Federal Transformers Oman power your business with reliable, innovative, and efficient transformer solutions

Raising the Bar in Testing & Quality Assurance

FTS operates a state-of-the-art testing lab equipped to perform a comprehensive range of routine and type tests, including:

Routine Tests:

- Measurement of Insulation Resistance.
- Measurement of Voltage Ratio & Vector Group Check.
- Measurement of Winding Resistance.
- Measurement of No Load Loss and Current.
- Induced Overvoltage With stand Test.
- Separate Source Voltage With stand Test.
- Breakdown Voltage test for Transformers Oil as per IEC-60296.

Type Tests:

Various type tests as per customer requirements.



Industry Approvals & Certifications

FTS is a trusted partner to prestigious organizations, holding approvals from:

- NAMA Electricity Distribution Company (NEDC)
- NAMA Dhofar Services Company (NDS)
- Distribution Code Review Panel (DCRP)
- KAHRAMAA (QATAR)
- Petroleum Development Oman (PDO)
- OQ Group
- Many More Oil & Gas and Industrial Clients



Certifications

Bureau Veritas Certification

FEDERAL TRANSFORMERS AND SWITCHGEARS L.L.C
P.O. Box 296, Postal Code 124,
Plot No-325-328, Rasyl Industrial Area,
SULTANATE OF OMAN

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 14001:2015
Scope of certification

DESIGN DEVELOPMENT, MANUFACTURING, TESTING, SUPPLY & SERVICING OF POWER AND DISTRIBUTION TRANSFORMERS CONTAINING MINERAL/NATURAL/SYNTHETIC INSULATING OILS, CAST RESIN TRANSFORMERS, SPECIAL TRANSFORMERS, PACKAGE SUBSTATIONS & FEEDER PILLARS

Original cycle start date: 10-01-2018
Expiry date of previous cycle: 09-01-2024
Certification / Recertification Audit date: 28-12-2023
Certification / Recertification cycle start date: 13-02-2024
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 09-01-2027
Certificate No.: OMO22150 Version: 1 Issue date: 13-02-2024

Signed on behalf of BVCH SAS UK Branch
Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8PG, United Kingdom
Local Office: Bureau Veritas Middle East Co. LLC, Office 44, 4th Floor, Canal Building, Al Khawan, P.O. Box 110, P.C. 124, Muscat, Sultanate of Oman
Further certifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +968 2496 2000
UKAS Certificate Template Single Site Rev 4.1 1/1 28 Aug 2023

Bureau Veritas Certification

FEDERAL TRANSFORMERS AND SWITCHGEARS L.L.C
P.O. Box 296, Postal Code 124,
Plot No-325-328, Rasyl Industrial Area,
SULTANATE OF OMAN

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 9001:2015
Scope of certification

DESIGN DEVELOPMENT, MANUFACTURING, TESTING, SUPPLY & SERVICING OF POWER AND DISTRIBUTION TRANSFORMERS CONTAINING MINERAL/NATURAL/SYNTHETIC INSULATING OILS, CAST RESIN TRANSFORMERS, SPECIAL TRANSFORMERS, PACKAGE SUBSTATIONS & FEEDER PILLARS

Original cycle start date: 10-01-2018
Expiry date of previous cycle: 09-01-2024
Certification / Recertification Audit date: 28-12-2023
Certification / Recertification cycle start date: 13-02-2024
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 09-01-2027
Certificate No.: OMO22148 Version: 1 Issue date: 13-02-2024

Signed on behalf of BVCH SAS UK Branch
Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8PG, United Kingdom
Local Office: Bureau Veritas Middle East Co. LLC, Office 44, 4th Floor, Canal Building, Al Khawan, P.O. Box 110, P.C. 124, Muscat, Sultanate of Oman
Further certifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +968 2496 2000
UKAS Certificate Template Single Site Rev 4.1 1/1 28 Aug 2023

Bureau Veritas Certification

FEDERAL TRANSFORMERS AND SWITCHGEARS L.L.C
P.O. Box 296, Postal Code 124,
Plot No-325-328, Rasyl Industrial Area,
SULTANATE OF OMAN

Bureau Veritas Certification Holding SAS - UK Branch certifies that the Management System of the above organisation has been audited and found to be in accordance with the requirements of the management system standards detailed below

ISO 45001:2018
Scope of certification

DESIGN DEVELOPMENT, MANUFACTURING, TESTING, SUPPLY & SERVICING OF POWER AND DISTRIBUTION TRANSFORMERS CONTAINING MINERAL/NATURAL/SYNTHETIC INSULATING OILS, CAST RESIN TRANSFORMERS, SPECIAL TRANSFORMERS, PACKAGE SUBSTATIONS & FEEDER PILLARS

Original cycle start date: 10-01-2018
Expiry date of previous cycle: 09-01-2024
Certification / Recertification Audit date: 28-12-2023
Certification / Recertification cycle start date: 13-02-2024
Subject to the continued satisfactory operation of the organisation's Management System, this certificate expires on: 09-01-2027
Certificate No.: OMO22149 Version: 1 Issue date: 13-02-2024

Signed on behalf of BVCH SAS UK Branch
Certification Body Address: 5th Floor, 66 Prescot Street, London, E1 8PG, United Kingdom
Local Office: Bureau Veritas Middle East Co. LLC, Office 44, 4th Floor, Canal Building, Al Khawan, P.O. Box 110, P.C. 124, Muscat, Sultanate of Oman
Further certifications regarding the scope and validity of this certificate, and the applicability of the management system requirements, please call: +968 2496 2000
UKAS Certificate Template Single Site Rev 4.1 1/1 28 Aug 2023

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المملكة العربية السعودية
وزارة البترول والثروة المعدنية
شركة البترول الوطنية
البنوك والبنوك

Ref: RE/CDOMAH/160/ 15.13
Date: 3 May 2018
M/s Zubair Electric LLC
P.O. Box 2634
COP, Postal Code 111
Sultanate of Oman
Fax: 24594922 / 24594927
Attn: Mr. Manoj Kumar Ghosh, General Manager

Dear Sirs,
Product approval - FEDERAL Distribution Transformers both Oil and Dry type
We refer to your letter ref. ZEL/16009MV/SBH/24823 dated 08.04.2018 regarding the above mentioned subject.
We have no objection to include your company who are the authorized channel partners for M/s. Federal Transformers and Switchgears L.L.C. Oman, in our approved vendors list subject to strict adherence of standards and quality. However, we reserve the right to remove from our approved list at any time if we observe performance/quality deficiency in your supplied products.
This is for your information and necessary records please.
Yours faithfully,
Zubair bin Ali Dawood
D.O. of Architectural & Engineering Design
Central Design Office

P.O. Box : 949, Postal Code 100
Telephone : 24 088500
Telefax : 24 088506
E-mail : cdomt@raa.gov.om
الهاتف : 24 088500
الفاكس : 24 088506
البريد الإلكتروني : cdomt@raa.gov.om

شركة تنمية نفط عمان
Petroleum Development Oman L.L.C.
CERTIFICATE OF REGISTRATION - PRODUCT VENDOR

CERTIFICATE NUMBER: **RED1002283-2022**
VENDOR CODE: **100342** DATE OF ISSUE: 28.04.2022

PETROLEUM DEVELOPMENT OMAN LLC
CERTIFIES THAT:

MANUFACTURER: FEDERAL TRANSFORMERS & SWITCHGERS CO.
COUNTRY OF ORIGIN: Oman
LOCAL AGENT: ZUBAIR ELECTRIC LLC
COMMERCIAL AGENCY NO.: 128349
POSTAL ADDRESS: X.P.O. Box 2634 CPO SEEB

IS REGISTERS WITH THE COMPANY AS AN APPROVED PRODUCT VENDOR WITH EFFECT FROM THE DATE OF ISSUE OF THIS CERTIFICATE FOR THE FOLLOWING PRODUCT GROUP CATEGORIES:

ELECTRICAL EQUIPMENT & SERVICES

REGISTERED	AVOIDED	PRODUCT CATEGORY	REGISTERED SUB-CATEGORY	STANDARDS & CERTS	MAXIMUM	MINIMUM
ISCADAN	AVOIDED	TRANSFORMERS	MINI TRANSFORMER	Minimum Capacity up to 25000 KVA	Minimum	Minimum
ISCADAN	AVOIDED	TRANSFORMERS	MINI TRANSFORMER	Minimum Capacity up to 25000 KVA	Minimum	Minimum

Al-Azhar Engineering & Professional Support Ltd.
Website: www.alazhar.com & Professional Support Ltd.
Phone: +968 2496 2000
FAX: +968 2496 2000
Page 1 of 2

Certifications


 مجلس مراجعة قواعد التوزيع
 DISTRIBUTION CODE REVIEW PANEL

Product Approval Certificate

Certificate No: DCRP/PA/CER/2020/06 Issue Date: 12th Feb 2020 First Registration: 12th Feb 2020

Distribution Code Review Panel
Certifies That:

Electrical Product: 500, 630, 1000 & 1600 KVA, 11/0.433 KV, Cast Resin Dry Type Transformers
Manufacturer: Federal Transformers Co. LLC.
Country of Origin: Abu Dhabi, United Arab Emirates
Local Representative: Federal Transformers & Switchgears LLC.
Address: P.O. Box 296, P.C. 124 Sultanate of Oman
 Tel: (+ 968) 24594621


Is registered with the panel as an Approved Product with the effect from the date of issuing this certificate

DCRP CHAIRMAN

This Certificate is valid until:
 11th Feb 2025
 Please Refer Overleaf for Approval Conditions

Total Page Number: 45 Pages

The Panel Establishment Pursuant to Article (96) of Royal Decree 79/2004
 المجلس المختص طبقاً للمادة ٩٦ من المرسوم السلطاني رقم ٧٩/٢٠٠٤


 مجلس مراجعة قواعد التوزيع
 DISTRIBUTION CODE REVIEW PANEL

Product Approval Certificate

Certificate No: DCRP/PA/CER/2022/37 Issue Date: 09th August 2023 First Registration: 14th May 2018

Distribution Code Review Panel
Certifies That:


Electrical Product: 100, 200, & 315KVA, 11/0.433 KV Oil Type Distribution Transformers
Manufacturer: Federal Transformers & Switchgears LLC.
Country of Origin: Sultanate of Oman
Local Representative: Federal Transformers & Switchgears LLC.
Address: P.O. Box 296, P.C. 124 Sultanate of Oman
 Tel: (+ 968) 24594621

Is registered with the panel as an Approved Product with the effect from the date of issuing this certificate

DCRP CHAIRMAN

This Certificate is valid until:
 13th May 2028
 Please Refer Overleaf for Approval Conditions

The Panel Establishment Pursuant to Article (96) of Royal Decree 79/2004
 المجلس المختص طبقاً للمادة ٩٦ من المرسوم السلطاني رقم ٧٩/٢٠٠٤


 مجلس مراجعة قواعد التوزيع
 DISTRIBUTION CODE REVIEW PANEL

Product Approval Certificate

Certificate No: DCRP/PA/CER/2022/13 Issue Date: 30th May 2023 First Registration: 22nd Feb 2018

Distribution Code Review Panel
Certifies That:

Electrical Product: 500 & 1000 KVA, 11/0.433 KV Distribution Transformers
Manufacturer: Federal Transformers & Switchgears LLC.
Country of Origin: Sultanate of Oman
Local Representative: Federal Transformers & Switchgears LLC.
Address: P.O. Box 296, P.C. 124 Sultanate of Oman
 Tel: (+ 968) 24594621

Is registered with the panel as an Approved Product with the effect from the date of issuing this certificate

DCRP CHAIRMAN

This Certificate is valid until:
 29th May 2028
 Please Refer Overleaf for Approval Conditions

The Panel Establishment Pursuant to Article (96) of Royal Decree 79/2004
 المجلس المختص طبقاً للمادة ٩٦ من المرسوم السلطاني رقم ٧٩/٢٠٠٤


 مجلس مراجعة قواعد التوزيع
 DISTRIBUTION CODE REVIEW PANEL

Product Approval Certificate

Certificate No: DCRP/PA/CER/2022/06 Issue Date: 09th Feb 2022 First Registration: 12th Feb 2020

Distribution Code Review Panel
Certifies That:

Electrical Product: 2000 KVA, 11/0.433 KV Oil Immersed Distribution Transformers
Manufacturer: Federal Transformers & Switchgears LLC.
Country of Origin: Sultanate of Oman
Local Representative: Federal Transformers & Switchgears LLC.
Address: P.O. Box 296, P.C. 124 Sultanate of Oman
 Tel: (+ 968) 24594621

Is registered with the panel as an Approved Product with the effect from the date of issuing this certificate

DCRP CHAIRMAN

This Certificate is valid until:
 11th Feb 2025
 Please Refer Overleaf for Approval Conditions

The Panel Establishment Pursuant to Article (96) of Royal Decree 79/2004
 المجلس المختص طبقاً للمادة ٩٦ من المرسوم السلطاني رقم ٧٩/٢٠٠٤


 مجلس مراجعة قواعد التوزيع
 DISTRIBUTION CODE REVIEW PANEL

Product Approval Certificate

Certificate No: DCRP/PA/CER/2022/05 Issue Date: 09th Feb 2022 First Registration: 12th Feb 2020

Distribution Code Review Panel
Certifies That:


Electrical Product: 20MVA, 33/11.5 KV Oil Immersed Power Transformers
Manufacturer: Federal Transformers & Switchgears LLC.
Country of Origin: Sultanate of Oman
Local Representative: Federal Transformers & Switchgears LLC.
Address: P.O. Box 296, P.C. 124 Sultanate of Oman
 Tel: (+ 968) 24594621

Is registered with the panel as an Approved Product with the effect from the date of issuing this certificate

DCRP CHAIRMAN

This Certificate is valid until:
 11th Feb 2025
 Please Refer Overleaf for Approval Conditions

The Panel Establishment Pursuant to Article (96) of Royal Decree 79/2004
 المجلس المختص طبقاً للمادة ٩٦ من المرسوم السلطاني رقم ٧٩/٢٠٠٤


 مجلس مراجعة قواعد التوزيع
 DISTRIBUTION CODE REVIEW PANEL

Product Approval Certificate

Certificate No: DCRP/PA/CER/2021/14 Issue Date: 4th May 2021 First Registration: 10th May 2016

Distribution Code Review Panel
Certifies That:

Electrical Product: 400 A, 6 Ways Mini Feeder Pillar (GRP Enclosure)
Manufacturer: Premier Switchgears L.L.C
Country of Origin: Sultanate of Oman
Local Representative: Premier Switchgears L.L.C
Address: P.O. Box: 849, P.C. 211, Salalah Sultanate of Oman
 Tel: (+ 968) 26884137

Is registered with the panel as an Approved Product with the effect from the date of issuing this certificate

DCRP CHAIRMAN

This Certificate is valid until:
 03rd May 2026
 Please Refer Overleaf for Approval Conditions

The Panel Establishment Pursuant to Article (96) of Royal Decree 79/2004
 المجلس المختص طبقاً للمادة ٩٦ من المرسوم السلطاني رقم ٧٩/٢٠٠٤

Sultanate of Oman
Ministry of Defence
Engineering Services

Document No.: MOD/ES/73/2022
 Date of Issue: 10/10/2022

THE FOLLOWING PRODUCT:

MANUFACTURED BY: Federal Transformers & Switchgears L.L.C. - Made in Oman
TRADED BY (LOCAL AGENT): Federal Transformers & Switchgears L.L.C.
Sultanate of Oman

The product is only approved for the following conditions:
 Please turn the certificate to see technical conditions

HAS BEEN EVALUATED AND APPROVED TO BE USED IN MINISTRY OF DEFENCE ENGINEERING SERVICES (MODES)

This certificate is valid for **Three years** from the date of issue. It will null and void if any discrepancy is found at any stage in the salient features and constituent components declared by the manufacturer or failure of supplier to provide MODES with the required technical support or after sales services as agreed

رئيس لجنة اعتماد المنتجات
 Products Approval Committee Chairman

سلطنة عمان
وزارة الدفاع
الخدمات الهندسية

رقم المستند: مود/٧٣/٢٠٢٢
 تاريخ الإصدار: ١٠/١٠/٢٠٢٢

للمنتج التالي:

جهة المنتج:

الوكيل المحلي:

الإتحادية للمحولات والمقابس الكهربائية ش.م.م
 سلطنة عمان

للمنتج ممتد فقط حسب الشروط التالية
 يرجى الاطلاع على الشروط الفنية على الشهادة

تم تقييمه واعتماده للاستخدام من قبل الخدمات الهندسية بوزارة الدفاع

تعدد هذه الشهادة مازولة المعمول بها لثلاث سنوات من تاريخ الإصدار وتصبح لاغية في حال العثور على فروق في أي من مميزات المنتج أو مكوناته أو أي من مواصفاته الأساسية عن ما أعلنت عنه جهة التصنيع أو ارتفاع اللجوء إلى إيراد الخدمات الهندسية فيها أو عدم تقديم دعم ما بعد البيع الفني عليها مستقبلاً.

رئيس لجنة اعتماد المنتجات
 Products Approval Committee Chairman

شهادة اعتماد منتج
Product Approval Certificate

Distribution Transformers -11KV (100,200 & 315 KVA)
 (500,1000,2000 KVA)

Head of Engineering Services
 ENGINEERING SERVICES OFFICE

Certifications

DNV-GL

KEMA TYPE TEST CERTIFICATE OF SHORT-CIRCUIT PERFORMANCE

Object A three-phase oil-immersed power transformer **2084-19**

Type Power Transformer **Serial No.** 000479/01

Rated power: 20 MVA (ONAN) / 15 MVA (ONAN)
 Rated voltage: 33 kV ± 2.5% / 11.5 kV
 Connection symbol: Dyn11
 Rated frequency: 50 Hz

Manufacturer Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman *

Client Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman

Tested by KEMA B.V., Arnhem, the Netherlands

Date of tests 16 January, 7 March and 12 June 2019

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

IEC 60076-5:2006

This Certificate has been issued by DNV GL following exclusively the STL Guidelines.

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard with respect to the dynamic ability to withstand short-circuits.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This Certificate consists of 76 pages in total.

KEMA B.V.
 Shikhar Subramany
 Director, High-Power Laboratory

KEMA Laboratories Arnhem, 23 July 2019

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DNV-GL

KEMA TYPE TEST CERTIFICATE OF TEMPERATURE-RISE AND DIELECTRIC PERFORMANCE

Object A three-phase oil-immersed pole-mounted distribution transformer **1035-19**

Type distribution transformer with welded type radiators **Serial No.** 2707

Rated power: 100 kVA
 Rated voltage: 33 kV ± 2.5% / 0.433 kV
 Connection symbol: Dyn11
 Rated frequency: 50 Hz

Manufacturer Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman *

Client Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman

Tested by KEMA B.V., Utrechtseweg 310, Arnhem, the Netherlands

Date of tests 14 to 29 January 2019

The object, constructed in accordance with the description, drawings and photographs incorporated in this certificate has been subjected to the series of proving tests in accordance with

IEC 60076-1:2011, IEC 60076-2:2011, IEC 60076-3:2013 and IEC 60076-10:2016

This Type Test Certificate has been issued by DNV GL following exclusively the STL Guidelines.

The results are shown in the record of Proving Tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard (s) and to justify the ratings assigned by the manufacturer as listed on page 4.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This Certificate consists of 52 pages in total.

KEMA B.V.
 Shikhar Subramany
 Director, High-Voltage Laboratory

KEMA Laboratories Arnhem, 24 April 2019

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DNV-GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

Object A three-phase oil-immersed distribution transformer **2018-10**

Type distribution transformer with corrugated fin type tank **Serial No.** 5709

Rated power: 200 kVA
 Rated voltage: 11 kV ± 2.5% / 0.433 kV
 Connection symbol: Dyn11
 Rated frequency: 50 Hz

Manufacturer Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman *

Client Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman

Tested by KEMA B.V., Utrechtseweg 310, Arnhem, the Netherlands

Date of tests 14 January to 29 January 2019

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with the complete type test requirements of

IEC 60076-1:2011, IEC 60076-2:2011, IEC 60076-3:2013, IEC 60076-5:2006, IEC 60076-10:2016

This Certificate has been issued by DNV GL following exclusively the STL Guidelines.

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard and to justify the ratings assigned by the manufacturer as listed on page 5 and the dynamic ability to withstand short-circuits.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This Certificate consists of 93 pages in total.

KEMA B.V.
 Shikhar Subramany
 Director, High-Power Laboratory

KEMA Laboratories Arnhem, 24 April 2019

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DNV-GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

Object A three-phase oil-immersed distribution transformer **2028-18**

Type Distribution transformer **Serial No.** 00003

Rated power: 315 kVA
 Rated voltage: 11 kV ± 2.5% / 433 V
 Connection symbol: Dyn11
 Rated frequency: 50 Hz

Manufacturer Federal Transformers and Switchgears LLC
 P.O. Box 2634 CPO, 121 Seeb, Rusay, Oman *

Client Federal Transformers and Switchgears LLC
 P.O. Box 2634 CPO, 121 Seeb, Rusay, Oman

Tested by DNV GL Netherlands B.V., Arnhem, the Netherlands

Date of tests 25, 26 January and 15 February 2018

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with the complete type test requirements of

IEC 60076-1:2011, IEC 60076-2:2011, IEC 60076-3:2013, IEC 60076-5:2006, IEC 60076-10:2016

This Certificate has been issued by DNV GL following exclusively the STL Guidelines.

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard and to justify the ratings assigned by the manufacturer as listed on page 5 and the dynamic ability to withstand short-circuits.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This Certificate consists of 70 pages in total.

DNV GL Netherlands B.V.
 J.S. Yonjine
 Executive Vice President
 KEMA Laboratories

KEMA Laboratories Arnhem, 20 March 2018

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DNV-GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

Object A three-phase oil-immersed distribution transformer **2204-18**

Type Distribution transformer **Serial No.** 3226

Rated power: 1000 kVA
 Rated voltage: 11 kV ± 2.5% / 433 V
 Connection symbol: Dyn11
 Rated frequency: 50 Hz

Manufacturer Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman *

Client Federal Transformers and Switchgears LLC
 P.O. Box 296, PC 124, Plot No. 325-328, Rusay Industrial Area, Oman

Tested by DNV GL Netherlands B.V., Arnhem, the Netherlands

Date of tests 4 to 23 July 2018

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with

IEC 60076-1:2011, IEC 60076-2:2011, IEC 60076-3:2013, IEC 60076-5:2006, IEC 60076-10:2016

This Certificate has been issued by DNV GL following exclusively the STL Guidelines.

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard with respect to the dynamic ability to withstand short-circuits.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This Certificate consists of 73 pages in total.

DNV GL Netherlands B.V.
 J.S. Yonjine
 Executive Vice President
 KEMA Laboratories

KEMA Laboratories Arnhem, 5 October 2018

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DNV-GL

KEMA TYPE TEST CERTIFICATE OF COMPLETE TYPE TESTS

Object A three-phase oil-immersed distribution transformer **2323-17**

Type distribution transformer **Serial No.** 00002

Rated power: 1000 kVA
 Rated voltage: 11 kV ± 2.5% / 433 V
 Connection symbol: Dyn11
 Rated frequency: 50 Hz

Manufacturer Federal Transformers and Switchgears LLC
 Rusay, Sultanate of Oman *

Client Federal Transformers and Switchgears LLC
 Rusay, Sultanate of Oman

Tested by DNV GL Netherlands B.V., Arnhem, the Netherlands

Date of tests 5, 6, 10, 11 October, 9 November, 6, 12 December 2017

The object, constructed in accordance with the description, drawings and photographs incorporated in this Certificate, has been subjected to the series of proving tests in accordance with the complete type test requirements of

IEC 60076-1:2011, IEC 60076-2:2011, IEC 60076-3:2013, IEC 60076-5:2006, IEC 60076-10:2016

This Certificate has been issued by DNV GL following exclusively the STL Guidelines.

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard and to justify the ratings assigned by the manufacturer as listed on page 5 and the dynamic ability to withstand short-circuits.

This Certificate applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This Certificate consists of 70 pages in total.

DNV GL Netherlands B.V.
 J.S. Yonjine
 Executive Vice President
 KEMA Laboratories

KEMA Laboratories Arnhem, 22 December 2017

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KEMA Labs

KEMA TEST REPORT

1214-22
Revision 1

Object A three-phase unit substation consisting of:
 - One three-phase oil-immersed Ring Main Unit
 - Serial number: SFO039186
 - A three-phase oil-immersed hermetically sealed distribution transformer
 - Serial number: 100118
 - Six-way feeder pillar
 - Serial number: 12193

Type 3F-FF-DPS **Serial No.** 100118

11/0,433 kV - 1600 kVA - 84/213 A - 50 Hz

Client Federal Transformers and Switchgears LLC
 P.O. Box 296, Plot No. 325-328, Rusay Industrial Area, Sultanate of Oman

Manufacturer Federal Transformers and Switchgears LLC
 P.O. Box 296, Plot No. 325-328, Rusay Industrial Area, Sultanate of Oman *

Tested by KEMA B.V., Arnhem, the Netherlands

Date of tests September 1 to December 16, 2022

Test specification The tests have been carried out in accordance with client's instructions. Test procedure and test parameters were based on IEC 62771-202 (2014).

Summary and conclusion The temperature rise test inside the enclosure met the requirements for class 10 enclosures.
 The IP and IK has been verified.

This report applies only to the object tested. The responsibility for conformity of any object having the same type references as that tested rests with the Manufacturer, * as declared by the manufacturer.

This report consists of 42 pages in total.

KEMA B.V.
 Shikhar Subramany
 Director, High-Voltage Laboratory

KEMA Laboratories Arnhem, July 10, 2023

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EPN

Type Test Report

Document No: 10877-19-1051 Copy No: 1 Number of pages: 68

Apparatus: Three-phase oil-immersed power transformer
 Designation: 2000 kVA type without further designation

Serial Number: 1726

Manufacturer: Federal Transformers and Switchgears LLC
 P.O. Box 296, Postal Code 124
 Rusay, Sultanate of Oman

Client: Federal Transformers and Switchgears LLC
 P.O. Box 296, Postal Code 124
 Rusay, Sultanate of Oman

Date(s) of test(s): 05 September to 18 October 2019

Tested by: PFI Institut „Profifield“ für elektrische Hochleistungstechnik GmbH
 Landsberger Allee 376A
 12851 Berlin
 GERMANY

Test(s) performed: Selected type tests
 Selected serial tests
 Selected routine tests
 (See clause 2 performed test(s))

The apparatus, constructed in accordance with the description, drawings and photographs incorporated in this document has been subjected to the series of proving tests in accordance with:

IEC 60076-1:2011-08
 IEC 60076-2:2011-02
 IEC 60076-3:2013-02
 IEC 60076-5:2006-02
 IEC 60076-10:2016-03

The results are shown in the record of proving tests and the oscillograms attached hereto. The values obtained and the general performance are considered to comply with the above standard and to justify the ratings assigned by the manufacturer as listed on page 5 and the dynamic ability to withstand short-circuits.

12 November 2019

Date: 12 November 2019
 Test Engineer in charge: Jürgen Wittwer
 Approved by: Rainer Spiller

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KEMA B.V.
 Shikhar Subramany
 Director, High-Voltage Laboratory

KEMA Laboratories Arnhem, 22 December 2017

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Discover how **Federal Transformers and Switchgears LLC** can power your business forward.



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**P.O. Box 296, Postal Code 124
Plot No. 325-328, Rusayl Industrial Area, Muscat, Sultanate of Oman**