

FALCON X7

Enable your Mission Critical Operation with most versatile, efficient & flexible power protection solution for Maximum Business continuity

From 160 kVA to 800 kVA

Scalable Solution upto 6.4 MVA



Fuji Electric has been a pioneer in the energy industry for over 100 years, with a history dating back to 1923. We have continuously pushed the boundaries of technological advancements and delivered innovative and reliable energy solutions to our customers. Our mission is to empower our customers to achieve their energy goals with efficient, reliable, and sustainable products and services. We strive to be a leader in the energy industry, driving positive change through collaboration, creativity, and embracing new technologies and approaches to energy management.



At Fuji Electric, we believe in the power of IoT and digitization to provide smart solution that help our customers optimize energy usage and streamline operations. Our team of highly skilled professionals is dedicated to delivering exceptional results that meet the unique needs of each customer.

Contact us today to learn more about our innovative and reliable energy solutions and how we can help you power a better future.

Whether you're looking to power your manufacturing operations, develop renewable energy solutions, or improve the sustainability of your transportation fleet, Fuji Electric India has the expertise and experience to help you achieve your goals.



PRODUCT DESIGN PHILOSOPHY

Fuji Electric Falcon X Series products has been developed with design expertise of >100 years in power & semiconductor field. Falcon X series has been designed to solve most customer pain areas.

Falcon X series offers most versatile configuration with it's Eco friendly design and also delivers maximum efficiency to have lowest TCO without compromising reliability and availability of the system.



RELIABLE

Ensuring uninterrupted performance and dependable operation, offering consistent and trustworthy results.

EFFICIENT

Advanced design and intelligent features maximize energy efficiency and optimizes resource utilization.



VERSATILE

A flexible solution seamlessly integrates into various applications and environments.

SUSTAINABLE

Designed with environmental consciousness prioritizing eco-friendliness by incorporating energy-saving mechanisms.



FLEXIBLE

Unparallel flexibility allows easy customization and adaptability to suit specific needs with modular design and scalable features.

Fuji Electric Falcon X7 is true online double conversion UPS system with it's Advance T-Type NPC 3-Level Inverter technology which delivers AC to AC efficiency upto 96.5% to help user to have lowest total operating cost. Falcon X7 delivers rated output power at 0.9 or Unity PF with it's wide range of operating load power factor spanning 0.5 lag to 0.7 lead which ensure user can operate the system wide range of application.

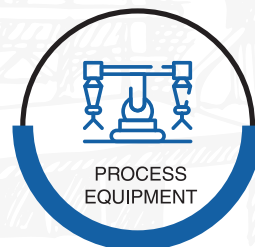
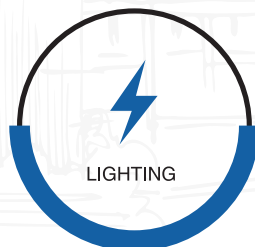
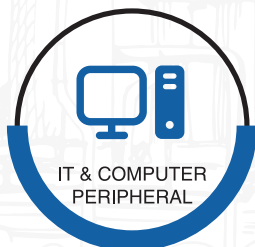
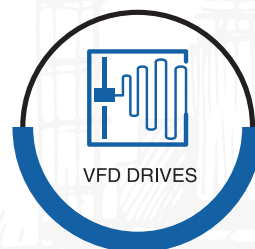
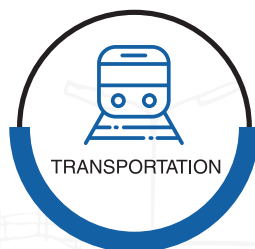
It's compact footprint ensures user to have ease of use, ease of installation and ease of management and ideal solution for mission critical application like.



KEY FEATURE

- › IGBT Based Transformer Less
- › 3 Phase 3 Wire Input
- › Power Walk in Upto 300 Msec
- › Phase Sequence Correction
- › Scalable Upto 6.4 MVA
- › Common Battery Configuration
- › 0.5 lag to 0.7 Lead Operating PF
- › High Short CKT handling Upto 3.5 times
- › Flexible Battery System (38-48 Blocks)
- › Installation against the wall
- › Lithium ION Compatible
- › Advance Battery Management
- › Temperature Compensated Charging
- › Built in all Safety & Protection mechanism
- › Wide Communication & Monitoring Options

APPLICATIONS

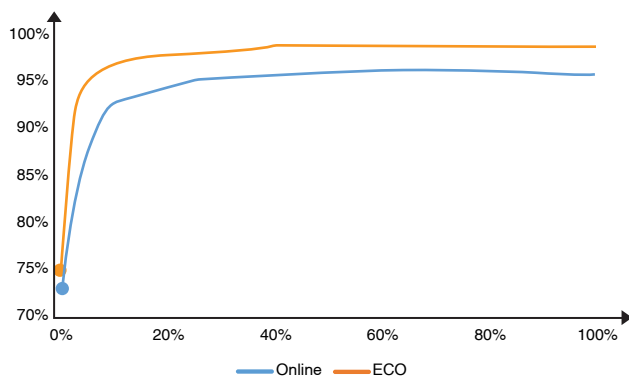


EFFICIENT & SUSTAINABLE TECHNOLOGY

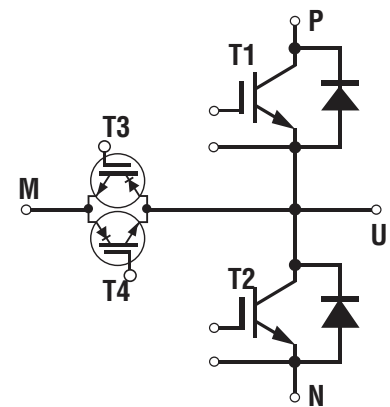
Fuji Electric Falcon X7 has been designed to meet users sustainability and energy efficiency challenges with Advance T Type NPC 3 Level Inverter technology it delivers upto 96.5% efficiency reducing energy consumption and minimizing losses even during light load operation. This helps the user to have lowest operation cost (Opex).

Additionally, it ensures low voltage stress on each component and reduces semiconductor losses providing reliable and efficient design.

AC to AC Efficiency Curve



Advance T-Type NPC 3 Level Inverter



3rd party agency certified



Upto 96.5% online efficiency



Better opex & capex



Advance T type NPC 3 level inverter



> 99% eco mode efficiency

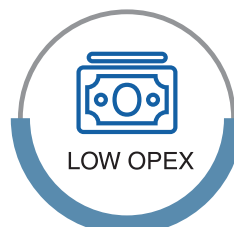


Reduction in energy consumption

GLOBAL ACCREDITATION & CERTIFICATION



International
Electrotechnical
Commission



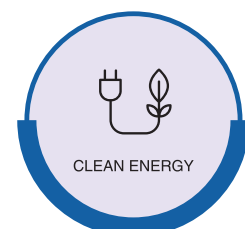
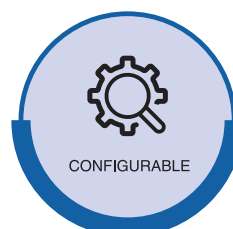
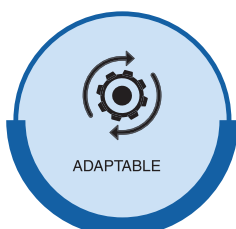
ADAPTABLE & VERSATILE INPUT CONFIGURATION

Fuji Electric Falcon X7 is designed to manage and take care of customer input power quality challenges with its IGBT based front end rectifier to have 3 Phase 3 wire input and having wide input voltage operating window and built in Phase Sequence Correction. It ensures user has maximum input protection helping achieve maximum power availability even during unstable grid operation.

Falcon X7 has been designed to take care of input design configuration. With its default single & dual feed connectivity it adds flexibility for the user to use as per his desire. It also comes with configurable power walk, which can be settable as per design configuration.



- IGBT based front end rectifier
- 3 phase 3 wire input
- Single & dual feed
- <3% THDi
- Wide input voltage window (+/-20%)
- Configurable power walk upto 300 Seconds
- Phase sequence correction
- Genset compatible



UNMATCHABLE OUTPUT PERFORMANCE

Fuji Electric Falcon X7 has been developed keeping in mind the critical and most demanding user application with its Advance T Type NPC 3 Level Inverter technology it ensures reliable power source to have <1% THDv and also delivers rated output to meet load requirement.

Falcon X7 has been designed to take care of most application related challenges, which user faces in day to day operations helping achieve maximum power availability and highest uptime.



Scalable Upto 6.4 MVA



<1% THDv



Crest Factor 3:1



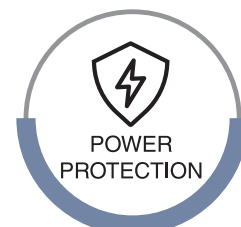
Isc = 3.5 x Rated Current or
100 Msec



0.5 lag to 0.7 Lead Operating
Power Factor



0 to 40 Degree Operating
Temperature



POWER MANAGEMENT REDEFINED

Fuji Electric Falcon X7 comes with innovative 4 quadrant design operation, which helps withdraw or dispose power generation to input utility. Few applications like CNC machine and lift application type of load generates power, which ultimately results in impacting stable UPS operation and core component life i.e AC & DC capacitors and batteries.

Fuji Electric's innovative and unique Advance T Type NPC RB- IGBT operates in 4 quadrant bidirectional design and safely disposes power to grid.



4 QUADRANT BI DIRECTIONAL RECTIFIER

Unique and innovative proven design to handle regenerative load application

NO ADDITIONAL BRAKING RESISTOR REQUIRED

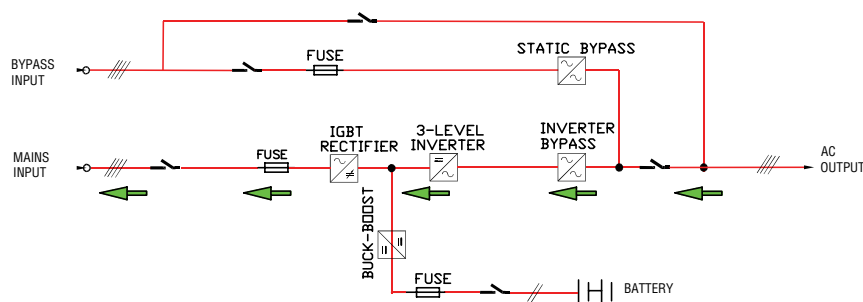
No additional component required to dispose regenerative energy which helps user to have lowest capex while working in double conversion mode

NO IMPACT ON CAPACITOR AND BATTERY LIFE

Essential component life and performance is always secured which directly helps user to have lowest operational cost while achieving maximum power protection

HASSLE FREE OPERATION

Maximum power availability and continuous operation without downtime to ensure peace of mind operation

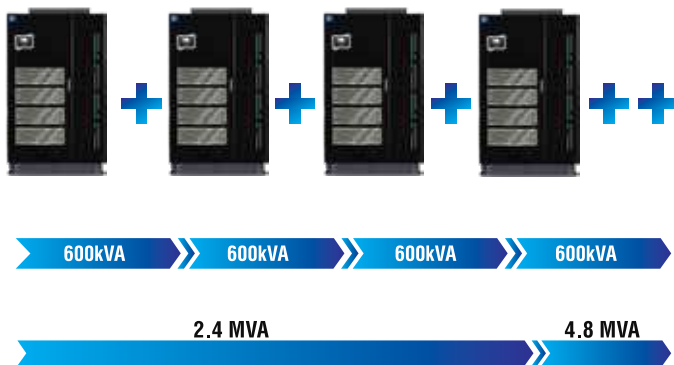


“ 100%
REGENERATIVE
LOAD HANDLING
CAPACITY ”

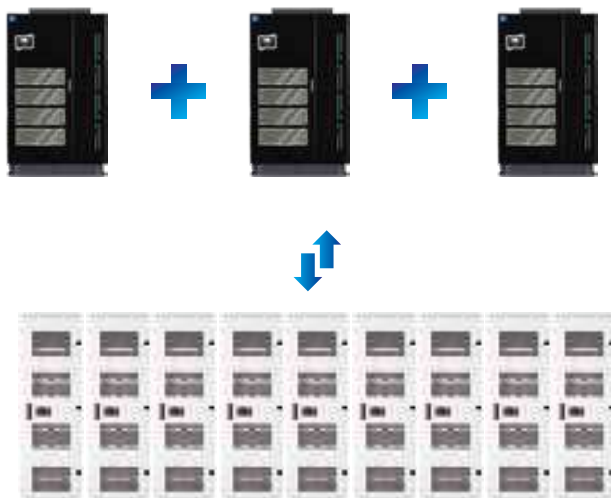
FLEXIBLE AND SCALABLE DESIGN

Fuji Electric Falcon X7 ensures and delivers the flexibility and scalability which user expect in its design configuration while ensuring that it will deliver maximum uptime without single point of failure.

It delivers scalability upto 8 units which can help users to have power configuration upto 6.4 MVA while delivering the complete flexibility to have the lowest Capex & Opex to achieve lowest total cost of operation.



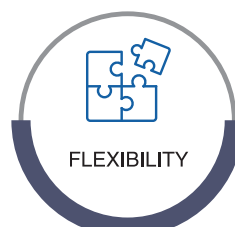
-  Scalable upto 8 units
-  Independent Control
-  Avoids Single Point of Failure
-  Design to Run in Capacity & Redundant configuration
-  Helps to have maximum load balancing



Centralized DC Design

COMMON BATTERY CONFIGURATION.

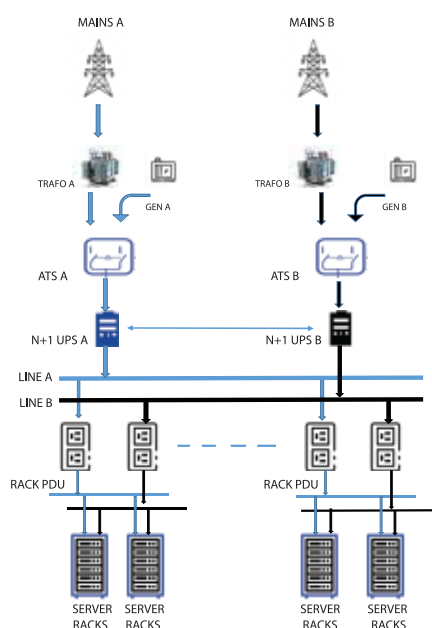
-  User can go upto 3 UPS's in parallel configuration
-  Distributed equalize charging and discharging
-  Helps user to reduce capex & opex
-  Able to achieve the maximum availability without affecting design need
-  User can deploy maximum protection to have hassle free maintenance and operation



MULTIPLE DESIGN CONFIGURATION

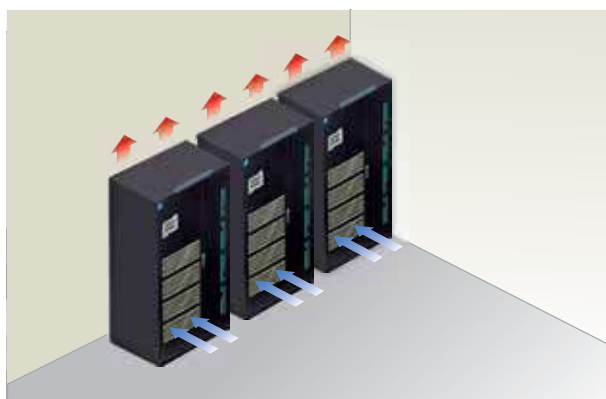
Fuji Electric's design expertise can help users to select the most optimum and scalable design helping them achieve maximum power availability, and maximizing uptime. It ensures that users achieve their long term capex and opex goals to deliver maximum performance.

SCALABLE AND FLEXIBLE DESIGN CONFIGURATION TO ACHIEVE N+1, N+2, N+N ARCHITECTURE

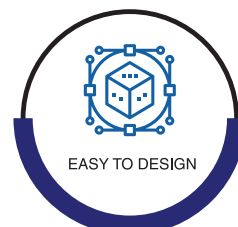


- Multiple possible design layouts
- Possible with dual & three bus architecture
- Possible with distributed redundant architecture
- Fits & integrate perfectly with other power management product
- Helps to achieve maximum power availability of 99.99999% uptime

INSTALLATION AGAINST THE WALL

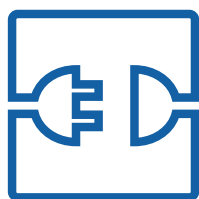


- Compact & optimized footprint
- Possible with back to back installation
- Complete front access
- Flexible & easy to maintain and install
- Bottom cable entry
- Optional top entry panel



ADAPTABLE AND FLEXIBLE BATTERY MANAGEMENT

Fuji Electric's Falcon X series comes with intelligent battery management technology which helps to have efficient and safe battery management while delivering the best possible battery life. This is due to the independent DC to DC charger, which delivers 3-stage charging technology enabling functionality as per battery need and demand while delivering optimum performance.



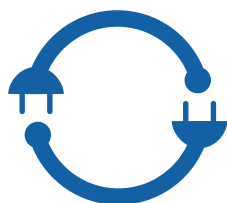
INDEPENDENT DC TO DC CHARGER



<1% RIPPLE CURRENT



38 TO 48 BATTERY BLOCKS



2 WIRE BATTERY ARCHITECTURE



PERIODIC CHARGING

- ⬇ Manage charging cycle
- ⬇ Improved battery life
- ⬇ Improved energy consumption



LOAD DEPENDENT CHARGING

- ⬇ Manage as per load
- ⬇ Charge as per demand
- ⬇ Enables quick charge



TEMP COMPENSATED CHARGING

- ⬇ Regulate as per temperature
- ⬇ Avoid excess charge
- ⬇ Avoids excess heating

COMPATIBLE WITH VARIOUS ENERGY SOURCES



Lithium ION
Battery



SMF VRLA
Battery



Thin Pure
Lead Battery



Nickel Cadmium
Batteries

EASE OF MANAGEMENT AND MONITORING

Effortlessly manage and monitor your system with Fuji Electric's UPS, Our User-friendly interface ensures seamless control and proactive monitoring for prompt action.

Our Built-in LCD HMI is loaded with multiple monitoring and management options that give desired information in the most user-friendly manner. Built in HMI is designed to give the user complete status of Input, Output, Battery, and Bypass parameters along with Integrated management & monitoring solution of SNMP & BMS system.



SNMP card



Modbus card



Dry contact card

- Complete ease of management
- Built in LCD HMI
- System status LED bar
- Multiple monitoring & management options
- System schematic on HMI for product run status
- Complete status of input/output/battery/bypass parameters



TOUCH SCREEN DISPLAY



LCD DISPLAY



PRODUCT TECHNICAL SPECIFICATION IN DETAIL

FALCON X7 160-800 kVA

Rated power (kVA)	160	200	250	300	400	500	600	800
Input Charateristics								
Rated Voltage	380-400-415 Vac 3-Ph + N + E							
Rated Voltage Tolerance	±20% @ 400 Vac							
Input PF	>0.99 on >25% load onwards							
Rated Frequency	50-60 Hz ±10%							
Phase Sequence Correction	Yes By Default							
Current Harmonic Distortion (THDi)**	<3%							
Rectifier Type	IGBT Base Front End Active Rectifier							
Bypass Parameters								
Rated Voltage	380-400-415 Vac 3-Ph + N + E							
Rated Frequency	50-60 Hz							
Connection	Standard Dual Feed							
Bypass Overload	125% Continuous							
Output Parameters								
Rated Voltage	380-400-415 Vac 3-Ph + N + E							
Inverter Type	Advance T-Type NPC 3-Level IGBT Base Inverter High Efficiency Transformer Less							
Rated Frequency	50-60 Hz							
Output Power Factor	Unity or 0.9 PF							
Voltage Variation - Static Load	±1%							
Crest Factor	3:1							
Voltage Distortion (THDv)	< 2% @ Linear Load <3% @ Non Linear Load							
Output Frequency Stability	±2% (Settable from ±1% to ±6%)							
Output Phase Angle	120 ± 1deg.							
Overload Capacity	110% for 1 Hour 125% for 10 Mins 150% for 1 Min							
Load Power Factor	0.5 Lag to 0.7 Lead without derating							
Efficiency	Upto 96.5%							
Bypass Parameters								
Number of Battery (12V) Blocks	40 Nos (Selectable from 38 to 48 Batteries)							
Nominal Battery Voltage	480Vdc (Selectable from 456-576Vdc)							
Compatibility	SMF, Tubular, Ni-Cd, Li-Ion Battery							
Environmental Parameters								
Operating Temperature	0 to 40°C (at Rated Input and Load)							
Ingress Protection	IP20							
Range of Relative Humidity	upto 95% max (without Condensing)							
Maximum Operating Altitude	Up to 1000 Meter without derating							
Storage Temperature	0°C up to 60°C							
Acoustic Noise at 1m from Panel Front (Ref ISO3746)	< 68 dBA							
Communication and management								
Display	128x64 LCD Graphic Display with LED Mimic (Optional Touch Screen Display)							
Communication Interface (Options)	Simple Network Management Protocol (SNMP), MODBUS-RTU , Dry Contacts							
Regulatory								
Safety	IEC62040 - 1							
EMC/EMI/RFI	IEC62040 - 2							
Performance	IEC62040 - 3							

**THDv @ <1%

Specification are subject to change without notice

FUJI ELECTRIC SERVICE STRENGTH



REAL TIME SERVICE REPORT
THROUGH MOBILE APP



SERVICE REQUEST
THROUGH MOBILE APP



400 COMPANY TRAINED
SERVICE ENGINEERS



80+
SERVICE LOCATIONS



SPARE PARTS WAREHOUSE
IN 24 LOCATIONS

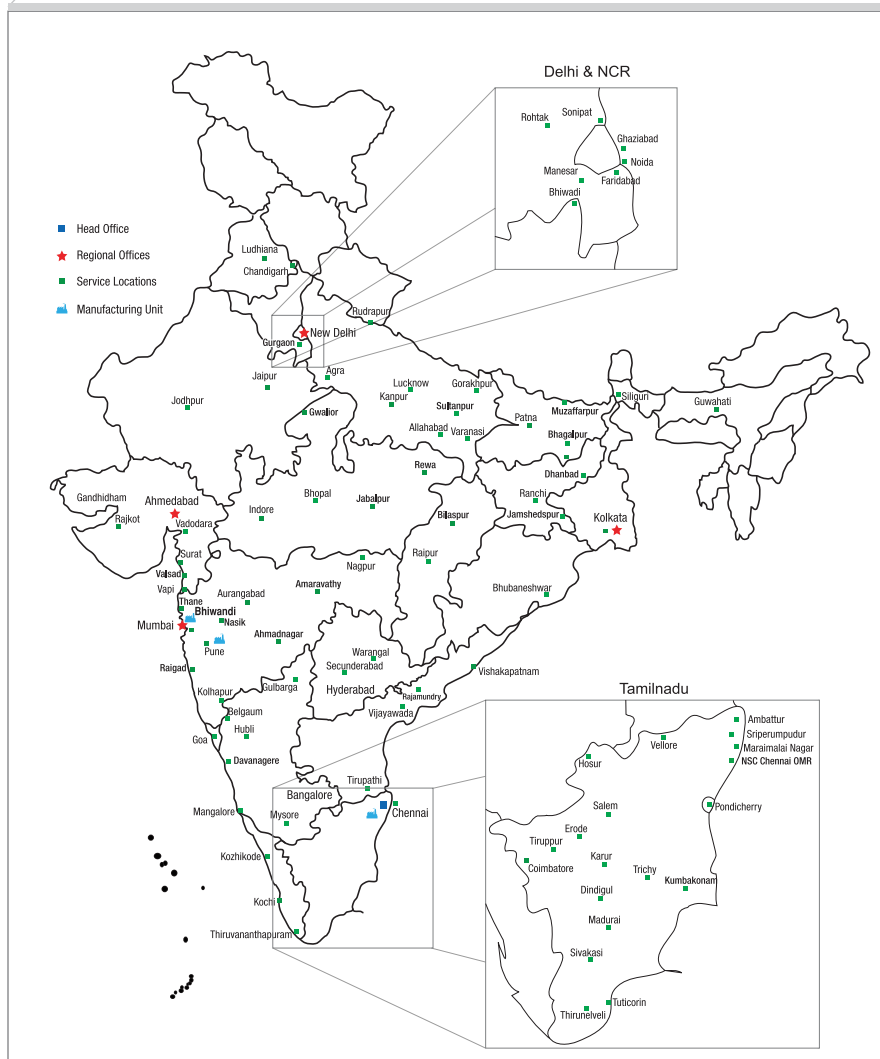
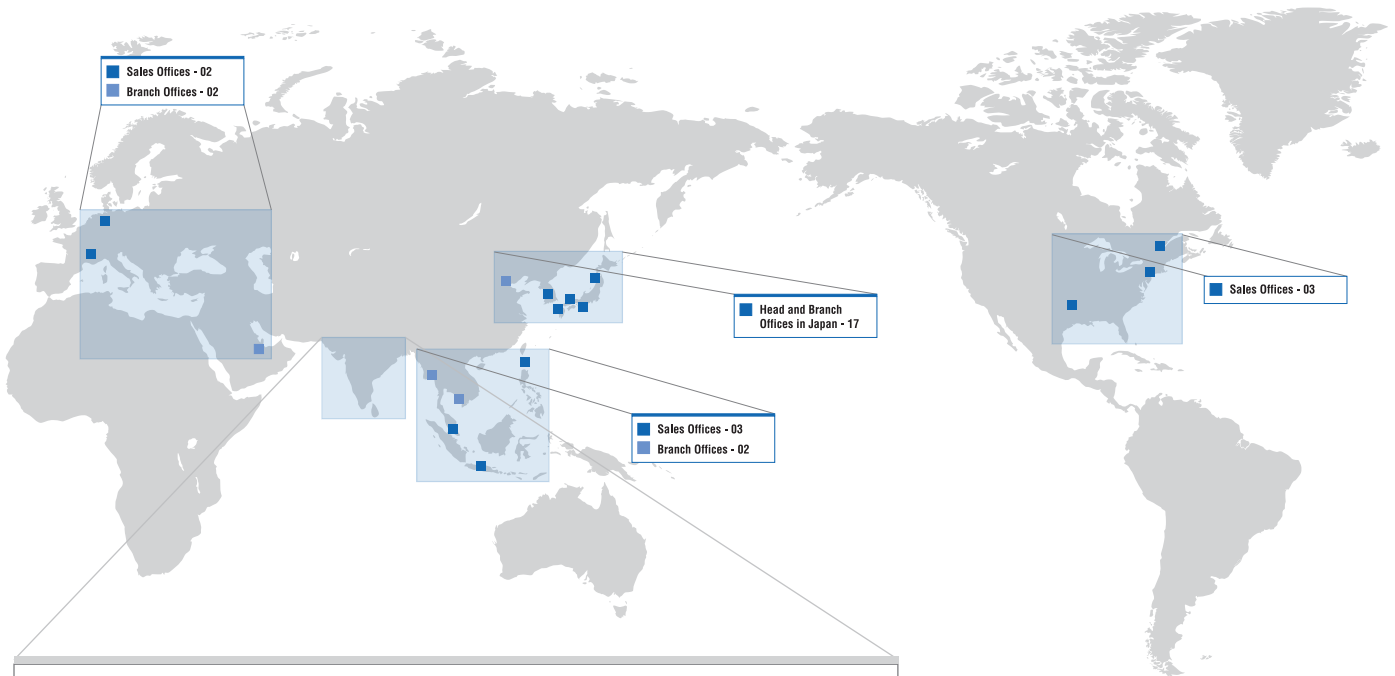


CALL CENTER
WITH MULTI
LANGUAGE SUPPORT



ANYTIME SERVICE REQUEST

GLOBAL PRESENCE



Product Offerings

- Online UPS (1-800 KVA)
- Servo Controlled Voltage Stabilizer (Oil Cooled / Air Cooled)
- Active Harmonic Filter
- Static Transfer Switch
- Isolation Transformer
- Solar Inverter
- Medium Voltage / Low Voltage VFD
- Instrumentation
- Factory Automation
- Process Automation (PLC/HMI/SCADA)

Service Offerings

- Comprehensive Annual Maintenance Contracts (CAMC)
- Annual Maintenance Contracts (Labour - AMC)
- AMC for Third Party Power Products
- Battery Replacement Services
- Power Audits
- Stabilizer Retrofits
- Rental UPS and Stabilizers
- Stabilizer Oil Replacement
- Remote Monitoring



Fuji Electric

Innovating Energy Technology

 **Fuji Electric India Pvt. Ltd.**

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This mark symbolizes
the commitment of Fuji Electric
to environmental protection.



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