Fuji Electric

Innovating Energy Technology

Online Double Conversion UPS

Falcon 8500

UPS 10 KVA -300 KVA

The Falcon 8500 has been developed by a World Class R&D team, with over three decades of power electronics experience for the harsh power and site conditions prevalent in India and other developing countries.

Falcon 8500 shares the characteristics of the Falcon birds which is a rugged and an incredible flying machine and one of the fastest creature on the planet with the ability to move and change direction very quickly. Similarly, the Falcon UPS is an incredible power protection system designed and manufactured in India to global IEC standards.

Highlights of Falcon 8500 UPS at a Glance

Flexibility

- Inbuilt Isolation Transfomer
- Compatible for medical imaging equipment requiring low mains resistance
- Compatible with all types of loads including regener ative loads,lifts, escalators and lighting loads
- 1+1 parallel redundant configuration with Common battery bank
- Rectifier current limit setting for optimised upstream infrastructure
- Parallel upto 3 units for capacity or redundancy

Reliability

- Operating temperature of 0-40°C with special attention in component selection and design to improve reliability
- Advanced battery management techniques to improve battery life with three stage charging and with auto equalizing charge at predefined intervals
- Advanced thermal protection of IGBT using on chip built-in temperature sensor.

Total Cost of Ownership

- Intelligent Eco mode operation with an efficiency of upto 99%
- Long Life power electronics grade capacitors

Applications

- Infrastructure
- Commercial Offices & Malls
- Lifts & Escalators
- Medical Imaging Equipment
- Engineering Industry
- Process Industry

Reliability

The Falcon UPS family is designed for harsh conditions seen in India, Middle East, Africa and ASEAN countries., Like high ambient temperatures, very high humidity, wide input voltage fluctuations, and operation on DG Sets during powercuts which are not seen in many parts of the world.

The Falcon UPS is designed for continuous operation at 40°C ambient temperature with special attention to details in component selection and design to improve reliability and life under demanding conditions. Complexity of control wiring within the UPS has been simplified using CANBUS communication protocol for higher reliability and trouble - free operations.

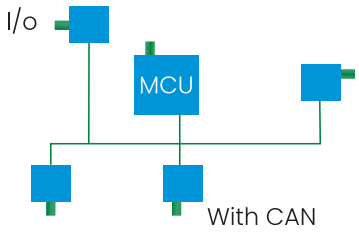
Flexibility

Falcon 8500 deploys a sophisticated control circuit with power walk-in function to achieve progressive rectifier start-up to avoid the impact of inrush current on the upstream breakers and to avoid the step loading on generators.

Falcon 8500 has also been designed with Rectifier current Limit function, taking into account the short term momentary loads which allows the system to work in parallel with the battery and to reduce the maximum demand on the mains or avoids the need to enhance the maximum demand sanctioned by the utility provider or generator.

Inbuilt isolator switches for input, output, bypass and maintenance bypass gives the flexibility to connect the cables directly on the UPS system without any external distribution panel requirement.

■ CANBUS Communication

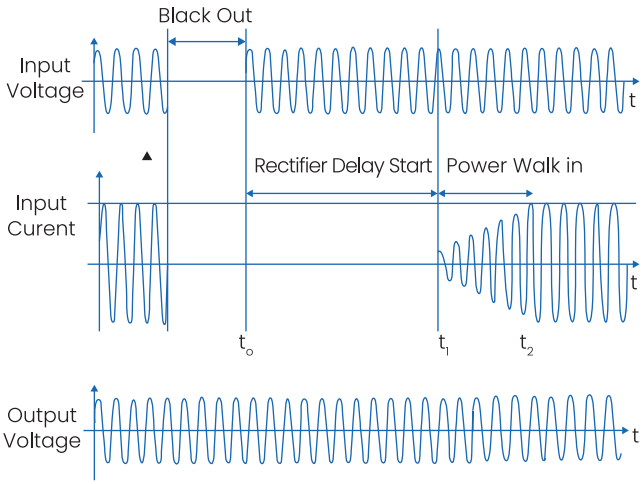


Simplified CANBUS Communication Protocol

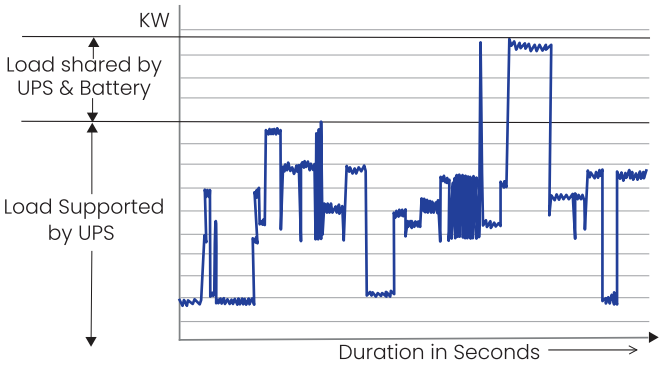
■ Special Design Heat Sink

Special Heat Sinks with large surface area for effective heat dissipation in small volume.

■ Rectifier Delay Start



■ Rectifier Current Limit



Compatibility with Loads

An advanced PWM (Pulse Width Modulation) SVM (Space Vector Modulation) digitalcontrol technique, to modulate the inverter, provides fast transient response with high efficiency. SVM also allows the UPS to adapt the PWM switching to different loading conditions such as: partial load, full load, linear load, non-linear load, static load, pulsating load.

Falcon 8500 comes in-built* with Special IGBT controller for adding external breaking resistors to make the UPS compatible with regenerative loads like Metal forming and Elevators.

Easy Installation

Falcon 8500 has a compact footprint and requires a very small for installation.

The Human Machine Interface (HMI) is intuitive and user friendly with a LCD screen and LED mimics.

Total Cost of Ownership

Falcon 8500 can be operated upto 40°C (ambient temperature) without precision air conditioning as required by most UPS. This helps large saving for the customer in CapEx and OpEx costs associated with cooling required for the UPS. The UPS batteries must be kept in a separate room for safety and temperature must be maintained below 27°C to maximize the life of the batteries.

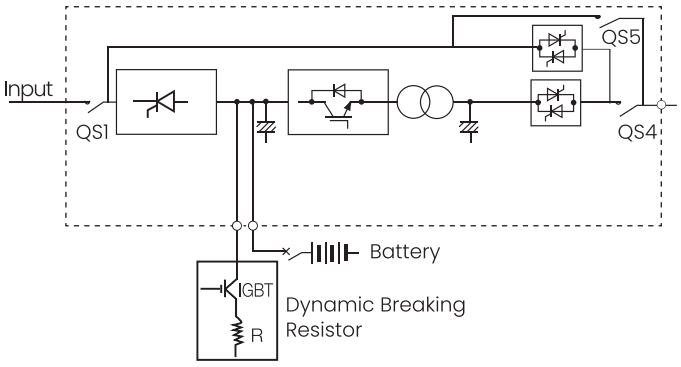
Long Life Power Electronic grade capacitors are being used in the UPS which reduces need for replacement cost of capacitors during the life time of the UPS.

Intelligent High Efficiency

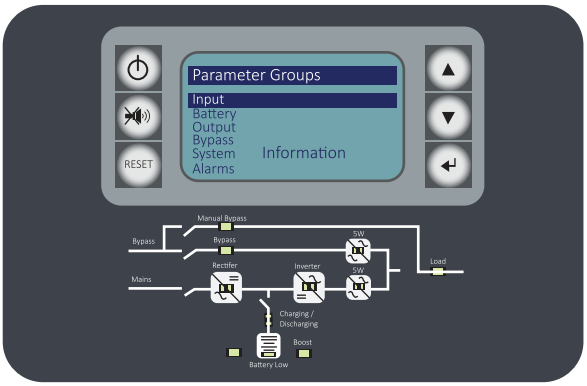
Eco Mode operations which can be enabled for energy savings (Upto 99% Efficiency). The firmware, tested to Indian power conditions monitors the quality of the input power, and enables the Eco Mode operations on bypass only when input power conditions are stable. Other wise the UPS transfers back to double conversion mode in less than 5ms whereby the reliability of power is ensured to the critical load.

*inbuilt upot 20KVA

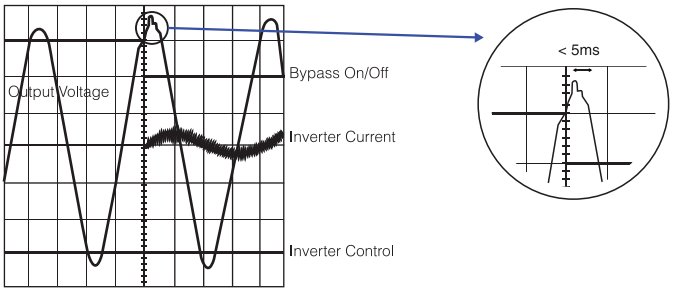
■ UPS with DBR



■ User-Friendly HMI



■ Eco mode of Operation



Technical Specification

Online Double Conversion UPS

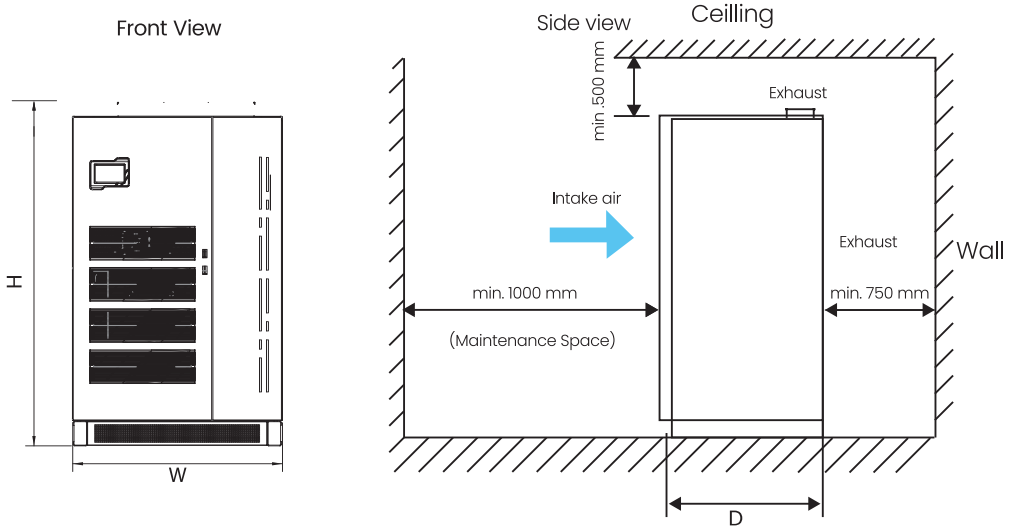
Falcon 8500

UPS 10KVA -300KVA

General		Falcon 8500														
Capacity		10KVA	20KVA	30KVA	10KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA	200KVA	250KVA	300KVA
Input																
Phase		3 Phases + Neutral + Ground														
Voltage		415AC +/-15%														
Frequency		50Hz, +/- 6%														
Output																
Voltage		230/240V Single Phase			400V/415VAC (380VAC Optional)											
Voltage Regulation		-														
THDu		<=2% for linear load														
Power Factor		0.6 to unity within KVA & KW rating														
Crest		3:1														
Overload Capability		(>150% for 200ms) not mentioned														
System																
System Efficiency		Online mode:upto 90%; ECO mode:upto 99%			92%		92%		92%		92%		93%			
Display		128X64 Graphics LCD & Mimic														
IP Class		IP20														
Interface		Optional:Dry Contacts, SNMP														
Operation Temperature		0~40°C														
Storage Temperature		Storage temperature 0-70°C														
Relative Humidity		0~95%(Non - Condensing)														
Noise		<= 65dBA														
Altitude of Operation		1000m; 1% derating per 100m. Max 2000M @30°C														
Isolation Transformer		Inbuilt														
Physical																
Capacity		10KVA	20KVA	30KVA	10KVA	20KVA	30KVA	40KVA	60KVA	80KVA	100KVA	120KVA	160KVA	200KVA	250KVA	300KVA
Dimension in mm	Width	500	500	500	500	500	500	500	600	600	600	600	1100	1200	1200	1200
	Depth	700	700	700	700	700	800	800	900	900	900	900	900	900	900	900
	Height	1010	1010	1010	1010	1010	1080	1080	1400	1400	1400	1400	1750	1850	1850	1850
Weight in Kgs		300	300	350	300	300	350	350	550	600	650	700	1250	1400	1700	1700
Colour		RAL 7016 Texture - Anthracite Grey														
Applicable Standards																
Safety		IEC 62040-1														
EMC		IEC 62040-2														
Performance		IEC 62040-3														

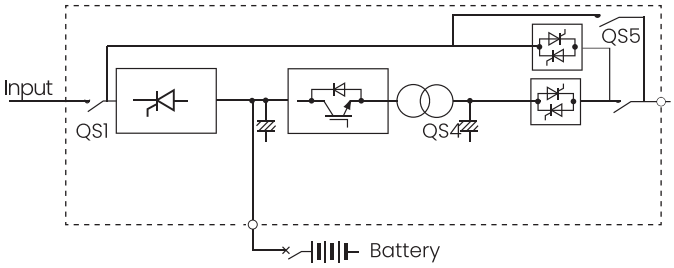
* Specifications are subject to change

UPS Main Unit

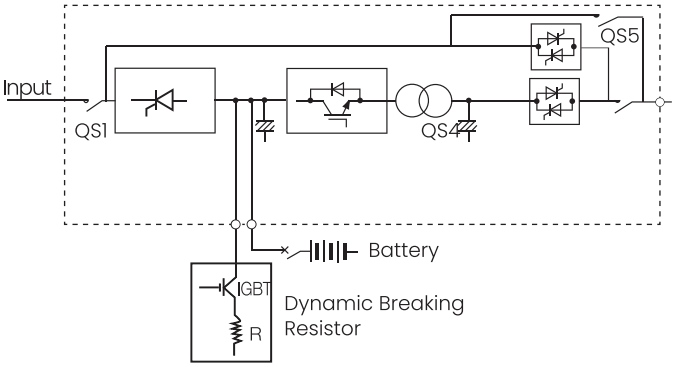


Falcon 8500 UPS Configuration Examples

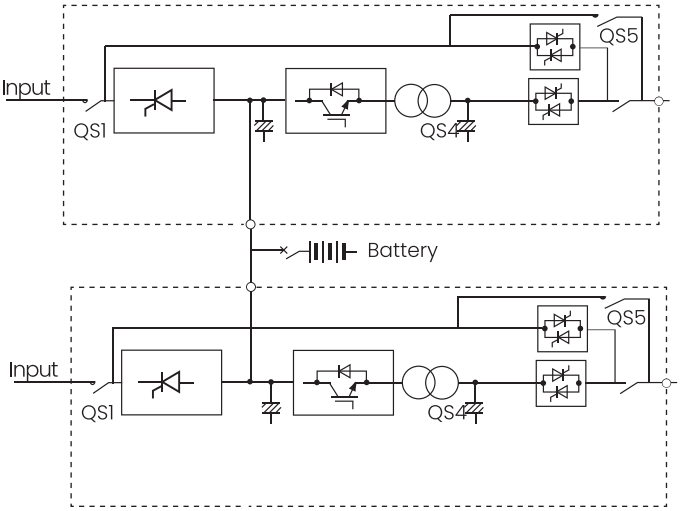
■ Standlone UPS Configuration



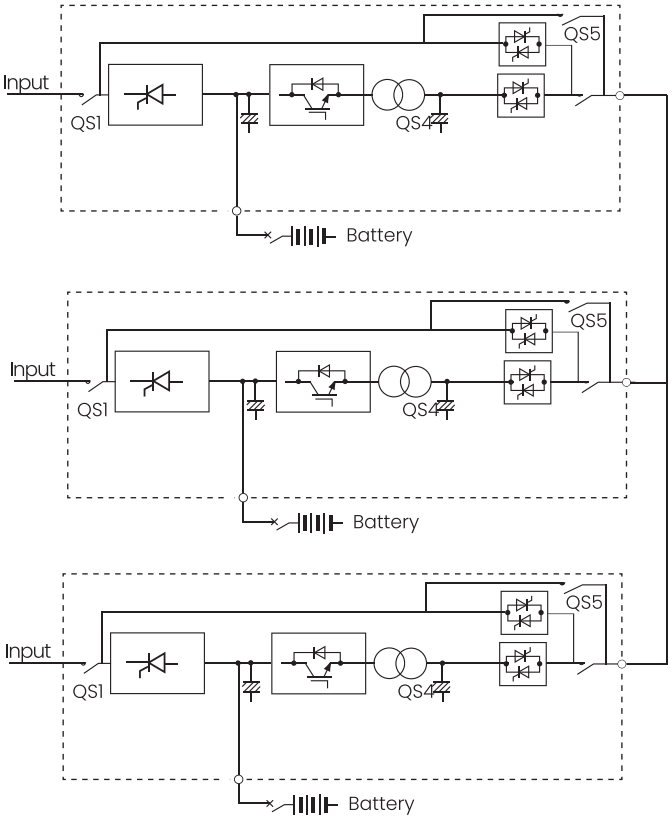
■ Stanlone UPS with DBR



■ 1+1 Parallel UPS with Common Battery Bank



■ Parallel UPS for Capacity or redundancy



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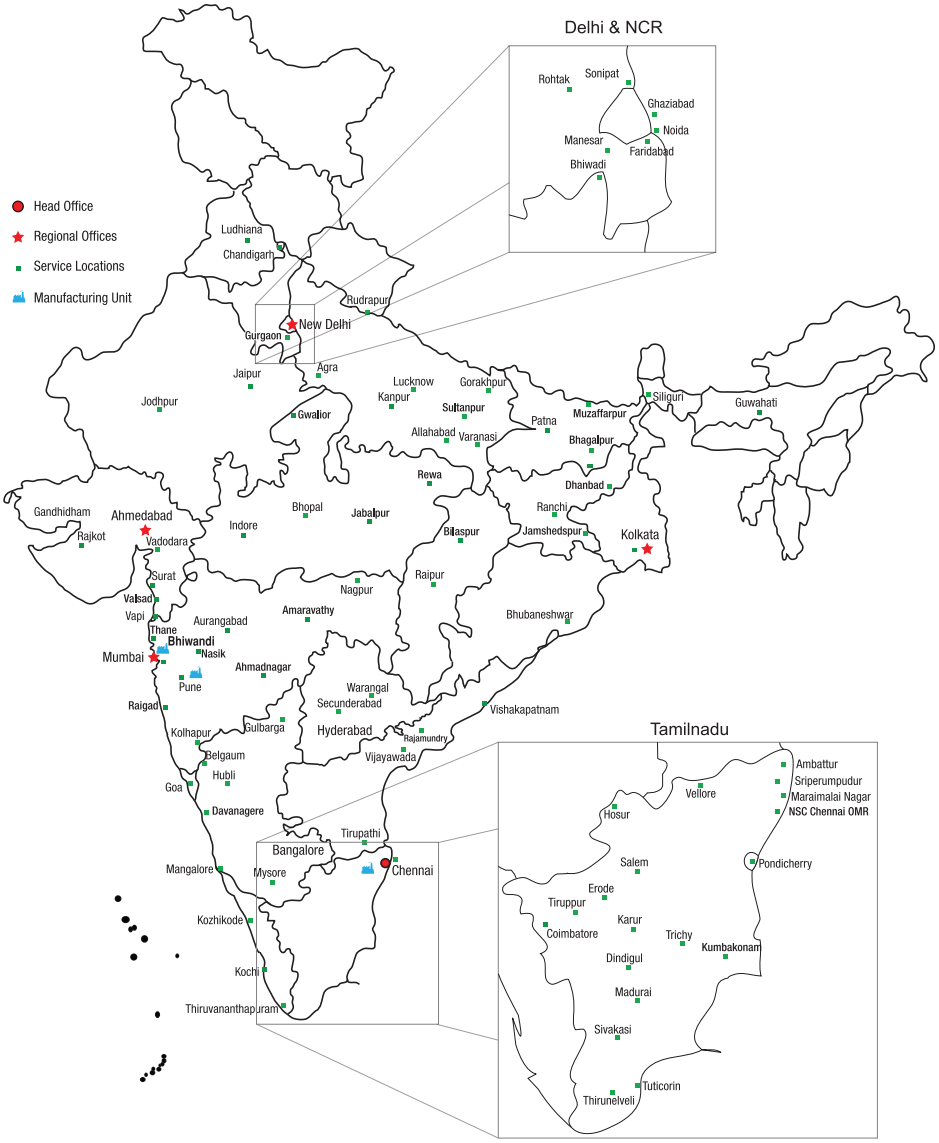
Pan India Sales & Service Network



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
- Instrumentaion
- 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

Service Support

- Real time E-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
- Any time service request

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Scan QR code for Service support

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