

Online Double Conversion UPS

# **Falcon 1000i**

UPS - 5 KVA - 200 KVA

Three Phase Input / Single Phase Output



## **Features & Benefits**

- 32 bit floating point DSP controlled UPS
- Advance rectifier
- State of Art IGBT based inverter design
- 128 x 64 Graphics Display True RMS reading of more than 25 different parameters of UPS
- Inbuilt isolation transformer
- Internal CAN bus communication
- Multiple interfacing options
- Advanced thermal design and monitoring
- N+1 redundant fans





Falcon 1000i range of SCR/IGBT based rectifier UPS systems are designed for the industrial application. Built for working reliably in harsh environmental conditions with IP41 and above with high operating temperatures. Falcon 1000i UPS has earth shielding in the standard input and output transformers to maximize noise attenuation. The commercial units, at best, have only an output transformer as standard and will add a standard double wound transformer to the input without shielding.

- The transformer and power component design calculations for the industrial products assume maximum temperature (>40°C) with N+1 fan.
- Selection criteria for consumables such as capacitors - Industrial UPS calculated at 40°C full load with life >10 years
- Latest designs adapt IGBT rectifier, CAN Bus communication and protocol to suit industrial ecosystem
- On demand Natural cool systems can be designed.

## Applications

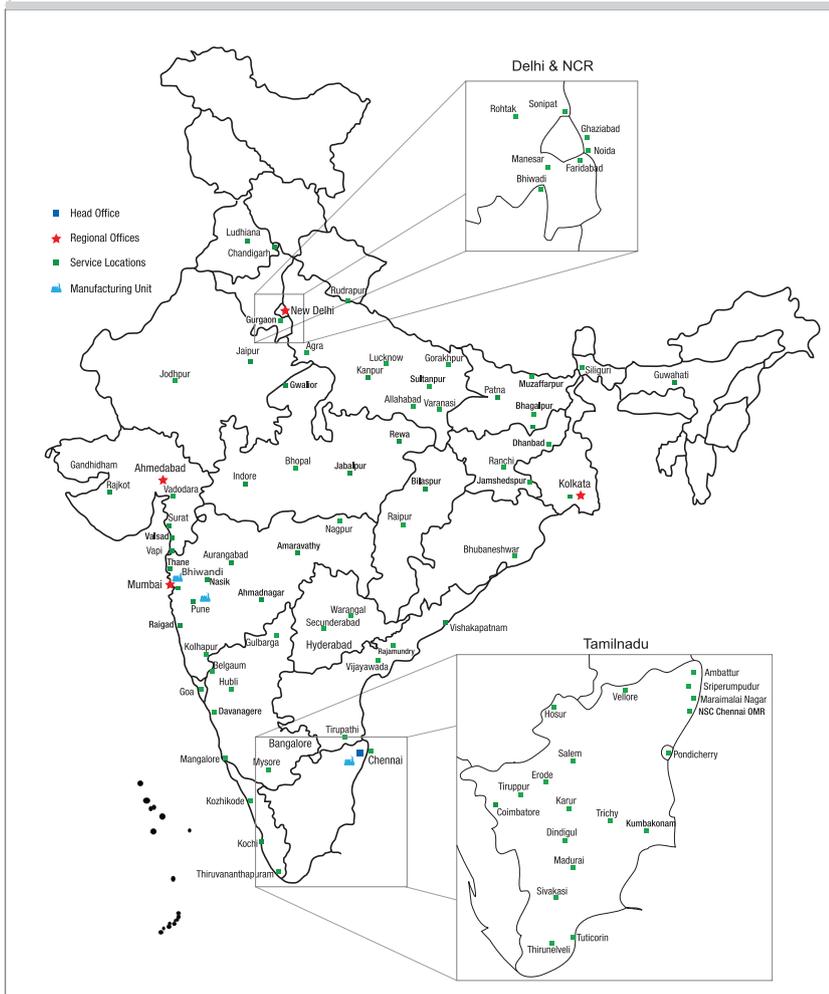
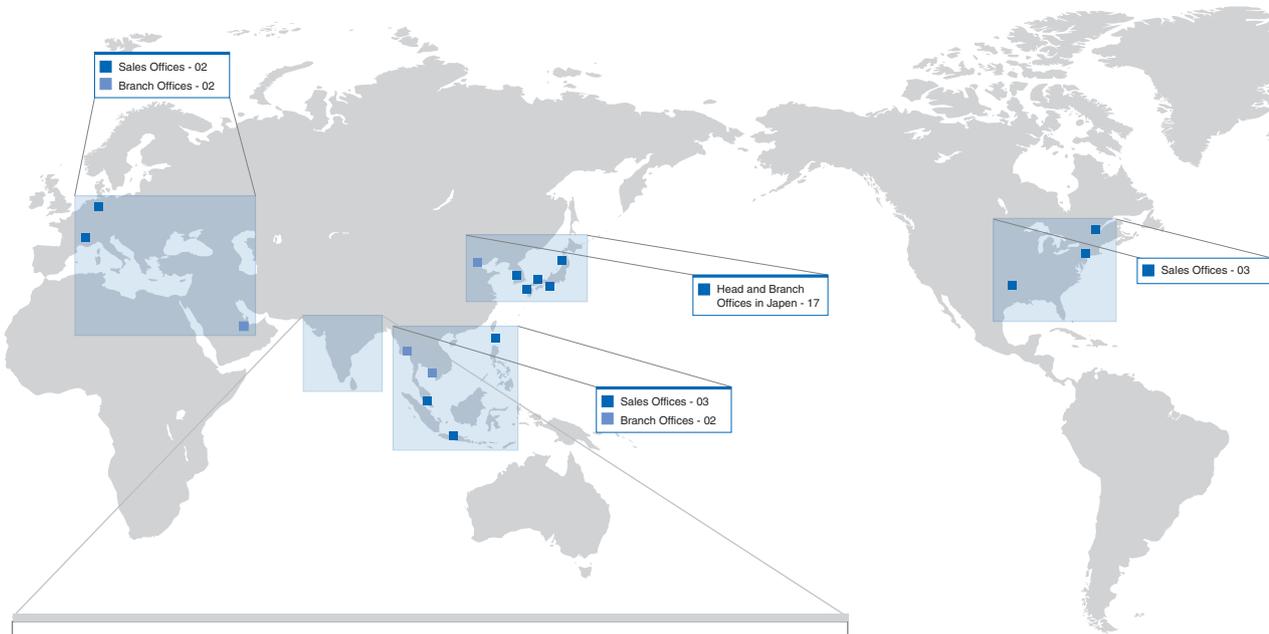
- Oil and Gas Industry (onshore and offshore)
- Power Industry
- Steel Industry
- Cement Industry
- Water and waste water Industry
- Automotive Industry
- Processing plants
- Pulp and paper Industry
- Railway & Signaling
- Foundries
- Textile Industry

**Technical Specification**
**Falcon 1000i**

UPS - 5 to 200 KVA

Three Phase Input / Single Phase Output

	<b>Falcon 1000i</b>	<b>Options</b>
<b>Input</b>		
Nominal Voltage	415 V AC (3 Ph + N), +/- 15%	440V, +10% / -20%
Frequency	50 Hz, +/- 6%	60Hz
Rectifier Bridge Configuration	6 Pulse APFC	IGBT / 12 pulse
Power Factor	>0.92	>0.98/ 0.96
I THD	<30%	<5% for IGBT / <15% for 12 pulse
		Input Source Selector
<b>Battery</b>		
Nominal DC	5 to 15 KVA - 240V & 110VDC, 20 KVA - 300V DC & above 25 KVA - 360V DC	5 to 75 KVA for 220V DC
Charging Current	10A for 5 - 20 KVA, 15A for 25 - 30KVA, 20A for 35 - 60 KVA	As per project requirement for Higher rating.
DC Ripple	1%	
Type	SMF / Lead acid / Ni Cd / Plante	
Configuration	Individual / Common Battery	Common DC Bus
		Battery Temp Compensation
		Battery Earth fault / Battery reverse polarity
<b>Output</b>		
Nominal Rating (KVA)	5 to 200 KVA	
Nominal Power Factor	0.8	0.6 to unity within KVA & KW rating
Voltage	220V/230V/240V AC	110V/115V/120V AC upto 200 kVA
Voltage Stability	Steady state +/- 1%	2% for 110V
Dynamic Response	For 0 to 100% step load change the output shall remain within + 5% & recover to 98% within one cycle. (IEC 62040 - 3, Class 1)	
Frequency	50 Hz, +/- 0.1%	60Hz
Voltage distortion at linear load	<= 2%	
Voltage distortion at non-linear load	<= 5% (Ref 62040-3)	
Waveform	Sinusoidal	
Topology	IGBT Based DSP Control	
Crest Factor	3:1	
Overload Capacity from Inverter at Nominal Voltage	110% for 60 min, 125% for 10 min, 150% for 60 sec	
Configuration	Stand Alone, Parallel Redundant	Hot standby / Dual Redundant
<b>Bypass</b>		
		Transformer / SCVS / Static
Voltage	200V/230V/240VAC	110V/115V/120V AC up to 200 kVA
Input Voltage Variation	+/-15%	
Frequency Synchronization Range	50 Hz (+/- 0.5 TO 3Hz settable)	60Hz
Transfer Time	Sync Mode : No Break	
	Async Mode : <10 ms	
	Sync Mode : No Break	
Retransfer Time	Async Mode : Retransfer Inhibited	
Manual Bypass	Make Before Break Operation	
<b>Environment</b>		
Operating Temperature	0 to 50°C	
Storage Temperature	0 to 70°C	
Relative Humidity	Upto 95% RH (Non Condensing)	
Maximum Operating Altitude without de-rating	1000 m	
<b>Physical Characteristics</b>		
Degree of protection for enclosure	IP41	IP42
Ventilation	Forced Air	Redundant Fan
Cable Entry	Bottom	Top Cable Entry (Through cable Alley)
Cabinet Finish	RAL 7016 Structure Finish	RAL 7032/7035 OR as per Project requirement
Cabinet Steel Thickness	Frame 2mm, front door 2mm, covers 1.2mm	Covers 1.6mm / 2mm
<b>Others</b>		
PFC	5 PFC	
Utility socket	230V, 5A	Space heater
Transducer	---	4-20 mA
UPS monitoring	---	UPS MON/ HTTP/SNMP
Connectivity ports	RS232 / RS485 / Ethernet	Ethernet / Modbus RS 485 / Modbus TCP/IP / Profibus

**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

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