

400Hz Static Frequency Converter

Smart FC400 10-800kVA

400Hz is a type of frequency within AC electrical power, which is the standard for weapon systems, aerospace and aircraft industries across the world. Airports, hangars and aircraft ships must have access to a 400Hz frequency converter as this is not a standard power.

EnSmart designs and manufactures 400Hz Smart FC400 Series frequency converter specially for the control and lighting systems of military airports and aircraft ships. To complete the airfield range of products, Smart FC400 is available with 28VDC and 270VDC power supplies.



Reliable 400Hz Power for Marine and Military

- 50Hz/60Hz to 400Hz Frequency Conversion
- Parallelable up to 8 Units
- Mobile Structure, Front Access
- Battery Connection Option

Solid-State Advanced Technology

- State-of-the-art IGBT Technology with DSP Control
- PWM Rectifier and Inverter
- High Efficiency
- Maximum Power (PF 0,9 and PF 1 for kW=kVA)
- Input Power Factor Correction (PFC) 500 Real Time Event Log with Detailed Parameters
- EPO (Emergency Power Off)

Flexible Design

- Input-Output Galvanic Isolation
- Version with Anti-Vibration
- Mobile Version on Trolley
- PCB Tropicalization Treatment
- Additional Power Module 28VDC 200-400-600-800A,
- Customized Voltages and Frequencies
- Customized IP Enclosures



Technical Specifications

MODEL																				
Capacity	10kVA	15kVA	20kVA	30kVA	40kVA	60kVA	80kVA	100kVA	120kVA	160kVA	200kVA	250kVA	300kVA	400kVA	500kVA	600kVA	800kVA			
Power Watt	9kW	13.5kW	18kW	27kW	36kW	54kW	72kW	90kW	108kW	144kW	180kW	225kW	270kW	360kW	450kW	540kW	720kW			
INPUT																				
Nominal Voltage	400 VAC 3 P+N (208V, 440V 480V and 575V on request)																			
Voltage Tolerance	-20% +15%																			
Frequency Tolerance	50 / 60 Hz ±50% (Selectable)																			
Power Factor	>0.99																			
Total Harmonic Distortion	THDi < %3																			
OUTPUT																				
Power Factor	0.9 (1 Optional)																			
Nominal Voltage	380/400/415 /440/480 VAC 3 P (110V and 575V on request)																			
Voltage Tolerance	Static ±1, Dynamic ±3																			
Frequency Tolerance	400Hz + - 10%																			
Output THD	Linear Load <1% / Non-Linear Load <3%																			
Crest Factor	3:1																			
Overload Capacity*	At 125% Load 10min, at 150% Load 1min																			
Efficiency (Online Mode)	96%																			
Efficiency (Eco Mode)	Up to 99%																			
BYPASS																				
Nominal Voltage	380/400/415 VAC 3 P																			
Voltage Tolerance	15% (Configurable from 10% to 30%)																			
Frequency Tolerance	±5 (Selectable)																			
ENVIRONMENTAL																				
Operating Temperature	0°C / +40°C																			
Storage Temperature	-15°C / +45°C																			
Protection Class	IP20 (Other IP Options are Optional)																			
Humidity	0-95% Without Condensation																			
Altitude	<1000m, Correction Factor 1. <2000m, Correction Factor >0.92, <3000m; Correction Factor >0.84																			
Noise Level	<53 dBA	<55 dBA	<60 dBA	<65 dBA	<72 dBA	<74 dBA														
COMMUNICATION																				
Communication Port	RS232 (Standart), RS485, MOD-Bus, J-Bus, Web, Tel-Net, GPRS, CAN-Bus, SNMP (Option)																			
STANDARDS																				
Quality	ISO 9001, ISO 14001, ISO 18001, TSE-HYB																			
Performance	EN62040-3 (VFI-SS-111, Bureau Veritas Certified)																			
EMC/LVD	EN62040-2, EN62040-1, EN60950, (TÜV SÜD Certified)																			
DIMENSIONS & WEIGHT																				
Cabinet Dimensions (mm)	Width	490			763			810			830			1250			1999			
	Depth	805			771			820			870			845			867			
	Height	1190			1555			1705			1800			2102			2045			
Net Weight (kg)	100	100	107	118	125	260	270	350	355	450	460	470	850	850	850	1740	1740			
	Packaging Dimensions (mm)	Width	600			600			900			900			1370			2150		
		Depth	900			900			970			970			870			970		
Height		1400			1400			2040			2040			2120			2120			
Gross Weight (kg)	140	141	145	164	185	353	361	376	387	398	491	500	890	890	890	1820	1820			

* under certain conditions.
3 Phase In / 1 Phase Out Version is Available. (10 to 30kVA)

Ensmart reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on Ensmart products previously or subsequently sold. Ensmart does not guarantee the items of the accuracy and completeness.

Highlights



Stable Voltage & Frequency
Clean, Full Sine-Wave Output at 400Hz Frequency And Voltage



Highly Flexible
Options Available for Nema and IP Enclosures and Controls



Solid State Design
Small Footprint and Front Access for Easy Service