

# PL / GC SERIES

## INDUSTRIAL AC UPS SYSTEM

### Product Description

PL / GC Series Industrial AC Uninterruptible Power Supplies, with advanced online, double conversion technology to provide regulated and uninterrupted power to critical loads. UPS System is designed in modular block structure with Rectifier, Inverter and Static Transfer Switch, where each main block is monitored and controlled separately by DSP (Digital Signal Processor) controller. It provides AC power which is critical for Industrial, Medical and Computer applications.



### Key Features

- DC or AC, or DC and AC inputs
- Input and output 50Hz, 60Hz, 831/3Hz, 400Hz frequency optional
- Galvanic Isolation / Output isolation transformer
- Intelligent Power Module or IGBT technology
- Full controlled conventional rectifier (Thyristor base)
- Smart control and high reliability with DSP (Digital Signal Processor)
- Float charge, equalizing charge and boost charge selections in Automatic and manual charge modes
- 2x16 character LCD display & Audible alarm, showing measurements, status and alarm messages
- High efficiency, Low output distortion factor
- Calibration of measurements from front panel
- Language selection from front panel (English / German / Turkish / Dutch / Portuguese)
- Input Voltage Low / High, Line Failure, Over Temperature and Short Circuit protections
- Ability to program all operation parameters (password protected)
- Monitor and control over RS232 or \*RS485 Modbus communication. \*Option



SPHERE POWER  
Powering Life

# Technical Specifications

Model	3KVA – 60KVA	60KVA – 400KVA
INPUT		
Input Voltage (Vac)	110V / 115V / 208V / 220V / 240V (*Other voltages upon request)	3 x 190 / 200 / 360 / 380 / 415 Vac Phase to Phase or N (*Other voltages upon request)
Input Voltage (Vdc)	40 - 70 Vdc / 80 - 160 Vdc / 160 - 260 Vdc / 300 - 450 Vdc	260 - 300 Vdc / 300 - 450 Vdc / 400 - 650 Vdc
Input Voltage Tolerance	+15 % / -10 %	
Maximum Input Voltage	± 20 %	
Frequency	50Hz / 60Hz / *400Hz (upon request)	
Frequency Tolerance	±10 %	
Rectifier Type	6 or 12 pulse Thyristor / IGBT Controlled	
Isolation Transformer	Standard (except 400Vdc Rectifiers)	
OUTPUT		
Output Voltage	115 / 200 to 120 / 208 Vac - 220 / 380 Vac to 240 / 440 Vac with or without Neutral; 110 Vac + N / 220 Vac + N	
Power (kVA)	10 15 20 30 40 60 80 100 120 160 200 300 400	
Power (kW)	8 12 16 24 32 48 64 80 96 128 160 240 320	
Voltage Stability	± 1%	
Rectification Time	Max 25ms. After Boost Charge	
Frequency	50Hz - 1000Hz (on-demand)	
Frequency Tolerance	+ 2% (synchronized) adjustable, 0.01 (free run)	
Efficiency (Diff. DC Nominal)	87% - 91% / 90% - 95%	
Total Harmonic Distortion	< 3% @ linear load < 5% @ non-linear load	
Power Factor	0.8	
Crest Factor	3 : 1	
Overload	110% - 125% @ 10mins. / 125% - 150% @ 1 min. / >150% load: by-pass	
Short-Circuit Protection	Electronic Short Circuit Protection	
Technology	Space Vector Control	
DIGITAL DISPLAYS		
LCD Display	Output Voltage & Current / Input Voltage / DC Bus Voltage / Inverter Frequency (Output Frequency) / Load Percentage / Load powering up status	
Alarm Notifications (LCD)	Overload / Abnormal AC Input / IGBT Fault / Over Temperature	
LED Display	Input OK / Operation / Common Alarm	
Communication and Remote Monitoring	2 pieces of programmable isolated dry contact information	
Control and Monitoring	Modbus through isolated RS232 / RS485 serial port	
Dry Contact Information	Contact 1 : Programmable Contact 2 : Programmable	
SYSTEM DATA		
Internal & External Protection Degree	IP 20 to IP 55 (Optional)	
Cable Entry	Bottom	
Access	Front Access	
System Design Life	> 15 Years	
System Conformance	EMC 50091-2; EN 50091-1; EN62040-1, -2	
ENVIRONMENTAL DATA		
Operating Temperature	Operating Temperature - 10°C to + 50°C	
Storage Temperature	Storage Temperature - 20°C to + 70°C	
Relative Humidity	Relative Humidity 0 - 90% (Non-condensing)	
Operating Altitude	Operating Altitude Max. 2000m (optional)	
PL/GC Series 1 & 3 Phase Industrial AC UPS powered by EPC. Specifications can change without notice. Datasheet v1.2		