Chloride CP-60Z AC UPS System

5 to 60kVA - 1ph and 3ph output

Industrial Power for
Business-Critical Continuity™

The Chloride CP-60Z industrial Uninterruptible Power Supply (UPS) system is the result of latest industrial requirements combined with R&D innovations to offer an improved efficiency and reduced operating costs industrial UPS.

The Chloride CP range is designed to meet the stringent electrical and mechanical requirements in industrial environments. Each Chloride CP product is based on interchangeable sub-assemblies to allow full customization, in compliance with client's technical specification and with project documentation requirements.

Benefits

- **Energy savings** - Improved efficiency means reduced power consumption and smaller air conditioning system
- **Project savings** - Higher input power factor and lower inrush current allow smaller upstream transformer, switchgear and cables and reduce line current and losses in the cables.
- **Safe and easy maintenance** - Segregated manual bypass and front access to major components improve safety and reduce MTTR
- **Asset Management System** - The UPS is compatible with the Emerson AMS Suite Intelligent Device Manager which helps to ensure an efficient preventive maintenance

Key Features

- **Low Ripple Voltage** to reduce battery stress and optimize its lifetime
- **Low inrush current** < 4In (12-pulse) not to oversize mains power supply
- **SCR-based rectifier, 6 or 12 pulses,** with improved operation to significantly reduce the mains' pollution (THDi) and the input RMS current
- **Proven reliability**: The unique design allows the UPS to continuously operate at full load at a permanent 40°C ambient temperature
- **Galvanic isolation:** input and output transformers are standard on the complete range.
- **Ingress protection IP42** is provided as standard to operate in the most demanding environments
- Compatibility with Nickel-Cadmium and Lead-Acid batteries, open or gas-recombination types
- Multilingual digital graphic display with embedded event log
- Wide choice of configurations, options, and remote monitoring solutions

Applications

The Chloride CP-60Z is the best solution, both cost effective and environmental friendly, to meet industrial requirements of a wide range of sectors, such as:

- Oil & Gas, offshore and onshore
- Refining and Petrochemical industries
- Water infrastructures
- Mining
- Transportation (rail, metro, tramway)

CHLORIDE

Custom-designed AC UPS systems to secure industrial processes

The Chloride CP-60Z is available from 5 to 60kVA in single-phase or three-phase output configuration. It offers a wide choice of DC battery voltages (110V, 220V or 400V) and of output voltages (from 1x110 V to 3x415V) to best fit the application.

The UPS uses patented digital Vector Control technology which increases the UPS performances, enables active conditioning of the load and allows personalised system settings.

The Chloride CP-60Z can be adapted for project-specific requirements. A wide choice of industrialized extras allow system customization according to the most demanding technical specifications.

To further improve load availability and process reliability, the system is able to operate in dual parallel configuration, centralized or distributed, with single or dual batteries, and can include AC bus-tie.

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Ratings - Output Power at cos phi 0.8 (kVA) vs battery voltage (Vdc)		
110-120 Vdc	**220-240 Vdc**	**400 Vdc**
5	5	-
10	10	-
20	20	-
30	30	-
-	40	40
-	50	50
-	60	60

Technical Data	
Input	
Input voltage (other voltage on request)	400 VAC (380; 415) ±10%
Inrush current	< 8 x In (6-pulse version) < 4 x In (12-pulse version)
Power factor	up to 0.94
Frequency range	50 Hz (60 Hz factory setting) ±5%
Intermediate DC circuit	
Nominal DC voltage	110 / 120 / 220 / 240 / 400 VDC
Voltage stability	±1% in float mode, input within tolerance ±1.5% for parallel chargers
Voltage ripple (battery connected)	0.25% RMS, in float mode
Current limitation	I nominal
Charging characteristic	IU according to DIN 41773
Output	
Available ratings (see table above)	from 5 to 60 kVA (at PF 0.8 lagging)
AC voltage:	
• Single phase	230 VAC (220, 240) ; 110 VAC (115, 120)
• Three phase	400 VAC (380, 415) ; 220 VAC (190, 208)
Frequency	50 Hz (60 Hz factory setting)
Frequency stability:	
• with internal oscillator	±0.05%
• with reserve synchronism	±3% (from 0.2 to 6% factory setting)
Voltage stability (0-100% load variation):	
• static	±1% (±2% for parallel systems)
• dynamic	VFI SS 111 - complies to IEC62040-3, class 1
Overload inverter (in % of nominal power)	150%/1 min - 125%/10 min
Short-circuit clearance:	
• 1-ph output (in % of nominal current)	250%/100 ms - 175%/5 s
• 3-ph output (in % of nominal current)	315%/100 ms - 220%/5 s (Ph-N)
Voltage distorsion:	
with 100% linear load	<3 %
with 100% non linear load	≤5 % (complies with IEC 62040-1-2)
Allowable power factor	0.5 lagging to 0.5 leading
Allowable crest factor	3/1
Battery	
Type	Lead Acid or Nickel Cadmium, vented or recombination
Autonomy	From few minutes to several hours, as required and specified
Battery current limitation	0.1C (lead acid) / 0.2C (Nickel Cadmium)
General Data	
Rectifier efficiency	up to 90 % (according to rating and config.)
Operating temperature	From 0 to 40 °C
Storage temperature	From -20 °C to +70 °C (battery excluded)
Relative humidity	<90 % non condensing at 20 °C
Operating altitude	1000 m (without system derating)
Cooling	Fan-assisted with redundant monitored fans
External ingress protection	IP 42
Noise	less than 66 dB (according to rating)
Input / output isolation	2500 VAC / 1 minute
Frame colour	RAL 7032
Dimensions	Varying according to ratings and options

Standards	
Compliance	IEC 62040 (-1, -2, -3) / 60146 (-1-1, -1-3, -2) / IEC 60950 IEC 61000-6-2 - IEC 61000-6-4 IEC 60529 / IEC 60439 / IEC 60076
Conformity	EMC Directive 2004/108/CE Low Voltage Directive (LVD) 2006/95/CE CE Mark

Options	
Rectifier	12-pulse SCR rectifier Special 3-ph input voltage (up to 3x690Vac) Surge and/or lighning protections Input circuit breaker
Battery	Battery circuit protection box (Fuse or circuit breaker) Battery reversed polarity detection Battery Low Voltage Disconnection (LVD) Battery black start Battery room temperature sensor for battery charge compensation DC earth fault detection
Output	AC earth fault detection Output fuse switch or circuit breaker
Reserve	Reserve input circuit breaker Reserve transformer (H class) Reserve stabilizer (servo-controlled) Stabilizer output isolator
System	Dual configurations AC distribution (circuit breakers) Backfeed protection Internal cabinet lighting Auxiliary power socket Anti-condensation heater UPS cabinet temperature monitor Special cabinet identification (Tag, nameplate)
Mechanical	Top cable entry Special frame color Special feet height Special keylock Special gland plate Lifting eyes 2mm panels thickness
Communication	Front panel analogue meters (72x72, class 1 or class 1.5) Transducers 4-20mA Additional volt-free contacts Modbus RTU (RS232 or RS485) Modbus / TCP Profibus IEC61850 protocol PPVis monitoring software AMS compatibility kit Passive mimic panel Active mimic panel with integrated LEDs Special lamp indicator on front panel (22mm diameter)

Emerson Network Power.
The global leader in enabling
Business-Critical Continuity™.

- AC Power
- Connectivity
- DC Power
- Embedded Computing
- Embedded Power
- **Industrial Power**
- Infrastructure Management & Monitoring
- Outside Plant
- Power Switching & Controls
- Precision Cooling
- Racks & Integrated Cabinets
- Services

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