CHLORIDE® CP70i

DC/AC inverter
5 to 250 kVA (1-ph output) / up to 500 kVA (3-ph output)

CHLORIDE® CP RANGE

Customized to user specification

Full portfolio of industrial options

BENEFITS

Unrivalled adaptability to existing site conditions, thanks to the wide input DC voltage range:

- Compatibility with any battery configuration already installed on site
- Optimum operation with DC bus having a wide voltage excursion

Technical and budgetary optimization of the battery: On greenfield or brownfield projects where battery may represent an important part of the system total price, the wide input DC voltage range allows:

- Optimization of the number of battery cells as per the input tolerance of the loads to be secured
- Optimization of the battery capacity and therefore the price, as per the required autonomy

Smart access to inverter data:

- User interface with large, colour touchscreen
- Embedded event logger (up to 2000 events) and capability to export recorded events via USB stick

FEATURES

Reliability: Unique design which allows the UPS to continuously operate for at least 20 years at full load at 40 °C

Robust mechanical design: the system withstands vertical and horizontal acceleration stress tests 0.5g as standard

Galvanic isolation: output transformer is included as standard

Remote monitoring solutions: Modbus, Profibus, Ethernet, IEC61850, volt-free contact, monitoring software

The industrial inverter Chloride® CP70i is a DC/AC converter combining IGBT/PWM technology with proven digital control to offer the best performances under any electrical and environmental conditions.

Range Overview

Chloride® CP70i inverter converts a DC input voltage (from batteries or from a DC bus) into a perfect sinusoidal output voltage to provide power to critical AC loads.

It uses the patented digital Vector Control technology which increases the performances of power components, enables an active conditioning of the loadand allows personalized system settings. The result is improved reliability for the process and enhanced safety for the personnel.

Chloride® CP70i range offers a wide choice of DC input voltages (from 110 Vdc to 240 Vdc) and of output voltages. It is available from 5 kVA to 250 kVA in single-phase output configuration, and from 5 kVA to 320 kVA in three-phase output configuration.

Chloride® CP70i inverter is also available with 400 Vdc input. This configuration can be combined with a CP70R or a CP70RC rectifier-charger in order to design specific high ratings double conversion AC UPS systems, up to 500 kVA.

To further improve load availability and process reliability, Chloride® CP70i is able to operate in dual parallel configuration, with centralized or distributed reserve line, and can include an AC bus-tie.

Applications

- Power generation plants
- Transmission and Distribution substations
- Oil and Gas industries, offshore and onshore

Example of Chloride® CP70i-60kVA-220Vdc-230Vac 1ph

CHLORIDE® CP70i

DC/AC Inverter
5 to 250 kVA (1-ph output) / up to 500 kVA (3-ph output)

Technical data

RATINGS OUTPUT POWER[1] (kVA) vs DC INPUT VOLTAGE (Vdc)																
110-120 Vdc	5	10	20	30	40	50	60[2]	80	100	120	160[2]	200[2]	-	-	-	-
220-240 Vdc	-	10	20	30	40	50	60	80	100	120	160	200	250	320[2]	-	-
400 Vdc	-	-	-	-	-	-	-	80	100	120	160	200	250	320[2]	400[2]	500[2]

INPUT			
DC Voltage	110-120 V	220-240 V	400 V
Input voltage range	88-156 V	176-305 V	296-507 V

OUTPUT	
Available ratings	See table (at PF 0.8 lagging)
AC voltage • Single-phase • Three-phase	 1 x 230 V (220, 240) ; 1 x 110 V (115, 120)[3] 3 x 400 V (380, 415) ; 3 x 220 V (200, 208, 230)[3]
Frequency	50 Hz (60 Hz)
Frequency stability • With internal oscillator • With reserve synchronism	 +/- 0.05 % +/- 3 % (from 1 to 5 % adjustable)
Voltage stability (for 0 to 100 % load variation) • Static • Dynamic	 +/-1 % (+/-2 % for parallel systems) VFI SS 111 as per IEC/EN 62040-3, class 1
Inverter overload capability • 1 minute • 10 minutes	 150 % of nominal power 125 % of nominal power
Short-circuit clearance (in % of nominal current) • 1-ph output • 3-ph output Ph-Ph : Ph-N :	 250 % / 100ms - 175% / 5s 315 % / 100 ms - 220 % / 5 s 190 % / 100 ms - 135 % / 5 s
Harmonic voltage distortion • With 100 % linear load • With 100 % non-linear load	 < 3 % SS as per IEC/EN 62040-3
Allowable power factor	0,5 lagging to 0,5 leading[4]
Allowable crest factor	Up to 3/1

GENERAL DATA	
Operating temperature	0 to 40 °C[3]
Storage temperature	-20 to +70 °C
Relative humidity	< 95 % non condensing
Operating altitude	1000 m max without derating[3]
Cooling	Forced ventilation
Efficiency	Up to 91 %, according to rating
External protection	IP 20[3] as per CEI 60529
Noise (at 1m in front of the unit)	60 – 75 dB according to rating
Cabinet color	Grey RAL 7032[3]
Dimensions	Varying according to ratings and options

OPTIONS	
Consult us for any other requirements, subject to feasibility	
Inverter	• Automatic precharge of capacitors • Onther output voltage (1 x 110 to 3 x 690 VAC) • Inverter oversizing
Bypass line	• Bypass isolator(s) • Bypass transformer (H class) • Bypass stabilizer (servo-controlled) • Backfeed protection
System	• Inverter with or with bypass line • CParallel configurations • Input / output isolators • AC Distribution • Earth fault detection or monitoring • Internal lighting • Anti-condensation heater • Cabinet temperature monitor
Mechanical	• External ingress protection up to IP42 • Top cable entry • Specified color of panels • Special feet height (200mm or 300mm) • Special keylock • Non-magnetic gland plate (brass or aluminum) • Lifting eyes • 2 mm side panels thickness • Specified cabinet identification (tag, nameplate) • Anti-seismic design

Communication	• Front panel analogue meters (72x72, class 1.5 or class 1)
	• Transducers 4-20mA
	• Additional volt-free contacts
	• Modbus RTU (RS232 or RS485)
	• Modbus / TCP
	• Profibus
	• IEC61850 protocol
	• PPVis monitoring software
	• Mimic panel on front:
	  • Passive mimic of the system
	  • Active mimic with integrated LEDs
	• Lamp indicator on front panel (22 mm diameter)

STANDARD	
IEC62040-1:2008 +AMD1:2013	Uninterruptible power systems (UPS) - Part 1-2: General and safety requirements for UPS in restricted access locations
IEC62040-2:2006	Uninterruptible power systems (UPS) – Part 2: Electromagnetic compatibility (EMC) requirements
IEC62040-3:2011	Uninterruptible power systems (UPS) - Part 3: Method of specifying the performance and test requirements
IEC61439-1:2011	Low voltage switchgear and controlgear assemblies - Part 1: General rules
IEC60529:1989 +AMD1:1999	Degrees of protection provided by enclosures (IP Code)
IEC60076-11:2004	Power transformers – Part 11: Dry type transformers

CONFORMITY	
Low voltage directive	2006/95/EC and 2014/35/EU
EMC directive	2004/108/EC and 2014/30/EU
CE Mark	

(1) at power factor 0.8 lagging
(2) 3-ph ouput only
(3) other available on request
(4) derating may apply

VertivCo.com/chloride | **Global & Europe,** Vertiv Industrial Systems SAS,
30, Avenue Montgolfier
BP 90 - 69684 Chassieu - France
T: +33 (0)4 78 40 13 56
Industrial.Power@VertivCo.com

To find contact in your region, please visit www.VertivCo.com