CHLORIDE® FP40R

Rectifier - Battery charger - DC UPS 25 to 100 A (1-ph input) / up to 400 A (3-ph input)

CHLORIDE® FP RANGE

Configured to order with industrial options Pre-defined blocks for shorter lead time

BENEFITS

Improved reliability provided by a fully controlled SCR bridge and a reduced quantity of components.

Adaptability thanks to a selection of industrialized options and an easy parameter settings for quick onsite adjustments.

Simplicity of the product design to improve MTBF and to reduce MTTR.

KEY FEATURES

Low Voltage Ripple to optimize battery life.

Low inrush current < 8In not to oversize mains power supply (3-phase).

Compact design with the capability to integrate the battery in the charger cabinet.

Human-Machine Interface (HMI) to deliver appropriate information level to the user.

Ingress protection up to IP55 for harsh environmental conditions.

Compatibility with nickel-cadmium and lead-acid batteries, vented or gas-recombination types.

Galvanic isolation between input and output.

Digital control and monitoring

Wide choice of configurations and options.

Chloride® FP4OR industrial rectifier is the result of engineering research in product simplification to offer an SCR based standardized design with adaptability to industrial requirements.



- Power transmission and distribution
- Continuous process industries
- Petrochemical and chemical industries
- Water and wastewater industries

Range Overview

Chloride® FP40R rectifier is available from 25 A to 100 A in single-phase input configuration, and up to 400 A in threephase input configuration. It offers a wide range of output voltages, from 24 Vdc to 220 Vdc.

Chloride[®] FP40R is suitable for use either as a battery charger, a rectifier or as a DC power supply. It features a microprocessor control which offers exceptional stability and allows adaptability for different application requirements.

To further improve load availability and process reliability, Chloride® FP40R is able to operate in dual parallel configuration.



Chloride®

VERTIV



Technical Data

InternalInternal (1-phase)Internal (3-phase)Input voltage (other voltage on request)230 VAC ± 10%400 VAC ± 10%Inrush current< 15 ln< 8 lnPower factor0.7 (typical)0.8 (typical)Frequency rangeFrom 47 to 63 HzCUTPUTAvailable ratingsSee Ratings tableNominal DC voltage24, 48, 110, 125, 220 VStatic regulation1 %Voltage ripple 1-phDisconnected battery (< 2.5 %)Voltage ripple 3-phDisconnected battery CurrentRemote signaling with 4 dry contactsEvent log up to 100 eventsEATTERYTypeLead acid or nickel cadmium, vented or recombinaisonAutonomyFrom 83 % to 94 % (according to model)Operating temperatureFrom 2.0 °C to +70 °C (battery excluded)Retifier efficiencyFrom 33 % to 94 % (according to model)Operating temperatureFrom 2.0 °C to +70 °C (battery excluded)Retifier efficiencyFrom 2.0 °C to +70 °C (battery excluded)Retifier efficiencyFrom 2.0 °C to +70 °C (battery excluded)Retifier efficiencyFrom 2.0 °C to +70 °C (battery excluded)Retif	INPUT					
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Static regulation 1 % Voltage ripple 1-ph Disconnected battery (< 2.5 %)	Available ratings	See Ratings table				
Voltage ripple 1-ph Disconnected battery (< 2.5 %)	Nominal DC voltage					
Voltage ripple 3-ph Disconnected battery (< 0.7 %)	Static regulation	1.70				
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unit) Isolation Input - Output 2500 VAC / 1 minute Frame colour RAL 7035 or RAL 7032	Internal ingress protection					
Isolation Input - Output 2500 VAC / 1 minute Frame colour RAL 7035 or RAL 7032	0 1	IP20 with open door				
Frame colour RAL 7035 or RAL 7032	Noise (at 1m in front of the unit)	IP20 with open door				
	Noise (at 1m in front of the	IP20 with open door ≤ 60 dB	/1 minute			
Dimensions Varying according to ratings and options (consult us)	Noise (at 1m in front of the unit)	IP20 with open door ≤ 60 dB Input - Output 2500 VAC	/1minute			

Compliance

STANDARDS	
IEC/NF EN 60146-1-1: 2009	Semiconductor converters - Part 1-1: Specification of basic requirements
IEC/NF EN 61000-6-2: 2006	Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments
IEC/NF EN 61000-6-4: 2007 AMD1: 2011	Electromagnetic compatibility (EMC) - Part 6-4: Generic standards - Emission standards for industrial environments
IEC/NF EN 61439-1: 2012	Low voltage switchgear and controlgear assemblies - Part1: General rules
IEC/NF EN 60950-1: 2013 AMD2: 2014	Information technology equipment - Safety - Part 1: General requirements
NF C58-311: 1990	Procedure for type tests for rectifier-battery charger and batteries

EUROPEAN DIRECTIVES

Low voltage directive:	2006/95/EC (before April 2016)		
	2014/35/EU (after April 2016)		
EMC directive:	2004/108/EC (before April 2016)		
	2014/30/EU (after April 2016)		

Charger	Input circuit breaker or molded case circuit breaker (16 kA or 36 kA) Position contact on AC input circuit breaker Paralleling diode Dropping diode DC earth fault monitor Customer connection on terminal blocks Ultra low voltage ripple < 0.1 % (48 V) Measurements of AC input voltage, current and frequency
Battery	Battery protection (fuses or circuit breaker with contact) Protection against battery reversed polarity Battery Low Voltage Disconnection (LVD) Temperature sensor for battery charge compensation Test battery presence or test battery capacity
Mechanical	Operating temperature up to 55 °C (with system derating) External ingress protection IP21, 23, 40, 41, 43, 55* Space heater with hygrostat and/or thermostat Internal lighting 100 mm or 200 mm base frame Lifting eyes
DC Load	DC output protection (fuses or circuit breaker with contact) Distribution board (circuit breaker with or without contact)
Communication * Available according to ratings	Modbus RS485 Remote alarm up to 8 additional relays

SPECIAL REQUEST	
Configuration	Single rectifier with no battery Dual charger in single cabinet Dual charger with shared battery
Battery	Batteries in charger cabinet (on shelves or drawers)
Mechanical	Other RAL painting colour

Ratings

OUTPUT CURRENT (A) VS OUTPUT VOLTAGE (VDC)								
24 Vdc	48 Vdc	110 - 125 Vdc	220 Vdc					
-	-	25	25					
-	40	40	-					
-	60	60	-					
100	100	100	-					
35	35	35	35					
65	65	65	65					
100	100	100	100					
160	160	160	160					
220	220	220	220					
300	300	300	300					
400	400	400	-					
	24 Vdc - - 100 35 65 100 160 220 300	24 Vdc 48 Vdc - - - 40 - 60 100 100 35 35 65 65 100 100 160 100 160 220 300 300	24 Vdc 48 Vdc 110 - 125 Vdc - - 25 - 40 40 - 60 60 100 100 100 35 35 35 65 65 65 100 100 100 160 160 160 220 220 220 300 300 300					

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