

## Chloride® FP Range

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



### Benefits

**Compact DC power pack:** capability to integrate the battery inside the charger cabinet to save space.

**Adaptability:** wide choice of output voltages and industrialized options is available to meet your specific needs.

**Easy diagnostic:** the control system gives you a quick reLoading of the system status via the LEDs and the integrated display.

**Availability:** You need to have systems running all the time and be able to verify it. The automatic battery test quickly and safely validates battery availability. No manual test is required.

### Key Features

**Power factor corrector** to limit perturbations on the upstream network.

**Low voltage ripple** to optimize battery life.

**Fuse or circuit breaker** on the output and on the battery line.

**Up to IP41 ingress protection** to meet installation requirements of industrial environments.

**Design Flexibility** which allows paralleling of the internal rectifier modules to increase the available power or to ensure N+1 redundancy.

The Chloride® FP20R is a battery charger for stationary batteries that is delivered in a compact enclosure. It is available in several configurations: as a DC power pack with integrated battery or as a stand-alone charger with external battery, it ensures the continuity of service to critical DC loads. As a stand-alone rectifier, it supplies DC power supply to industrial processes.

### Range Overview

Chloride® FP20R is supplied with a single-phase input and offers a wide choice of output voltages, from 12 Vdc to 220 Vdc. The range of available ratings is from 6 to 180 A, according to the chosen output voltage.

Chloride® FP20R combines high frequency switch-mode technology with microprocessor control to bring a high performance level and exceptional output voltage stability in a very compact design.

To further ensure reliability of the connected load, Chloride® FP20R is provided with natural convection cooling, thus eliminating the need to replace worn mechanical parts.

### Applications

- Programmable Logic Controllers (PLCs)
- Control and monitoring circuits
- Auxiliary relay circuits (coils)
- Drive circuits



Example of Chloride® FP20R-CK

## Available Ratings

ITEM CODE	OUTPUT VOLTAGE	CHARGER CURRENT	BATTERY CAPACITY <sup>(1)</sup>	AVAILABLE POWER (MAINS) <sup>(2)</sup>	AVAILABLE POWER ON BATTERY (W)					ACCEPTABLE PEAKS (A)		CABINET TYPE
	VDC				A	Ah	W	30'	1h	2h	4h	
FP20R 12 30 24	12	30	24	331	360	208	126	64	34	60	100	CK
FP20R 12 30 38	12	30	38	312	360	322	176	94	63	60	100	CK
FP20R 12 30 48	12	30	48	302	360	360	252	128	67	60	100	CK
FP20R 12 30 60	12	30	60	288	360	360	270	145	80	60	100	CK
FP20R 12 30 76	12	30	76	264	360	360	352	188	126	60	100	CK
FP20R 12 30 120	12	30	120	216	360	360	360	290	160	60	100	CK
FP20R 12 60 24	12	60	24	691	360	208	126	64	34	120	200	CK
FP20R 12 60 38	12	60	38	674	579	322	176	94	63	120	200	CK
FP20R 12 60 48	12	60	48	662	720	416	252	128	67	120	200	CK
FP20R 12 60 60	12	60	60	648	720	470	270	145	80	120	200	CK
FP20R 12 60 76	12	60	76	629	720	644	352	188	126	120	200	CK
FP20R 12 60 120	12	60	120	576	720	720	540	290	160	120	200	CK
FP20R 24 30 24	24	30	24	662	720	416	252	128	68	60	100	CK
FP20R 24 30 38	24	30	38	629	720	644	352	188	126	60	100	CK
FP20R 24 30 48	24	30	48	605	720	720	504	256	134	60	100	CK
FP20R 24 30 60	24	30	60	576	720	720	540	290	160	60	100	CK
FP20R 24 30 76	24	30	76	538	720	720	704	376	252	60	100	CK
FP20R 24 30 120	24	30	120	432	720	720	720	580	320	60	100	CK
FP20R 24 60 24	24	60	24	1382	720	416	252	128	68	120	200	CK
FP20R 24 60 38	24	60	38	1348	1158	644	352	188	126	120	200	CK
FP20R 24 60 48	24	60	48	1325	1440	832	504	256	134	120	200	CK
FP20R 24 60 60	24	60	60	1296	1440	940	540	290	160	120	200	CK
FP20R 24 60 76	24	60	76	1257	1440	1288	704	376	252	120	200	CK
FP20R 24 60 120	24	60	120	1152	1440	1440	1080	580	320	120	200	CK
FP20R 24 60 200	24	60	200	960	1440	1440	1440	940	500	120	200	CR
FP20R 24 60 200	24	60	200	960	1440	1440	1440	940	500	120	200	CK
FP20R 24 60 300	24	60	300	720	1440	1440	1440	1350	810	120	200	CR
FP20R 24 120 200	24	120	200	2400	2880	2880	1730	940	500	168	280	CR
FP20R 24 120 300	24	120	300	2160	2880	2880	2500	1350	810	168	280	CR
FP20R 24 120 450	24	120	450	1800	2880	2880	2880	2100	1220	168	280	CR
FP20R 24 120 600	24	120	600	1440	2880	2880	2880	2810	1630	168	280	CR
FP20R 24 180 300	24	180	300	3600	4320	4320	2500	1350	810	216	360	CR
FP20R 24 180 450	24	180	450	3240	4320	4320	3800	2100	1220	216	360	CR
FP20R 24 180 600	24	180	600	2880	4320	4320	4320	2810	1630	216	360	CR
FP20R 48 15 24	48	15	24	605	720	720	504	256	134	30	50	CK
FP20R 48 15 38	48	15	38	538	720	720	704	376	252	30	50	CK
FP20R 48 15 60	48	15	60	432	720	720	720	580	320	30	50	CK
FP20R 48 30 24	48	30	24	1325	1140	832	504	256	134	60	100	CK
FP20R 48 30 38	48	30	38	1258	1440	1288	704	376	252	60	100	CK
FP20R 48 30 60	48	30	60	1152	1440	1440	1080	580	320	60	100	CK
FP20R 48 30 100	48	30	100	960	1440	1440	1440	940	500	60	100	CR
FP20R 48 30 100	48	30	100	960	1440	1440	1440	940	500	60	100	CK
FP20R 48 30 150	48	30	150	720	1440	1440	1440	1350	810	60	100	CR
FP20R 48 60 100	48	60	100	2400	2880	2880	1730	940	500	84	140	CR
FP20R 48 60 150	48	60	150	2160	2880	2880	2500	1350	810	84	140	CR
FP20R 48 60 200	48	60	200	1920	2880	2880	2880	1880	1000	84	104	CR
FP20R 48 60 300	48	60	300	1440	2880	2880	2880	2810	1630	84	104	CR
FP20R 48 90 100	48	90	100	3840	4320	3278	1730	940	500	108	180	CR
FP20R 48 90 150	48	90	150	3600	4320	4320	2500	1350	810	108	180	CR
FP20R 48 90 200	48	90	200	3360	4320	4320	3450	1880	1000	108	180	CR
FP20R 48 90 300	48	90	300	2880	4320	4320	4320	2810	1630	108	180	CR

<sup>(1)</sup> VRLA battery

<sup>(2)</sup> Output power value given with mains input available and battery in recharge at 0.1C<sub>10</sub>

## Available Ratings

ITEM CODE	OUTPUT VOLTAGE	CHARGER CURRENT	BATTERY CAPACITY <sup>(1)</sup>	AVAILABLE POWER (MAINS) <sup>(2)</sup>	AVAILABLE POWER ON BATTERY (W)					ACCEPTABLE PEAKS (A)		CABINET TYPE
	VDC				A	Ah	W	30'	1h	2h	4h	
FP20R 110 06 07	110	6	7	583	660	432	243	144	81	12	20	CK
FP20R 110 06 14	110	6	14	506	660	660	486	288	162	12	20	CK
FP20R 110 12 07	110	12	7	1243	800	432	243	144	81	24	40	CK
FP20R 110 12 14	110	12	14	1166	1320	864	486	288	162	24	40	CK
FP20R 110 12 24	110	12	24	1056	1320	1320	1134	576	306	24	40	CR
FP20R 110 12 38	110	12	38	902	1320	1320	1320	846	567	24	40	CR
FP20R 110 12 60	110	12	60	660	1320	1320	1320	1320	720	24	40	CR
FP20R 110 24 38	110	24	38	2222	2640	2640	1584	846	567	33	56	CR
FP20R 110 24 60	110	24	60	1980	2640	2640	2430	1320	720	33	56	CR
FP20R 110 24 100	110	24	100	1540	2640	2640	2640	2100	1120	33	56	CR
FP20R 110 24 150	110	24	150	990	2640	2640	2640	2640	1840	33	56	CR
FP20R 110 36 60	110	36	60	3300	3960	3960	2430	1320	720	43	72	CR
FP20R 110 36 100	110	36	100	2860	3960	3960	3960	2100	1120	43	72	CR
FP20R 110 36 150	110	36	150	2310	3960	3960	3960	3150	1840	43	72	CR
FP20R 120 06 07	120	6	7	636	720	480	270	160	90	12	20	CK
FP20R 120 06 14	120	6	14	552	720	720	540	320	180	12	20	CK
FP20R 120 12 07	120	12	7	1356	800	480	270	160	90	24	40	CK
FP20R 120 12 14	120	12	14	1272	1440	960	540	320	180	24	40	CK
FP20R 120 12 24	120	12	24	1152	1440	1440	1260	604	340	24	40	CR
FP20R 120 12 38	120	12	38	984	1440	1440	1440	940	630	24	40	CR
FP20R 120 12 60	120	12	60	720	1440	1440	1440	1440	800	24	40	CR
FP20R 120 24 38	120	24	38	2424	2880	2700	1760	940	630	33	56	CR
FP20R 120 24 60	120	24	60	2160	2880	2880	2700	1460	800	33	56	CR
FP20R 120 24 100	120	24	100	1680	2880	2880	2880	2340	1250	33	56	CR
FP20R 120 24 150	120	24	150	1080	2880	2880	2880	2880	2030	33	56	CR
FP20R 120 36 60	120	36	60	3600	4320	4320	2700	1460	800	43	72	CR
FP20R 120 36 100	120	36	100	3120	4320	4320	4300	2340	1250	43	72	CR
FP20R 120 36 150	120	36	150	2520	4320	4320	4320	3500	2030	43	72	CR
FP20R 220 06 07	220	6	7	1166	1320	864	486	288	162	12	20	CK
FP20R 220 06 24	220	6	24	792	1320	1320	1320	1152	612	12	20	CR
FP20R 220 06 38	220	6	38	484	1320	1320	1320	1320	1134	12	20	CR
FP20R 220 12 38	220	12	38	1804	2640	2640	2640	1692	1134	17	28	CR
FP20R 220 12 60	220	12	60	1320	2640	2640	2640	2610	1440	17	28	CR
FP20R 220 18 38	220	18	38	3124	3960	3960	3168	1692	1134	21	36	CR
FP20R 220 18 60	220	18	60	2640	3960	3960	3960	2610	1440	21	36	CR

<sup>(1)</sup> VRLA battery

<sup>(2)</sup> Output power value given with mains input available and battery in recharge at 0.1C<sub>10</sub>



CK Cabinet



CR128 Cabinet



CR188 Cabinet



## Technical Data

Input	
Main supply	230 Vac 1 ph
Input voltage tolerance	-20 % / +15 %
Power factor	> 0.95
Input frequency	50 / 60 Hz
Frequency range	From 47 to 63 Hz

Output	
Nominal voltage	See selection table
Output voltage range	±15 %
Static regulation	±1 %
Voltage ripple	< 0.1 % RMS

Battery	
Type	Valve regulated lead acid

Monitoring	
Type of display	Alphanumerical, 2 lines of 8 characters Monitoring of the DC voltage
Main functions	LED test Battery recharge current limitation
Measurements	Output voltage Output current
Remote signaling	< 0.1 % RMS

General data	
Rectifier efficiency	From 83 % to 91 %
Operating temperature	From 0 to 40 °C
Storage temperature	From -5 °C to +45 °C
Relative humidity	< 95 % non condensing at 20 °C
Operating altitude	1000 m (without system derating)
Cooling	Natural convection cooling
External protection	IP31
Internal protection	Protection against unintentional direct contacts, as per IEC 60950-14
Noise (at 1m in front of the unit)	≤ 60 dB
Input / output insulation	2500 VAC / 1 minute
Frame colour	RAL 7035
Dimensions	CK type: H 850 mm x W 500 mm x D 420 mm CR type: H 1200 mm or 1800 mm x W 800 mm x D 654 mm - Height to be confirmed based on options

Options		
Charger / load	400	Single-phase 400 Vac input voltage
	Q	Position contact on AC input circuit breaker
	D	Paralleling diode
	I	DC earth fault alarm
	F	Integrated distribution board, up to 12 feeders (fuses)
Battery	FB	Battery protection (fuse 32 A)
	A	Low-voltage battery cut-off
	B	Battery test
	C	C13-100 automatic control system - programmable 0.5 to 24 h (in compliance with French standards)
	T	Temperature probe for battery charge compensation
Mechanical	RT	External ingress protection IP41
		Space heater with hygostat and/or thermostat
		Internal lighting
		Lifting rings
		Feet 100 mm or 200 mm
Communication	RS	Modbus RS485
	FR / EN	Display Language French or English

Special request		
Battery		Other types of batteries, lead-acid or nickel-cadmium, vented or recombination
	JB / HB	Battery protection (circuit breaker with or without contact)
Load	J / H	Integrated distribution board, up to 6 feeders (circuit breakers with or without contact)

## 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)