

**Technical data**  
**Smart chargers**  
**Fiamm Motive Power**  
**Premium ES**



## Premium ES chargers

### Matching table of capacity and recharge time

Recharge time in hours for a 80 % discharged battery, discharged battery at a electrolyte temperature of 30°C

For battery range:	C <sub>5 min</sub>	FMP energy plus					FMP energy dry	powerbloc dry (AGM)	
Standard							12h@80%DOD	10 h	12 h
Ionic system		7 h	8 h	10 h	12 h	14 h	8h@60%DOD		
Pneumatic circulation		6 h	7 h	9 h	11 h	13 h			

24 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC1 PE 24 V 20 A	100	100	140	160	180	220	110	120	140
TC1 PE 24 V 25 A	100	120	180	210	250	280	140	170	200
TC1 PE 24 V 30 A	100	140	210	250	300	330	170	190	230
TC1 PE 24 V 35 A	100	170	250	300	350	380	200	220	270
TC1 PE 24 V 40 A	150	190	280	330	390	430	230	250	300
TC1 PE 24 V 50 A	150	240	330	390	460	510	280		
TC1 PE 24 V 60 A	180	280	390	470	530	590	340		
TC1 PE 24 V 70 A	180	330	450	540	630	690	400		
TC1 PE 24 V 80 A	200	380	520	620	720	790	450		
TC1 PE 24 V 100 A	250	450	620	740	850	950	570		

TC3 PE 24 V 70 A	180	330	450	540	630	690	400		
TC3 PE 24 V 120 A	250	580	800	960	1120	1220	680		
TC3 PE 24 V 140 A	250	670	930	1100	1240	1400	800		
TC3 PE 24 V 200 A	250	850	1200	1400	1620	1800	1100		

36 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC1 PE 36 V 20 A	100	100	140	160	180	220	110	120	140
TC1 PE 36 V 30 A	100	140	210	250	300	330	170	190	230
TC1 PE 36 V 40 A	150	190	280	330	390	430	230		
TC1 PE 36 V 50 A	150	240	330	390	460	510	280		
TC1 PE 36 V 60 A	180	280	390	470	530	590	340		
TC1 PE 36 V 70 A	180	330	450	540	630	690	400		
TC1 PE 36 V 80 A	200	380	520	620	720	790	450		

TC3 PE 36 V 75 A	180	360	500	600	700	750	430		
TC3 PE 36 V 100 A	250	450	620	740	850	950	570		
TC3 PE 36 V 115 A	250	570	780	930	1040	1200	660		

48 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC1 PE 48 V 30 A	100	140	210	250	300	330	170		
TC1 PE 48 V 40 A	150	190	280	330	390	430	230		
TC1 PE 48 V 50 A	150	240	330	390	460	510	280		
TC1 PE 48 V 70 A	180	330	450	540	630	690	400		
TC1 PE 48 V 100 A	250	450	620	740	850	950	570		

TC3 PE 48 V 60 A	180	280	390	470	530	590	340		
TC3 PE 48 V 75 A	180	360	500	600	700	750	430		
TC3 PE 48 V 100 A	250	450	620	740	850	950	570		
TC3 PE 48 V 115 A	250	570	780	930	1040	1200	660		
TC3 PE 48 V 140 A	250	670	930	1100	1240	1400	800		
TC3 PE 48 V 170 A	250	840	1150	1350	1550	1750	970		
TC3 PE 48 V 200 A	250	850	1200	1400	1620	1800	1100		
TC3 PE 48 V 240 A	250	960	1400	1650	1900	2100	1370		

72 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC3 PE 72 V 65 A	180	300	420	500	580	650	370		
TC3 PE 72 V 85 A	200	400	550	660	740	840	480		
TC3 PE 72 V 105 A	250	480	660	790	890	1000	600		

80 Volt

Capacity in Ah/C<sub>5</sub> to be recharged within ... hours.

TC3 PE 80 V 40 A	150	190	280	330	390	430	230		
TC3 PE 80 V 65 A	180	300	420	500	580	650	370		
TC3 PE 80 V 85 A	200	400	550	660	740	840	480		
TC3 PE 80 V 105 A	250	480	660	790	890	1000	600		
TC3 PE 80 V 120 A	250	580	800	960	1120	1220	680		
TC3 PE 80 V 160 A	250	760	1060	1300	1450	1600	910		



## Technical parameters

	Unit	48 V 30 A 1-phase	48 V 40 A 1-phase	48 V 50 A 1-phase	48 V 70 A 1-phase	48 V 100A 1-phase
Power supply	V	230 ±10%	230 ±10%	230 ±10%	230 ±10%	230 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	9	12	14.5	21	30
Power supply cable	mm <sup>2</sup>	3 x 1.5	3 x 2.5	3 x 2.5	3 x 4	3 x 6
Power supply fuse (Protistor)	A	20	30	30	30	50
Battery cable	mm <sup>2</sup>	10	10	10	25	25
Battery cable length.	m	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP21	IP21	IP21	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	10	13	13	22	55
Dimensions						
Height	mm	377	411	411	600	940
Length	mm	281	317	317	410	410
Depth (out of cable)	mm	186	206	206	317	317
Fixing centers						
Height	mm	280	355	355	390	540
Width (Wall fixing)	mm	268	304	304	394	394
Front panel		LED	LED	LED	LCD	LCD

## Technical parameters

	Unit	48V 60A 3-phase	48V 75 A 3-phase	48V 100 A 3-phase	48 V 115A 3-phase	48 V 140A 3-phase	48 V 170A 3-phase	48V 200A 3-phase	48V 240A 3-phase
Power supply	V	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	5.8	7.3	9.7	11	13.6	16.5	19.4	23.3
Power supply cable	mm <sup>2</sup>	4 x 2.5	4 x 2.5	4 x 2.5	4 x 2.5	4 x 4	4 x 4	4 x 6	4 x 6
Power supply fuse (Protistor)	A	20	20	20	20	30	30	30	30
Battery cable	mm <sup>2</sup>	16	16	25	25	50	50	50	50
Battery cable length.	m	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	18	18	18	18	30	55	55	55
Dimensions									
Height	mm	581	581	581	581	750	940	940	940
Length	mm	389	389	389	389	410	410	410	410
Depth	mm	180	180	180	180	317	317	317	317
Fixing centers									
Height	mm	548	548	548	548	540	540	540	540
Width (Wall fixing)	mm	220	220	220	220	394	394	394	394
Front panel		LED	LED	LED	LED	LCD	LCD	LCD	LCD

## Technical parameters

	Unit	72V 65A 3-phase	72 V 85 A 3-phase	72 V 105 A 3-phase	80 V 40 A 3-phase	80 V 65 A 3-phase	80 V 85 A 3-phase	80 V 105 A 3-phase	80 V 120 A 3-phase	80 V 160 A 3-phase
Power supply	V	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%	400 ±10%
Frequency	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Nominal Current consumption	A	9.5	12.4	15.3	6.5	10.5	13.7	17	19.4	26
Power supply cable	mm <sup>2</sup>	4 x 2.5	4 x 4	4 x 4	4 x 2.5	4 x 2.5	4 x 4	4 x 4	4 x 4	4 x 6
Power supply fuse (Protistor)	A	20	30	30	20	20	30	30	30	40
Battery cable	mm <sup>2</sup>	25	50	50	25	25	50	50	50	50
Battery cable length.	m	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10	1 to 10
IP protection level		IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20	IP20
T°. of use	°C	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40	0 to +40
Weight	kg	22	30	55	22	22	30	55	55	55
Dimensions										
Height	mm	600	750	940	600	600	750	940	940	940
Length	mm	410	410	410	410	410	410	410	410	410
Depth	mm	317	317	317	317	317	317	317	317	317
Fixing centers										
Height	mm	390	540	540	390	390	540	540	540	540
Width (Wall fixing)	mm	394	394	394	394	394	394	394	394	394
Front panel		LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD	LCD

## Profiles and options ● series ▲ optional □ not available

	24V 20A	24V 50A	24V 70A	36V 75A
	24V 25A	24V 60A	24V 120A	36V 100A
	24V 30A	24V 70A	24V 140A	36V 115A
	24V 35A	24V 80A	24V 200A	
	24V 40A	24V 100A		
	36V 20A	36V 40A		
	36V 30A	36V 50A		
		36V 60A		
		36V 70A		
		36V 80A		
	1-phase	1-phase	3-phase	3-phase

FMP energy plus + ionic mixing	●	●	●	●
FMP energy plus + electrolyte mixing*	□	▲	▲	▲
FMP energy dry	●	●	●	●
FMP energy Low Maintenance 70 (LM 70)	□	□	□	□
FMP energy Low Maintenance 200 (LM 200)	□	□	□	□
powerbloc dry (AGM)	●	□	□	□
FMP Aqualevel	□	▲	▲	▲
Remote display (green/red)	□	▲	▲	▲
Serial link for charger memory download	□	▲	▲	▲
*Pump for electrolyte mixing	□	▲	▲	▲

Profiles and options ● series ▲ optional □ not available

	48V 30A 48V 40A 48V 50A 48V 70A 48V 100A  1-phase	48V 60A 48V 75A 48V 100A 48V 115A 48V 140A 48V 170A 48V 200A 48V 240A 3-phase	72V 65A 72V 85A 72V 105A  3-phase	80V 40A 80V 65A 80V 105A 80V 120A 80V 160A  3-phase
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FMP energy plus + ionic mixing	●	●	●	●
FMP energy plus + electrolyte mixing*	▲	▲	▲	▲
FMP energy dry	●	●	●	●
FMP energy Low Maintenance 70 (LM 70)	□	□	□	□
FMP energy Low Maintenance 200 (LM 200)	□	□	□	□
powerbloc dry (AGM)	□	□	□	□
FMP Aqualevel	▲	▲	▲	▲
Remote display (green/red)	▲	▲	▲	▲
Serial link for charger memory download	▲	▲	▲	▲
*Pump for electrolyte mixing	▲	▲	▲	▲

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