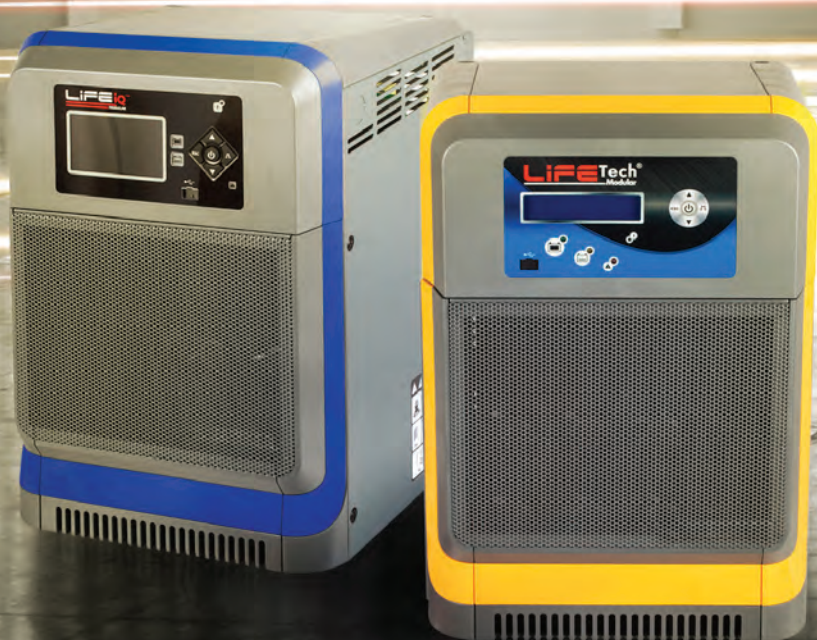


**CHARGING
SOLUTION**

**FIAMM MOTIVE
POWER®
MODULAR
CHARGERS**

TECHNICAL DATA SHEET

“MODULAR: SETTING
A NEW STANDARD”



FIAMM
MOTIVE POWER®

Lifetech® Modular

MATCHING TABLE OF CAPACITY AND RECHARGE TIME - SINGLE PHASE AND THREE PHASE

Charging Times (+/- 0,5 h) from 80% DOD at 30°C

CHARGING PROFILES	Configuration	Volt	C ₁			C ₂			Gel/Evolution (PzV, PzVB)		OPPORTUNITY CHARGE (PzQ)	
			C ₁ Min	C ₁	C ₁ Max	C ₂ Min	C ₂	C ₂ Max	@60% 8 h	@60% 9 h	@80% 11 h	@80% 12 h
Slow Charge PzS, PzB, PzM						9 h	10.5 h	12 h				
Heavy duty flooded PzS, PzB, PzQ			7 h	8 h	9 h							
Standard flooded PzS, PzB, PzM (WL8)			6 h	7 h	8 h							
Airmix with PzS, PzB, PzM (WL13), PzQ			5.5 h	6.5 h	7.5 h							

SINGLE PHASE

Model	Configuration	Volt	C ₁ Min	C ₁	C ₁ Max	C ₂ Min	C ₂	C ₂ Max	C ₃ Min	C ₃	C ₃ Max
TC1 LT Modular 12V 1kW*	Contr POUT**	12	108	189	208	208	245	290	123	165	108
	MAX POUT		144	252	277	277	327	387	164	220	135
TC1 LT Modular 24V 1kW*	Contr POUT**	24	108	189	208	208	245	290	123	165	108
	MAX POUT		144	252	277	277	327	387	164	220	135
TC1 LT Modular 24V 2kW	Contr POUT**	24	196	343	377	377	445	527	223	300	180
	MAX POUT		288	503	554	554	655	774	327	440	245
TC1 LT Modular 24V 3kW	Contr POUT**	24	380	664	731	731	864	1022	432	581	360
	MAX POUT		432	755	831	831	982	1161	491	661	475
TC1 LT Modular 36/48V 1kW*	Contr POUT**	36	64	112	123	123	145	172	73	98	64
	MAX POUT		100	175	192	192	227	269	114	153	80
TC1 LT Modular 36/48V 2kW	Contr POUT**	36	136	238	262	262	309	366	155	208	125
	MAX POUT		192	336	369	369	436	516	218	294	170
TC1 LT Modular 36/48V 3kW	Contr POUT**	36	240	420	462	462	545	645	273	367	240
	MAX POUT		300	524	577	577	682	806	341	459	300
TC1 LT Modular 36/48V 1kW*	MAX POUT	48	72	126	138	138	164	194	82	110	72
	Contr POUT**		98	171	188	188	223	263	111	150	90
TC1 LT Modular 36/48V 2kW	MAX POUT	48	144	252	277	277	327	387	164	220	123
	Contr POUT**		172	301	331	331	391	462	195	263	180
TC1 LT Modular 36/48V 3kW	MAX POUT	48	216	378	415	415	491	581	245	330	215
	Contr POUT**										

THREE PHASE

Model	Configuration	Volt	C ₁ Min	C ₁	C ₁ Max	C ₂ Min	C ₂	C ₂ Max	C ₃ Min	C ₃	C ₃ Max
TC3 LT Modular 24/36/48V 3.5kW	MAX POUT	24	280	490	538	538	636	753	318	428	280
	Contr POUT**		384	671	738	738	873	1032	436	587	350
TC3 LT Modular 24/36/48V 7kW	MAX POUT	24	512	895	985	985	1164	1376	582	783	480
	Contr POUT**		560	979	1077	1077	1273	1505	636	856	640
TC3 LT Modular 24/36/48V 10.5kW	MAX POUT	24	652	1140	1254	1254	1482	1753	741	997	700
	Contr POUT**		840	1469	1615	1615	1860		955	1120	815
TC3 LT Modular 24/36/48V 14kW	MAX POUT	24	1120	1958	2064	1860					1050
	Contr POUT**		1280	2064							1280
TC3 LT Modular 24/36/48V 17.5kW	MAX POUT	24	1280	2064							1600
	Contr POUT**										
TC3 LT Modular 24/36/48V 21kW	MAX POUT	24	1280	2064							1600
	Contr POUT**										
TC3 LT Modular 24/36/48V 3.5kW	MAX POUT	36	260	455	500	500	591	699	295	398	260
	Contr POUT**		520	909	1000	1000	1182	1398	591	765	325
TC3 LT Modular 24/36/48V 7kW	MAX POUT	36	780	1364	1500	1500	1773	1860	886	1120	650
	Contr POUT**		1040	1818	2000						975
TC3 LT Modular 24/36/48V 14kW	MAX POUT	36	1280	2064							1300
	Contr POUT**										1280
TC3 LT Modular 24/36/48V 17.5kW	MAX POUT	36	1280	2064							1600
	Contr POUT**										
TC3 LT Modular 24/36/48V 21kW	MAX POUT	36	1280	2064							1600
	Contr POUT**										
TC3 LT Modular 24/36/48V 3.5kW	MAX POUT	48	240	420	462	462	545	645	273	367	240
	Contr POUT**		328	573	631	631	745	882	373	502	300
TC3 LT Modular 24/36/48V 7kW	MAX POUT	48	440	769	846	846	1000	1183	500	673	410
	Contr POUT**		480	839	923	923	1091	1290	545	734	550
TC3 LT Modular 24/36/48V 10.5kW	MAX POUT	48	560	979	1077	1077	1273	1505	636	856	600
	Contr POUT**		720	1259	1385	1385	1636	1860	818	1101	700
TC3 LT Modular 24/36/48V 14kW	MAX POUT	48	960	1678	1846				1091	1120	900
	Contr POUT**		1200	2064							1200
TC3 LT Modular 24/36/48V 17.5kW	MAX POUT	48	1200	2064							1500
	Contr POUT**		1280	2064							1280
TC3 LT Modular 24/36/48V 21kW	MAX POUT	48	1280	2064							1600
	Contr POUT**										
TC3 LT Modular 72/80V 3.5kW	MAX POUT	72	160	280	308	308	364	430	182	245	160
	Contr POUT**		240	420	462	462	545	645	273	367	200
TC3 LT Modular 72/80V 7kW	MAX POUT	72	320	559	615	615	727	860	364	489	300
	Contr POUT**		400	699	769	769	909	1075	455	612	400
TC3 LT Modular 72/80V 10.5kW	MAX POUT	72	480	839	923	923	1091	1290	545	734	500
	Contr POUT**		640	1119	1231	1231	1455	1720	727	979	600
TC3 LT Modular 72/80V 14kW	MAX POUT	72	800	1399	1538	1538	1818	1860	909	1120	800
	Contr POUT**		960	1678	1846	1846	1860		1091	1120	960
TC3 LT Modular 72/80V 17.5kW	MAX POUT	72	960	1678	1846	1846	1860		1091	1120	1000
	Contr POUT**										
TC3 LT Modular 72/80V 21kW	MAX POUT	72	960	1678	1846	1846	1860		1091	1120	1200
	Contr POUT**										
TC3 LT Modular 72/80V 3.5kW	MAX POUT	80	144	252	277	277	327	387	164	220	144
	Contr POUT**		288	503	554	554	655	774	327	440	180
TC3 LT Modular 72/80V 7kW	MAX POUT	80	360	629	692	692	818	968	409	550	360
	Contr POUT**		432	755	831	831	982	1161	491	661	450
TC3 LT Modular 72/80V 10.5kW	MAX POUT	80	576	1007	1108	1108	1309	1548	655	881	540
	Contr POUT**		720	1259	1385	1385	1636	1860	818	1101	720
TC3 LT Modular 72/80V 14kW	MAX POUT	80	720	1259	1385	1385	1636	1860	818	1101	900
	Contr POUT**		864	1510	1662	1662	1860		982	1120	864
TC3 LT Modular 72/80V 17.5kW	MAX POUT	80	864	1510	1662	1662	1860		982	1120	1080
	Contr POUT**										

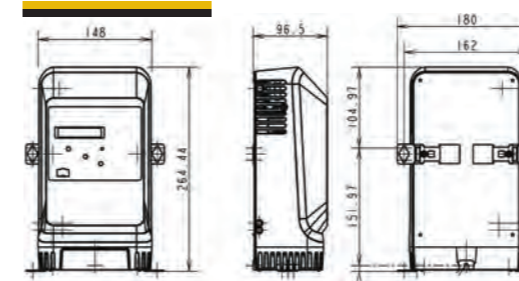
* Airmix not available on 1 kW.
** Output currents set at different values to match specific capacities

Lifetech® Modular

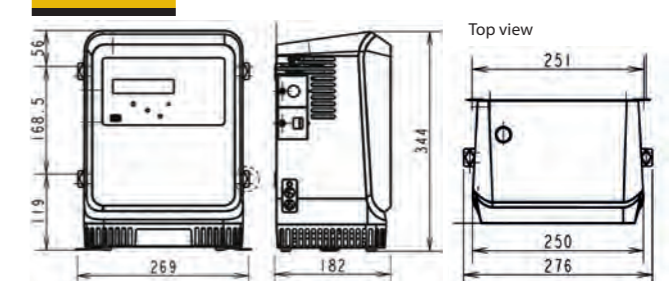
TECHNICAL SPECIFICATION - SINGLE PHASE

Specifications	Units	Stand Alone 1kW **			2kW		3kW	
Battery voltage		12V	24V	36/48V	24V	36/48V	24V	36/48V
Nominal input voltage	Vac	230V +/- 10% / 1ph						
Frequency	Hz	50/60						
Max current draw @ 230Vac	Aac	2.4	4.8	5.1	9.6	10.2	14.4	15.3
AC input cable section	mm ²	3 x 1.0			3 x 1.5			
AC input cable length	m	1.5						
Max output current @ 230Vac	Adc	36	36	25/18	72	50/36	108	75/54
Battery cables section	mm ²	6			25			
Battery cables length	m	3						
IP protection		IP21						
Operating temperature	°C	0°C to +45°C						
Power factor		0.99						
Idle mode	W	≤10						
Display		2 line LCD						
Weight	kg	2.4			6.7		7.7	
Dimensions (HxWxD)	mm	264 x 148 x 96.5			344 x 250 x 182			
Weight with airmix	kg	** Not available on stand alone 1kW			10.0		11.0	
Dimensions (HxWxD) with airmix	mm	** Not available on stand alone 1kW			435 x 286 x 185			
Cabinet		1 bay stand alone			3 bay (2 modules)		3 bay (3 modules)	

1 bay stand alone



3 bay cabinet



TECHNICAL SPECIFICATION - THREE PHASE

Specifications	Units	3.5kW		7kW		10.5kW		14kW		17.5kW		21kW	
Battery voltage		24/36/48V	72/80V	24/36/48V	72/80V	24/36/48V	72/80V	24/36/48V	72/80V	24/36/48V	72/80V	24/36/48V	72/80V
Nominal input voltage	Vac	400V +/- 10% / 3ph											
Frequency	Hz	50/60											
Max current draw @ 400Vac	Aac	5.6	5.6	11.2	11.2	16.8	16.8	22.4	22.4	28.0	28.0	29.8	33.6
AC input cable section	mm ²	4 x 2.5				4 x 4.0				4 x 6.0			
AC input cable length	m	2											
Max output current @ 400Vac	Adc	70/65/60	40/36	140/130/120	80/72	210/195/180	120/108	280/260/240	160/144	320/320/300	200/180	320/320/320	240/216
Battery cables section	mm ²	35				70				95			
Battery cables length	m	3											
IP protection		IP21											
Operating temperature	°C	0°C to +45°C											
Power factor		0.95											
Idle mode	W	≤10											
Display		2 line LCD											
Weight	kg	26.0		29.5		33.5		37.0		44.5		48.0	

Life iQ™ Modular

MATCHING TABLE OF CAPACITY AND RECHARGE TIME - SINGLE PHASE AND THREE PHASE

Charging Times (+/- 0.5 h) from 80% DOD at 30°C

CHARGING PROFILES		Gel/Evolution (PzV, PzVB)												OPPORTUNITY CHARGE (PzQ)	
Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	C ₆ Min	C ₆ Max	C ₇ Min	C ₇ Max
Slow Charge PzS, PzB, PzM				9 h	10.5 h	12 h									
Heavy duty flooded PzS, PzB, PzQ		7 h	8 h	9 h						@60% 8 h	@60% 9 h				
Standard flooded PzS, PzB, PzM (WL8)		6 h	7 h	8 h						@80% 11 h	@80% 12 h				
Airmix with PzS, PzB, PzM (WL13), PzQ		5.5 h	6.5 h	7.5 h											
Water Less* 20 PzM								8h	10h	12h					

SINGLE PHASE

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC1 LIQ Modular 24V 1kW	Contr POUT**	24	108	189	208	208	245	290	126	142	180	123	165
	MAX POUT		144	252	277	277	327	387	167	189	240	164	220
TC1 LIQ Modular 24V 2kW	Contr POUT**	24	196	343	377	377	445	527	228	258	327	223	300
	MAX POUT		288	503	554	554	655	774	335	379	480	327	440
TC1 LIQ Modular 24V 3kW	Contr POUT**	24	380	664	731	731	864	1022	442	500	633	432	581
	MAX POUT		432	755	831	831	982	1161	502	568	720	491	661

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC1 LIQ Modular 36/48V 1kW	Contr POUT**	36	64	112	123	123	145	172	74	84	107	73	98
	MAX POUT		100	175	192	192	227	269	116	132	167	114	153
TC1 LIQ Modular 36/48V 2kW	Contr POUT**	36	136	238	262	262	309	366	158	179	227	155	208
	MAX POUT		192	336	369	369	436	516	223	253	320	218	294
TC1 LIQ Modular 36/48V 3kW	Contr POUT**	36	240	420	462	462	545	645	279	316	400	273	367
	MAX POUT		300	524	577	577	682	806	349	395	500	341	459

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC1 LIQ Modular 36/48V 1kW	MAX POUT	48	72	126	138	138	164	194	84	95	120	82	110
	Contr POUT**		98	171	188	188	223	263	114	129	163	111	150
TC1 LIQ Modular 36/48V 2kW	MAX POUT	48	144	252	277	277	327	387	167	189	240	164	220
	Contr POUT**		172	301	331	331	391	462	200	226	287	195	263
TC1 LIQ Modular 36/48V 3kW	MAX POUT	48	216	378	415	415	491	581	251	284	360	245	330
	Contr POUT**												

THREE PHASE

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC3 LIQ Modular 24/36/48V 3.5kW	MAX POUT	24	280	490	538	538	636	753	326	368	467	318	428
	Contr POUT**		384	671	738	738	873	1032	447	505	640	436	587
TC3 LIQ Modular 24/36/48V 7kW	MAX POUT	24	512	895	985	985	1164	1376	595	674	853	582	783
	Contr POUT**		560	979	1077	1077	1273	1505	651	737	933	636	856
TC3 LIQ Modular 24/36/48V 10.5kW	MAX POUT	24	652	1140	1254	1254	1482	1753	758	858	1087	741	997
	Contr POUT**		840	1469	1615	1615	1860	2186	977	1105	1400	955	1120
TC3 LIQ Modular 24/36/48V 14kW	MAX POUT	24	1120	1958	2064				1302	1474	1860		
	Contr POUT**		1280	2064						1488	1684	1860	
TC3 LIQ Modular 24/36/48V 21kW	MAX POUT	24	1280	2064					1488	1684	1860		
	Contr POUT**												

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC3 LIQ Modular 24/36/48V 3.5kW	MAX POUT	36	260	455	500	500	591	699	302	342	433	295	398
	Contr POUT**		520	909	1000	1000	1182	1398	605	684	867	591	795
TC3 LIQ Modular 24/36/48V 7kW	MAX POUT	36	780	1364	1500	1500	1773	1860	907	1026	1300	886	1120
	Contr POUT**		1040	1818	2000				1209	1368	1733		
TC3 LIQ Modular 24/36/48V 10.5kW	MAX POUT	36	1280	2064					1488	1684	1860		
	Contr POUT**		1280	2064						1488	1684	1860	

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC3 LIQ Modular 24/36/48V 3.5kW	MAX POUT	48	240	420	462	462	545	645	279	316	400	273	367
	Contr POUT**		328	573	631	631	745	882	381	432	547	373	502
TC3 LIQ Modular 24/36/48V 7kW	MAX POUT	48	440	769	846	846	1000	1183	512	579	733	500	673
	Contr POUT**		480	839	923	923	1091	1290	558	632	800	545	734
TC3 LIQ Modular 24/36/48V 10.5kW	MAX POUT	48	560	979	1077	1077	1273	1505	651	737	933	636	856
	Contr POUT**		720	1259	1385	1385	1636	1860	837	947	1200	818	1101
TC3 LIQ Modular 24/36/48V 14kW	MAX POUT	48	960	1678	1846				1116	1263	1600	1091	1120
	Contr POUT**		1200	2064						1395	1579	1860	
TC3 LIQ Modular 24/36/48V 21kW	MAX POUT	48	1280	2064					1488	1684	1860		
	Contr POUT**												

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC3 LIQ Modular 72/80V 3.5kW	MAX POUT	72	160	280	308	308	364	430	186	211	267	182	245
	Contr POUT**		240	420	462	462	545	645	279	316	400	273	367
TC3 LIQ Modular 72/80V 7kW	MAX POUT	72	320	559	615	615	727	860	372	421	533	364	489
	Contr POUT**		400	699	769	769	909	1075	465	526	667	455	612
TC3 LIQ Modular 72/80V 10.5kW	MAX POUT	72	480	839	923	923	1091	1290	558	632	800	545	734
	Contr POUT**		640	1119	1231	1231	1455	1720	744	842	1067	727	979
TC3 LIQ Modular 72/80V 14kW	MAX POUT	72	800	1399	1538	1538	1818	1860	930	1053	1333	909	1120
	Contr POUT**		960	1678	1846				1116	1263	1600	1091	1120

Model	Configuration	Volt	C ₁ Min	C ₁ Max	C ₂ Min	C ₂ Max	C ₃ Min	C ₃ Max	C ₄ Min	C ₄ Max	C ₅ Min	C ₅ Max	
TC3 LIQ Modular 72/80V 3.5kW	MAX POUT	80	144	252	277	277	327	387	167	189	240	164	220
	Contr POUT**		288	503	554	554	655	774	335	379	480	327	440
TC3 LIQ Modular 72/80V 7kW	MAX POUT	80	360	629	692	692	818	968	419	474	600	409	550
	Contr POUT**		432	755	831	831	982	1161	502	568	720	491	661
TC3 LIQ Modular 72/80V 10.5kW	MAX POUT	80	576	1007	1108	1108	1309	1548	670	758	960	655	881
	Contr POUT**		720	1259	1385	1385	1636	1860	837	947	1200	818	1101
TC3 LIQ Modular 72/80V 14kW	MAX POUT	80	864	1510	1662	1662	1860		1005	1137	1440	982	1120
	Contr POUT**												

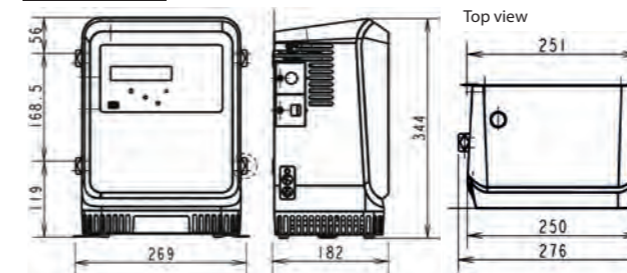
* 3 Bay Cabinet | ** Output currents set at different values to match specific capacities

Life iQ™ Modular

TECHNICAL SPECIFICATION - SINGLE PHASE

Specifications	Units	1kW			2kW		3kW	
Battery voltage		12V	24V	36/48V	24V	36/48V	24V	36/48V
Nominal input voltage	Vac	230V +/- 10% / 1ph						
Frequency	Hz	50/60						
Max current draw @ 230Vac	Aac	2.4	4.8	5.1	9.6	10.2	14.4	15.3
AC input cable section	mm ²	3 x 1.5						
AC input cable length	m	1.5						
Max output current @ 230Vac	Adc	36	36	25/18	72	50/36	108	75/54
Battery cables section	mm ²	25						
Battery cables length	m	3						
IP protection		IP21						
Operating temperature	°C	0°C to +45°C						
Power factor		0.99						
Idle mode	W	≤10						
Display		Multiline TFT						
Weight	kg	6.0			7.0		8.0	
Dimensions (HxWxD)	mm	344 x 250 x 182						
Weight with airmix	kg	9.0			10.0		11.0	
Dimensions (HxWxD) with airmix	mm	435 x 286 x 185						
Cabinet		3 bay (1 module)			3 bay (2 modules)		3 bay (3 modules)	

3 bay cabinet





















TECHNICAL SPECIFICATION - THREE PHASE

Specifications	Units	3.5kW		7kW		10.5kW		14kW		17.5kW		21kW	
Battery voltage		24/36/48V	7										

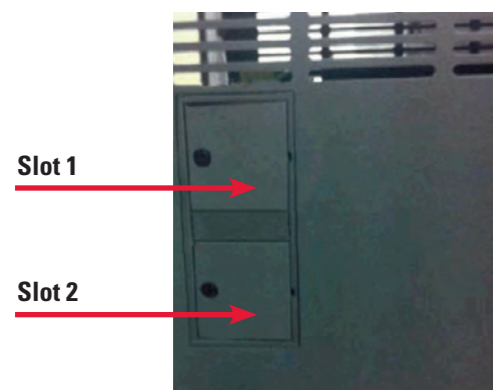
OPTIONS

● available

Option	Description	Lifetech*	Life iQ™	Picture (internal equipment)	Picture (external equipment)
Airmix*	To initiate electrolyte circulation in the battery (what shortens the charge duration)	●	●		
Electrovalve*	To allow to fill the battery with water automatically	●	●		
Remote red and green indicators*	To indicate battery in charge/available remotely	●	●		
Remote red and green indicators with on/off switch*	To indicate battery in charge/available and to allow to start/stop the charge remotely	●	●		
BSI 40™**	Battery Status Indicator to indicate first battery to use (FIFO system)	●	●		
	Additional external LCD display	●	●		
	Additional external alarm	●	●		
Arcless (or pilot contact control or LM/EB)*	To remove arcs in the output plug in case of disconnection during the charge (could be 1 or 2 wire(s) option depending on the battery connection)	●	●		
Ethernet	To connect the charger to a network (wired)		●		
Ethernet WIFI	To connect the charger to a network (wireless)		●		
BFM	To connect the charger to BFM system (wired)		●		
PLC	To connect the charger to a Programmable Logic Controller through relays		●		

*not available on 1 kW stand alone

Slot 1 (upper) is used for electrovalve or airmix connection.
Slot 2 (lower) is used for all other option connection.
There are no more than two options according to free posts.





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