



ESL 7-12

12V - 7 Ah



Electrical specifications

Nominal		12V - 7 Ah
Capacity 25°C @ 1,8V/c	20h	7 Ah
	10h	6,6 Ah
	8h	- Ah
	3h	5,25 Ah
	1h	4,27 Ah
Self discharge @ 25°C	per month	3 %
Resistance ^(Ohm)	fully charged	Approx. 28 mΩ
I _{max} Charge		2,8 A
I _{max} Discharge		108 (5 sec) A
Charge Voltage @25°C	Standby	2,26 - 2,30 V/Cell
Charge Voltage @25°C	Cyclic	2,41 - 2,48 V/Cell

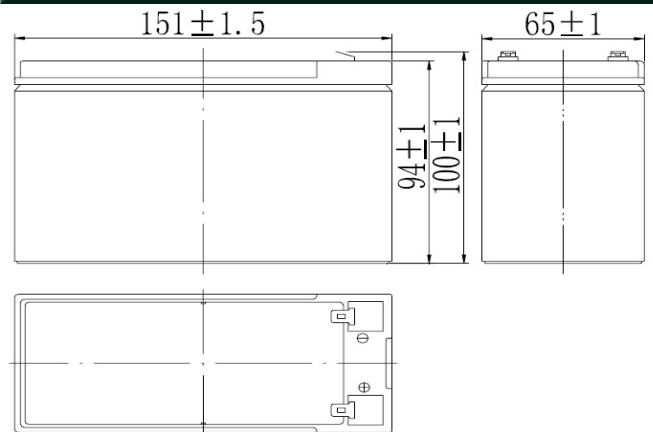
Other specifications

Design Life	12	Years
Dimensions L x W x H	151 x 65 x 94	mm
Total height	100	mm
Operating Temperature	-20 to +50	°C
Separator	Absorbant Glass Mat	
Grid alloy	Calcium / Tin lead alloy	
Case and cover	ABS	
Electrolyte	Sulphuric Acid	
Terminal / Length	T1/T2	faston
Optional terminal types	-	
Torque setting	- Nm	
Weight	2,20 (±5%)	Kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Container
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5 min	10 min	15 min	30 min	60 min	2 hr	3 hr	4 hr	5 hr	10 hr	20 hr
1,80	23.0	14.5	11.8	6.82	4.27	2.42	1.75	1.40	1.19	0.66	0.35
1,75	24.4	15.4	12.4	7.07	4.40	2.48	1.80	1.44	1.22	0.67	0.36
1,70	25.4	16.1	12.9	7.25	4.49	2.52	1.81	1.45	1.23	0.67	0.36
1,65	26.5	16.8	13.4	7.48	4.61	2.54	1.83	1.46	1.24	0.68	0.36
1,60	27.4	17.3	13.7	7.63	4.68	2.56	1.84	1.47	1.25	0.68	0.37

Constant Power Discharge - Watts at 25°C

V/Cell	5 min	10 min	15 min	30 min	60 min	2 hr	3 hr	4 hr	5 hr	10 hr	20 hr
1,80	256	164	134	78.1	49.4	28.3	20.7	16.6	14.2	7.87	4.23
1,75	272	173	142	81.1	51.0	29.0	21.4	17.2	14.6	8.04	4.32
1,70	284	181	147	83.1	52.0	29.5	21.5	17.3	14.7	8.08	4.35
1,65	296	189	152	85.7	53.4	29.7	21.7	17.4	14.8	8.12	4.37
1,60	305	195	156	87.5	54.2	29.9	21.8	17.5	14.9	8.16	4.38

Version : 2014123



ESL 9-12

12V - 9 Ah



Electrical specifications

Nominal		12V - 9 Ah
Capacity 25°C @ 1,8V/c	20h	8,8 Ah
	10h	8,2 Ah
	8h	- Ah
	3h	6,54 Ah
	1h	5,34 Ah
Self discharge @ 25°C	per month	3 %
Resistance _(ohm)	fully charged	Approx. 19 mΩ
I _{max} Charge		2,7 A
I _{max} Discharge		135 (5 sec) A
Charge Voltage @25°C	Standby	2,26 - 2,30 V/Cell
Charge Voltage @25°C	Cyclic	2,41 - 2,48 V/Cell

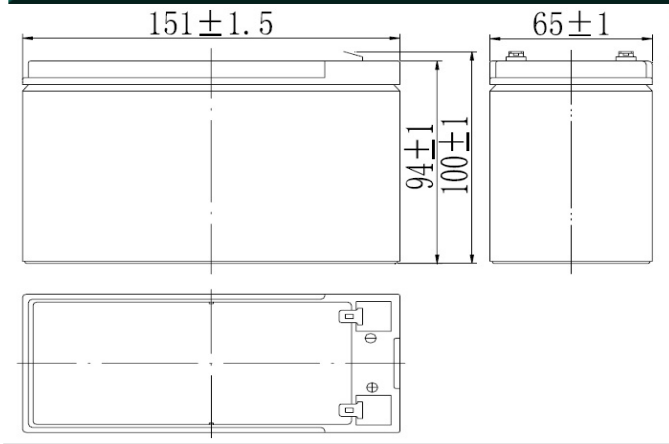
Other specifications

Design Life		12 Years
Dimensions L x W x H		151 x 65 x 94 mm
Total height		100 mm
Operating Temperature		-20 to +50 °C
Separator		Absorbant Glass Mat
Grid alloy		Calcium / Tin lead alloy
Case and cover		ABS
Electrolyte		Sulphuric Acid
Terminal / Length		T1/T2 faston
Optional terminal types		-
Torque setting		- Nm
Weight		2,60 (±5%) Kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Container
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5 min	10 min	15 min	30 min	60 min	2 hr	3 hr	4 hr	5 hr	10 hr	20 hr
1,80	28.7	18.1	14.7	8.52	5.34	3.02	2.18	1.75	1.48	0.82	0.44
1,75	30.4	19.2	15.5	8.84	5.50	3.10	2.25	1.80	1.53	0.84	0.45
1,70	31.8	20.1	16.1	9.06	5.62	3.15	2.27	1.81	1.54	0.84	0.45
1,65	33.2	21.0	16.7	9.35	5.76	3.18	2.28	1.83	1.55	0.85	0.45
1,60	34.2	21.6	17.1	9.54	5.85	3.20	2.30	1.84	1.56	0.85	0.46

Constant Power Discharge - Watts at 25°C

V/Cell	5 min	10 min	15 min	30 min	60 min	2 hr	3 hr	4 hr	5 hr	10 hr	20 hr
1,80	321	205	168	97.6	61.8	35.4	25.9	20.8	17.7	9.84	5.29
1,75	340	217	177	101	63.7	36.3	26.7	21.4	18.3	10.0	5.40
1,70	355	227	183	104	65.0	36.9	26.9	21.6	18.4	10.1	5.43
1,65	370	236	190	107	66.7	37.2	27.1	21.7	18.5	10.2	5.46
1,60	382	244	195	109	67.7	37.4	27.3	21.9	18.6	10.2	5.48

Version : 2014/12-1



ESL 12-12

12V - 12h



Electrical specifications

Nominal		12V - 12	Ah
Capacity 25°C @ 1,8V/c	20h	11,8	Ah
	10h	10,9	Ah
	8h	10,24	Ah
	3h	8,73	Ah
	1h	7,11	Ah
Self discharge @ 25°C	per month	3	%
Resistance _(Ohm)	fully charged	Approx. 19	mΩ
I _{max} Charge		4,8	A
I _{max} Discharge		180 (5 sec)	A
Charge Voltage @25°C	Standby	2,26 - 2,30	V/Cell
Charge Voltage @25°C	Cyclic	2,41 - 2,48	V/Cell

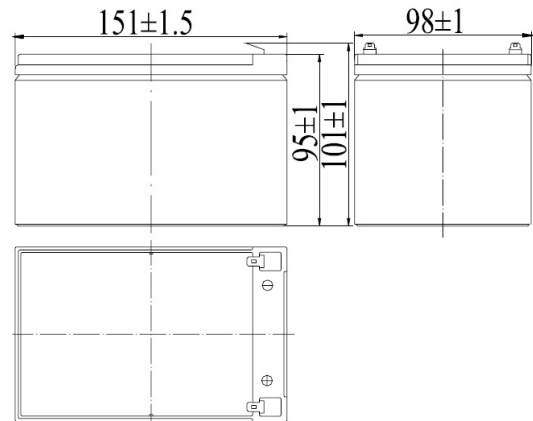
Other specifications

Design Life	12	Years
Dimensions L x W x H	151 x 98 x 95	mm
Total height	101	mm
Operating Temperature	-20 to +50	°C
Separator	Absorbant Glass Mat	
Grid alloy	Calcium / Tin lead alloy	
Case and cover	ABS	
Electrolyte	Sulphuric Acid	
Terminal / Length	T1/T2	faston
Optional terminal types	-	
Torque setting	-	Nm
Weight	3,4 (±5%)	Kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Container
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
1,80	24.2	19.6	11.4	7.11	4.03	2.91	2.33	1.98	1.28	1.09	0.59
1,75	25.6	20.7	11.8	7.34	4.14	3.00	2.40	2.04	1.32	1.12	0.60
1,70	26.8	21.4	12.1	7.49	4.20	3.02	2.42	2.05	1.33	1.12	0.60
1,65	27.9	22.3	12.5	7.68	4.24	3.04	2.43	2.07	1.34	1.13	0.61
1,60	28.8	22.8	12.7	7.80	4.26	3.06	2.45	2.08	1.35	1.13	0.61

Constant Power Discharge - Watts at 25°C

V/Cell	10min	15min	30min	60min	2h	3h	4h	5h	8h	10h	20h
1,80	273	224	130	82.4	47.2	34.6	27.7	23.6	15.4	13.1	7.06
1,75	289	236	135	85.0	48.4	35.6	28.6	24.4	15.8	13.4	7.20
1,70	302	244	138	86.7	49.1	35.9	28.8	24.5	16.0	13.5	7.24
1,65	315	254	143	89.0	49.6	36.1	29.0	24.7	16.1	13.5	7.28
1,60	325	260	146	90.3	49.9	36.4	29.2	24.8	16.2	13.6	7.31

Version : 2014/12-3



ESL 55 - 12 FT

12V - 55 Ah



Electrical specifications

Nominal Voltage		12 V
Capacity 25°C to 1,8V/c	20 hour rate	59,4 Ah
	10 hour rate	56,1 Ah
	8 hour rate	54,4 Ah
	3 hour rate	43,8 Ah
	1 hour rate	36,2 Ah
Self discharge @ 25°C	per month	2,5 - 3 %
Internal Resistance	fully charged	9,6 mΩ
Impedance	fully charged	633 S
Maximum current	charging	8 A
Charge Voltage @25°C	Float (-3mV/°C/c)	2,25 - 2,29 V/Cell
	Cyclic (-5mV/°C/c)	2,37 - 2,40 V/Cell

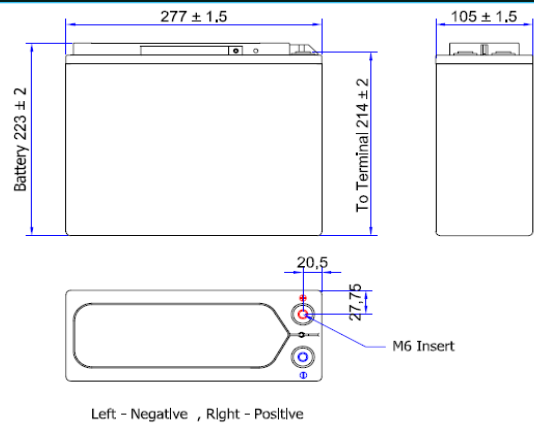
Other specifications

Design Floating Life @20°C		12 Years
Dimensions LxWxH (± 2mm)		277x105x223 mm
	Total height	223 mm
Operating Temperature (storage)		-20 to +50 °C
Separator		Absorbent Glass Mat
Grid alloy		Calcium / Tin lead alloy
Case and cover		ABS
Electrolyte		Sulphuric Acid
Terminal / Length		M6 insert
Optional terminal types		none
Torque setting		8 Nm
Weight		17,7 (±5%) kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Case and cover
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	123	90,0	73,0	70,0	62,0	58,1	53,3	49,4	46,3	43,7	41,4	36,2	24,5	19,4	14,6	11,5	9,79	8,50	7,60	6,80	6,20	5,61	4,80	2,97
1,75	136	97,0	79,0	72,5	64,0	59,5	54,5	51,0	48,0	44,8	42,5	36,3	26,6	19,9	15,0	11,6	9,90	8,50	7,60	6,80	6,20	5,61	4,80	2,97
1,70	149	104	84,0	75,0	67,0	61,0	56,0	52,0	49,0	45,9	43,6	36,9	26,7	20,4	15,1	11,8	9,90	8,60	7,60	6,80	6,20	5,61	4,80	2,97
1,65	162	111	89,0	77,5	69,0	62,5	57,5	53,0	50,0	47,0	44,8	36,9	26,8	20,8	15,2	12,0	10,0	8,60	7,70	6,90	6,20	5,61	4,90	2,97
1,60	175	118	94,0	80,0	71,0	64,0	59,0	54,0	51,0	48,0	46,0	36,9	26,9	21,3	15,3	12,1	10,1	8,70	7,70	6,90	6,20	5,72	4,90	3,08

Constant Power Discharge - Watts/Cell at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	254	156	132	129	115	110	101	93,4	87,9	83,0	78,7	70,0	46,5	36,8	28,0	22,1	19,4	16,8	14,9	13,5	12,2	11,1	9,70	6,16
1,75	273	162	141	132	120	113	103	90,0	90,0	85,3	80,5	70,6	47,6	37,5	29,5	22,4	19,6	16,9	15,0	13,5	12,2	11,2	9,70	6,16
1,70	292	176	151	137	124	116	106	94,7	92,2	87,3	82,5	70,6	48,8	38,5	29,6	22,6	19,7	16,9	15,0	13,5	12,2	11,3	9,80	6,27
1,65	311	190	161	142	128	118	108	98,7	94,5	89,3	84,5	70,7	50,0	39,5	29,7	22,8	19,8	17,0	15,1	13,6	12,2	11,4	9,80	6,27
1,60	330	204	171	147	132	121	111	103	96,7	91,3	86,5	71,0	51,2	40,5	29,4	23,2	19,9	17,1	15,1	13,6	12,3	11,6	9,80	6,38

Revision: 201512-1



ESL 95 - 12 FT

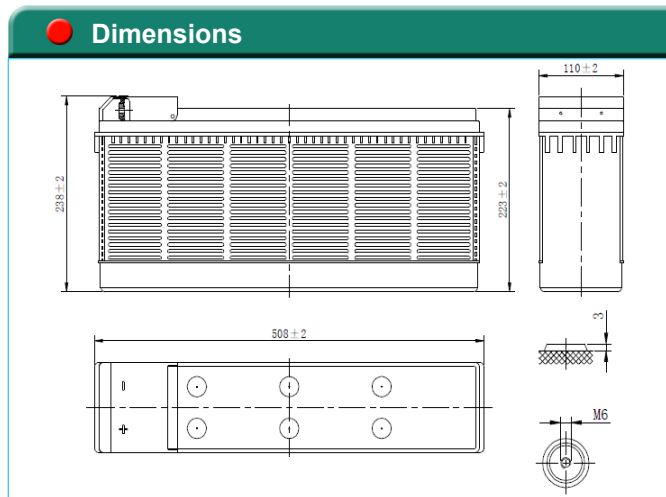
12V - 95 Ah



Electrical specifications			
Nominal Voltage			12 V
Capacity 25°C to 1,8V/c	20 hour rate	106,0	Ah
	10 hour rate	100,0	Ah
	8 hour rate	98,4	Ah
	3 hour rate	69,6	Ah
	1 hour rate	50,6	Ah
Self discharge @ 25°C	per month	2,5 - 3	%
Internal Resistance	fully charged	≤ 6,3	mΩ
Impedance	fully charged	890	S
Maximum current	charging	10	A
Charge Voltage @25°C	Float (-3mV/°C/c)	2,25 - 2,29	V/Cell
Charge Voltage @25°C	Cyclic (-5mV/°C/c)	2,37 - 2,40	V/Cell

- | Innovative Features | |
|---------------------|---|
| • | Completely maintenance free, sealed construction eliminates the need for adding water |
| • | Fully tank formed plates |
| • | Analytical grade electrolyte |
| • | Spill proof / leak proof |
| • | Valve regulated Max internal pressure 2,5 psi |
| • | Multi-position usage |
| • | ABS Case and cover |
| • | Low self discharge |
| • | FAA and IATA approved as non-hazardous |
| • | Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat |

Other specifications			
Design Floating Life @20°C		12	Years
Dimensions LxWxH (± 2mm)		508x110x238	mm
	Total height	238	mm
Operating Temperature (storage)		-20 to +50	°C
Separator		Absorbent Glass Mat	
Grid alloy		Calcium / Tin lead alloy	
Case and cover		ABS	
Electrolyte		Sulphuric Acid	
Terminal / Length		M6	insert
Optional terminal types		none	
Torque setting		8,5	Nm
Weight		28,5 (±5%)	kg



Constant Amps discharge - Amps at 25°C																								
V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	NA	164	132	117	100	85,1	80,0	72,0	62,5	60,5	58,5	50,6	41,4	33,0	23,2	20,2	16,7	14,8	13,1	12,3	10,8	10,0	8,45	5,30
1,75	NA	175	143	122	104	90,3	83,5	75,7	65,6	62,0	60,2	53,2	43,7	34,3	24,4	20,5	17,2	15,1	13,4	12,4	11,1	10,1	8,52	5,32
1,70	NA	185	152	129	108	95,1	84,7	76,7	68,9	65,0	63,4	55,6	44,4	35,4	25,5	21,0	17,6	15,3	13,5	12,5	11,3	10,1	8,61	5,35
1,65	NA	196	161	141	115	99,6	86,1	78,8	72,2	68,4	64,6	57,8	45,1	36,6	26,5	21,5	18,0	15,5	13,7	12,7	11,5	10,2	8,65	5,45
1,60	NA	207	169	146	120	104	93,2	83,2	75,2	72,2	66,9	60,0	46,5	37,6	27,4	21,8	18,3	15,7	13,9	12,9	11,8	10,2	8,74	5,50

Constant Power Discharge - Watts/Cell at 25°C																								
V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	NA	280	221	200	177	159	147	132	120	112	105	94,8	76,5	62,8	45,5	39,4	31,6	29,0	25,5	24,5	20,8	19,1	16,4	10,3
1,75	NA	303	238	210	189	169	153	138	127	120	112	101	80,0	65,2	47,8	39,6	32,7	29,4	25,7	24,6	21,2	19,6	16,6	10,4
1,70	NA	325	255	223	200	178	163	144	133	125	115	106	82,6	67,4	50,2	39,9	33,8	29,8	25,9	24,9	21,7	20,0	16,7	10,5
1,65	NA	346	271	232	206	185	170	153	138	128	118	111	84,5	69,6	52,5	41,0	34,8	30,0	26,4	25,1	21,8	20,1	16,8	10,6
1,60	NA	366	285	244	215	192	175	155	143	135	125	115	85,6	71,6	54,4	41,3	35,6	30,3	26,7	25,5	22,0	20,2	17,0	10,6

Revision: 201512-1



ESL 100 - 12 FT

12V - 100 Ah



Electrical specifications

Nominal Voltage		12	V
Capacity 25°C to 1,8V/c	20 hour rate	118,0	Ah
	10 hour rate	101,0	Ah
	8 hour rate	96,0	Ah
	3 hour rate	74,4	Ah
	1 hour rate	60,7	Ah
Self discharge @ 25°C	per month	2,5 - 3	%
Internal Resistance	fully charged	6,09	mΩ
Impedance	fully charged	860	S
Maximum current	charging	10	A
Charge Voltage @25°C	Float (-3mV/°C/c)	2,25 - 2,29	V/Cell
	Cyclic (-5mV/°C/c)	2,37 - 2,40	V/Cell

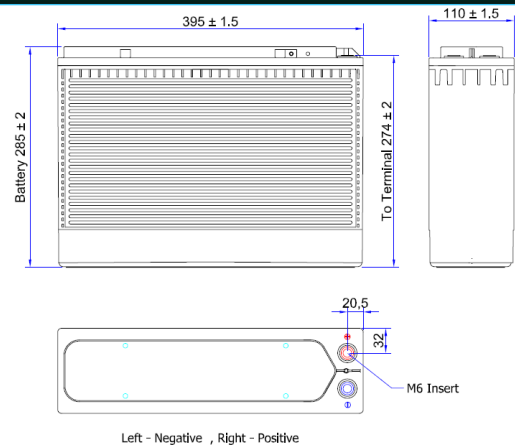
Other specifications

Design Floating Life @20°C		12	Years
Dimensions LxWxH (± 2mm)		395x110x285	mm
	Total height	285	mm
Operating Temperature (storage)		-20 to +50	°C
Separator		Absorbent Glass Mat	
Grid alloy		Calcium / Tin lead alloy	
Case and cover		ABS	
Electrolyte		Sulphuric Acid	
Terminal / Length		M6 / 12mm	insert
Optional terminal types		none	
Torque setting		8,5	Nm
Weight		34,0 (±5%)	kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Case and cover
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	215	152	121	115	99,0	92,7	84,4	77,8	72,4	67,9	64,0	60,7	40,5	32,4	24,8	19,8	17,1	14,9	13,3	12,0	11,0	10,1	8,80	5,90
1,75	238	164	130	119	102	94,5	87,0	80,0	74,0	69,6	65,5	62,3	41,5	33,2	25,1	20,2	17,2	14,9	13,4	12,0	11,0	10,1	8,80	5,90
1,70	261	176	138	123	106	97,0	89,0	82,0	76,0	71,4	67,0	63,8	42,6	34,0	25,4	20,4	17,3	15,0	13,4	12,0	11,0	10,1	8,80	5,90
1,65	283	188	147	127	110	99,5	91,0	84,0	78,0	73,2	68,5	65,3	43,6	34,8	25,7	20,6	17,4	15,1	13,5	12,1	11,1	10,2	8,90	6,00
1,60	305	200	156	131	114	102	93,0	86,0	80,0	75,0	70,0	66,8	44,6	35,6	26,0	20,8	17,5	15,2	13,5	12,1	11,1	10,2	8,90	6,00

Constant Power Discharge - Watts/Cell at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	367	262	219	210	185	175	160	147	138	129	122	115	77,0	61,5	47,5	38,0	33,6	29,3	26,3	23,8	21,7	20,0	17,4	11,7
1,75	407	283	235	217	192	180	163	150	141	132	125	118	78,7	63,2	48,1	38,5	33,7	29,4	26,3	23,8	21,7	20,1	17,4	11,7
1,70	445	303	251	224	199	185	167	154	144	135	128	121	80,7	64,7	48,7	39,0	33,9	29,5	26,4	23,9	21,8	20,1	17,5	11,7
1,65	483	323	267	232	206	189	172	158	148	139	131	124	82,7	66,2	49,3	39,5	34,1	29,7	26,4	24,0	21,8	20,2	17,5	11,8
1,60	521	343	282	239	213	193	175	162	151	142	134	127	84,7	67,7	49,9	39,9	34,3	29,9	26,5	24,0	21,9	20,2	17,6	11,8

Revision: 201512-1



ESL 100 - 12 FTS

12V - 100 Ah

Electrical specifications

Nominal Voltage		12 V
Capacity 25°C to 1,8V/c	20 hour rate	99 Ah
	10 hour rate	92,1 Ah
	8 hour rate	89,9 Ah
	3 hour rate	75,1 Ah
	1 hour rate	60,3 Ah
Self discharge @ 25°C	per month	2,5 - 3 %
Internal Resistance	fully charged	approx 3,9 mΩ
Maximum current @ 25°C	charging	25 A
	discharging	(5sec) A
Charge Voltage @25°C	Float (-18mV/°C)	2,25 - 2,29 V/Cell
Charge Voltage @25°C	Cyclic (-24mV/°C)	2,37 - 2,41 V/Cell

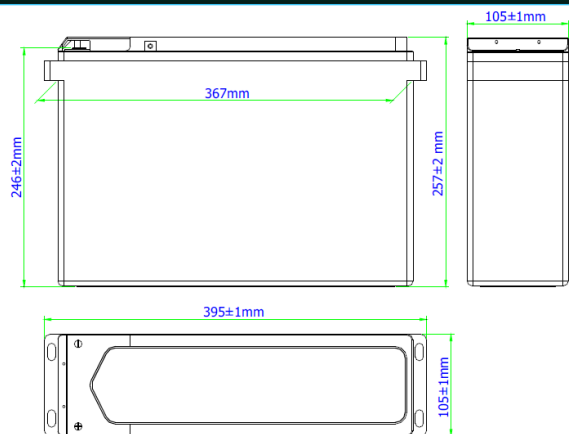
Other specifications

Design Floating Life @20°C		12 Years
Dimensions LxWxH (± 2mm)		396x105x258 mm
	Total height	258 mm
Operating Temperature (storage)		-20 to +50 °C
Separator		Absorbent Glass Mat
Grid alloy		Calcium / Tin lead alloy
Case and cover		ABS
Electrolyte		Sulphuric Acid
Terminal / Length		M6 / 16mm insert
Optional terminal types		none
Torque setting		5-7 Nm
Weight		27,4 (±5%) kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Case and cover
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	60min	90min	2h	3h	4h	5h	6h	7h	8h	10h	12h	20h	24h
1,80	250	193	163	138	119	104	91.9	83.3	75.9	60.3	43.0	34.3	25.0	19.9	16.7	14.4	12.7	11.2	9.21	7.81	4.96	4.23
1,75	270	203	169	142	121	106	93.6	84.6	77.0	61.0	43.7	34.7	25.3	20.1	16.9	14.6	12.8	11.4	9.31	7.91	5.03	4.29
1,70	289	212	174	145	123	107	94.6	85.4	77.7	61.5	44.1	35.0	25.6	20.3	17.1	14.8	13.0	11.5	9.43	8.00	5.10	4.35
1,65	299	220	178	147	125	109	95.5	86.2	78.3	62.0	44.5	35.3	25.7	20.5	-	-	-	-	-	-	-	-
1,60	318	227	181	149	126	110	96.5	86.9	79.0	62.3	44.7	35.5	25.9	20.6	-	-	-	-	-	-	-	-

Constant Power Discharge - Watts/Cell at 25°C

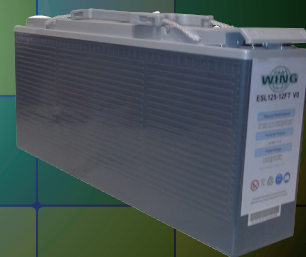
V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	60min	90min	2h	3h	4h	5h	6h	7h	8h	10h	12h	20h	24h
1,80	358	318	274	241	213	189	170	157	143	115	85.3	68.5	49.9	39.7	32.8	28.3	25.0	22.3	18.5	15.8	10.0	8.52
1,75	401	338	287	250	220	196	175	160	147	117	86.6	69.7	51.0	40.2	33.2	28.8	25.3	22.6	18.8	16.0	10.2	8.67
1,70	441	355	298	258	226	200	180	163	149	119	87.6	70.8	51.3	40.5	33.6	29.1	25.6	22.8	18.9	16.2	10.3	8.74
1,65	465	365	307	263	231	202	182	165	150	120	88.2	71.3	51.6	41.0	-	-	-	-	-	-	-	-
1,60	480	375	312	268	234	204	184	166	151	121	88.8	71.7	51.9	41.2	-	-	-	-	-	-	-	-

Revision: 201504



ESL 125 - 12 FT

12V - 125 Ah



Electrical specifications

Nominal Voltage		12 V
Capacity 25°C to 1,8V/c	20 hour rate	130,0 Ah
	10 hour rate	120,0 Ah
	8 hour rate	114,4 Ah
	3 hour rate	100,8 Ah
	1 hour rate	72,0 Ah
Self discharge @ 25°C	per month	2,5 - 3 %
Internal Resistance	fully charged	4,3 mΩ
Impedance	fully charged	1140 S
Maximum current	charging	15 A
Charge Voltage @25°C	Float (-3mV/°C/c)	2,25 - 2,29 V/Cell
Charge Voltage @25°C	Cyclic (-5mV/°C/c)	2,37 - 2,40 V/Cell

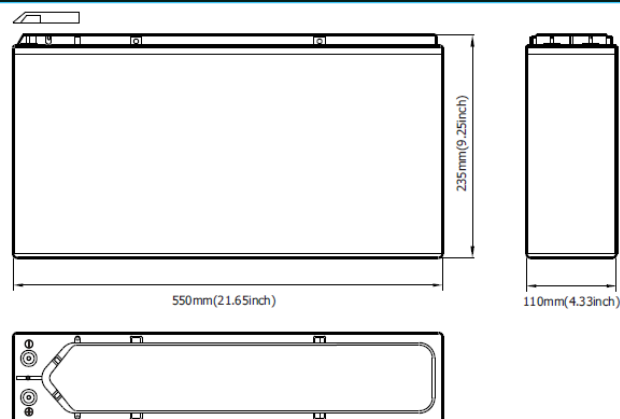
Other specifications

Design Floating Life @20°C		12 Years
Dimensions LxWxH (± 2mm)		551x110x239 mm
	Total height	239 mm
Operating Temperature (storage)		-20 to +50 °C
Separator		Absorbent Glass Mat
Grid alloy		Calcium / Tin lead alloy
Case and cover		ABS
Electrolyte		Sulphuric Acid
Terminal / Length		M8 / 20mm insert
Optional terminal types		none
Torque setting		13 Nm
Weight		37 (±5%) kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Case and cover
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	331	221	174	143	124	110	102	94,3	86,4	79,3	74,6	70,7	52,1	43,2	30,3	24,9	21,2	18,6	16,2	14,6	13,3	12,5	10,6	6,56
1,75	351	234	184	151	131	114	105	97,6	89,3	81,9	76,9	72,9	53,6	44,3	31,3	25,6	21,9	19,1	16,7	15,0	13,5	12,6	10,7	6,61
1,70	367	245	190	157	135	118	108	100	91,1	83,3	78,2	74,4	54,5	45,0	31,5	25,8	22,0	19,3	16,8	15,1	13,6	12,6	10,7	6,65
1,65	382	255	197	163	141	121	111	103	93,4	85,2	80,2	76,3	55,4	45,4	31,7	26,0	22,2	19,4	16,9	15,2	13,7	12,7	10,8	6,67
1,60	394	263	202	167	144	124	113	105	95,1	86,6	81,5	77,5	56,0	45,7	31,9	26,1	22,3	19,5	17,0	15,3	13,7	12,7	10,8	6,68

Constant Power Discharge - Watts/Cell at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	595	400	318	263	229	204	188	175	162	148	140	134	100	83,3	59,3	48,7	41,8	36,5	32,1	28,8	26,3	24,8	21,1	13,1
1,75	632	424	336	278	241	211	195	182	167	153	145	139	102	85,5	61,3	50,2	43,2	37,7	32,9	29,7	26,8	25,1	21,3	13,2
1,70	660	443	348	287	249	218	200	186	170	156	147	141	104	86,8	61,7	50,5	43,3	38,0	33,2	29,8	26,9	25,2	21,4	13,3
1,65	687	461	361	298	259	224	206	191	175	159	151	145	106	87,7	62,2	51,0	43,7	38,2	33,4	30,2	27,1	25,2	21,4	13,3
1,60	710	476	370	306	265	229	210	194	178	162	153	147	107	88,2	62,5	51,2	44,0	38,5	33,6	30,3	27,2	25,3	21,5	13,4



ESL 150 - 12 FT

12V - 150 Ah



Electrical specifications

Nominal Voltage		12 V
Capacity 25°C to 1,8V/c	20 hour rate	172,0 Ah
	10 hour rate	150,0 Ah
	8 hour rate	142,4 Ah
	3 hour rate	111,0 Ah
	1 hour rate	90,7 Ah
Self discharge @ 25°C	per month	2,5 - 3 %
Internal Resistance	fully charged	4,92 mΩ
Impedance	fully charged	1320 S
Maximum current	charging	15 A
Charge Voltage @25°C	Float (-3mV/°C/c)	2,25 - 2,29 V/Cell
	Cyclic (-5mV/°C/c)	2,37 - 2,40 V/Cell

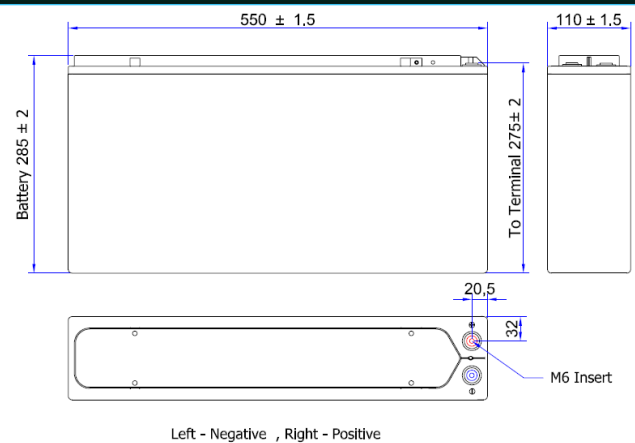
Other specifications

Design Floating Life @20°C		12 Years
Dimensions LxWxH (± 2mm)		550x110x285 mm
	Total height	285 mm
Operating Temperature (storage)		-20 to +50 °C
Separator		Absorbent Glass Mat
Grid alloy		Calcium / Tin lead alloy
Case and cover		ABS
Electrolyte		Sulphuric Acid
Terminal / Length		M8 / 20mm insert
Optional terminal types		none
Torque setting		8 Nm
Weight		48,5 (±5%) kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Case and cover
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Constant Amps discharge - Amps at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	318	226	179	171	148	138	126	116	108	101	95,7	90,7	61,2	48,8	37,0	29,6	25,6	22,1	19,8	17,8	16,2	15,0	12,9	8,60
1,75	352	243	192	177	155	142	129	119	110	104	98,5	93,0	62,8	50,0	37,5	29,9	25,8	22,3	19,8	17,8	16,2	15,0	12,9	8,60
1,70	385	261	205	183	159	145	132	122	113	106	101	95,2	64,3	51,3	38,0	30,3	25,9	22,4	19,9	17,9	16,3	15,0	13,0	8,60
1,65	418	278	218	188	165	149	135	125	116	109	103	97,5	65,8	52,5	38,5	30,7	26,0	22,5	19,9	17,9	16,3	15,1	13,0	8,70
1,60	451	296	231	194	170	152	138	128	119	111	105	99,8	67,3	53,7	39,0	31,1	26,1	22,6	20,0	18,0	16,4	15,1	13,1	8,70

Constant Power Discharge - Watts/Cell at 25°C

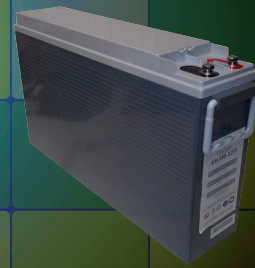
V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	543	389	325	312	276	261	238	219	205	193	182	172	116	92,7	71,3	56,8	50,1	43,6	39,0	35,3	32,2	29,6	25,8	17,2
1,75	600	419	349	323	287	267	245	225	211	197	186	177	119	94,5	72,2	57,6	50,4	43,8	39,1	35,3	32,2	29,7	25,8	17,2
1,70	657	449	372	334	297	274	251	230	216	202	191	181	122	97,0	73,1	58,3	50,7	44,0	39,2	35,4	32,3	29,8	25,9	17,3
1,65	714	479	396	345	307	281	257	236	221	207	195	185	125	99,5	74,0	59,0	50,9	44,3	39,3	35,5	32,4	29,8	25,9	17,3
1,60	771	509	419	356	317	287	262	241	226	212	200	190	128	102	74,9	59,7	51,1	44,5	39,4	35,6	32,5	29,9	26,0	17,4

Revision: 201512-2



ESL 180 - 12 FT

12V - 180 Ah



Electrical specifications

Nominal Voltage		12 V
Capacity 25°C to 1,8V/c	20 hour rate	192,0 Ah
	10 hour rate	178,0 Ah
	8 hour rate	170,4 Ah
	3 hour rate	132,9 Ah
	1 hour rate	109,0 Ah
Self discharge @ 25°C	per month	2,5 - 3 %
Internal Resistance	fully charged	4,44 mΩ
Impedance	fully charged	1350 S
Maximum current	charging	20 A
Charge Voltage @25°C	Float (-3mV/°C/c)	2,25 - 2,29 V/Cell
Charge Voltage @25°C	Cyclic (-5mV/°C/c)	2,37 - 2,40 V/Cell

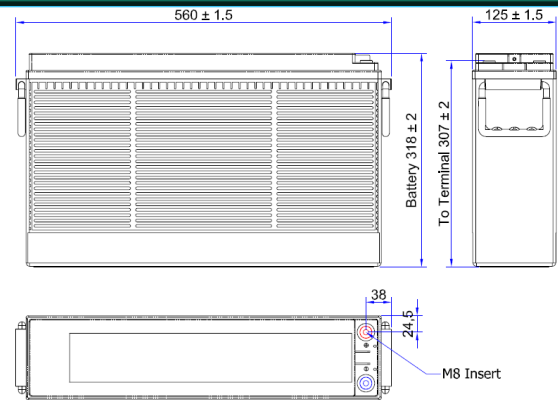
Other specifications

Design Floating Life @20°C		12 Years
Dimensions LxWxH (± 2mm)		560x125x318 mm
	Total height	318 mm
Operating Temperature (storage)		-20 to +50 °C
Separator		Absorbent Glass Mat
Grid alloy		Calcium / Tin lead alloy
Case and cover		ABS
Electrolyte		Sulphuric Acid
Terminal / Length		M8 / 20mm insert
Optional terminal types		none
Torque setting		18 Nm
Weight		53,5 (±5%) kg

Innovative Features

- Completely maintenance free, sealed construction eliminates the need for adding water
- Fully tank formed plates
- Analytical grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2,5 psi
- Multi-position usage
- ABS Case and cover
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 8962, DIN 43534, BS 6290 Pt4, Eurobat

Dimensions



Left - Negative , Right - Positive

Constant Amps discharge - Amps at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	381	271	215	204	177	166	151	139	129	121	114	109	72,8	58,1	44,3	35,3	30,5	26,5	23,7	21,3	19,5	17,8	15,5	9,60
1,75	421	392	231	212	184	170	154	143	132	124	117	111	74,0	59,5	45,0	35,5	30,6	26,6	23,7	21,3	19,5	17,9	15,5	9,60
1,70	461	313	246	219	190	174	158	146	135	127	120	114	76,0	61,0	45,5	36,0	30,8	26,7	23,8	21,4	19,6	17,9	15,6	9,70
1,65	501	334	262	226	196	178	162	150	139	130	123	116	78,0	62,4	46,0	36,5	31,0	26,8	23,8	21,5	19,6	18,0	15,6	9,70
1,60	541	355	277	233	203	182	166	153	142	133	126	119	80,0	63,9	46,5	37,1	31,2	27,0	23,9	21,6	19,7	18,1	15,7	9,80

Constant Power Discharge - Watts/Cell at 25°C

V/Cell	5min	10min	15min	20min	25min	30min	35min	40min	45min	50min	55min	60min	90min	2h	3h	4h	5h	6h	7h	8h	9h	10h	12h	20h
1,80	621	466	389	374	331	313	285	262	246	230	217	206	138	110	85,0	67,9	59,9	52,2	46,7	42,3	38,5	35,5	30,9	18,2
1,75	697	578	418	397	343	321	292	269	252	236	233	211	141	113	86,3	68,6	60,2	53,5	46,8	42,4	38,6	35,6	31,0	18,4
1,70	773	582	446	400	355	329	299	276	258	242	238	216	145	116	87,3	69,5	60,5	53,7	47,0	42,5	38,7	35,6	31,1	18,6
1,65	849	596	474	413	367	336	306	282	264	247	234	221	148	119	88,3	70,4	60,8	53,0	47,1	42,6	38,8	35,7	31,1	18,8
1,60	925	610	502	426	380	344	313	289	270	253	239	227	152	121	89,3	71,3	61,1	53,2	47,2	42,7	38,9	35,8	31,2	19,0

Revision: 2016012-1