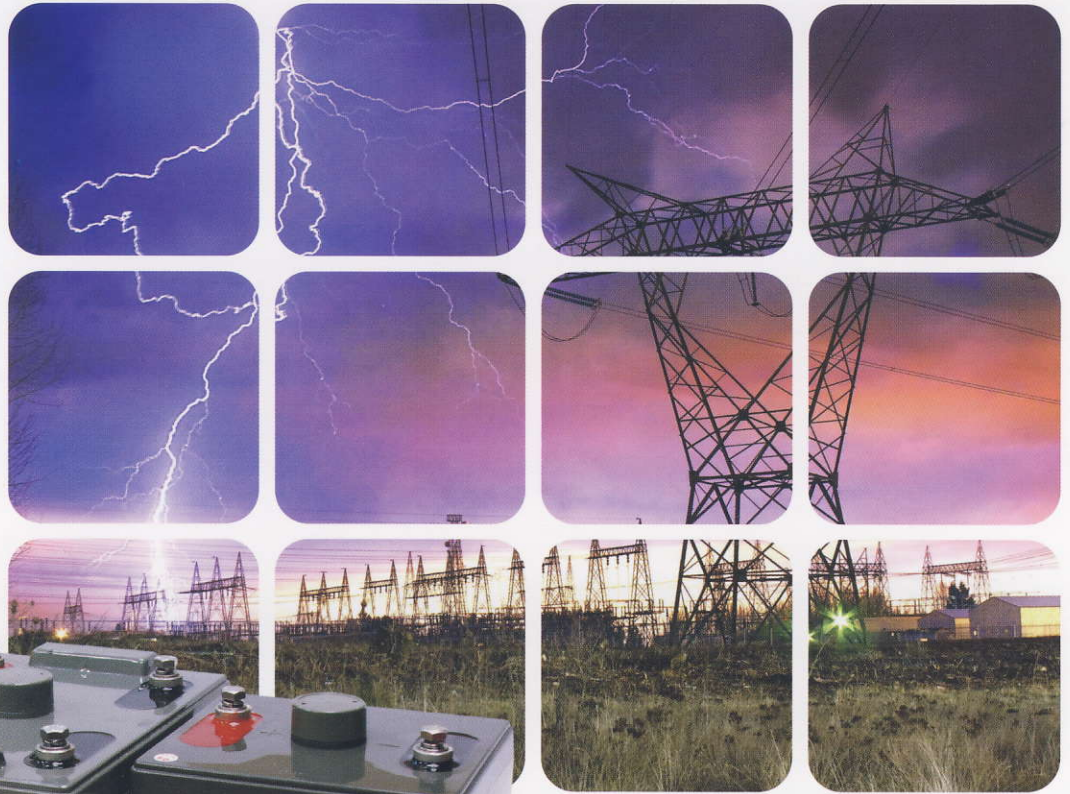


AGM

TECHNOLOGY

MSB ULTRA

LIFE EXPECTANCY 15 YEARS PLUS
Maintenance-Free Rechargeable Battery



IEC 60896-21,22: 2004



Certificate of UL



Certificate of CE



Manufactured under the guidelines of ISO 9001:2008, the **M-B ULTRA** range of 2 volts Valve Regulated Sealed Lead Acid cell complies to rigid tests by national telecommunication and other accredited bodies. Life expectancy conducted by in-house life acceleration test & corrosion reports provides proof that **M-B ULTRA** 2 volt range to last more than 15 years @25° celcius. Moreover the battery has both CE and UL accreditation.

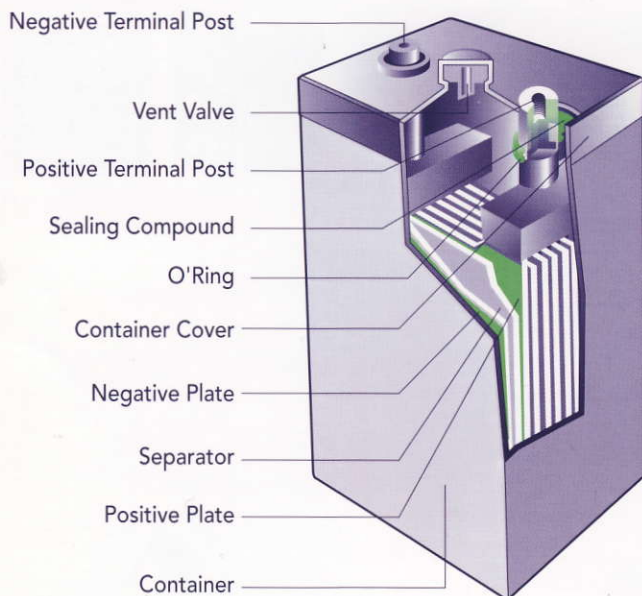
Standby Applications Include:

- ◆ Telecommunication
- ◆ UPS
- ◆ Instrumentation Control
- ◆ PA / PABX System
- ◆ Emergency Lighting
- ◆ Solar
- ◆ Engine Starting
- ◆ Signalling (Railway)
- ◆ Switch Tripping and Closing

Features

- ◆ Long Life Design
- ◆ 95% Gas Recombination Efficiency
- ◆ Copper Insert Terminal
- ◆ Space Saving. No Special Room Required
- ◆ ABS Container*
- ◆ Ease of Handling
- ◆ Fully Sealed Construction
- ◆ Unrestricted Transportation
- ◆ High Energy Density
- ◆ Low internal resistance
- ◆ Wide operating tempeature 0°C to 60°C

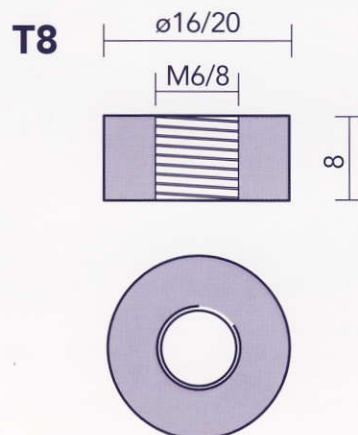
Battery Construction



Battery Terminal

Standard Terminal(mm)

Threaded Insert 8mm STUD



Note: * Flame Retardant Container to BS6334 category FV '0' is available on request.
Standard insulated flexible connectors are supplied.

Technical Description

Positive Plates	Grid Plates
Negative Plates	Grid Plates
Separator	Absorbed Glass Mat(AGM)
Terminals	Copper Inserts, Extruded Lead, Electrolyte Tight
Type of Connection	Screwed (bolt-in) Connection/ Standard Flexible Insulated Connectors
Cell Container	ABS
Service Life	15 Years Plus, Maintenance Free
Float Charge	2.23 – 2.25 VPC @ 30°C/25°C
Boost Charge	2.35 VPC @ 25°C for Maximum of 3 Hours
Standards	Conform to JIS, IEC60896-21,22, UL94, BS6290 Pt.4

Specifications

Battery Model ULTRA	Nominal Voltage (V)	Rated Capacity(AH) to Final Voltage					Dimension			Total Height Including Terminal (H2)	Approx Weight (kg)	Internal Resistance (ohms)	Terminal Hole size Diameter
		1.80V 20HR	1.80V 10HR	1.80V 5HR	1.80V 3HR	1.80V 1HR	Length (L)	Width (W)	Height (H1)				
MS2-65	2	72	66	60.5	54.9	43.4	170±2	71±2	205±2	212±2	4.7	1.8mΩ	2M6/16
MS2-75	2	80	75	67.5	61.5	48	170±2	71±2	205±2	212±2	5.5	1.6mΩ	2M6/16
MS2-100	2	110	100	92.5	84.3	66.6	170±2	71±2	205±2	212±2	6.0	1.4mΩ	2M6/18
MS2-130	2	148	136	123	113	89	170±2	98±2	205±2	212±2	8.0	1.2mΩ	2M6/18
MS2-150	2	166	153	139	127	100	170±2	98±2	205±2	212±2	8.5	1.1mΩ	2M6/18
MS2-200	2	218	200	180	165	128	170±2	105±2	328±2	350±2	12.7	1mΩ	2M8/20
MS2-250	2	270	250	225	204	160	170±2	105±2	328±2	350±2	14.0	1mΩ	2M8/20
MS2-300	2	326	300	270	246	192	170±2	149±2	328±2	350±2	17.7	0.9mΩ	2M8/20
MS2-350	2	380	350	315	288	224	170±2	149±2	328±2	350±2	19.0	0.8mΩ	2M8/20
MS2-400	2	468	432	389	354	274	210±2	175±2	328±2	350±2	25.7	0.7mΩ	4M8/20
MS2-500	2	540	500	450	410	320	240±2	170±2	328±2	350±2	28.5	0.6mΩ	4M8/20
MS2-600	2	650	600	540	492	384	300±2	175±2	328±2	350±2	35.0	0.55mΩ	4M8/20
MS2-750	2	780	750	600	550	430	300±2	175±2	328±2	350±2	38.9	0.52mΩ	4M8/20
MS2-800	2	868	800	720	657	512	410±3	175±2	328±2	350±2	51.0	0.5mΩ	8M8/20
MS2-1000	2	1086	1000	900	822	640	475±3	175±2	328±2	350±2	57.0	0.45mΩ	8M8/20
MS2-1200	2	1302	1200	1080	984	768	475±3	175±3	328±2	350±2	72.4	0.4mΩ	8M8/20
MS2-1500	2	1620	1500	1350	1230	960	400±3	350±3	340±2	350±2	94.0	0.35mΩ	8M8/20
MS2-2000	2	2170	2000	1800	1641	1280	490±3	350±3	340±2	350±2	119.0	0.28mΩ	16M8/20
MS2-2500	2	2712	2500	2250	2052	1600	490±3	350±3	340±2	350±2	132.0	0.25mΩ	16M8/20
MS2-3000	2	3250	3000	2700	2460	1920	712±3	350±3	340±3	350±3	181.0	0.2mΩ	16M8/20

Note: 4M8/20 = 4 Pole – M8-nut & 20-Diameter

Discharge Performance

Constant Current (Amp) Discharge Table To 1.60 VOLT PER CELL @25°C

Model/ time(mins.)	10	20	30	60	120	180	300	480	600
MS2-65 Ultra	140	83	67	43	25	19	13	8	7.2
MS2-75 Ultra	160	94	76	49	28	21.8	14.8	9	8.3
MS2-100 Ultra	215	126	101	65.2	37.2	29	19.7	12	11
MS2-130 Ultra	277	171	137	88	50.2	39.1	26.6	16.2	13.5
MS2-150 Ultra	320	192	154	99.7	56.9	44.4	30.1	18.2	16.2
MS2-200 Ultra	-	272	218	140	75	60	40.5	25	22
MS2-250 Ultra	-	317	254	164	82	69.6	47	29	25.6
MS2-300 Ultra	-	407	327	210	119	92.8	63	38.4	33.5
MS2-350 Ultra	-	461	370	239	134.5	104.8	71.2	43.4	37.5
MS2-400 Ultra	-	543	436	280	150	120	81	50	44
MS2-500 Ultra	-	660	530	340	170.6	144.8	97.8	60.3	53.2
MS2-600 Ultra	-	754	606	390	220	175	116	74	61.5
MS2-800 Ultra	-	1006	808	520	285	220	147	94	82
MS2-1000 Ultra	-	1320	1060	680	340	288	195	120	106
MS2-1200 Ultra	-	1509	1211	780	440	350	232	148	123
MS2-1500 Ultra	-	1886	1514	975	534	412	275	176	153.7
MS2-2000 Ultra	-	2514	2019	1300	750	568	380	225	205
MS2-2500 Ultra	-	3143	2524	1625	890	687	459	293.5	256
MS2-3000 Ultra	-	3771	3029	1950	1125	852	570	337.5	307

Constant Current (Amp) Discharge Table To 1.70 VOLT PER CELL @25°C

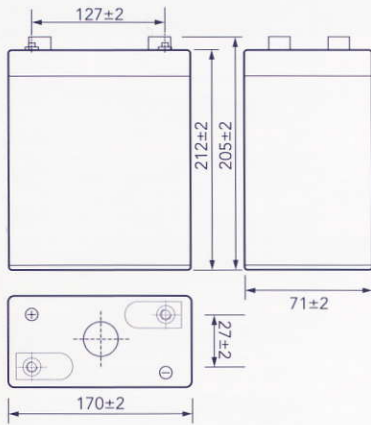
Model/ time(mins.)	10	20	30	60	120	180	300	480	600
MS2-65 Ultra	138	72	63	42	24	18	11.6	8	7.1
MS2-75 Ultra	156	81	71	47	27	20	13.5	9	8.1
MS2-100 Ultra	208	109	95	63	36	26.6	18	12	10.8
MS2-130 Ultra	265	148	130	86	48.6	36	24.3	16	13.3
MS2-150 Ultra	310	166	146	97	55	39.9	27.5	18	16
MS2-200 Ultra	-	234	206	137	72	53.2	36	24	21.6
MS2-250 Ultra	-	274	240	159	83.5	61.7	41.7	27.8	25.5
MS2-300 Ultra	-	352	309	205	115.2	85.1	57.6	38.4	33
MS2-350 Ultra	-	398	350	232	130	96.1	65	43.4	37.3
MS2-400 Ultra	-	469	411	273	144	106.4	72	48	43.2
MS2-500 Ultra	-	570	500	332	173.9	128.3	86.7	57.8	53
MS2-600 Ultra	-	651	571	379	215	160	105	71	61
MS2-800 Ultra	-	869	762	506	268	198	134	90	81
MS2-1000 Ultra	-	1140	1000	664	345	255	170	114	106
MS2-1200 Ultra	-	1303	1143	742	430	320	210	142	122
MS2-1500 Ultra	-	1629	1429	949	502	371	251	168.5	151.5
MS2-2000 Ultra	-	2171	1905	1265	675	497	330	220	204
MS2-2500 Ultra	-	2714	2381	1581	837	618.5	418	356	253
MS2-3000 Ultra	-	3257	2857	1897	1012	745	495	330	306

Constant Current (Amp) Discharge Table To 1.80 VOLT PER CELL @25°C

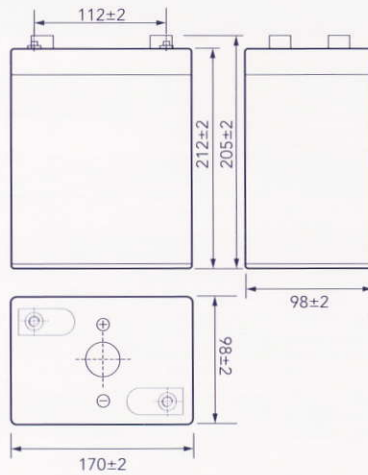
Model/ time(mins.)	10	20	30	60	120	180	300	480	600
MS2-65 Ultra	134	63	50	36	22	17	11.6	7.8	6.5
MS2-75 Ultra	150	71	57	41	25	19.8	13.3	8.9	7.5
MS2-100 Ultra	200	95	76	55	34	26.3	17.7	11.8	10
MS2-130 Ultra	250	130	104	75	47	35.5	23.9	15.6	13
MS2-150 Ultra	298	146	117	84	53	40.2	27	17.5	15
MS2-200 Ultra	-	206	165	118	68	52.6	35.8	23.6	20
MS2-250 Ultra	-	240	192	138	78.9	61	41.5	27.4	25
MS2-300 Ultra	-	309	247	178	108.8	84.1	56.6	37.7	30
MS2-350 Ultra	-	350	280	201	122.9	95	64	42.6	35
MS2-400 Ultra	-	411	329	237	136	105.2	71.6	47.2	40
MS2-500 Ultra	-	500	400	288	164.1	127	86.3	57	50
MS2-600 Ultra	-	571	457	329	200	155	103	70	60
MS2-800 Ultra	-	762	610	439	265	195	130	89	80
MS2-1000 Ultra	-	1000	800	576	325	250	170	102	100
MS2-1200 Ultra	-	1143	914	658	400	310	206	140	120
MS2-1500 Ultra	-	1429	1143	823	497	365	243.5	166	150
MS2-2000 Ultra	-	1905	1524	1097	635	485	330	195	200
MS2-2500 Ultra	-	2381	1905	1371	828	609	406	278	250
MS2-3000 Ultra	-	2857	2286	1646	952	727	495	292	300

Battery Layout

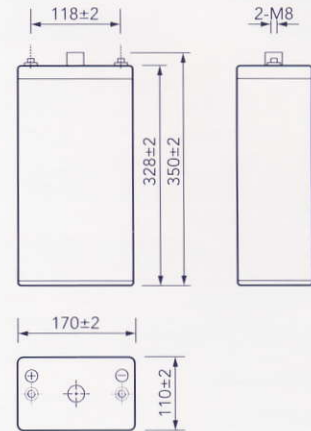
**MS2-65 Ultra/ MS2-75 Ultra/
MS2-100 Ultra**



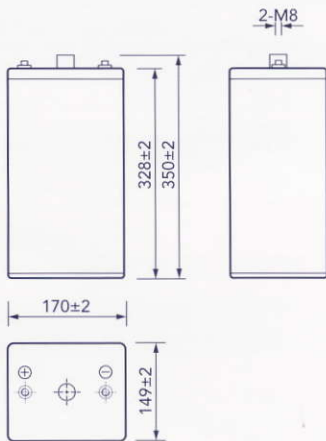
MS2-130 Ultra/ MS2-150 Ultra



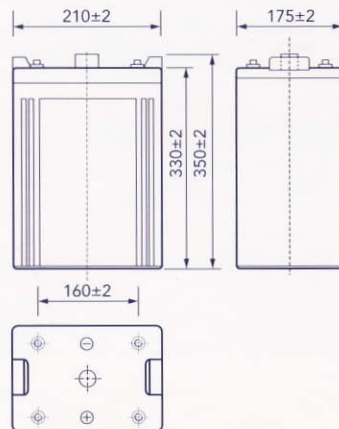
MS2-200 Ultra/ MS2-250 Ultra



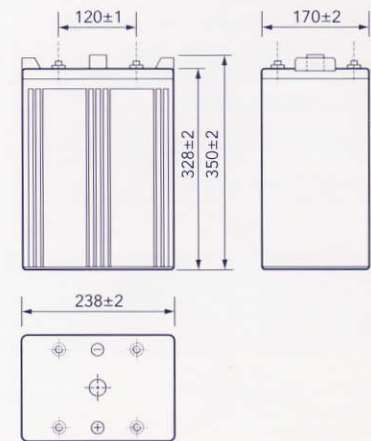
MS2-300 Ultra/ MS2-350 Ultra



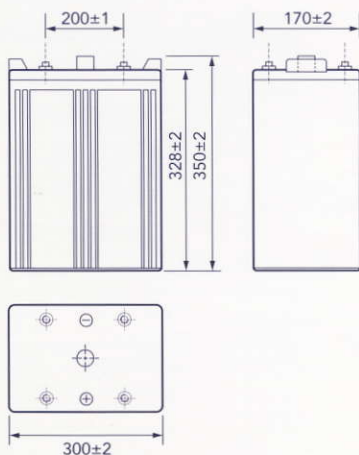
MS2-400 Ultra



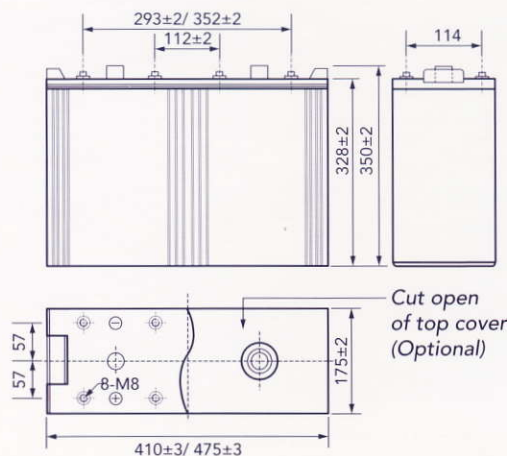
MS2-500 Ultra



MS2-600 Ultra/ MS2-750 Ultra

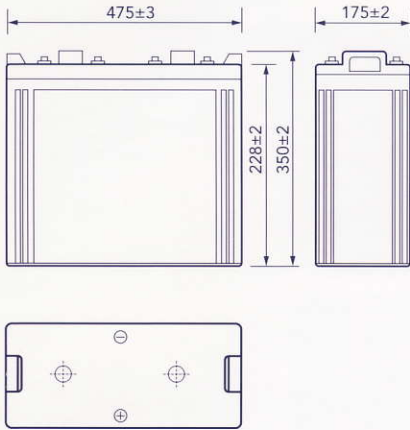


MS2-800 Ultra/ MS2-1000 Ultra

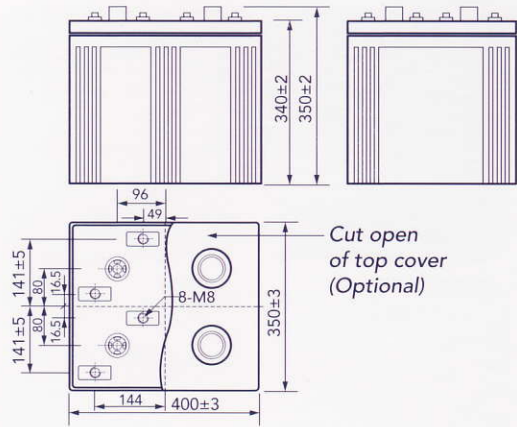


Battery Layout

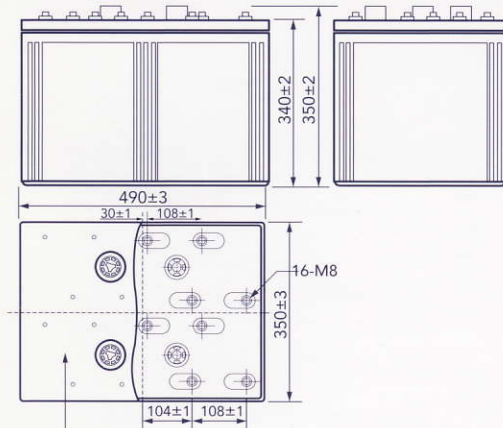
MS2-1200 Ultra



MS2-1500 Ultra

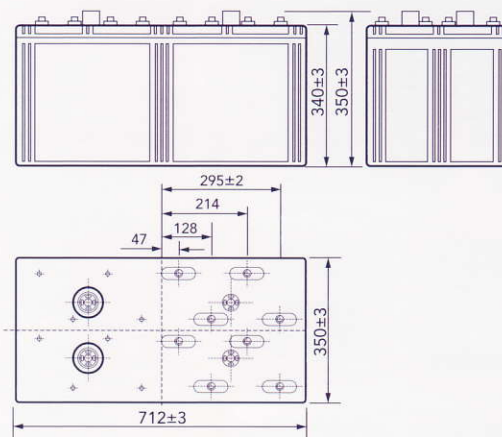


MS2-2000 Ultra/ MS2-2500 Ultra



Cut open
of top cover
(Optional)

MS2-3000 Ultra



* Dimension in millimetres (mm)

MSB ULTRA

