



LM

LM Battery Range

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THE LM BATTERY SERIES IS AN OPZS VENTED RANGE DESIGNED BY FIAMM TO MEET DIN 40736-1 SPECIFICATIONS.

ALL PRODUCTS HAVE BEEN DESIGNED TO PROVIDE USERS WITH A HIGHLY ROBUST PRODUCT FAMILY. THE RANGE HAS BEEN DEVELOPED FOR APPLICATIONS WHERE DISCHARGE CYCLES NEED TO BE OF THE HIGHEST LEVELS OF RELIABILITY. AS RESULT OF THIS THE RANGE EXCEEDS THE SPECIFICATION STANDARDS LAID DOWN BY THE DIN STANDARD. THIS PERFORMANCE IS THE RESULT OF A LOW ANTIMONY ALLOY PLATE WHICH PROVIDES VERY LOW WATER CONSUMPTION OVER THE LIFE OF THE PRODUCT. UNDER NORMAL FLOAT OPERATING CONDITIONS BATTERIES REQUIRE TOPPING-UP ONCE EVERY THREE YEARS. FURTHERMORE THE DESIGN HAS BEEN OPTIMIZED TO LOWER SELF-DISCHARGE DURING STORAGE. ALL OF THESE OUTSTANDING FEATURES ADD UP TO A LONGER LIFE PRODUCT WITH LOWER MAINTENANCE COSTS. LIKE ALL FIAMM LEAD-ACID BATTERIES THE LM RANGE IS ECO-FRIENDLY AND FULLY RECYCLABLE.



MAIN APPLICATIONS:



TELECOMMUNICATION



INDUSTRIAL UPS



UTILITIES AND INDUSTRY



RAILWAYS



OIL & GAS

SPECIFICATIONS

The positive tubular grid is composed of a special alloy (Pb-Sb) which is die-cast to guarantee high corrosion resistance and low water consumption (1 topping up in 3 years in float conditions)

Electrolyte: sulphuric acid electrolyte with specific gravity of 1.24kg/l at 20°C

Separators have high porosity and provide very low internal resistance

Robust design thanks to high mechanical polymers properties; box made of SAN and with an ABS lid

The vent plug is made of porous flameproof material for a superior safety

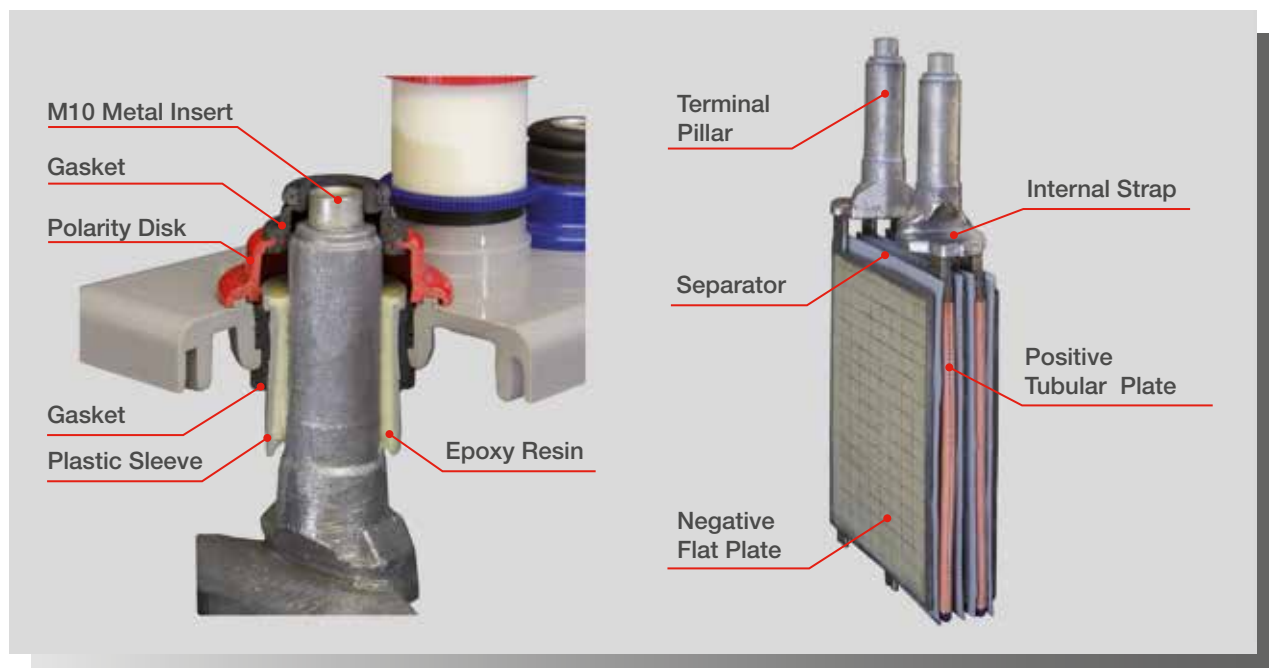
A long shelf life of up to six months is possible without recharge (<2% discharge per month)

The metallic threaded insert on terminals ensures the highest conductivity and provides maximum torque retention and easy installation

Flexible connections ensure a safe link between terminals

The connecting bolt is fully insulated but with probe hole on the top to grant electrical measurements

TECHNOLOGY



THE UNIQUE FIAMM TERMINAL DESIGN PERMITS PILLAR GROWTH DURING CELL LIFE WITHOUT LEAKAGE. THIS FEATURES AVOID MECHANICAL STRESS ON THE LID OF THE CELL.

THE LM RANGE HAS A DESIGN LIFE IS 20 YEARS DUE TO HIGH RELIABILITY AND COMPONENTS MANUFACTURE PROCESS. ALL LM MODELS ARE AVAILABLE IN A DRY CHARGE VERSION.

BATTERY TYPE	REFERENCE OPzS DIN 40736-1	NOMINAL CAPACITY (Ah) 10H to 1.8VPC at 20°C	SHORT CIRCUIT CURRENT (A) IEC 60896-11	INTERNAL RESISTANCE (mOhm) IEC 60896-11	NOMINAL DIMENSION (mm)			ELECTROLYTE QUANTITY (liters)	TYPICAL WEIGHT (with electrolyte) (kg)
					Lenght	Width	Height		
LM 100	2 OPzS 100	108	1250	1.824	103	206	420	4.2	14.1
LM 150	3 OPzS 150	162	1875	1.216	103	206	420	3.8	15.8
LM 200	4 OPzS 200	216	2380	0.840	103	206	420	3.6	17.4
LM 250	5 OPzS 250	270	2700	0.730	124	206	420	4.7	21.2
LM 300	6 OPzS 300	324	3240	0.608	145	206	420	5.4	24.8
LM 350	5 OPzS 350	390	3150	0.628	124	206	536	6.3	28.4
LM 420	6 OPzS 420	468	3780	0.524	145	206	536	7.2	32.7
LM 490	7 OPzS 490	546	4410	0.449	166	206	536	8.3	37.6
LM 600	6 OPzS 600	630	4560	0.447	145	206	711	12.2	44.9
LM 700	7 OPzS 700	735	5320	0.383	210	191	711	15.0	58.8
LM 800	8 OPzS 800	840	6100	0.335	210	191	711	12.9	62.2
LM 900	9 OPzS 900	945	6840	0.298	210	233	711	22.0	71.5
LM 1000	10 OPzS 1000	1050	7600	0.268	210	233	711	17.7	74.9
LM 1200	12 OPzS 1200	1260	9120	0.223	210	275	711	22.1	89.2
LM 1500	12 OPzS 1500	1570	10200	0.200	210	275	861	26.7	110
LM 1750	14 OPzS 1750	1840	11900	0.171	212	399	837	35.5	142
LM 1875	15 OPzS 1875	1970	12750	0.160	212	399	837	34.0	147
LM 2000	16 OPzS 2000	2100	13600	0.150	212	399	837	38.3	151
LM 2250	18 OPzS 2250	2360	15300	0.133	212	487	837	43.6	181
LM 2500	20 OPzS 2500	2620	17000	0.120	212	487	837	48.4	188
LM 3000	24 OPzS 3000	3150	20400	0.100	212	576	837	52.6	222
LM 3500	28 OPzS 3500	3500	23800	0.086	212	576	837	55.2	241

ELECTRICAL CHARACTERISTICS

Float Voltage: 2.23 V/cell at 20°C

Boost Voltage: 2.40 V/cell

Float Voltage Compensation with Temperature: -2.5 mV/cell/°C

Self-Discharge at 20°C: <2%/month

STANDARDS

DIN 40736-1 – specification OPzS cell

DIN 43539T5 – deep discharge

DIN 40740 – electrolyte level indicator

IEC 60896 Part 11 – vented types requirements & tests

CERTIFICATIONS

ISO 9001

Quality Management System

ISO 14001

Environmental Management System

ISO 45001

Workplace Safety & Health

ACCESSORIES

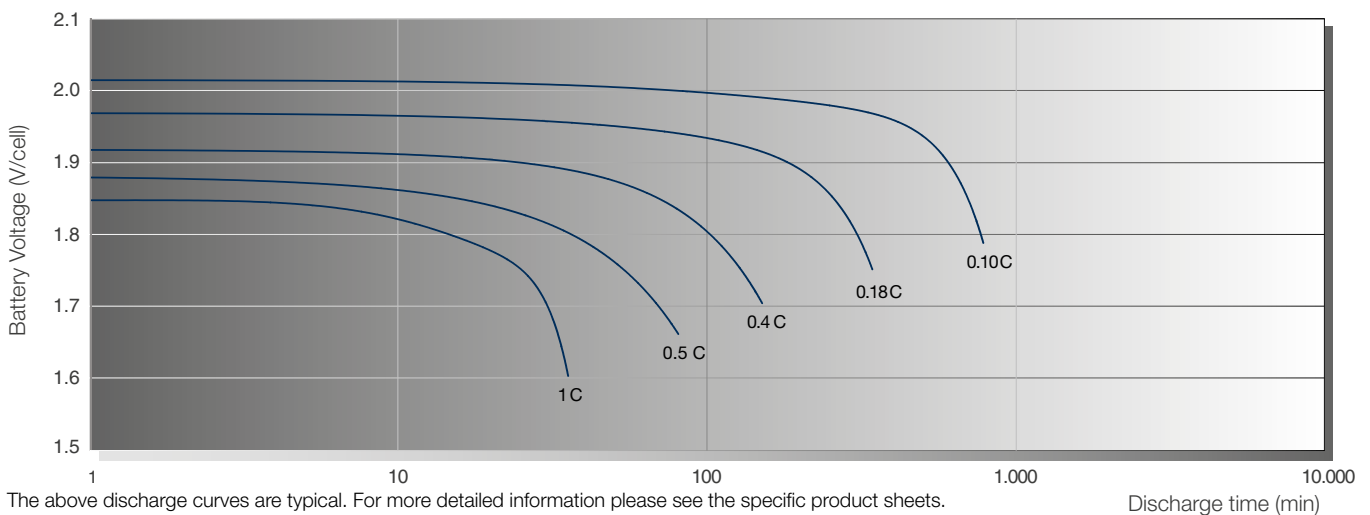
Recombination plug

Filtering plugs to DIN standard

Racks for battery installation (standard and anti-seismic)

Monitoring system

DISCHARGE CURVES at different current / final voltage (at 20°C)

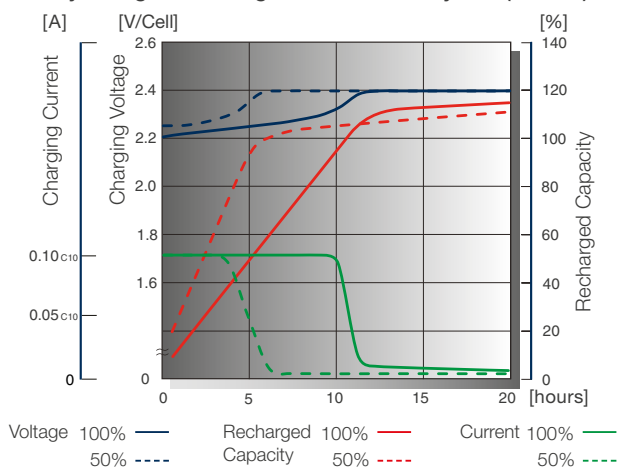


The above discharge curves are typical. For more detailed information please see the specific product sheets.

Discharge time (min)

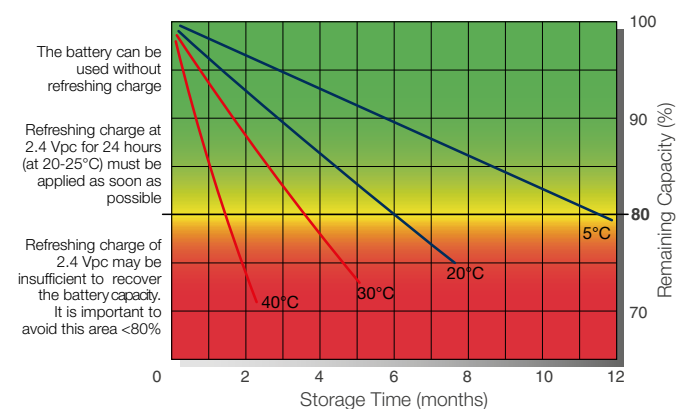
TYPICAL CHARGE CURVES

Battery Voltage and Charge Time for Standby Use (at 20°C)



STORAGE

Capacity loss during storage at various temperatures



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