



SMG (OPzV)

ENDURLITE VRLA range

TECHNICAL FEATURES

- ▶ **Positive tubular plates:** incorporating a special grid construction, pressure cast from antimony-free alloy, with highly porous gauntlets that retain the active material.
- ▶ **Negative plates:** designed to have service lives consistent with the positive plates. The alloy and curing process are designed so that porosity of active material is maintained during operation.
- ▶ **Electrolyte:** immobilized in a gel structure.
- ▶ **Separators:** made of high quality microporous material, with low electrical resistance to achieve the lowest self discharge and highest efficiency.
- ▶ **Containers and lids:** made of plastic ABS material. Also available, upon request, in ABS flame retardant material (category FV0 and UL 94 class V0).
- ▶ **Easy Installation:** FIAMM SMG cells are normally installed in an upright position on steel stands but their design allows for horizontal installation too (all sizes up to 1500Ah).
- ▶ **One Way relief valve:** opens at low pressure and is fitted with a flame arrestor device.
- ▶ **Terminals:** female threaded terminals (M10) ensure perfect contact and a low resistance with the flexible cable connectors.
- ▶ **Post seals:** high integrity post seal design to prevent electrolyte leakage and terminal corrosion.
- ▶ **Connectors:** flexible, fully insulated cable connectors, bolted to the terminal with an insulated screw, having a probe hole on the top for electrical measurement.

APPLICATIONS

- ▶ Telecommunications
- ▶ Emergency Lighting
- ▶ Electric Utilities
- ▶ Airport and Seaport signalling
- ▶ Railways



PRODUCT FEATURES

- ▶ Safe
- ▶ Design Life : 20 Year on float in temperature controlled environment
- ▶ Versatile
- ▶ Reliable
- ▶ Minimal Gassing
- ▶ Excellent Cycling
- ▶ Capacity Range from 200 Ah to 3000 Ah



The FIAMM SMG range of valve regulated lead acid stationary batteries combines the benefits of recombination technology (i.e. virtually no maintenance due to very low gas emissions, and no needs for water addition) plus the advantages of conventional flooded batteries with positive tubular plates (i.e. long life and excellent cycling capability). FIAMM has a program of continuous improvement investing in manufacturing processes, equipment and technology. FIAMM's Standby Battery Manufacture is in compliance with ISO 9001 and ISO 14001 quality assurance. Our continuous investment in battery technology is reflected by means of premium products that are of the highest quality and reliability. FIAMM SMG valve regulated lead acid batteries are the ideal energy source for many different standby applications, the combination of Gel Electrolyte and tubular positive plate technology offer high level of reliability, long float life and high cycle life.



Standby Batteries

SMG (OPzV)

ENDURLITE
VRLA range



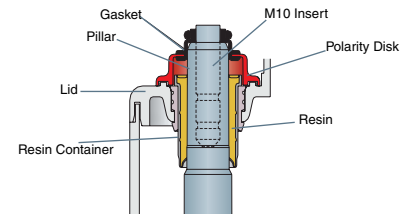
FIAMM SMG (OPzV) Range

CELL TYPE	DIN TYPE	Nominal Capacity Ah 8 hrs to 1.75 Vpc at 77°F	DIMENSIONS in/(mm)			WEIGHT lbs/(kg)
			Length	Width	Height	
SMG 200	4 OPzV 200	200	4.1/(103)	8.1/(206)	15.7/(398)	37.4/(17)
SMG 250	5 OPzV 250	250	4.9/(124)	8.1/(206)	15.7/(398)	46.2/(21)
SMG 300	6 OPzV 300	300	5.7/(145)	8.1/(206)	15.7/(398)	52.8/(24)
SMG 350	5 OPzV 350	350	4.9/(124)	8.1/(206)	20.2/(514)	57.2/(26)
SMG 420	6 OPzV 420	420	5.7/(145)	8.1/(206)	20.2/(514)	70.4/(32)
SMG 490	7 OPzV 490	490	6.53/(166)	8.1/(206)	20.2/(514)	79.2/(36)
SMG 600	6 OPzV 600	600	5.7/(145)	8.1/(206)	27.1/(689)	99/(45)
SMG 800	8 OPzV 800	800	8.3/(210)	7.5/(191)	27.1/(689)	138.6/(63)
SMG 1000	10 OPzV 1000	1000	8.3/(210)	9.2/(233)	27.1/(689)	171.6/(78)
SMG 1200	12 OPzV 1200	1200	8.3/(210)	10.8/(275)	27.1/(689)	193.6/(88)
SMG 1500	12 OPzV 1500	1500	8.3/(210)	10.8/(275)	33.1/(840)	228.8/(104)
SMG 2000	16 OPzV 2000	2000	8.4/(214)	15.7/(399)	32.1/(816)	308/(140)
SMG 2500	20 OPzV 2500	2500	8.4/(214)	19.6/(497)	32.1/(816)	387.2/(176)
SMG 3000	24 OPzV 3000	3000	8.4/(214)	22.7/(576)	32.1/(816)	451/(205)

ELECTRICAL CHARACTERISTICS

- ▶ **Nominal Voltage** : 2 V
- ▶ **Float Voltage at 77°F** : 2.23 Vpc
- ▶ **Boost Charge** : 2.4 Vpc with max current of 0.25 C₈(A)
- ▶ **Self Discharge** : <2% per month at 77°F

HIGH RELIABILITY POST SEAL



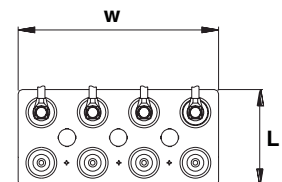
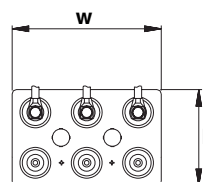
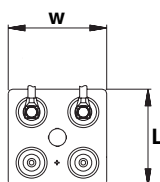
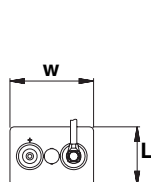
Terminal Lay Outs

SMG 200
TO
SMG 600

SMG 800
TO
SMG 1500

SMG 2000

SMG 2500
SMG 3000



Standby Batteries



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Constant current discharge rates Amperes to 1.75 Vpc at 77°F (25°C)

Cell Type	Discharge Time (minutes)														
	1	10	15	30	60	120	180	240	300	360	420	480	540	600	1440
SMG 200	277	264.7	239	172	112.3	71	53	42.2	35.6	31	27.6	25	22.8	21	10.02
SMG 250	320	298.7	273	204	140	88.9	66.2	52.6	44.5	38.7	34.5	31.25	28.6	26.4	12.6
SMG 300	367.7	352	322.4	243	169	107	79.4	63.1	53.3	46.4	41.4	37.5	34.3	31.6	15.0
SMG 350	375	363.6	333.7	262.6	185.4	122.6	92.6	74.6	63.2	54.9	48.9	43.8	40.3	37	17.7
SMG 420	411	402.7	369.8	299.7	219.4	146.3	111.2	89.5	75.9	65.8	58.7	52.5	48.3	44.5	21.2
SMG 490	439.8	430.5	399.6	330.6	250.3	171	129.8	104	88.6	76.8	68.5	61.25	56.3	51.9	24.8
SMG 600	484	478.9	456.3	395.5	305.9	209	158.6	127.7	108.1	94	83.9	75	69	63.5	30.4
SMG 800	780	770	721	565.5	425.4	279	211	170	144	125.6	112.3	100	92	84.7	40.5
SMG 1000	932	921	855	706.6	531.5	351.2	266.8	215.3	180.2	156.6	139	125.6	114.3	106	50.67
SMG 1200	1024	999	939	794	613.9	419.2	317	258.5	217	188.5	166.9	151.4	137	126.7	60.7
SMG 1500	1065	1053	1035	899	720	515	398.6	324.4	276	240	212.2	190.5	173	159.6	74.67
SMG 2000	1420	1404	1380	1199	960	687	531.5	432.6	367.7	320.3	283.2	254.4	230.7	213.2	99.6
SMG 2500	1775	1754	1725	1499	1200	858	664	540.7	459	400.7	353.3	315	288.4	266.8	124.6
SMG 3000	2130	2105	2070	1798	1440	1030	797	649	552	481	424	382	346	319	149

Constant power discharge rates Watts per cell to 1.75 Vpc at 77°F (25°C)

Cell Type	Discharge Time (minutes)														
	1	10	15	30	60	120	180	240	300	360	420	480	540	600	1440
SMG 200	484	463	418	306	204	132	98.6	79	66.6	58	52	47.2	43.3	40	19
SMG 250	560	523	478	364	254.4	164	124	98.4	83.3	72.6	65	59	54	49.8	23.9
SMG 300	643.7	616	563	433	306	197	147.3	118.4	100	87	77.9	70.6	64.9	59.8	28.6
SMG 350	656	635.5	584	468	336	225.6	172	139	118.4	102.8	91.9	83.4	76	70.1	33.8
SMG 420	719	704	651	536	399	270	206	167	142	123.6	110.2	100	91	84.2	40.5
SMG 490	772	758	708	592	454	315.2	241	195	166	144.2	129	116.4	106	98.2	47.3
SMG 600	855	846	808	708	555	385	295	238	203	176	157.6	143	130	120.5	57.8
SMG 800	1364	1348	1262	1007	769	514	392	317	270	235	210	190.5	174	160.7	77
SMG 1000	1631	1612	1501	1258	962	645.8	494	400.7	338	293.5	261.6	237	216	200.8	96.4
SMG 1200	1793	1754	1657	1417	1111	771	589	481	405	352	314	284	259	240	115
SMG 1500	1872	1852	1823	1599	1298	942	735	601	514	449	396.5	358	326.5	301.8	142
SMG 2000	2495	2469	2431	2133	1730	1256	980.6	802	685	598	529	478	434	402.7	189.5
SMG 2500	3120	3086	3038	2667	2164	1571	1226	1003	856	748	661	597.4	544	502.6	237
SMG 3000	3743	3703	3646	3200	2596	1885	1472	1204	1027	897	794	717	653	603.6	284

FIAMM SMG cells are normally installed in the upright position on steel stands. When necessary they can be arranged for mounting in a horizontal position (cells up to 1500 Ah) to have a real front access terminal battery. The technical-marketing staff of FIAMM is at your service to study the optimal layout to fit your battery room



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