Sealed lead-acid cell

EUROPOWER®

Model: EXL 400N

EXL-N Series

EUROPOWER cells are made in **AGM technology.** Owing their excellent power and current capability these batteries are designed for both large and important central battery UPS systems as well as for applications in telecommunications and renewable energy engeneering (the battery system **capacity even up to 12000 Ah**). They have a very high repeatibility of parameters and long designed life. EXL-N cells can withstand **1200 discharge/charge cycles at 80% DOD.**

TECHNICAL DATA

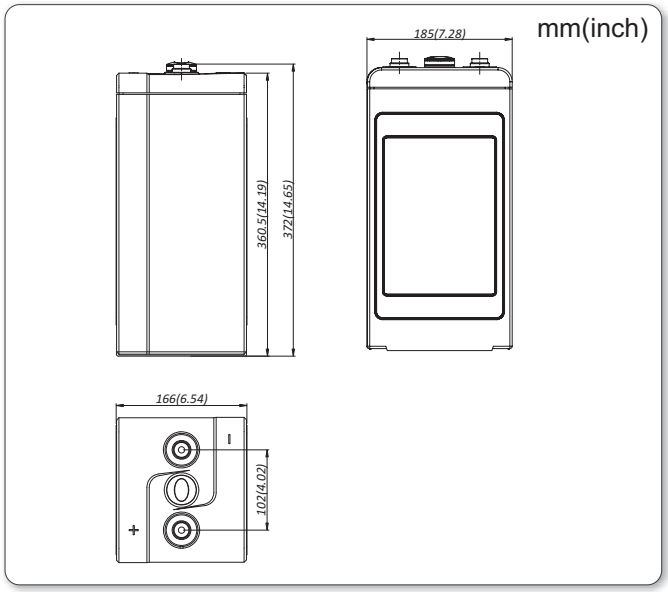
Nominal voltage		2 V
Nominal capacity		400 Ah / C_{10}
Cell per unit		1
Technology		AGM
Design life		over 17 years @ 20°C* over 15 years @ 25°C
Dimensions	height	372,0 mm
	length	166,0 mm
	width	185,0 mm
Weight		~24,5 kg
Capacity @ 25°C	10h 41,1A @1,80V/cell.	411,0 Ah
	3h 101A @1,80V/cell.	303,0 Ah
	1h 226A @1,75V/cell.	226,0 Ah
	30 min 339A @1,75V/cell.	169,5 Ah
Ambient nominal temperature range	charge	0°C ~ 40°C
	discharge	-40°C ~ 55°C
	storage	-20°C ~ 40°C
Internal resistance	@ fully charge battery	≤0,35 mΩ
Charging voltage @ 20°C	standby use	2,25 V (-3 mV/°C)
	cycle use	2,35 V (-4 mV/°C)
Charging current	recommended	40 A
	maximum	100 A
Capacity retention during storage @ 20°C (self discharge)	after 1 month	98 %
	after 6 months	86 %
	after 12 months	73 %
Container material	standard	ABS UL 94-HB
	optional	ABS UL 94-V0**
Terminal	insert terminal	I3
Terminal hardware initial torque		10,0 Nm

*) - According to Eurobat (Long Life group) **) - Flame-retardant

APPLICATIONS

- high power Uninterruptible Power Supplies (UPS)
- substations
- emergency lighting systems
- telecommunication power plants
- renewable power sources
- GSM base stations

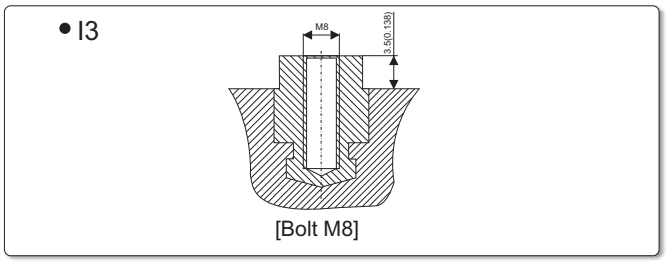
DIMENSIONS



NO TRANSPORT RESTRICTED

Not restricted for air, surface and water transport. Classified as non-hazardous material (*IATA/ICAO Special Provision A67, DOT-CFR Title 49 parts 171-189, IMDG amendment 27*)

TERMINALS



DISCHARGE CHARACTERISTICS

• Constant current (Current [A], 25[°C] / 77[°F])

Discharge time

F.V. V/cell	5 min	15 min	30 min	45 min	1h	3h	5h	6h	8h	10h	24h
1,90	402	327	242	198	169	89,5	65,5	57,6	46,3	38,6	17,7
1,85	467	386	282	230	191	95,4	68,0	59,8	48,1	40,0	18,1
1,83	491	409	302	241	198	97,3	68,7	60,7	48,6	40,2	18,3
1,80	528	436	317	253	211	101	70,4	61,8	49,5	41,1	18,7
1,75	549	462	339	273	226	104	72,1	63,4	50,5	42,1	19,0
1,70	576	488	364	285	237	107	74,1	64,4	51,1	42,7	19,3

• Constant power (Power [W/cell], 25[°C] / 77[°F])

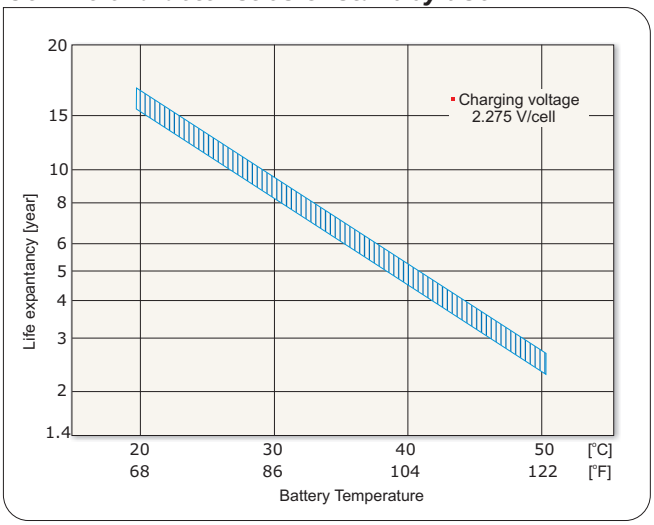
Discharge time

F.V. V/cell	5 min	15 min	30 min	45 min	1h	3h	5h	6h	8h	10h	24h
1,90	783	637	487	399	348	190	135	116	90,8	75,9	36,0
1,85	888	734	578	476	405	205	145	124	97,0	81,8	37,5
1,83	923	769	612	503	429	211	149	127	98,3	83,5	38,3
1,80	976	806	649	524	445	216	152	131	100	85,1	39,0
1,75	1004	845	673	540	455	224	156	135	103	86,5	39,6
1,70	1036	878	697	560	474	233	160	138	107	87,8	40,2

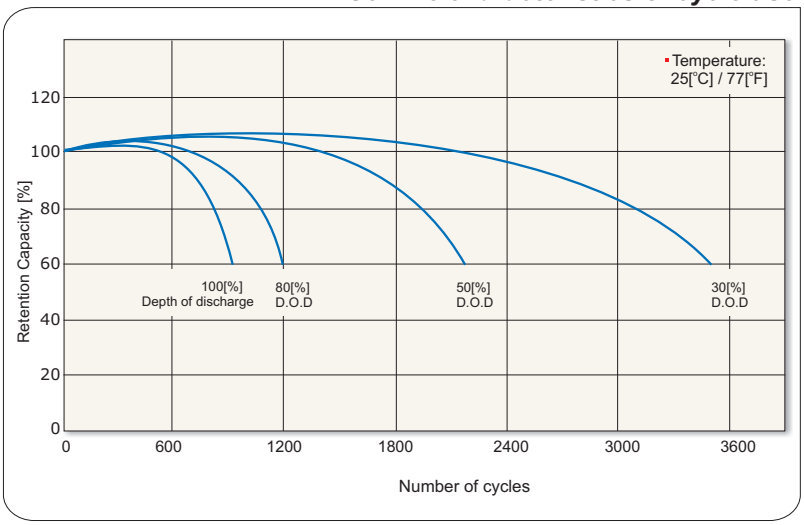
F.V. - Final voltage

EXL 400N

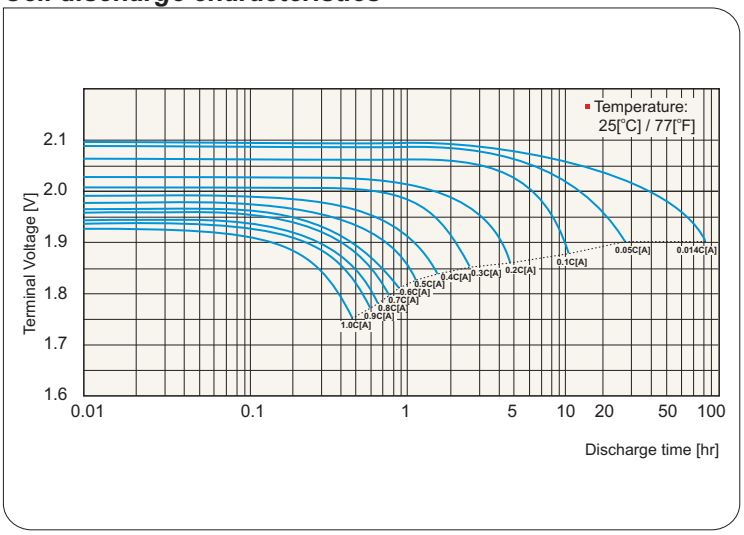
Cell life characteristics of standby use



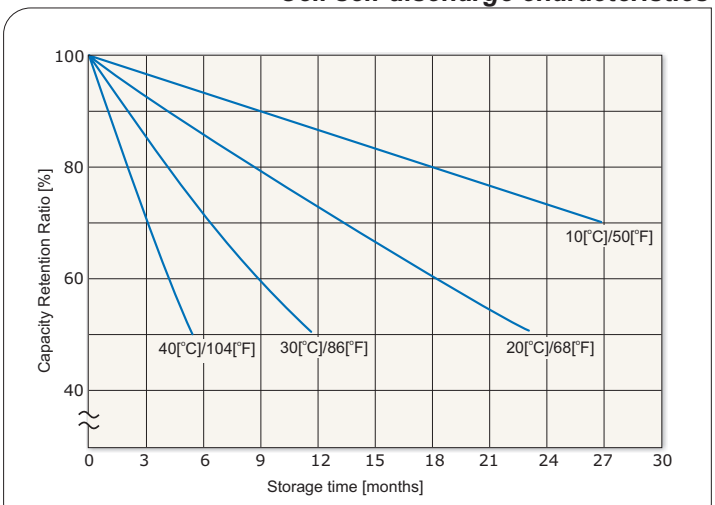
Cell life characteristics of cycle use



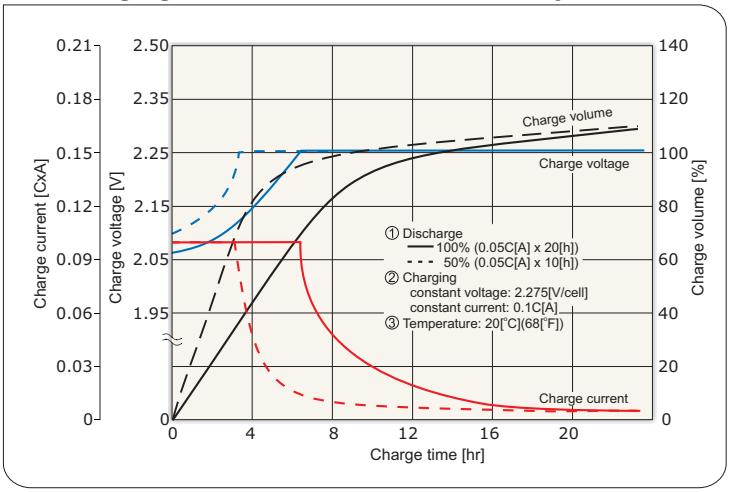
Cell discharge characteristics



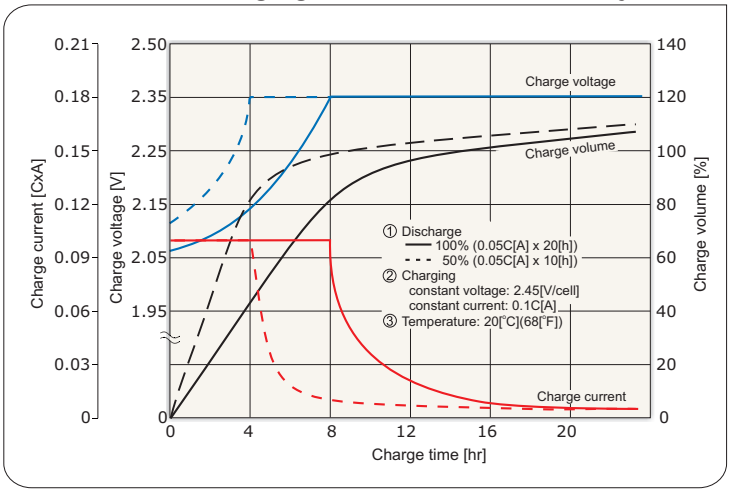
Cell self discharge characteristics



Cell charging characteristics for the standby use



Cell charging characteristics for the cycle use



Cell discharge current and final discharge voltage

Discharge current [A]	0.2C > I	0.2C ≤ I < 0.5C	0.5C ≤ I < 1.0C	1.0C ≤ I
Final discharge voltage [V/cell]	1.85	1.83	1.75	1.70

*) **C** - Capacity

Date of issue: 16.03.2010; change number: 2; date of change: 19.05.2015