

TECHNICAL DATA
BASIC DATA

Rated Voltage	12 V
20 hr capacity at end voltage 1,75 / cell at 25°C	9,0 Ah
Internal resistance (fully charged battery) at 25°C	17 mΩ

DIMENSIONS

Length	151(±1) mm
Width	65(±1) mm
Height	93,5(±1) mm
Height with terminal	99,5(±1) mm
Weight	2,52 kg

Terminals

Faston	T2
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OPERATION TEMPERATURE RANGE

Storage	-15°C to +50°C
Charge	-20°C to +40°C
Discharge	-15°C to +40°C

TEMPERATURE

Effect of temperature to capacity at 40°C	103 %
Effect of temperature to capacity at 25°C	100 %
Effect of temperature to capacity at 0°C	86 %
Nominal operating temperature range	25°C

CASE MATERIAL

Standard	ABS (UL.94:HB)
Flame retardant	ABS (UL94:V0)

CHARGE VOLTAGE

Float charge at 25°C	13,5 V ± 0,30 V
Cycle charge at 25°C	14,4 V ± 0,60 V

CHARGE CURRENT

Recommended	0,90 A
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MAX. DISCHARGE CURRENT

5 sec.	135 A
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DESIGNED LIFE

EcoForce designed life at 25°C	up to 8
At 20°C according to Long Life Group	10-12

SELF DISCHARGE

EF series batteries may be stored for up to 6 months at 25°C

PHOTO
APPLICATIONS

- All purpose
- Uninterruptable Power Supply (UPS)
- Electric Power System (EPS)
- Emergency backup power supply
- Alarm and security systems
- Communication power supply
- DC power supply
- Auto control systems

STANDARDS

- Compliance with IEC 60896 standards, EU Battery Directive
- UL and CE Certified
- ISO 45001, ISO 9001 and ISO 14001

DISCHARGE CHARACTERISTICS
• Constant current (current [A], 25 [°C])

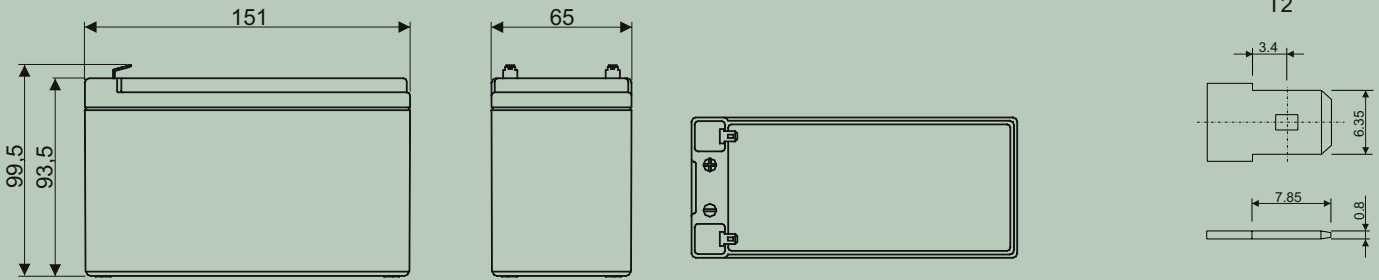
F.V. v/cell	Discharge time										
	5 min	10 min	15 min	30 min	1h	2h	3h	4h	5h	10h	20h
1,85	30,2	20,7	16,1	9,34	5,41	3,08	2,22	1,77	1,51	0,832	0,440
1,80	32,4	21,9	16,9	9,63	5,54	3,14	2,26	1,80	1,53	0,843	0,445
1,75	34,2	22,8	17,4	9,88	5,66	3,19	2,30	1,82	1,55	0,851	0,450
1,70	35,8	23,7	18,0	10,1	5,76	3,24	2,33	1,85	1,57	0,860	0,454
1,67	37,0	24,4	18,5	10,3	5,85	3,28	2,35	1,86	1,58	0,866	0,457
1,60	39,3	25,4	19,1	10,6	5,98	3,34	2,40	1,90	1,61	0,877	0,462

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

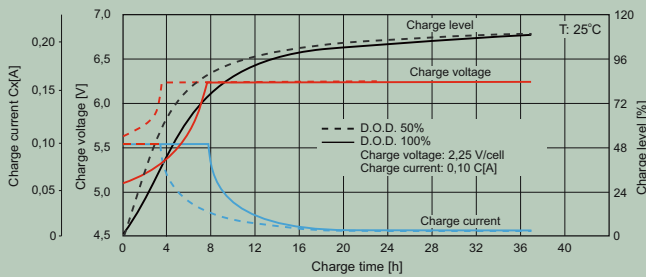
F.V. v/cell	Discharge time										
	5 min	10 min	15 min	30 min	1h	2h	3h	4h	5h	10h	20h
1,85	57,1	39,4	30,8	18,1	10,5	6,03	4,37	3,49	2,98	1,65	0,880
1,80	60,8	41,4	32,1	18,5	10,8	6,13	4,43	3,53	3,02	1,67	0,890
1,75	63,3	42,8	33,0	18,9	10,9	6,22	4,49	3,58	3,05	1,69	0,900
1,70	65,7	44,2	33,9	19,3	11,1	6,30	4,55	3,62	3,09	1,71	0,907
1,67	67,4	45,2	34,6	19,6	11,2	6,36	4,59	3,65	3,11	1,72	0,914
1,60	70,1	46,5	35,6	20,0	11,4	6,46	4,66	3,71	3,15	1,74	0,924

F.V. - Final Voltage

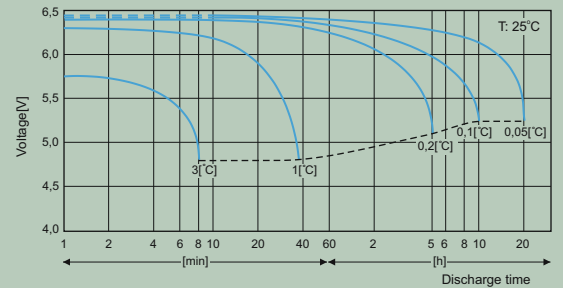
DIMENSIONS/TERMINALS



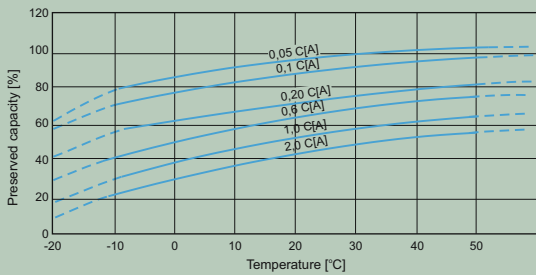
CHARGE CHARACTERISTICS



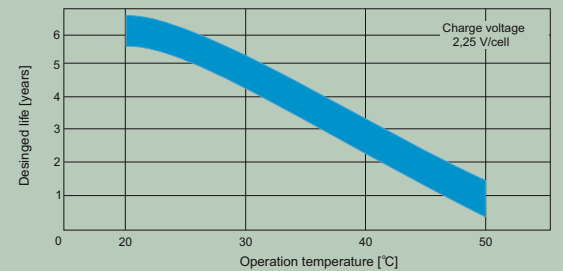
DISCHARGE CHARACTERISTICS



SELF DISCHARGE CHARACTERISTICS



FLOAT LIFE



SAFETY



ENVIROMENTAL INFORMATIONS

USED BATTERIES AND BATTERIES ARE Categorized as HAZARDOUS WASTE. WASTE OF THIS TYPE, DUE TO ITS ORIGIN, CHEMICAL COMPOSITION AND OTHER TOXIC SUBSTANCES, AND OTHER PROPERTIES, MAY BE A HAZARD. ACCORDING TO THE WASTE ACT, WASTE IN THE FORM OF BATTERIES AND ACCUMULATORS SHOULD BE COLLECTED SEPARATELY FROM OTHER TYPES OF WASTE.

IN ORDER TO OBTAIN MORE DETAILED INFORMATION, WE ENCOURAGE YOU TO CONTACT US, WE PROVIDE ANY INFORMATION ON HOW TO DEAL WITH USED BATTERIES AND ACCUMULATORS.