

T90 Pro

90 Ah | 12 V | 100 h

Specifications

Voltage	12 V
Nominal Capacity	90 Ah @ 100 hour-rate
Number of Cells	6
Internal Resistance	Approx. 5.5 mΩ
Design Life	12 years (floating charge)
Self Discharge	Monthly rate < 3% @ 25 °C Recharge after 6 months Charge before using

Temperature Ranges

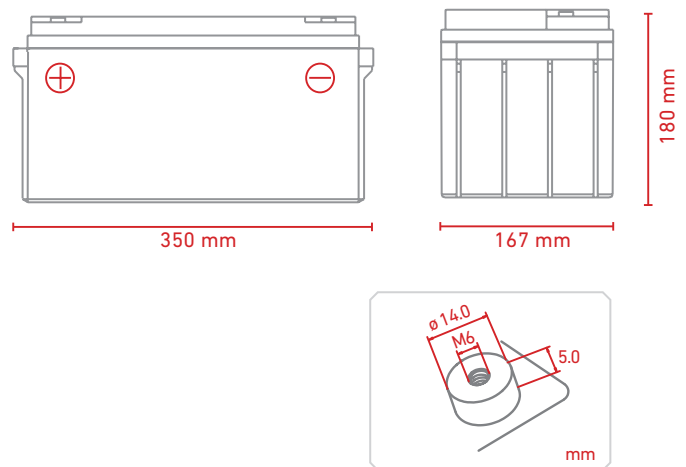
Normal Operation	25 °C ± 5 °C
Discharging	-20 °C to 60 °C
Charging	-10 °C to 50 °C
Storage	-20 °C to 60 °C

Charging & Discharging

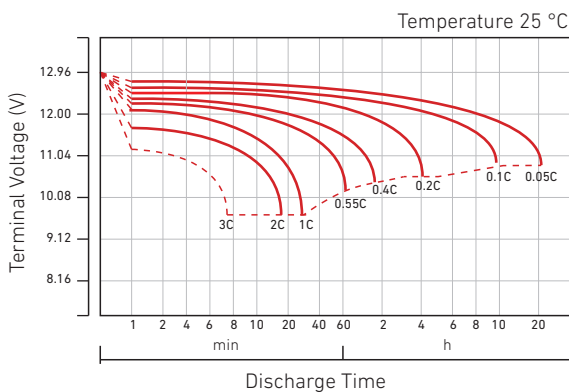
Max. Charging Current	24.0 A
Max. Discharge Current	800 A (5 sec)
Float Charging Voltage	13.6 V to 13.8 V @ 25 °C Temperature Compensation: -3mV/°C/Cell
Cycle Use Voltage	14.6 V to 14.8 V @ 25 °C Temperature Compensation: -4mV/°C/Cell
Reference Capacity	C3 61 Ah C5 69 Ah C10 76 Ah C20 80 Ah C100 90 Ah

Mechanical Specifications

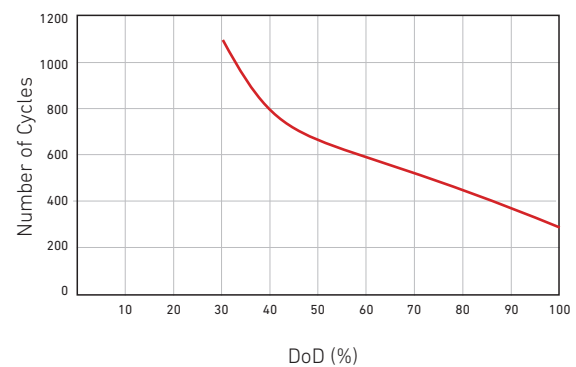
Measurements (L x W x H)	350 x 167 x 180 mm
Weight	Approx. 23.0 kg
Terminals	F11 (M6)
Case material	A.B.S. UL94-HB, UL94-V0 Optional



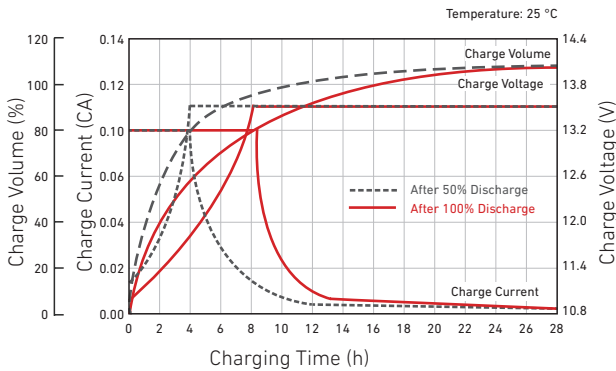
Discharge Characteristics Curve



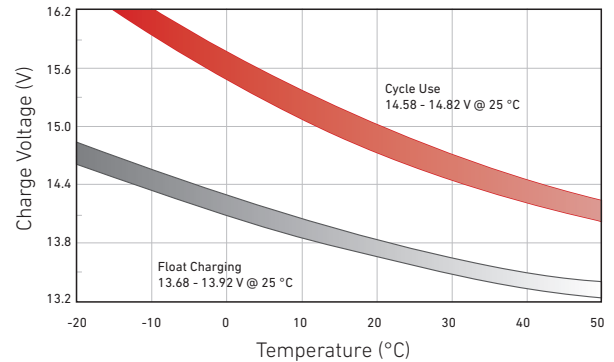
Cycle Life in Relation to Depth of Discharge



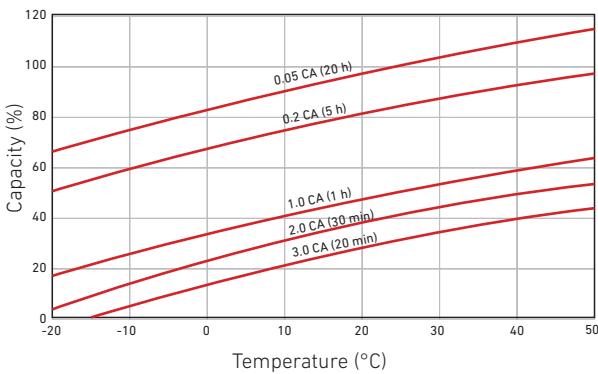
Charge Characteristics Curve For Cycle Use (IU)



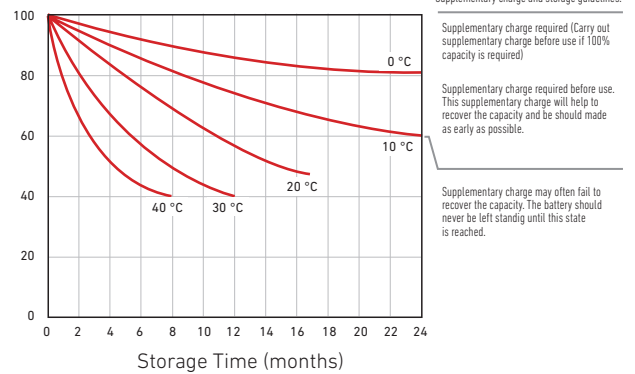
Relationship Between Charging Voltage and Temperature



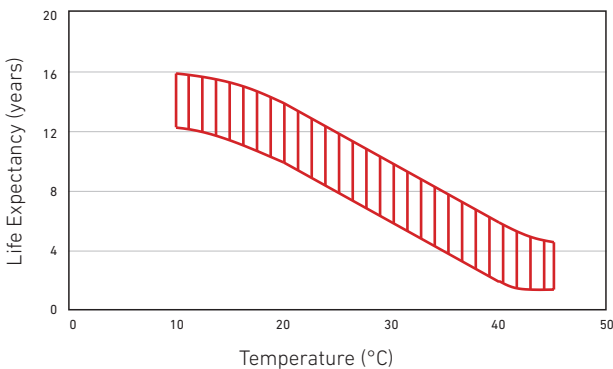
Temperature Effects on Capacity



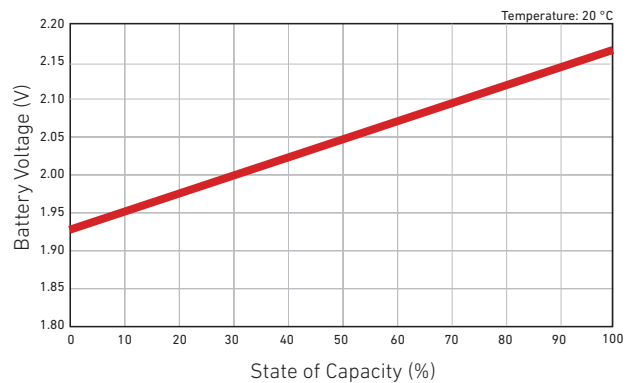
Storage Characteristics



Effect of Temperature on Long-Term Life



Relationship of OCV and State of Charge



Constant Current Discharge Characteristics: A (25 °C)

F.V	Time											
	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h	100 h
1.60 V	196,0	146,3	83,9	48,5	28,4	21,1	16,7	14,1	9,63	8,16	4,16	0,90
1.65 V	189,5	141,9	82,2	47,6	27,9	20,8	16,5	13,9	9,52	8,08	4,12	0,89
1.70 V	180,9	136,1	79,8	46,4	27,3	20,4	16,2	13,7	9,38	7,97	4,07	0,88
1.75 V	169,5	128,4	76,7	44,7	26,4	19,8	15,8	13,4	9,18	7,81	4,00	0,86
1.80 V	154,3	118,0	72,3	42,4	25,2	19,0	15,2	12,9	8,90	7,60	3,90	0,84
1.85 V	133,5	103,7	66,2	39,2	23,4	17,8	14,3	12,3	8,50	7,29	3,76	0,81

Constant Power Discharge Characteristics: WPC (25 °C)

F.V	Time											
	10 min	15 min	30 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h	100 h
1.60 V	333,1	255,7	152,4	90,7	53,8	40,4	32,1	27,2	18,8	16,03	8,18	1,76
1.65 V	330,6	253,3	151,4	89,9	53,3	40,0	31,9	27,0	18,7	15,91	8,13	1,75
1.70 V	319,2	245,1	148,0	87,9	52,2	39,3	31,3	26,6	18,4	15,70	8,03	1,73
1.75 V	304,5	234,6	143,6	85,2	50,8	38,3	30,6	26,1	18,0	15,42	7,91	1,70
1.80 V	281,9	218,6	136,8	81,2	48,7	36,9	29,6	25,3	17,5	15,02	7,72	1,67
1.85 V	248,2	194,8	126,4	75,5	45,6	34,7	28,1	24,1	16,8	14,43	7,45	1,61