

Date 17/08/2015
 Model PL80 V216 C3 141052
 Tested by Kristian

Settings: BATV: 12.5V Bcap: 200Ah Temp: Room ambient
 Prog: 0
 Setup: Measure voltage using DVM Fluke (179). Apply 12.5Vdc between B+ B-, then configure dc power supply as current source for charge and load .

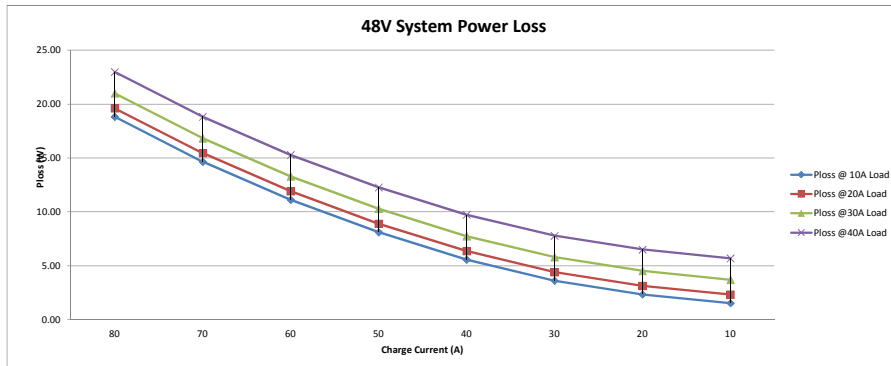
I. Power Loss Summary

12V System Total Power Loss (W)*					
Charge	80	18.02	18.82	20.20	22.18
	70	13.86	14.65	16.03	18.02
	60	10.33	11.12	12.50	14.49
	50	7.32	8.11	9.49	11.48
	40	4.78	5.57	6.95	8.94
	30	2.83	3.62	5.00	6.99
	20	1.55	2.34	3.72	5.71
	10	0.74	1.53	2.91	4.90
Current (A)		10	20	30	40
		Load			

24V System Total Power Loss (W)*					
Charge	80	18.33	19.12	20.50	22.49
	70	14.16	14.96	16.34	18.33
	60	10.63	11.43	12.81	14.80
	50	7.63	8.42	9.80	11.79
	40	5.08	5.88	7.26	9.25
	30	3.13	3.93	5.31	7.30
	20	1.86	2.65	4.03	6.02
	10	1.05	1.84	3.22	5.21
Current (A)		10	20	30	40
		Load			

48V System Total Power Loss (W)*					
Charge	80	18.82	19.61	20.99	22.98
	70	14.65	15.45	16.83	18.82
	60	11.12	11.92	13.30	15.29
	50	8.12	8.91	10.29	12.28
	40	5.57	6.37	7.75	9.74
	30	3.62	4.42	5.80	7.79
	20	2.35	3.14	4.52	6.51
	10	1.54	2.33	3.71	5.70
Current (A)		10	20	30	40
		Load			

*Total Loss: Shunt+Fet+Copper Tracks



II. Power Loss Detail

Measured	Calculated	Charge Side Loss					
Current (A)	Total: B- Sol- (mV)	Total Loss (W)	Total mOhm	Shunt (mV)	Fet 2 (mV)	Fet 1 (mV)	Track (mV)
80	219.41	17.55	2.74	18.64	73.95	77.44	49.30
70	191.26	13.39	2.73	16.31	64.92	67.27	42.71
60	164.3	9.86	2.74	14.1	55.6	58.3	36.3
50	137	6.85	2.74	11.7	46.2	48	31.1
40	107.7	4.31	2.69	9.2	38	36.3	24.2
30	78.6	2.36	2.62	7.1	28.7	27.7	15.1
20	54	1.08	2.70	4.8	18.9	18.3	12
10	26.9	0.27	2.69	2.5	9.7	9.1	5.6

Load Side Loss						
Current (A)	Total: L- B- (mV)	Total Loss (W)	Total mOhm	Shunt (mV)	Fet (mV)	Track (mV)
40	111.10	4.44	2.78	14.50	65.00	31.60
30	81.90	2.46	2.73	10.80	48.00	23.10
20	53.80	1.08	2.69	7.20	31.40	15.20
10	28.20	0.28	2.82	3.70	16.40	8.10

Power Supply Loss		
Current (mA)	System	Total Loss (W)
20.5	48	0.98
20.5	36	0.74
20.5	32	0.66
20.6	24	0.49
15.5	12	0.19