

The Charging Algorithms of the Program J114C

Status LED:

Whole main charging	=	orange
Ready/Trickle charge	=	green
Error	=	flashing red
Battery not connected	=	red
No Algorithm	=	red
Code switch test	=	flashing green

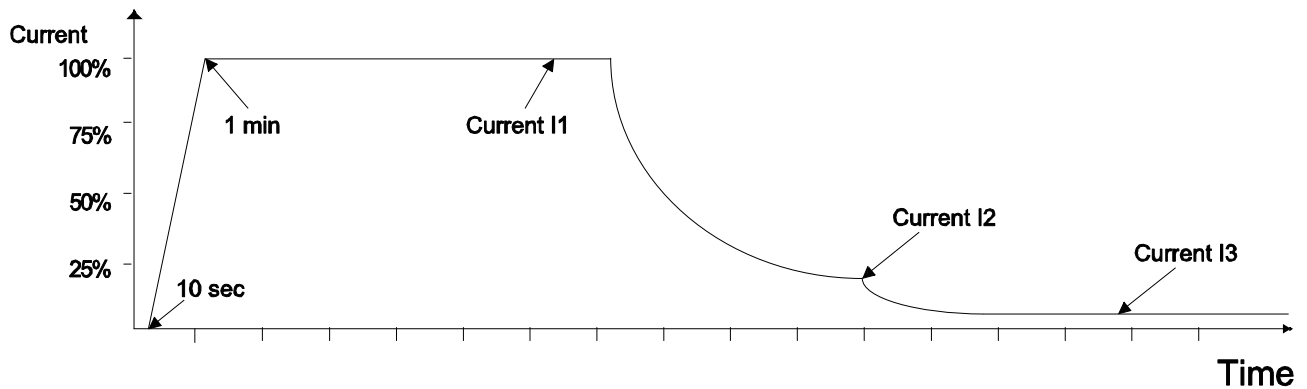
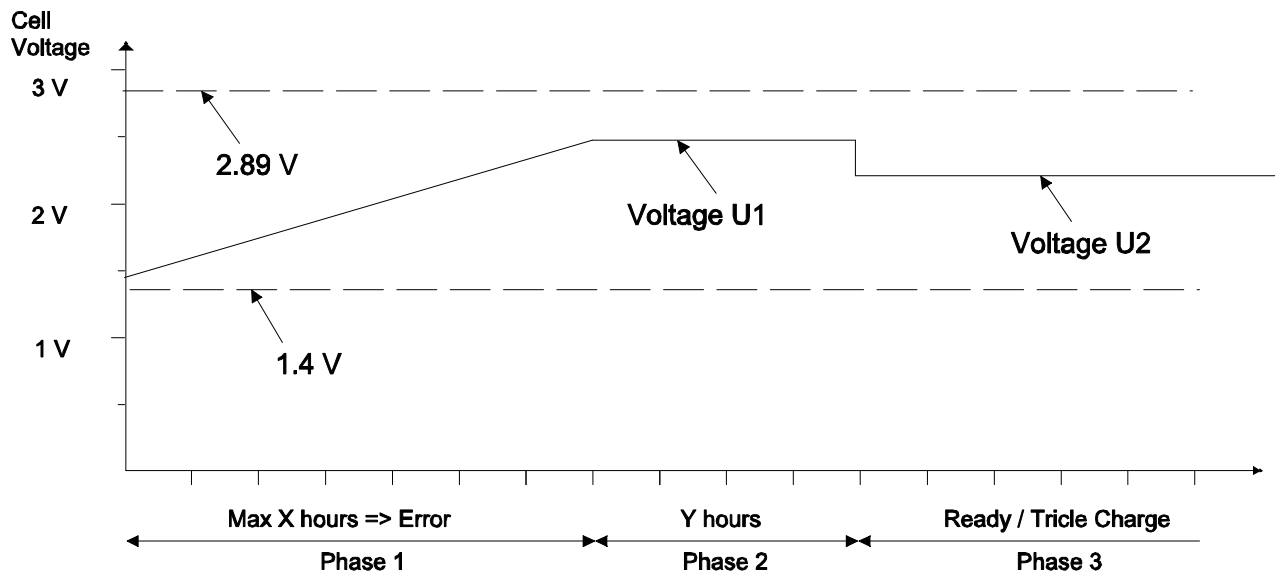
Charging algorithms for 24V, 30A PAC 800N:

Switch position	Battery Voltage	Battery type	Charging Current	Battery capacity	Charging curve
0	24 V	Unsealed	25 A	75 - 100 Ah	A
1	24 V	Unsealed	30 A	100 - 140 Ah	A
2	24 V	Unsealed	30 A	140 - 190 Ah	A
3	24 V	Unsealed	30 A	190 - 250 Ah	A
4	24 V	Unsealed	30 A	250 - 300 Ah	A
5	24 V	Sealed	25 A	75 - 100 Ah	B
6	24 V	Sealed	30 A	100 - 140 Ah	B
7	24 V	Sealed	30 A	140 - 190 Ah	B
8	24 V	Sealed	30 A	190 - 250 Ah	B
9	24 V	Sealed	30 A	250 - 300 Ah	B
10 = A	24 V	Sonnenschein	25 A	75 - 100 Ah	C
11 = B	24 V	Sonnenschein	30 A	100 - 140 Ah	C
12 = C	24 V	Sonnenschein	30 A	140 - 190 Ah	C
13 = D	24 V	Sonnenschein	30 A	190 - 250 Ah	C
14 = E	24 V	Sonnenschein	30 A	250 - 300 Ah	C
15 = F				No algorithm(Service)	

Din forhandler



Unsealed Battery



Charging Curve A for unsealed batteries:

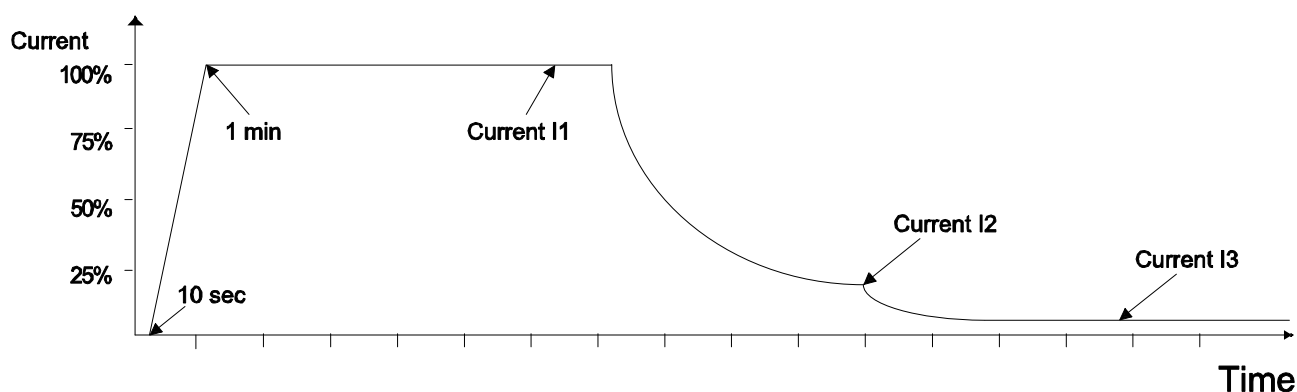
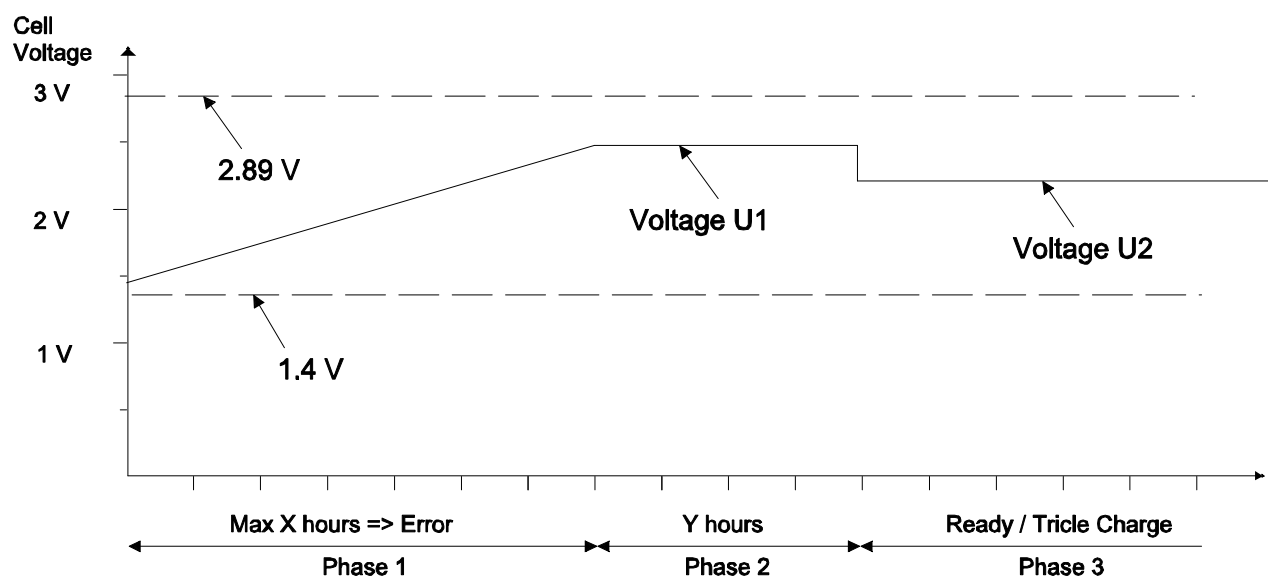
Switch position	Battery capacity	Voltage U1 V/Cell	Voltage U2 V/Cell	Current I1	Current I2	Current I3	Max. Time X	Max. Time Y
0	75-100 Ah	2.4	2.25	25 A	1.8 A	25 A	5	6
1	100-140 Ah	2.4	2.25	30 A	2.4 A	30 A	6	7
2	140-190 Ah	2.4	2.25	30 A	3.3 A	30 A	8	9
3	190-250 Ah	2.4	2.25	30 A	4.4 A	30 A	11	2
4	250-300 Ah	2.4	2.25	30 A	5.5 A	30 A	11	12

Din forhandler



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Sealed Battery



Charging Curve B for Sealed battery:

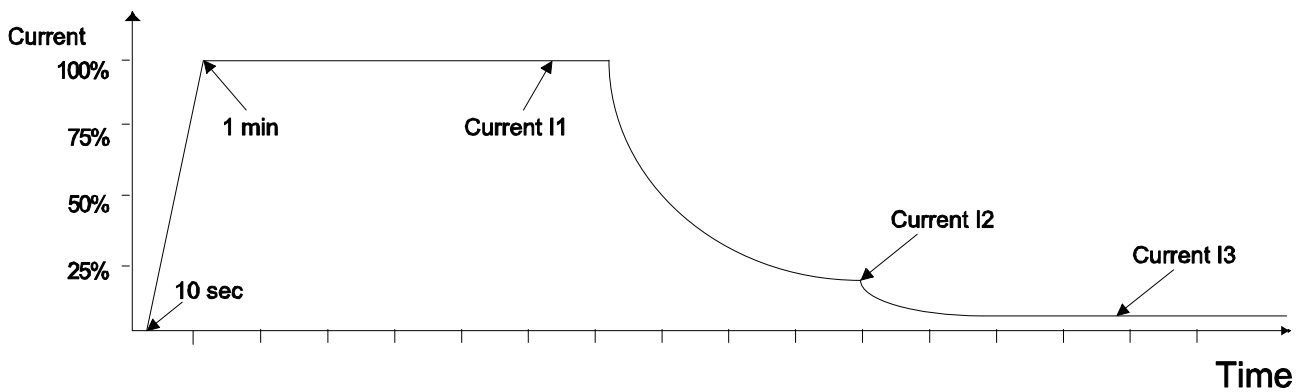
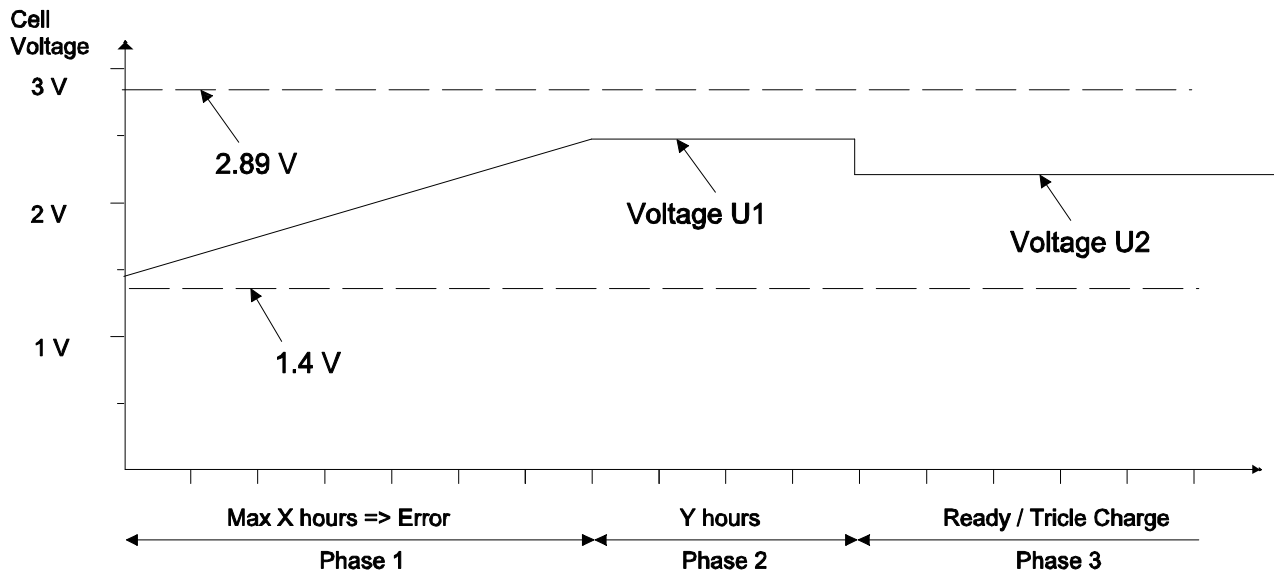
Switch position	Battery capacity	Voltage U1 V/Cell	Voltage U2 V/Cell	Current I1	Current I2	Current I3	Max. Time X	Max. Time Y
5	75-100 Ah	2.35	2.27	25 A	0.9 A	25 A	5	6
6	100-140 Ah	2.35	2.27	30 A	1.2 A	30 A	6	7
7	140-190 Ah	2.35	2.27	30 A	1.7 A	30 A	8	9
8	190-250 Ah	2.35	2.27	30 A	2.2 A	30 A	11	2
9	250-300 Ah	2.35	2.27	30 A	2.8 A	30 A	11	12

Din forhandler



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Sonnenschein Battery



Charging Curve C for Sonnenschein battery:

Switch position	Battery capacity	Voltage U1 V/Cell	Voltage U2 V/Cell	Current I1	Current I2	Current I3	Max. Time X	Max. Time Y
A = 10	75-100 Ah	2.4	2.3	25 A	0.9 A	25 A	5	6
B = 11	100-140 Ah	2.4	2.3	30 A	1.2 A	30 A	6	7
C = 12	140-190 Ah	2.4	2.3	30 A	1.7 A	30 A	8	9
D = 13	190-250 Ah	2.4	2.3	30 A	2.2 A	30 A	11	2
E = 14	250-300 Ah	2.4	2.3	30 A	2.8 A	30 A	11	12

Din forhandler



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Other rules:

- Charging voltage is compensated depending on battery's temperature.

$$U = V - 0.004 C * (T - 25)$$

Where:

U = Output voltage

V = Voltage on the table

C = Cell number

T = Battery's temperature in Celsius

- If battery temperature is 45 C output current decreases to 50% of nominal value. When decreased to 40 C output current is 100%.
- If battery temperature is 50 C charging momentarily turns off. When decreased to 45 C the charger starts with 50% output current.

Din forhandler



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The right battery

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