

|   | 1-cell Li-Ion   | 2-cell Li-Ion  | 3-cell Li-Ion   | 4-cell Li-Ion   |
|---|---|--|---|---|
| Available versions  |   | x  | x   | x   |
| Input voltage: / Line frequency                             | 90-264Vac 47-63Hz   |  |   |   |
| Max output power  | 29.4W   | 67.2W  | 80W   | 80W   |
| Step 0 < 10min Yellow                                       | CC 400mA, when battery voltage < 3V   | CC 500mA, when batt voltage < 6V                       | CC 500mA ± 50mA, when battery voltage < 9V              | CC 400mA, when batt voltage < 12V                       |
| Step 0 > 10min Red (4 blinks)                               | 0A / 0V   |  |   |   |
| Step 1 (Constant Current) Yellow                            | CC 8.0A +0.15/-0.3A, when 3V < Vbat < 4.2V  | CC 8.0A +0.15/-0.3A, when 6V < Vbat < 8.4V             | CC 6.35A +0.15/-0.3A, when 9V < Vbat < 12.6V            | CC 4.75A +0.15/-0.3, when 12V < Vbat < 16.8V            |
| Step 2 (Constant Voltage) Flashing Yellow                   | CV 4.2V ±0.05V < 5.6A until I charge < 400mA or max. 1h   | CV 8.4V ±0.1V < 5.6A until I charge < 400mA or max. 1h | CV 12.6V ±0.1V < 4.4A until I charge < 400mA or max. 1h | CV 16.8V ±0.1V < 3.3A until I charge < 400mA or max. 1h |
| Charge timer (step2, CV)                                    | 1h  |  |   |   |
| Safety timer (all steps) Red (5 blinks)                     | 72h   |  |   |   |
| Step 3 (Charge Completed) Green                             | 0A  |  |   |   |
| Restart voltage   | 4.1V  | 8.2V   | 12.3V   | 16.4V   |
| Formation Charge (Step 0)                                   | Low current start-up of deeply discharged battery.  |  |   |   |
| Wake-up of deeply discharged battery.                       | Yes, will apply voltage which deactivates deep discharge protection in battery pack.  |  |   |   |
| Indication when "Battery not connected"                     | Flashing Green (1s/1s)  |  |   |   |
| NTC input, on request (std is 10kohm, B-value approx. 4000) | 0 – 45 °C: Normal charge.<br>Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.  |  |   |   |
| Ripple  | < 100mV p-p   |  |   |   |
| Switch frequency approx.                                    | 65kHz   |  |   |   |
| Leakage current from battery with mains switched off        | < 1 mA at nominal battery voltage (< 0.72 Ah/month)   |  |   |   |
| Protection  | Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be terminated after 10min. (see step 0). Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks) No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF. |  |   |   |
| Temperature range   | Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC   |  |   |   |
| Safety  | Medical EN 60601-1 / Home Health care EN 60601-1-11/ Battery Charger EN 60335-2-29. A/V and Comm. tech: IEC 62368-1   |  |   |   |
| Insulation class  | Class II. (Class I on request)  |  |   |   |
| Insulation voltage: Primary – secondary                     | 4000VAC / 5700VDC   |  |   |   |
| EMC standards   | EN 55014-1 and –2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2   |  |   |   |
| Input terminal  | 2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request)  |  |   |   |
| Output terminals  | DC connector, Battery clips, Push-on terminals or open ends   |  |   |   |
| IP-Grade  | IP4X (IP44 on request)  |  |   |   |
| Rec. battery capacity                                       | 8-320Ah   | 8-320Ah  | 6.35-254Ah  | 4.75-190Ah  |
| Dimensions  | 172.5 × 73 × 42 mm  |  |   |   |
| Weight  | 400g  |  |   |   |
| Efficiency (at 230V 100% load) approx.                      |   | > 86%  | > 90%   | > 90%   |
| Derating at 40oC approx.                                    |   | 6.0A   | 4.6A  | 3.8A  |

## SPECIFICATIONS FOR 4340 LI

Generated 10/11/2025

|   | 5-cell Li-Ion   | 6-cell Li-Ion   | 7-cell Li-Ion  | 8-cell Li-Ion   |
|---|---|---|--|---|
| Available versions  | x   |   |  |   |
| Input voltage: / Line frequency                             | 90-264Vac 47-63Hz   |   |  |   |
| Max output power  | 80W   |   |  |   |
| Step 0 < 10min    Yellow                                    | CC 400mA, when battery voltage < 15V.   | CC 300mA, when batt voltage < 18V.                        | CC 300mA, when batt voltage < 21V.                       | CC 300mA, when batt voltage < 24V.                        |
| Step 0 > 10min    Red    (4 blinks)                         | 0A / 0V   |   |  |   |
| Step 1 (Constant Current)    Yellow                         | CC 3.8A +0.15/-0.3A, when 15V < Vbat < 21.0V  | CC 3.15A +0.15/-0.3A, when 18V < Vbat < 25.2V             | CC 2.70A +0.1/-0.3A, when 21V < Vbat < 29.4V             | CC 2.35A +0.1/-0.3A, when 24V < Vbat < 33.6V              |
| Step 2 (Constant Voltage)    Flashing Yellow                | CV 21.0V ± 0.15V < 2.6A until I charge < 300mA or max. 1h.  | CV 25.2V ± 0.15V < 2.2A until I charge < 300mA or max. 1h | CV 29.4V ± 0.2V < 1.9A until I charge < 300mA or max. 1h | CV 33.6V ± 0.2V < 1.6A until I charge < 300mA or max. 1h. |
| Charge timer (step2, CV)                                    | 1h  |   |  |   |
| Safety timer (all steps)    Red    (5 blinks)               | 72h   |   |  |   |
| Step 3 (Charge Completed)    Green                          | 0A  |   |  |   |
| Restart voltage   | 20.5V   | 24.6V   | 28.7V  | 32.8V   |
| Formation Charge (Step 0)                                   | Low current start-up of deeply discharged battery.  |   |  |   |
| Wake-up of deeply discharged battery.                       | Yes, will apply voltage which deactivates deep discharge protection in battery pack.  |   |  |   |
| Indication when “Battery not connected”                     | Flashing Green (1s/1s)  |   |  |   |
| NTC input, on request (std is 10kohm, B-value approx. 4000) | 0 – 45 °C: Normal charge.<br>Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.  |   |  |   |
| Ripple  | < 100mV p-p   |   |  |   |
| Switch frequency approx.                                    | 65kHz   |   |  |   |
| Leakage current from battery with mains switched off        | < 1 mA at nominal battery voltage (< 0.72 Ah/month)   |   |  |   |
| Protection  | Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks)<br>Charging of wrong lower voltage battery pack will be terminated after 10min. (see step 0). Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks)<br>No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF. |   |  |   |
| Temperature range   | Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC   |   |  |   |
| Safety  | Medical EN 60601-1 / Home Health care EN 60601-1-11/ Battery Charger EN 60335-2-29. A/V and Comm. tech: IEC 62368-1   |   |  |   |
| Insulation class  | Class II. (Class I on request)  |   |  |   |
| Insulation voltage: Primary – secondary                     | 4000VAC / 5700VDC   |   |  |   |
| EMC standards   | EN 55014-1 and –2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2   |   |  |   |
| Input terminal  | 2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request)  |   |  |   |
| Output terminals  | DC connector, Battery clips, Push-on terminals or open ends   |   |  |   |
| IP-Grade  | IP4X (IP44 on request)  |   |  |   |
| Rec. battery capacity                                       | 3.8-152Ah   | 3.15- 126Ah   | 2.7 - 108Ah  | 2.35 - 94Ah   |
| Dimensions  | 172.5 × 73 × 42 mm  |   |  |   |
| Weight  | 400g  |   |  |   |
| Efficiency (at 230V 100% load) approx.                      | > 91%   | > 90%   | > 91%  | > 91%   |
| Derating at 40oC approx.                                    | 2.8A  | 2.3A  | 2.2A   | 1.7A  |

|   | 9-cell Li-Ion  | 10-cell Li-Ion   | 11-cell Li-Ion  | 12-cell Li-Ion  |
|---|--|--|---|---|
| Available versions  | x  |  |   |   |
| Input voltage: / Line frequency                             | 90-264Vac 47-63Hz  |  |   |   |
| Max output power  | 80W  |  |   |   |
| Step 0 < 10min      Yellow                                  | CC 300mA, when batt voltage < 27V.   | CC 200mA, when batt voltage < 30V.                       | CC 200mA, when batt voltage < 33V                         | CC 200mA, when batt voltage < 36V.                        |
| Step 0 > 10min      Red      (4 blinks)                     | 0A / 0V  |  |   |   |
| Step 1 (Constant Current)      Yellow                       | CC 2.1A +0.1/-0.3A, when 27V < Vbat < 37.8V  | CC1.9A +0.1/-0.25A, when 30V < Vbat < 42V                | CC 1.7A +0.1/-0.25A, when 33V < Vbat < 46.2V              | CC 1.5A +0.1/-0.25A, when 36V < Vbat < 50.4V              |
| Step 2 (Constant Voltage)      Flashing Yellow              | CV 37.8V ± 0.2V < 1.5A until I charge < 200mA or max. 1h   | CV 42.0V ± 0.2V < 1.3A until I charge < 200mA or max. 1h | CV 46.2V ± 0.3V < 1.2A until I charge < 200mA or max. 1h. | CV 50.4V ± 0.3V < 1.1A until I charge < 200mA or max. 1h. |
| Charge timer (step2, CV)                                    | 1h   |  |   |   |
| Safety timer (all steps)      Red      (5 blinks)           | 72h  |  |   |   |
| Step 3 (Charge Completed)      Green                        | 0A   |  |   |   |
| Restart voltage   | 36.9V  | 41V  | 45.1V   | 49.2V   |
| Formation Charge (Step 0)                                   | Low current start-up of deeply discharged battery.   |  |   |   |
| Wake-up of deeply discharged battery.                       | Yes, will apply voltage which deactivates deep discharge protection in battery pack.   |  |   |   |
| Indication when “Battery not connected”                     | Flashing Green (1s/1s)   |  |   |   |
| NTC input, on request (std is 10kohm, B-value approx. 4000) | 0 – 45 °C: Normal charge.<br>Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.   |  |   |   |
| Ripple  | < 100mV p-p  |  |   |   |
| Switch frequency approx.                                    | 65kHz  |  |   |   |
| Leakage current from battery with mains switched off        | < 1 mA at nominal battery voltage (< 0.72 Ah/month)  |  |   |   |
| Protection  | Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks) Charging of wrong lower voltage battery pack will be terminated after 10min. (see step 0). Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks)<br>No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF. |  |   |   |
| Temperature range   | Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC  |  |   |   |
| Safety  | Medical EN 60601-1 / Home Health care EN 60601-1-11/ Battery Charger EN 60335-2-29. A/V and Comm. tech: IEC 62368-1  |  |   |   |
| Insulation class  | Class II. (Class I on request)   |  |   |   |
| Insulation voltage: Primary – secondary                     | 4000VAC / 5700VDC  |  |   |   |
| EMC standards   | EN 55014-1 and –2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2  |  |   |   |
| Input terminal  | 2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request)   |  |   |   |
| Output terminals  | DC connector, Battery clips, Push-on terminals or open ends  |  |   |   |
| IP-Grade  | IP4X (IP44 on request)   |  |   |   |
| Rec. battery capacity                                       | 2.1 - 84Ah   | 1.9 - 76Ah   | 1.7 - 68Ah  | 1.5– 60Ah   |
| Dimensions  | 172.5 × 73 × 42 mm   |  |   |   |
| Weight  | 400g   |  |   |   |
| Efficiency (at 230V 100% load) approx.                      | > 91%  | > 91%  | > 91%   | >91%  |
| Derating at 40oC approx.                                    | 1.6A   | 1.5A   | 1.3A  | 1.2A  |

|   | 13-cell Li-Ion  | 14-cell Li-Ion  |
|---|---|---|
| Available versions  | x   |   |
| Input voltage: / Line frequency                             | 90-264Vac 47-63Hz   |   |
| Max output power  | 80W   |   |
| Step 0 < 10min    Yellow                                    | CC 200mA, when batt voltage < 39V.  | CC 200mA, when batt voltage < 42V.                        |
| Step 0 > 10min    Red    (4 blinks)                         | 0A / 0V   |   |
| Step 1 (Constant Current)    Yellow                         | CC 1.45A +0.05/-0.2A, when 39V < Vbat < 54.6V   | CC 1.35A +0.05/-0.2A, when 42V < Vbat < 58.8V             |
| Step 2 (Constant Voltage)    Flashing Yellow                | CV 54.6V ± 0.3V < 1.0A until I charge < 200mA or max. 1h.   | CV 58.8V ± 0.3V < 0.9A until I charge < 200mA or max. 1h. |
| Charge timer (step2, CV)                                    | 1h  |   |
| Safety timer (all steps)    Red    (5 blinks)               | 72h   |   |
| Step 3 (Charge Completed)    Green                          | 0A  |   |
| Restart voltage   | 53.3V   | 57.4V   |
| Formation Charge (Step 0)                                   | Low current start-up of deeply discharged battery.  |   |
| Wake-up of deeply discharged battery.                       | Yes, will apply voltage which deactivates deep discharge protection in battery pack.  |   |
| Indication when “Battery not connected”                     | Flashing Green (1s/1s)  |   |
| NTC input, on request (std is 10kohm, B-value approx. 4000) | 0 – 45 °C: Normal charge.<br>Battery temperature < 0 °C (too cold) or > 45°C (too hot): No charge, wait until temp. is OK.  |   |
| Ripple  | < 100mV p-p   |   |
| Switch frequency approx.                                    | 65kHz   |   |
| Leakage current from battery with mains switched off        | < 1 mA at nominal battery voltage (< 0.72 Ah/month)   |   |
| Protection  | Protected against reversed polarity. Error Indication: Red (2 blinks) Short circuit proof. Error Indication: Red (3 blinks)<br>Charging of wrong lower voltage battery pack will be terminated after 10min. (see step 0). Indication: Red (4 blinks) Safety timer. Error Indication: Red (5 blinks)<br>No charge (or charge terminated) if connecting wrong battery pack with higher voltage. Indication: LED is OFF. |   |
| Temperature range   | Operating: -25 to +40oC. Transport and short time storage: -25 to +85oC   |   |
| Safety  | Medical EN 60601-1 / Home Health care EN 60601-1-11/ Battery Charger EN 60335-2-29. A/V and Comm. tech: IEC 62368-1   |   |
| Insulation class  | Class II. (Class I on request)  |   |
| Insulation voltage: Primary – secondary                     | 4000VAC / 5700VDC   |   |
| EMC standards   | EN 55014-1 and –2, Emission EN 61000-6-3, Immunity EN 61000-6-1, EN 60601-1-2   |   |
| Input terminal  | 2-pins IEC 320 connector, C8 or mains cable (3pins IEC 320 connector, C6 on request)  |   |
| Output terminals  | DC connector, Battery clips, Push-on terminals or open ends   |   |
| IP-Grade  | IP4X (IP44 on request)  |   |
| Rec. battery capacity                                       | 1.45 - 58Ah   | 1.35 – 54Ah   |
| Dimensions  | 172.5 × 73 × 42 mm  |   |
| Weight  | 400g  |   |
| Efficiency (at 230V 100% load) approx.                      | > 91%   |   |
| Derating at 40oC approx.                                    | 1.2A  | 1.1A  |