

|  | 1-cell Li-Ion   | 2-cell Li-Ion               | 3-cell Li-Ion                | 4-cell Li-Ion                |
|--|---|-----------------------------|------------------------------|------------------------------|
| Available versions                                   | x   |                             |                              |                              |
| Input voltage  | 198-264VAC  |                             |                              |                              |
| Line frequency                                       | 47 - 63Hz   |                             |                              |                              |
| Max output power                                     | 36W   | 67W                         | 88W                          | 101W                         |
| Ripple   | <100mV p-p  |                             |                              |                              |
| Efficiency (at 100% load, 230V) approx.              | >85%  | >87%                        | >89%                         | >89%                         |
| Leakage current from battery with mains switched off | <1mA  |                             |                              |                              |
| Step 1 Charge current: Orange                        | 8.5A +0.1/-0.75A  | 8.0A +0.3/-0.5A             | 7.0A +0.3/-0.4A              | 6.0A +0.1/-0.5A              |
| Step 2 Charge voltage                                | 4.2V ±0.05V   | 8.4V ±0.1V                  | 12.6V ±0.1V                  | 16.8V ±0.1V                  |
| - Charge current >: Orange <: Yellow                 | 3.8A ±0.2A  | 3.5A ±0.2A                  | 3.1A ±0.2A                   | 2.7A ±0.2A                   |
| Step 3 Charge termination (2) <: Green               | 300mA ±30%  |                             |                              |                              |
| Charge start Vbat <                                  | 4.1V +0.05/-0.15V or mains turn-on  | 8.2V ±0.1V or mains turn-on | 12.3V ±0.1V or mains turn-on | 16.4V ±0.1V or mains turn-on |
| NTC input on request (10K)                           | 0-45°C normal charge<br><0 or >45°C reduced charge (LED indication is yellow) |                             |                              |                              |
| Switch frequency approx.                             | 65kHz   |                             |                              |                              |
| Protection   | Protected against reversed polarity and short circuit proof                   |                             |                              |                              |
| Temperature range                                    | Operating: ±25 to +40oC / Storage: ±25 to +85oC                               |                             |                              |                              |
| Safety   | EN 60601-1, EN 60335-2-29   |                             |                              |                              |
| Insulation class                                     | Class II  |                             |                              |                              |
| Insulation voltage: Primary – secondary              | 4000VAC / 5700VDC   |                             |                              |                              |
| EMC standards  | Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1             |                             |                              |                              |
| Mains connection                                     | 2-pins IEC 60320/C8 connector. (Non-detachable mains cord on request)         |                             |                              |                              |
| Output terminals                                     | Battery clips or DC connector.  |                             |                              |                              |
| IP-Grade   | IP41 (IP67 on request).   |                             |                              |                              |
| Dimensions   | 135 × 80 × 44mm   |                             |                              |                              |
| Weight   | 480g (980g IP67 version)  |                             |                              |                              |

|  | 5-cell Li-Ion   | 6-cell Li-Ion                | 7-cell Li-Ion                | 8-cell Li-Ion                |
|--|---|------------------------------|------------------------------|------------------------------|
| Available versions                                   | x   |                              |                              |                              |
| Input voltage  | 198-264VAC  |                              |                              |                              |
| Line frequency                                       | 47 - 63Hz   |                              |                              |                              |
| Max output power                                     | 95W   | 98W                          | 103W                         | 101W                         |
| Ripple   | <100mV p-p  |                              |                              |                              |
| Efficiency (at 100% load, 230V) approx.              | >89%  |                              |                              |                              |
| Leakage current from battery with mains switched off | <1mA  |                              |                              |                              |
| Step 1 Charge current: Orange                        | 4.5A +0.3/-0.4A   | 3.9A +0.2/-0.3A              | 3.5A +0/-0.4A                | 3.0A +0.05/-0.3A             |
| Step 2 Charge voltage                                | 21.0V ±0.2V   | 25.2V ±0.2V                  | 29.4V ±0.2V                  | 33.6V ±0.2V                  |
| - Charge current >: Orange <: Yellow                 | 1.9A ±0.2A  | 1.7A ±0.2A                   | 1.6A ±0.2A                   | 1.4A ±0.2A                   |
| Step 3 Charge termination (2) <: Green               | 300mA ±30%  |                              |                              |                              |
| Charge start Vbat <                                  | 20.5V ±0.2V or mains turn-on  | 24.6V ±0.2V or mains turn-on | 28.7V ±0.2V or mains turn-on | 32.8V ±0.2V or mains turn-on |
| NTC input on request (10K)                           | 0-45°C normal charge<br><0 or >45°C reduced charge (LED indication is yellow) |                              |                              |                              |
| Switch frequency approx.                             | 65kHz   |                              |                              |                              |
| Protection   | Protected against reversed polarity and short circuit proof                   |                              |                              |                              |
| Temperature range                                    | Operating: ±25 to +40oC / Storage: ±25 to +85oC                               |                              |                              |                              |
| Safety   | EN 60601-1, EN 60335-2-29   |                              |                              |                              |
| Insulation class                                     | Class II  |                              |                              |                              |
| Insulation voltage: Primary – secondary              | 4000VAC / 5700VDC   |                              |                              |                              |
| EMC standards  | Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1             |                              |                              |                              |
| Mains connection                                     | 2-pins IEC 60320/C8 connector. (Non-detachable mains cord on request)         |                              |                              |                              |
| Output terminals                                     | Battery clips or DC connector.  |                              |                              |                              |
| IP-Grade   | IP41 (IP67 on request).   |                              |                              |                              |
| Dimensions   | 135 × 80 × 44mm   |                              |                              |                              |
| Weight   | 480g (980g IP67 version)  |                              |                              |                              |

|  | 9-cell Li-Ion   | 10-cell Li-Ion               | 11-cell Li-Ion               | 12-cell Li-Ion               |
|--|---|------------------------------|------------------------------|------------------------------|
| Available versions                                   | x   |                              |                              |                              |
| Input voltage  | 198-264VAC  |                              |                              |                              |
| Line frequency                                       | 47 - 63Hz   |                              |                              |                              |
| Max output power                                     | 102W  | 101W                         | 102W                         | 101W                         |
| Ripple   | <100mV p-p  |                              |                              |                              |
| Efficiency (at 100% load, 230V) approx.              | >89%  |                              |                              |                              |
| Leakage current from battery with mains switched off | <1mA  |                              |                              |                              |
| Step 1 Charge current: Orange                        | 2.7A +0/-0.3A   | 2.4A+0.05/-0.3A              | 2.2A +0/-0.3A                | 2.0A +0 /-0.3A               |
| Step 2 Charge voltage                                | 37.8V ±0.2V   | 42.0V ±0.2V                  | 46.2V ±0.2V                  | 50.4V ±0.3V                  |
| - Charge current >: Orange <: Yellow                 |   |                              |                              |                              |
| Step 3 Charge termination (2) <: Green               | 300mA ±30%  |                              |                              |                              |
| Charge start Vbat <                                  | 36.9V ±0.4V or mains turn-on  | 41.0V ±0.4V or mains turn-on | 45.1V ±0.4V or mains turn-on | 49.2V ±0.4V or mains turn-on |
| NTC input on request (10K)                           | 0-45°C normal charge<br><0 or >45°C reduced charge (LED indication is yellow) |                              |                              |                              |
| Switch frequency approx.                             | 65kHz   |                              |                              |                              |
| Protection   | Protected against reversed polarity and short circuit proof                   |                              |                              |                              |
| Temperature range                                    | Operating: ±25 to +40oC / Storage: ±25 to +85oC                               |                              |                              |                              |
| Safety   | EN 60601-1, EN 60335-2-29   |                              |                              |                              |
| Insulation class                                     | Class II  |                              |                              |                              |
| Insulation voltage: Primary – secondary              | 4000VAC / 5700VDC   |                              |                              |                              |
| EMC standards  | Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1             |                              |                              |                              |
| Mains connection                                     | 2-pins IEC 60320/C8 connector. (Non-detachable mains cord on request)         |                              |                              |                              |
| Output terminals                                     | Battery clips or DC connector.  |                              |                              |                              |
| IP-Grade   | IP41 (IP67 on request).   |                              |                              |                              |
| Dimensions   | 135 × 80 × 44mm   |                              |                              |                              |
| Weight   | 480g (980g IP67 version)  |                              |                              |                              |

|  | 13-cell Li-Ion  | 14-cell Li-Ion               | 15-cell Li-Ion               | 16-cell Li-Ion               |
|--|---|------------------------------|------------------------------|------------------------------|
| Available versions                                   | x   | x                            |                              |                              |
| Input voltage  | 198-264VAC  |                              |                              |                              |
| Line frequency                                       | 47 - 63Hz   |                              |                              |                              |
| Max output power                                     | 98W   | 100W                         | 101W                         | 101W                         |
| Ripple   | <100mV p-p  |                              |                              |                              |
| Efficiency (at 100% load, 230V) approx.              | >89%  |                              |                              |                              |
| Leakage current from battery with mains switched off | <1mA  |                              |                              |                              |
| Step 1 Charge current: Orange                        | 1.8A+0.05/-0.3A   | 1.7A+0.05/-0.3A              | 1.6A +0/-0.3A                | 1.5A +0/-0.3A                |
| Step 2 Charge voltage                                | 54.6V ±0.3V   | 58.8V ±0.3V                  | 63.0V ±0.3V                  | 67.2V ±0.3V                  |
| - Charge current >: Orange <: Yellow                 |   |                              |                              |                              |
| Step 3 Charge termination (2) <: Green               | 300mA ±30%  | 300mA ±30%                   | 200mA ±30%                   | 200mA ±30%                   |
| Charge start Vbat <                                  | 53.3V ±0.4V or mains turn-on  | 57.4V ±0.4V or mains turn-on | 61.5V ±0.4V or mains turn-on | 65.6V ±0.4V or mains turn-on |
| NTC input on request (10K)                           | 0-45°C normal charge<br><0 or >45°C reduced charge (LED indication is yellow) |                              |                              |                              |
| Switch frequency approx.                             | 65kHz   |                              |                              |                              |
| Protection   | Protected against reversed polarity and short circuit proof                   |                              |                              |                              |
| Temperature range                                    | Operating: ±25 to +40oC / Storage: ±25 to +85oC                               |                              |                              |                              |
| Safety   | EN 60601-1, EN 60335-2-29   |                              |                              |                              |
| Insulation class                                     | Class II  |                              |                              |                              |
| Insulation voltage: Primary – secondary              | 4000VAC / 5700VDC   |                              |                              |                              |
| EMC standards  | Med. EN 60601-1-2 / Emission EN 61000-6-3 / Immunity EN 61000-6-1             |                              |                              |                              |
| Mains connection                                     | 2-pins IEC 60320/C8 connector. (Non-detachable mains cord on request)         |                              |                              |                              |
| Output terminals                                     | Battery clips or DC connector.  |                              |                              |                              |
| IP-Grade   | IP41 (IP67 on request).   |                              |                              |                              |
| Dimensions   | 135 × 80 × 44mm   |                              |                              |                              |
| Weight   | 480g (980g IP67 version)  |                              |                              |                              |

|  | Variant 17                   |
|--|------------------------------|
| Available versions                                   |                              |
| Input voltage  |                              |
| Line frequency                                       |                              |
| Max output power                                     |                              |
| Ripple   |                              |
| Efficiency (at 100% load, 230V) approx.              |                              |
| Leakage current from battery with mains switched off |                              |
| Step 1 Charge current: Orange                        |                              |
| Step 2 Charge voltage                                |                              |
| - Charge current >: Orange <: Yellow                 |                              |
| Step 3 Charge termination (2) <: Green               |                              |
| Charge start Vbat <                                  | 65.6V ±0.4V or mains turn-on |
| NTC input on request (10K)                           |                              |
| Switch frequency approx.                             |                              |
| Protection   |                              |
| Temperature range                                    |                              |
| Safety   |                              |
| Insulation class                                     |                              |
| Insulation voltage: Primary – secondary              |                              |
| EMC standards  |                              |
| Mains connection                                     |                              |
| Output terminals                                     |                              |
| IP-Grade   |                              |
| Dimensions   |                              |
| Weight   |                              |