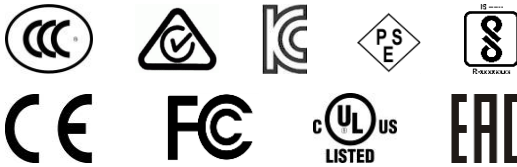


# Technical Data Sheet D90481

## SMBUS Universal Battery Charger



### 65 Watt SMBUS Desktop Universal Battery Charger for Smart Batteries (available w/medical approval upon request)

#### Features:

- Single bay fast charger
- For the standard battery form factors D92020, 2024, 2040, 2040-2, 2054, 2057 or smart batteries with a similar footprint (e.g. 202x range, 204x range, 205x range, DR36, etc.)
- Optimized charging process for smart batteries:
  - Longer cycle life
  - Faster charging
- Simple operation – Plug and Play
- Automatic recognition and calibration of smart battery learned capacity
- External power supply for worldwide use
- Country specific AC input cables available

#### Applications:

- Standard charging station for mobile devices used in medical, industrial and consumer markets

#### Specification SMB-UBC

##### Input

|               |             |
|---------------|-------------|
| Voltage range | 19 - 26VDC  |
| Current       | 3400mA max. |
| Power         | 65W         |

##### Output

|                                  |  |
|----------------------------------|--|
| Voltage range                    | 0 - 17.4VDC  |
| Current range                    | 0 – 4.8A   |
| Voltage tolerance <sup>(1)</sup> | ±1% max.   |
| Current tolerance <sup>(1)</sup> | ±10% max. @1A, ±3% max. @4A  |
| Protection                       | Short circuit<br>Over temperature shutdown<br>Input-/output over current |

##### Environmental

|                     |   |
|---------------------|---|
| Cooling             | convection cooled                                     |
| Temperature         | Operating:<br>0°C to 40°C                             |
|                     | Non-operating<br>-10°C to 70°C                        |
| Pressure & Altitude | Operating:<br>1060hPa to 795hPa<br>-382m to 2000m     |
|                     | Non-operating:<br>1060hPa to 572hPa<br>-382m to 4570m |
| Humidity            | 5% to 95% r.H., non-condensing                        |

##### General

|                           |  |
|---------------------------|--|
| Efficiency <sup>(2)</sup> | ~95% at 100% load  |
| Indicator                 | Multi-color LED<br>(green, red, orange)  |
| Battery types             | Standard battery form factors<br>D92020, 2024, 2040, 2040-2,<br>2054, 2057 or smart batteries with a<br>similar footprint (e.g. 202x range,<br>204x range, 205x range, DR36, etc.) |
| Green procurement         | RoHS 2011/65/EU<br>WEEE 2012/19/EU<br>Chinese RoHS   |

##### LED Indications

|                           |   |
|---------------------------|---|
| One time Red/Orange/Green | Selftest: Charger is ready for use.   |
| Red/Green blinking        | Battery recognition and initialization.   |
| Orange blinking           | The battery is currently being calibrated.  |
| Orange light              | The inserted battery is of the correct type and is currently being charged.   |
| Green light               | The battery is charged and can be removed for use.  |
| Red blinking              | The battery is too hot or too cold to be charged without damage. If the battery is too cold it will be charged as soon as it has warmed up sufficiently. If the battery is too hot it should be removed to cool down. |
| Red light                 | The battery is damaged or it is a conventional battery which cannot be recharged.   |

##### Charger Mechanical Details

|                            |                               |
|----------------------------|-------------------------------|
| Housing dimensions (LxWxH) | 151 x 90 x 43mm               |
| Weight                     | 198g (excluding power supply) |

##### Notes:

1. Total regulation tolerance includes initial set accuracy, line and load regulation
2. Power losses of input and output cables are not considered here.

# Technical Data Sheet D9

## SMBUS Universal Battery Charger



| Safety & EMC              |   |                           |
|---------------------------|---|---------------------------|
|                           | In combination with specified external AC/DC power supply |                           |
| Regulatory approvals      | Europe  | CE                        |
| Electromagnetic Emissions | Europe  | EN55011, EN55022, level B |
|                           | USA   | FCC15 class B             |
| Electromagnetic Immunity  | ESD immunity  | EN/IEC61000-4-2           |
|                           | Electromagnetic field immunity                            | EN/IEC61000-4-3           |
|                           | EFT / Burst   | EN/IEC61000-4-4           |
|                           | Surge   | EN/IEC61000-4-5           |
|                           | Conducted Immunity  | EN/IEC61000-4-6           |
|                           | Magnetic Fields   | EN/IEC61000-4-8           |
|                           | Voltage dips, short instrumentations & voltage variations | EN/IEC61000-4-11          |
| Immunity characteristics  |   | EN55024                   |

### Specification external AC/DC power supply

| Input          |                          |
|----------------|--------------------------|
| Voltage range  | 100 - 240VAC             |
| Current        | 1.7A max.                |
| Stand by power | No load < 0.5W @ 230 VAC |

| Output        |   |
|---------------|---|
| Voltage range | 19VDC                                     |
| Power         | 65W max.                                  |
| Current range | 3.4A                                      |
| Protection    | Over voltage, over current, Short circuit |

| Environmental |                                |
|---------------|--------------------------------|
| Temperature   | Operating:<br>0°C to 40°C      |
|               | Non-operating<br>-10°C to 70°C |

| General        |   |
|----------------|---|
| Efficiency     | California's Energy Efficiency Level VI |
| Ripple & Noise | 300mV (p-p)                             |

| Power Supply Mechanical Details |                  |
|---------------------------------|------------------|
| Standard output connector       | DC barrel jack   |
| Housing dimensions (LxWxH)      | 95 x 51 x 25.4mm |
| Weight                          | 270g             |

| Safety & EMC & Approvals |                        |       |
|--------------------------|------------------------|-------|
| Approvals                | Europe                 | CE    |
|                          | International          | CB    |
|                          | USA/Canada             | cULus |
|                          | Australia              | RCM   |
|                          | Russia (Customs Union) | EAC   |
|                          | Korea                  | KC    |
|                          | China                  | CCC   |
|                          | Japan                  | PSE   |
|                          | India                  | BIS   |