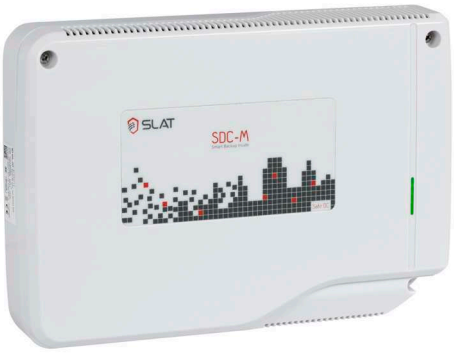
SLAT
for safer buildings

# SDC-M RS

## Micro-UPS DC with Modbus / BACnet – MS/TP Communication

**12 V DC – 15 V DC – 24 V DC – 48 V DC**
–
**Micro-UPS with "Smart Backup Inside" and very long service life.**

**DMR**
**dim (mm)→ W161 X H92 X D65**



**BOX2**
**dim (mm)→ W285 X H198 X D61**

**DIN1**
**dim (mm)→ W100 X H124 X D82**

**DIN2**
**dim (mm)→ W100 X H124 X D122**

Product images non-contractual

### BUILT-IN FUNCTIONS

- → Keeps control of the Smart Building in case of a power failure or glitch.
- → Filters electromagnetic disturbances.
- → Avoids the reporting of false alarms to the supervisor due to network glitches.
- → Delivers a constant voltage to equipment.
- → Output voltage adjustable from -8% to +13%.

### KEY PRODUCT FEATURES

- → Ultra-compact / Plug and Play, parallel configuration without accessories.
- → Performs self-diagnostic and that of its environment.
- → Selection of Modbus or BACnet configuration via a program that can be downloaded from www.slat.com.
- → Lead-free, cadmium-free backup, 100% recyclable.
- → Service life of more than 10 years.

# SDC-M RS 12 V DC - 15 V DC - 24 V DC - 48 V DC / 30 W - 55 W

## Modbus / BACnet - MS/TP Communication

| MECHANICAL CHARACTERISTICS | | | | | |
|---|---|---|---|---|---|
| BOXES | Size W x H x D (mm) | Weight (kg) | Materials | Protection rating | Installation |
|  DIN1 | **100 x 124 x 82** | **0.68** | Aluminum | 20 | DIN rail |
|  DIN2 | **100 x 124 x 122** | **0.96 - 1.36** | Aluminum | 20 | DIN rail |
|  DMR | **161 x 92 x 65** | **0.5** | ABS | 20 | DIN rail |
|  BOX2 | **285 x 198 x 61** | **1 - 1.5** | ABS | 30 | Wall-mounted |

| CONNECTIONS | | | |
|---|---|---|---|
| **DIN1** | **DIN2** | **DMR** | **BOX2** |
| Screw terminals with plug-in connectors with polarizing slot. | | Screw terminals. | - Cable feedthrough via 3 cable glands or cable grommet.<br>- Screw terminals. |
| **Capacity of terminal blocks / Cable size:** 0.2 to 2.5 mm² | | | |

**STANDARDS-BASED SPECIFICATIONS**

EN 60950-1 SELV class / EN 61000-6-1 / EN 61000-6-2 / EN 61000-3-2 A class

EN 61000-6-3 / EN 61000-6-4 / EN 55022 + A1 class B / UN 38.3

**ENVIRONMENTAL SPECIFICATIONS**

| TEMPERATURE | |
|---|---|
| **Storage** | -25 to +60°C |
| **Operating** | -10 to +55°C in cabinet at 100% load |
| | -5 to +60°C in cabinet at 75% load |

| HUMIDITY | |
|---|---|
| **Storage** | relative humidity 10 to 95% |
| **Operating** | relative humidity 20 to 95% |

**ALTITUDE**

Above 2,000 m, the maximum temperature decreases by 5% every 1,000 m

**SERVICE LIFE**

10 years at 25 °C product external environment, rated mains voltage, 75% load

**ELECTRICAL CHARACTERISTICS**

| NETWORK INPUT | |
|---|---|
| **Voltage network AC** | 98 to 265 V AC |
| **Voltage network DC** | 140 to 375 V DC |
| **Frequency** | 45 to 65 Hz |
| **Class** | Class 1 |
| **Current** | Inrush current limited by NTC |
| **Neutral systems** | TT, TN, IT |
| **Protection against** | primary short circuit and differential mode shock waves. |
| **Primary current @ 98 V AC** | 0.8 A [30 W] ; 1.5 A [55 W] |
| **Primary current @ 265 V AC** | 0.8 A [30 W] ; 0.38 A [55 W] |

| OPERATING OUTPUT | | | | |
|---|---|---|---|---|
| **Rated voltage ($U_n$)** | 12 V DC | 15 V DC | 24 V DC | 48 V DC |
| **Output current ($I_n$) 30 W** | 2.5 A | 2 A | 1.25 A | - |
| **Output current ($I_n$) 55 W** | 4.6 A | 3.6 A | 2.3 A | 1.15 A |
| **Maximum output power** | 30 W / 55W | | | |
| **Precision on voltage** | 1% | | | |
| **Adjustment by potentiometer [55 W]** | -8% to +13% | | | |
| **Current limitation □ short-circuit current** | $P_{max}$ to $P_{max}$ +10% with output voltage > 6 V | | | |
| **Peak current** | 2 $I_n$ during 0.004 second | | | |
| **HF ripple peak-peak (20 MHz-50 Ω)** | < 4% of $U_n$ | | | |
| **Effective LF ripple** | < 0.5% of $U_n$ | | | |
| **Static and dynamic regulation characteristics** | < 5% of $U_n$ for cumulative changes in sector and load (from 10% to 90%) | | | |
| **Output (Smart Backup)** | **η @ 20% loading** | | **η @ 75% loading** | **η @ 100% loading** |
| | 90% | | 93% | 92% |

| FUNCTIONAL CHARACTERISTICS |
|---|
| Operates in power-saving mode when the backup is charged. |
| Remote controlled back-up mode. |
| Filters disturbances of the electrical network. |
| Indicates the % of remaining autonomy. |
| (not for 48 V) Parallel configuration without accessories for: power increase / increase of the backup / redundancy duration. |
| Push-button disconnect of the backup (reset). |

| SMART BACKUP | | | | | |
|---|---|---|---|---|---|
| **Backup type** | **30 W Types** | 2D | 2E | 2F | 2G |
| | **55 W Types** | 3D | 3E | 3F | 3G |
| Latest generation Lithium-ion LifePO4 Technology (no risk of thermal runaway). | | | | | |
| Lead-free, cadmium-free, 100% recyclable. | | | | | |
| Storage: 9 months without recharging. | | | | | |
| 10 years service life. | | | | | |
| Advanced management settings, cell balancing, overload and overvoltage protection. | | | | | |
| Protection against deep discharge. | | | | | |
| A front panel pushbutton (on the board for BOX2) disconnects the backup via a static switch. The battery is automatically reconnected when mains voltage is present. | | | | | |

**BACKUP DURATION ACCORDING TO OUTPUT POWER - 30 W (TYPE 2)**

| | DMR<br>  <br>12 V / 15 V / 24 V | BOX2<br>  <br>12 V / 24 V / 48 V | | | |
|---|---|---|---|---|---|
| | **Backup D** | **Backup D** | **Backup E** | **Backup F** | **Backup G** |
| **Operating power** | **Autonomy expressed in hours and minutes** | | | | |
| **5 W** | **3h23** | **3h23** | **6h47** | **10h11** | **13h35** |
| **7 W** | **2h32** | **2h32** | **5h04** | **7h36** | **10h08** |
| **10 W** | **1h48** | **1h48** | **3h37** | **5h26** | **7h15** |
| **15 W** | **1h13** | **1h13** | **2h26** | **3h40** | **4h53** |
| **20 W** | **0h55** | **0h55** | **1h50** | **2h45** | **3h40** |
| **25 W** | **0h44** | **0h44** | **1h28** | **2h12** | **2h56** |
| **30 W** | **0h36** | **0h36** | **1h13** | **1h48** | **2h27** |

## BACKUP DURATION ACCORDING TO OUTPUT POWER - 55 W (TYPE 3)

DIN1
12 V / 15 V / 24 V / 48 V

BOX2
12 V / 24 V / 48 V

DIN2
12 V / 15 V / 24 V / 48 V

BOX2
12 V / 24 V / 48 V

| | Backup D | Backup E | Backup F | Backup G |
|---|---|---|---|---|
| Operating power | Autonomy expressed in hours and minutes | | | |
| 5 W | 3h10 | 6h20 | 9h29 | 12h40 |
| 7 W | 2h24 | 4h48 | 7h12 | 9h36 |
| 10 W | 1h46 | 3h31 | 5h16 | 7h02 |
| 15 W | 1h13 | 2h25 | 3h37 | 4h49 |
| 20 W | 0h55 | 1h50 | 2h44 | 3h40 |
| 25 W | 0h44 | 1h28 | 2h12 | 2h56 |
| 30 W | 0h37 | 1h14 | 1h50 | 2h27 |
| 35 W | 0h32 | 1h03 | 1h35 | 2h06 |
| 40 W | 0h28 | 0h55 | 1h23 | 1h50 |
| 45 W | 0h25 | 0h49 | 1h14 | 1h39 |
| 50 W | 0h22 | 0h44 | 1h06 | 1h28 |
| 55 W | 0h20 | 0h40 | 1h | 1h20 |

## PROTECTIONS

Against overvoltages on primary (atmospheric or industrial causes) by varistor and filter.

Against surges in user output (connection error) by breaking with cyclical restart if output voltage > $U_n$ +10%.

Against overcurrent by limiting the power supply to $I_n$ +10%.

Against output short-circuits by disconnecting the power supply if I > $I_n$ +10%.

## MMI

LED for status display and control

| Permanent green | Flashing green | Slow flashing orange | Fast flashing orange | Red |
|---|---|---|---|---|
| **Normal mode** | **ECO mode**<br><br>**Remote controlled backup mode** | **Backup mode** | **Installation fault**<br>- Overcurrent, short circuit<br>- Low voltage output (product overload).<br>- Excessive power supply temperature<br>- If no mains (outside specified power supply range).<br>**End of backup imminent** | **UPS to be changed**<br>- If no output voltage<br>- If power supply out of order (charger fault).<br><br>**Battery fault**<br>- Backup undervoltage.<br>- Backup overvoltage |

## COMMUNICATION

A RS485 type serial link retrieves information remotely (product serial number, system status) and communicates the analog values (voltages and load current, % of remaining backup, rectifier, and internal temperature of the DC UPS).

The on-board Modbus communication protocol is factory set. it may can be configured in BACnet protocol via the configuration software that can be downloaded on www.slat.com (setup details in the manual).

## PRODUCT REFERENCES

Interpretation of the product reference designations : **SDC-M [Voltage] 2[Backup] [box] RS** or **SDC-M [Voltage] 3[Backup] [box] RS**

Available at www.slat.com and on SLAT's Catalog.

*SLAT reserves the right to modify the characteristics of its products without prior notice.