

# SWIT®

OMNI-50S/99S

Rechargeable Li-ion Battery

Ver:C

# USER MANUAL

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Thank you for choosing SWIT products, please read this user manual before using and keep it properly for future reference.

## Warning

**Keep the following precautions in mind to avoid fire and other safety hazards!**

- Avoid using batteries in areas where there is fire or heat, as this can lead to risks such as battery overheating and casing rupture.
- Do not puncture the battery case or attempt to open, disassemble, or modify the battery in any way.
- Ensure that batteries are used and stored within the specified temperature range.
- Avoid charging the battery in a car or under direct sunlight.
- Refrain from using damaged batteries!
- Do not subject the battery housing to physical impacts such as squeezing.
- Verify that the power requirements of your equipment match the specifications of the battery.
- Keep batteries out of the reach of children!

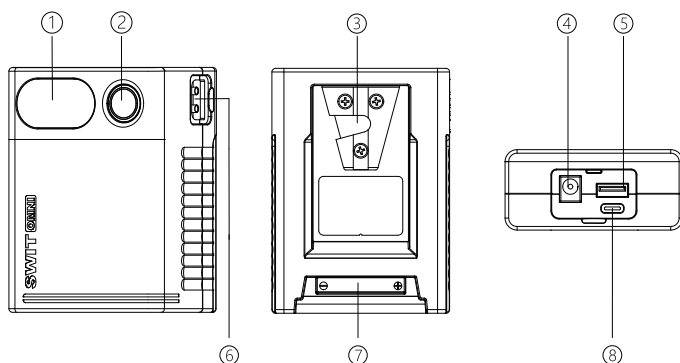
## Caution

- Batteries may heat up during charging and discharging, which is normal.
- Ensure that the electrodes remain clean and prevent any short circuits between them.
- When storing batteries for an extended period, place them in a cool and dry environment. It is recommended to maintain the battery level above 50%.
- If batteries are not used for ten days, they will enter ultra-low power mode and require pressing the button or charging for recovery.

## Features

- Versatile Interface Design: Equipped with built-in USB-C, D-TAP, USB-A, DC, and BP interfaces to fulfill power supply requirements for cameras, film and television lights, mobile phones, laptops, and other devices. The USB-C, D-TAP, and BP ports are bidirectional, offering flexibility in charging the battery from any interface.
- Custom HD Digital Display: Utilizes a custom HD digital display with a recessed design for precise monitoring of the battery's status while safeguarding against damage from drops or impacts.
- Enhanced Touch Functionality: Mechanical buttons feature touch functionality to minimize device jitter caused by button presses.
- Compatibility with SONY and RED Cameras: Supports digital communication with SONY and RED cameras, enabling real-time monitoring of battery levels through the camera display.
- High-Quality Battery Cells: Utilizes high-quality NCR18650GA high-energy-density lithium ternary cells, subjected to rigorous screening and pairing processes. Additionally, incorporates an internal self-balancing circuit for enhanced reliability and durability.
- Dual-Level Multi-Protection Circuit: Features a built-in two-level multi-protection circuit, offering comprehensive safety protection. The first level includes temperature, voltage, and current restoration capabilities, while the second level provides non-restorable protection against temperature, voltage, and current, effectively mitigating potential safety hazards following first-level protection failure.
- Ultra-Low Power Consumption Mode: Automatically switches to ultra-low power consumption mode after 12 hours of inactivity, reactivating with the press of a button or through charging for continued normal operation.

## Appearance



- ① LED screen
- ② Mechanical button (Touchable)
- ③ V-MOUNT
- ④ Barrel DC Out  Output Only. No charging input.
- ⑤ USB-A Output
- ⑥ D-TAP Input/Output
- ⑦ BP Input/Output
- ⑧ USB-C Input/Output

## Recharge

- Supports charging with a SWIT V-mount charger or a suitable USB-C charger. The OMNI-50S can be charged at maximum power using a USB-C charger of 30W and above, and the OMNI-99S can be charged at maximum power using a USB-C charger of 48W and above.
- Charging Status Indicator: During charging, the icon  is displayed to indicate the charging status, disappearing once the charging process is complete.
- USB-C Connection Notification: Upon plugging in the USB-C cable, the icon  appears, signaling the connection status.
- Optimal Charging Temperature: It is recommended to charge the battery within an optimal temperature range of 10°C to 30°C. The battery can be charged within a maximum allowable range of 0°C to 40°C for extended compatibility.

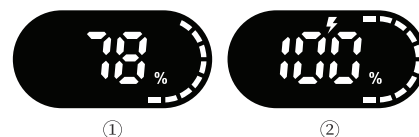
## Discharge

- Display Toggle: During battery discharge, the display can be switched between showing the duration or percentage of charge by either touching or pressing the button.
- Discharge Status Indicators: When the battery is discharging through the USB-C port, the icon  is displayed.
- Load Status Indicators: When both the DC connector and the USB-A connector are in use, the icons  and  illuminate.
- Activation of USB-A Port: When the screen is turned off, using the USB-A port requires activation by either touching or pressing the button first.
- Overload Protection: Overloading the USB-A, DC, or USB-C ports will result in automatic shutdown of the output, indicated by the corresponding icon disappearing. Please disconnect the load and wait for the battery to recover automatically.
- Protective Rubber Cap: After use, promptly cover the USB-A port with the rubber cap to prevent dust ingress.
- Temperature Considerations: Battery discharge time is reduced at low temperatures, and automatic cutoff may occur under heavy loads. The batteries are capable of discharging from -20°C to 50°C, with optimal performance achieved within the temperature range of -10°C to 40°C.

## Display

### 1. Battery resting or charging

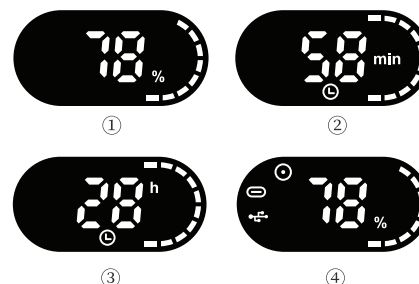
- ① Capacity percentage;
- ② The icon  Lights up to indicate charging.



### 2. Discharging

Touch or press the button to switch between displaying the battery percentage and remaining running time:

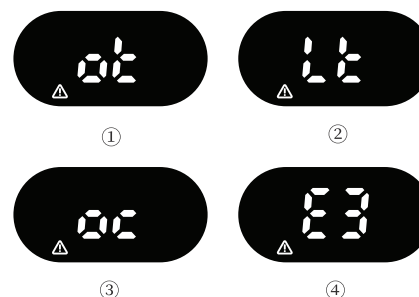
- ① Remaining capacity percentage
- ② Under 3h range time is displayed as 0~180min
- ③ Above 3h the remaining hours are displayed;
- ④ When DC, USB-A and USB-C are used, the corresponding interface icon will be displayed.



### 3. Alarm Code

The icon  shows Battery status abnormality, during the time touch or press the button to display the alarm code:

- ① Battery over-temperature (ot), please leave it at room temperature and wait for its own recovery;
- ② Battery low temperature (lt), please leave it at room temperature and wait for its own recovery;
- ③ Battery overcurrent (oc), please unplug the battery and make sure there is no foreign matter between the electrodes, it can be recovered after 20s.
- ④ E1 to E5: An irrecoverable error has occurred in the battery, please contact the manufacturer for repair, do not disassemble it by yourself;
- ⑤ After 12h of resting, the battery turns off the screen and enters the ultra-low power mode, which needs to be activated by pressing the button.



### 4. Battery Health

Long press button to display battery health L3~L1



## Specification

|                         |                       |                             |                                                                                                                                                           |                                                                |
|-------------------------|-----------------------|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Models                  |                       |                             | OMNI-50S                                                                                                                                                  | OMNI-99S                                                       |
| Capacity                |                       |                             | 50Wh, 3.45Ah                                                                                                                                              | 99Wh, 6.9Ah                                                    |
| Primary Interface Type  |                       |                             | V-mount                                                                                                                                                   | V-mount                                                        |
| Rated voltage           |                       |                             | 14.4V                                                                                                                                                     | 14.4V                                                          |
| Param-<br>eters         | BP                    | Discharge                   | 100W, 8A                                                                                                                                                  | 150W, 12A                                                      |
|                         |                       | Charging                    | 16.8V--- 1.7A                                                                                                                                             | 16.8V--- 3.4A                                                  |
|                         | D-TAP                 | Discharge                   | 100W,8A                                                                                                                                                   | 150W,12A                                                       |
|                         |                       | Charging                    | 16.8V--- 1.7A                                                                                                                                             | 16.8V--- 3.4A                                                  |
|                         | USB-A                 | Discharge                   | 5V---2A                                                                                                                                                   |                                                                |
|                         | DC                    | Discharge                   | 8.4V--- 3A                                                                                                                                                |                                                                |
|                         | USB-C                 | Discharge                   | 65W(Max), 5V/9V/12V/15V/20V(Max)--- 3.25A<br>Supported Protocols :<br>1.BC1.2, Apple and Samsung mobile phones<br>2.QC2.0,3.0<br>3.FCP,SCP<br>4.PD2.0,3.0 |                                                                |
|                         |                       | USB-C<br>Charger<br>Request | USB-C to C Charger:PD2.0/3.0≥30W<br>USB-A to C Charger:5V only                                                                                            | USB-C to C Charger:PD2.0/3.0≥48W<br>USB-A to C Charger:5V only |
|                         | Total Discharge Power |                             | 100W, 8A                                                                                                                                                  | 150W, 12A                                                      |
| Size                    |                       |                             | 102mm×74mm×33.5 mm                                                                                                                                        | 102mm×74mm×52mm                                                |
| Size with packing       |                       |                             | 150.31mm×104.11mm×50.18mm                                                                                                                                 | 150.31mm×104.11mm×68.33mm                                      |
| Net weight              |                       |                             | 338g                                                                                                                                                      | 553g                                                           |
| Weight with packaging   |                       |                             | 450.5g                                                                                                                                                    | 691.5g                                                         |
| Charging temperature    |                       |                             | 0℃~40℃ (suggestion 10℃~30℃)                                                                                                                               |                                                                |
| Discharging temperature |                       |                             | -20℃~50℃ (suggestion -10℃~40℃)                                                                                                                            |                                                                |
| Storage temperature     |                       |                             | -20℃~50℃                                                                                                                                                  |                                                                |
| Others                  | EMC                   |                             | EN55032,EN55035                                                                                                                                           |                                                                |
|                         | Safety standard       |                             | UN38.3, IEC62368                                                                                                                                          |                                                                |
|                         | Drop                  |                             | 1.2m bare metal free fall                                                                                                                                 |                                                                |