SWIT®

OMNI-50S/99S
Rechargeable Li-ion Battery
Ver: A

USER MANUAL

SWIT Electronics Co.,Ltd.

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.
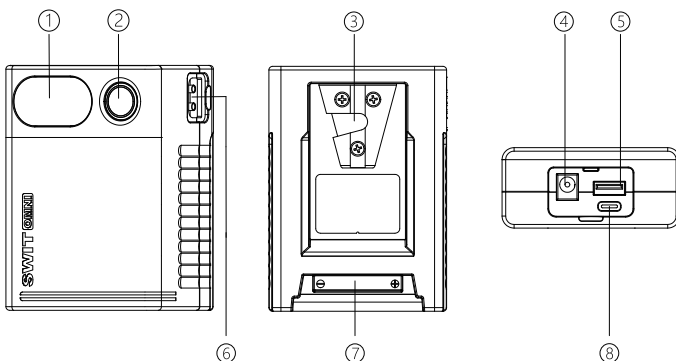- Keep batteries out of the reach of children!

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 DC round hole output connector
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.
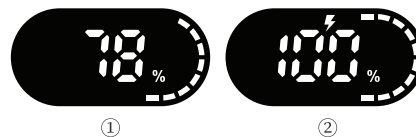
Discharge

- 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
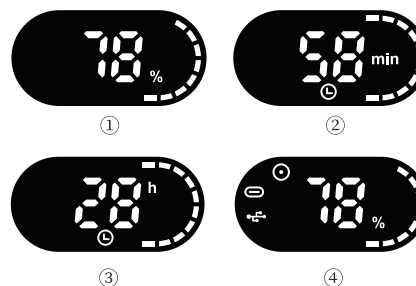
1. Battery resting or charging
  ① Capacity percentage;
  ② The icon ⚡ Lights up to indicate charging.

2.Discharging
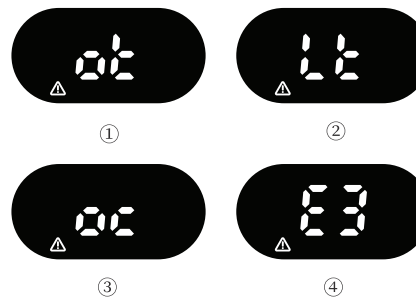 Touch or press the button to switch between displaying the battery percentage and remaining running time:
  ① Remaining capacity percentage
  ② Under 3h range time is displayed as 0～180min
  ③ Above 3h the remaining hours are displayed;
  ④ When DC, USB-A and USB-C are used, the corresponding interface 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-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 Supported Protocols： 1.BC1.2, Apple and Samsung mobile phones 2.QC2.0,3.0 3.FCP,SCP 4.PD2.0,3.0	
		USB-C Charger Request	USB-C to C Charger：PD2.0/3.0≥30W USB-A to C Charger：5V only	USB-C to C Charger：PD2.0/3.0≥48W 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	