

SWIT®

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

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!

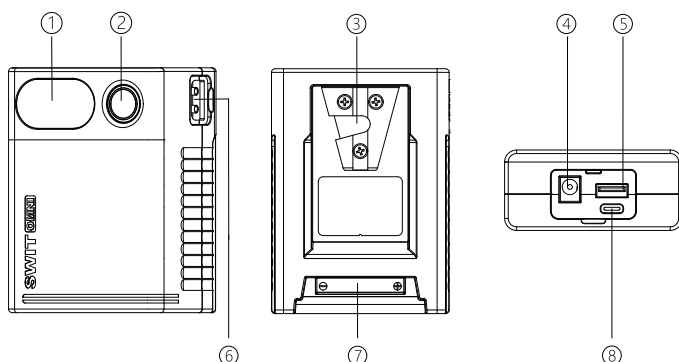
Caution

- 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 ten days 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

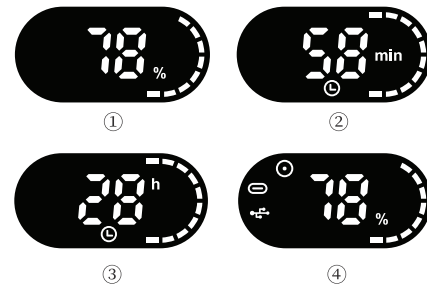
- ① Capacity percentage;
- ② The icon  Lights up to indicate charging.




2. Discharging

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

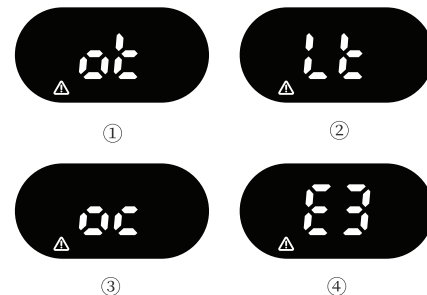
- ① Remaining capacity percentage
- ② Under 3h range time is displayed as 0~180min
- ③ Above 3h the remaining hours are displayed;
- ④ When DC, USB-A and USB-C are used, the corresponding interface icon will be displayed.



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 ten days 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	
Parameters	BP	Output	100W, 8A	150W, 12A
		Input	16.8V \pm 1.7A	16.8V \pm 3.4A
	D-TAP	Output	100W,8A	150W,12A
		Input	16.8V \pm 1.7A	16.8V \pm 3.4A
	USB-A	Output	5V \pm 2A	
	DC	Output	8.4V \pm 3A	
	USB-C	Output	65W(Max), 5V/9V/12V/15V/20V(Max) \pm 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	
		Input	5V/9V/12V/15V \pm 3A, 20V(Max) \pm 1.5A	5V/9V/12V/15V \pm 3A , 20V(Max) \pm 2.4A
	Total Discharge Power		100W, 8A	150W, 12A
	Size		102mm \times 74mm \times 33.5 mm	102mm \times 74mm \times 52mm
Size with packing		150.31mm \times 104.11mm \times 50.18mm	150.31mm \times 104.11mm \times 68.33mm	
Net weight		338g	553g	
Weight with packaging		450.5g	691.5g	
Charging temperature		0 $^{\circ}$ C \sim 40 $^{\circ}$ C (suggestion 10 $^{\circ}$ C \sim 30 $^{\circ}$ C)		
Discharging temperature		-20 $^{\circ}$ C \sim 50 $^{\circ}$ C (suggestion -10 $^{\circ}$ C \sim 40 $^{\circ}$ C)		
Storage temperature		-20 $^{\circ}$ C \sim 50 $^{\circ}$ C		
Others	EMC	EN55032,EN55035		
	Safety standard	UN38.3, IEC62368		
	Drop	1.2m bare metal free fall		