

# MES 100 9002 External battery for owa4x

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## 1 TECHNICAL SPECIFICATIONS: EXTERNAL BATTERY FOR OWA4X

### 1.1 MES 100 9002 (13400MAH)



Item	Specification
Time to recharge	14 hours
Charging temperature range	0 °C to 45 °C
Cell type	Lithium Ion 13.400mAh
Discharging temperature range	-20 °C to + 60 °C

(\*) Based on characterization, not tested in production.

*Battery Backup 13.400mAh*

**Note:** To know how to insert the battery properly and to know the duration of the battery in different modes on its owasys model, please refer to the corresponding integrator's manual.

## 2 EXTERNAL BATTERY CHARACTERISTICS:

Optional External Li-ion batteries are available for OWASYS devices. 3350mAh and 13400mAh high-capacity battery back-up can be installed, which allows continuous operation when the main power is lost. This enables the owa4x to e.g. make a final call before going into low power mode, or a similar procedure, as defined by the customer application software.

Both batteries have internal Protection Circuit Module in order to prevent overcharge, over discharge and overcurrent, and also temperature sensor.

The parameters of Protection Circuit Module as follows (@25°C):

- overcharge protection voltage  $4.280 \pm 0.025V$
- over discharge protection voltage  $2.30 \pm 0.050V$
- overcurrent protection  $\leq 4.0A$

The owa4x and owa5x Li-Ion charger IC checks the temperature-sensor of the battery pack to control that the battery is only charged within the charging temperature range 0 to +45°C. A TTL-level charge-enable input (CE) used to disable or enable the charge process (also available by user with owasys libraries), and two status outputs that indicate charging status.

CHARGE STATE	STAT1	STAT2
Precharge in progress	ON	ON
Fast charge in progress	ON	OFF
Charge done	OFF	ON
Charge suspend (temperature)	OFF	OFF
Timer fault	OFF	OFF
Sleep mode	OFF	OFF

\*OFF means the open-drain output transistor on the STAT1 and STAT2 pins is in an off state

External battery features -MES_100_9002h		Value
Nominal Voltage		2.5V - 4.2V
Nominal capacity		13.40Ah
Internal resistance		90mΩ
Charge Voltage		4.2V
Charge current	standard	1.6A
	rapid	3A
Discharge	standard	3A
	max peak	10A
NTC		10KΩ
Watt-hour rating		48Wh
over voltage (per cell)	cut off	4215mV
	release	4100mV
under voltage (per cell)	cut off	2300mV
	release	2400mV
Current limit 1 by SU		$\leq 4A$
Current limit 2 by SU		$\geq 17.9A$
short circuit protection		$\geq 42.9A$
Power consumption	active	15uA
	power down	8uA

## 3 PACKAGING INFORMATION

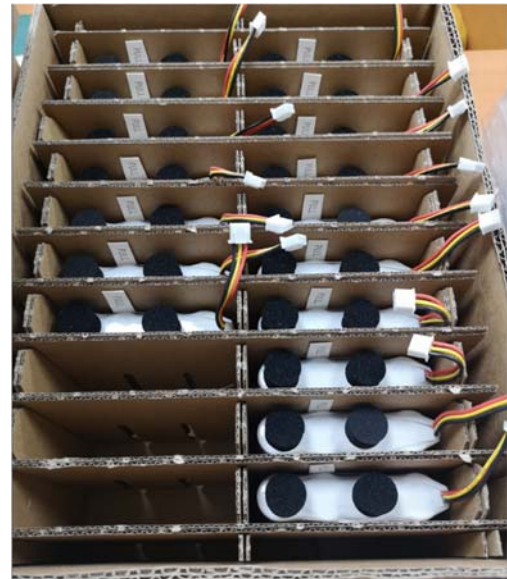
### 3.1 PACKAGING FOR PART NUMBERS: MES 100 9002 AND MES 100 9019

**Capacity per unit:** 13400mAh

**Battery weight:** 0,192 Kgs/units

**20 units per box:** 3,840 kgs/box

**Dimensions:** 28.0 x 21.0 x 11.0 cm



13440mAh package