

Accessories

Battery Cell Simulator NEW for Battery Measuring Module Series 2511

MODEL 2500-Z100



2500-Z100 + 2511
on mounting rail

Highlights

- Resistance simulation: 1 ... 300 mΩ
- Voltage simulation: 2.5 ... 5 V DC
- Repeat accuracy from ± 0.2 % F.S.
- Compact housing for wall mounting or DIN rail installation
- Suitable for many common cell formats and cell chemistry

Options

- Wall mounting
- Top hat rail mounting

Product description

The Battery Cell Simulator serves to test Battery Measuring Modules in the 2511 series, which are used in battery module assembly applications (incoming goods inspection, BoL, EoL). The Battery Cell Simulator is able to emulate battery cells of different technologies with resistance and open circuit voltage simulation. The resistance simulation replicates the purely ohmic resistance of a cell. The Battery Cell Simulator runs on 24 V DC. The LED on the front indicates the different operating states. Resistance and voltage values can be defined from standard values or from a custom set of values.

Technical data

Resistance simulation	
Resistance range	1 mΩ ... 300 mΩ
Standard values	1 mΩ, 3 mΩ, 5 mΩ, 10 mΩ, 15 mΩ, 30 mΩ, 50 mΩ, 100 mΩ, 150 mΩ, 300 mΩ
Repeat accuracy	±0.2 % F.S.*
Max. simulation test current	±0.8 A
Special values	on request
Voltage simulation	
Voltage range	2.5 V DC ... 5 V DC
Standard values	3.7 V, 3.9 V, 4.1 V
Accuracy	≤ 0.05 %
Options	
2500-Z100	Please specify a desired standard resistance value and voltage value
Housing	
Material	Aluminum
Dimensions (WxHxD)	104 x 54.6 x 120 mm
Weight	Approx. 500 g
Protection class	IP54
Connections	Power supply, signal output
General data	
Supply voltage	24 V (18 ... 30 V DC) Galvanic isolation, inverse polarity protection, overvoltage protection
Power consumption	Approx. 5 W
Operating temperature range	+10 °C ... +45 °C
Storage temperature range	-10 °C ... +70 °C
Humidity	0 ... 70 % non-condensing
Installation	4 rubberized feet (fitted as standard) Wall mounting (accessory) Mounting rail installation (accessory) (Mounting rail in accordance with DIN EN 50022)

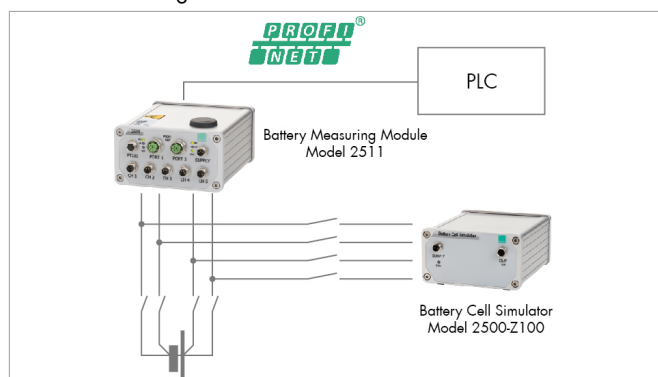
* In the case of interference radiation with frequencies in the range of 500 ... 550 MHz and simultaneous amplitude modulation at 1 kHz deviations of up to ±0.8 % can occur if the measurement frequency of the AC measurement is also 1 KHz.

Example application

The 2511 Battery Measuring Module is used for 100 % testing of the internal resistance (AC/DC) and OCV of 21700 format round cells during the battery module assembly process.

The battery cells in the production line are connected from one side. To carry out spot checks on the measuring system, a Battery Cell Simulator with a cell-specific connection adapter is substituted in place of the round cells and measured. A connecting cable is used to correctly assign the connections to the Battery Cell Simulator.

Schematic drawing



Simulation parameters

R_i 10 mΩ
 U_0 3,7 VDC

Accessories

Order code	
9900-K262	Measuring cable 3.0 m cable length, 4-pin M8 plug, one end with free wire end ferrules
2511-Z001	Mounting kit for wall mounting
2511-Z002	Mounting kit for mounting rail installation
9900-K251	Supply cable 2 m in length, 3-pin M8 socket, one end with free ferrules