This page contains comparison of different batteries to be used for lse01 LoRaWAN Soil Moisture Sensor.

Battery Voltage description: The battery for the lse01 should be between 3.0V to 3.6V. If we need to use a battery less than 3.3 volts we have to remove diode D1 and shortcut the two pads of it.Diode D1 lays between the main circuit and the battery If battery is less than 2.7 volts user have to replace the battery.

Specific power and Specific energy are important factors to keep in mind before choosing a battery.

Specific energy: defines the battery capacity in weight (Wh/kg).The capacity relates to the runtime.
Specific power: It's the ability to deliver a high current and indicates loading capability.

	Current	Voltage	Cost	Charge cycle	Lifespan	Safety	Specific Power	Specific Energy	Thermal runaway	Operating Temperature	C rate
Lithium Thino-Chloride											
Nickle Manganese Cobalt Oxide	mA	3.60V, 3.70V nominal;typical operating range 3.0–4.2V/cell, or higher	Low	1000–2000	Moderate	Moderate	Moderate	High	210°C		
Lithium Iron Phosphate		3.20, 3.30V nominal; typical operating range 2.5–3.65V/cell	Low	2000 and higher	High	High	High	Low	270°C (518°F) Very safe battery even if fully charged	-20℃~ +75℃	
Lithium Titanate		2.40V nominal; typical operating range 1.8–2.85V/cell	High	3,000–7,000	High	High	Moderate	Low	One of safest Li-ion batteries		1C typical; 5C maximum, charges to 2.85V
Lithium-Ion Polymer			Low		Low	Low					
NiMH		1.2V		180–2000			250–1,000 W/kg	60–120 W·h/kg		-30C to +85C	

References:
http://wiki.dragino.com/xwiki/bin/view/Main/User%20Manual%20for%20LoRaWAN%20End%20Nodes/LSE01-LoRaWAN%20Soil%20Moisture%20%26%20EC%20Sensor%20User%20Manual/
https://owlcation.com/stem/Comparing-6-Lithium-ion-Battery-Types