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	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		1000–2000				150–220Wh/kg	210°C	
Lithium Iron Phosphate		3.20, 3.30V nominal; typical operating range 2.5–3.65V/cell		2000 and higher				90–120Wh/kg	270°C (518°F) Very safe battery even if fully charged	
Lithium Titanate		2.40V nominal; typical operating range 1.8–2.85V/cell								
Lithium-Ion Polymer										

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