

A recording gap limits the supported throughput.

Entirely generated example. No customer, factory, instrument or measured battery performance is represented. This shows a review format, not scientific or industrial validation.

Question and method

Which intervals in two generated formation records support integration? Both use 12 V and +1 A with a declared maximum gap of 120 s. Integrate only original-adjacent supported intervals. For SYN-B, the 120-300 s gap is excluded; the 300-360 s interval remains included.

Measure	SYN-A	SYN-B
Input rows	5	5
Observed span (s)	240	360
Supported duration (s)	240	180
Supported / observed time (%)	100.0	50.0
Positive throughput (Ah)	0.066667	0.050000
Positive energy (Wh)	0.800	0.600
Eligible endpoint peak (deg C)	29	30

How to verify the values

SYN-A: 4 intervals x 60 s = 240 s; $Q = 1 \times 240 / 3600 = 0.066667$ Ah; $E = 12 \times 240 / 3600 = 0.800$ Wh. SYN-B: 3 intervals x 60 s = 180 s; $Q = 0.050000$ Ah; $E = 0.600$ Wh. The time ratio is supported duration divided by the first-to-last observed span.

Engineering interpretation

SYN-B does not support a full-window throughput estimate. Request the missing records or confirm why the gap occurred before comparing full runs. The lower reported total is not evidence of a weaker battery or an improvement opportunity. No extrapolation fills the missing interval.

Evidence and limits

Source: factory-pilot-synthetic.csv, generated by build_factory_pack.py. Full precision, source hash, intervals and equations are in factory-pilot-synthetic-reference.json. No measurement uncertainty, capacity, efficiency, state of health, scrap or saving is inferred. The observed windows differ.