

ELV and Commercial MEP Worked Example Pack

Tool group: Fire Alarm Battery, Intruder Alarm Battery, CCTV Storage, Energy Waste

This worked example shows the expected input logic, result interpretation, and verification checks for a common MEP planning scenario.

Sample inputs

Input	Value
Standby current	0.35 A
Alarm current	1.2 A
Standby duration	24 hours
Alarm duration	30 minutes
Cameras	32
Retention	30 days

Expected result interpretation

Result	Planning interpretation
Battery Ah	Standby plus alarm current, duration, derating, and spare define capacity.
CCTV storage	Camera count, bitrate, recording schedule, retention, RAID, and spare define storage.
Energy waste	EUI and operating quality identify likely savings range.

Verification notes

- Use manufacturer datasheets for standby/alarm currents and battery derating.
- Confirm authority standby duration and alarm duration for life-safety systems.
- For paid audits, replace benchmarks with meter data, schedules, BMS trends, and tariff records.

Official references to verify: ASHRAE, NFPA, IEC, IET BS 7671, ICC/IPC, CIBSE, local GCC/Saudi/UAE Civil Defense, and project specifications as applicable.