FENECON

Efficiency of FENECON Industrial L and XL

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1. Initial situation

As one of the most long-standing players in the industrial-scale electrical energy storage system market, FENECON can draw on a wealth of experience from the field and can thus verify its statements from development in practice. With this in mind, the efficiency of our industrial-scale battery energy storage systems has been and is continuously tested and evaluated as the key to long-term profitable use.

2. FENECON Industrial L

Data from a high double-digit number of systems, some of which have been in operation for several years, was used to evaluate efficiency. The use of the systems varies greatly depending on the application and location. The systems are all located outdoors either at the PV free-field site, in direct marketing or at an industrial site, in an energy cost optimization of the site. The load profiles and e. g. the average number of cycles of the systems also differ massively depending on the application. Although the systems operate in such different framework conditions, in real operation they have an average efficiency of: ≥ 95 %[1]. In real-life applications, the systems achieve approximately the values of our test stand over longer periods of time. This confirms our combination of highly efficient, decentralized silicon carbide inverters with automotive batteries, which have comparatively low internal resistances over the long term thanks to their NMC chemistry, among other things.

3. FENECON Industrial XL

Due to a similarly optimized system architecture, we expect the FENECON Industrial XL to also achieve this value in practice. This has already been proven on our test system under various applications. This prompts us to state the same high efficiency on the data sheet of the FENECON Industrial XL.

[1] Inverter-AC-side at nominal conditions, average efficiency of a new storage system defined as the proportion of discharged energy to stored energy (round trip efficiency); the actual overall efficiency depends on other factors such as ambient temperature, sea level, solar radiation as well as load profile; the nominal conditions correspond to the same conditions as for the capacity measurement and can be found in the warranty conditions