Battery energy storage systems (BESS)

Connection technology for battery energy storage



LAPP


AI

From energy storage to the grid

Battery storage systems are the backbone of the energy transition. They store excess energy from renewable sources such as wind and solar parks, balance out grid fluctuations and enable a predictable, stable energy supply. Whether as a containerised solution for use in the field, as an industrial emergency power storage system or as large-scale grid storage – the connection technology must operate with absolute reliability in every configuration.

With our specially tailored product portfolio, we offer the right solutions for all BESS cabling requirements – from battery modules through grid connection to power distribution.

Competences:

- everything from one source
- personal & competent contact partners
- worldwide locations & deliveries
- logistical excellence

Requirements:

- resistant to environmental factors
- durable in continuous operation
- space-saving cable routing
- high operational reliability
- easy-to-install solutions

An overview of connectivity solutions for BESS

From container-based solutions in the field to large-scale industrial installations: discover the full range of connectivity solutions for battery storage systems on our BESS page.

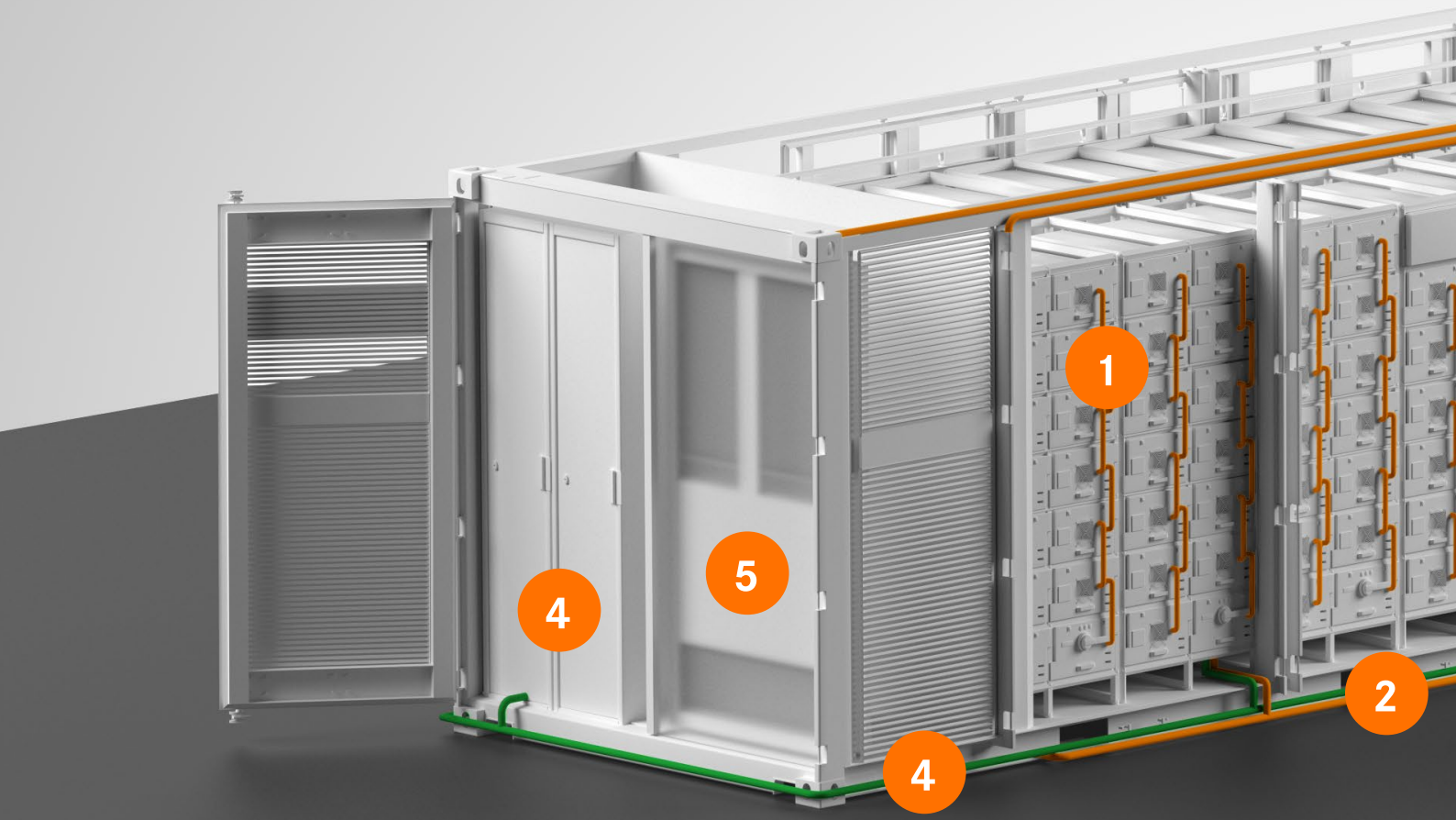
Find out more now.

Whitepaper: Connection technology for battery storage systems

How are the requirements for connection technology evolving across the BESS architecture – from the battery pack to the grid connection? Our whitepaper, ‘Connection Technology for Battery Storage – Technology Trends, Challenges and Solution Approaches’, provides an in-depth overview of current developments, technical challenges and suitable LAPP solutions.

Download it now for free.

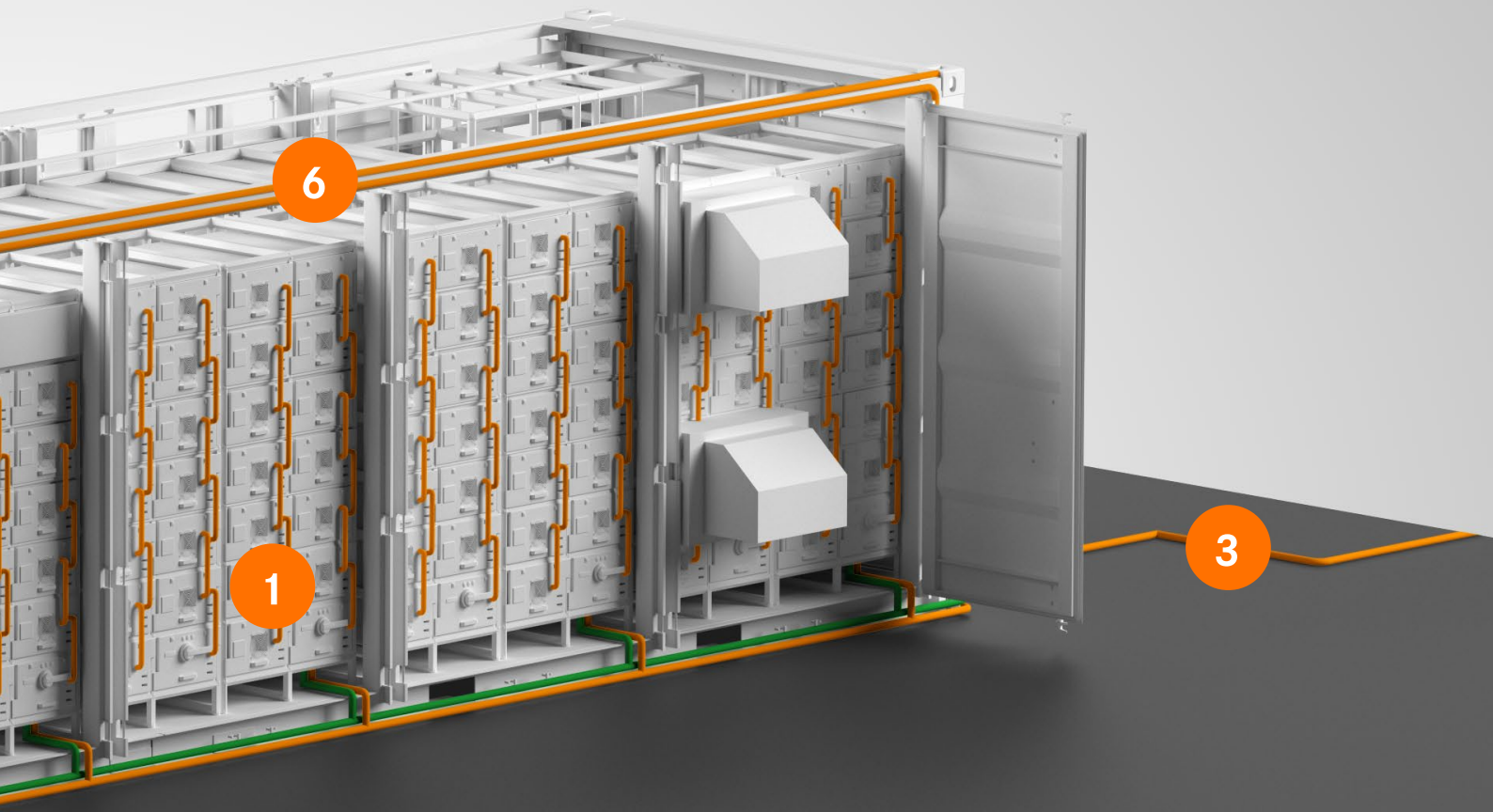
The right solution for every requirement



1 Battery System

2 DC Power Distribution

3 PCS Interface



Control & Communication 4

Thermal Management 5

Safety & Auxiliary 6

Products for battery storage systems

LAPP Solution	Product type	1 Battery System	
		Battery Pack	Battery Rack
		Connectivity for flexible pack-level interfaces, sensing, BMS communication.	Connectivity for pack-to-pack high-voltage interconnection, rack-level BMS communication, monitoring, auxiliary wiring and protective grounding.
ÖLFLEX® DC ESS SC	DC power cable		●
ÖLFLEX® DC ESS SC U	DC power cable		●
ÖLFLEX® DC ESS SC A	DC power cable		●
ÖLFLEX® CLASSIC 128 H BK SC	Power cables		●
ÖLFLEX® CHAIN 809 SC	Single core cable		●
ÖLFLEX® SOLAR H1 BUR	Solar cable		●
ÖLFLEX® WIRE MS 2.1	Single core cable		●
ÖLFLEX® WIRE MS 2.2	Single core cable		●
ÖLFLEX® WIRE 1063 SC*	Single core cable		●
ÖLFLEX® VFD 2XL	Motor connection cable		
ÖLFLEX® VFD Slim / 1XL / 2XL Symmetrical	Power and control cable		
ÖLFLEX® TRAY II	Power and control cable		
ÖLFLEX® TRAY II CY	Power and control cable		
ÖLFLEX® TRAY 6111 MC*	Power and control cable		
ÖLFLEX® 191	Power and control cable		
ÖLFLEX® CLASSIC 110	Power and control cable		
ÖLFLEX® CONNECT	Harnessing Solutions	●	●
ETHERLINE® CAT.5e, 6a, 7	Ethernet cable		●
ETHERLINE® CAT.6A SF/UTP	Ethernet cable		●
ETHERLINE® Cat.7 FLEX	Ethernet cable		●
ETHERLINE® T1 FD P	Single Pair Ethernet cable	●	●
UNITRONIC® BUS CAN	Bus cable	●	●
UNITRONIC® BUS LD	Bus cable		
UNITRONIC® LiYCY (TP)	Low-frequency data cable	●	●
UNITRONIC® LiYCY / LiYCY A	Low-frequency data cable	●	●
UNITRONIC® SENSOR FD	Sensor/actuator cable		
UNITRONIC® FPL 6113*	Sensor cable		
EPIC® BATTERY F & M	Connector		●
EPIC® DATA CAN Sub-D	Data connector		●
EPIC® DATA RJ45	Data connector		●
EPIC® DATA M8 / M12	Data connector		●
EPIC® DATA SPE-6 FA M CS1	Data connector		●
H05V-K	Single core		
H07-K	Single core		
NSGAFÖU	Power and control cable		
NSSHÖU	Power and control cable		
A2XY	Single core power cable		
Cable ties	Accessories	●	●
Electrical connection material	Accessories	●	●
Insulating and shrinking products	Accessories	●	●

* only available in APAC

2 & 3	4	5	6
DC Power Distribution & PCS Interface	**Control & Communication**	**Thermal Management**	**Safety & Auxiliary**
Connectivity for DC power aggregation, protection devices, monitoring and the PCS DC input.	Connectivity for CAN, fieldbus, Ethernet and signal communication between BMS, EMS, PCS, controllers and field devices.	Connectivity for HVAC, liquid cooling, fans, pumps, actuators and thermal monitoring throughout the BESS.	Connectivity for fire detection, gas monitoring, safety interlocks, auxiliary power, lighting and protective grounding throughout the BESS.
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Data communication systems



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HITRONIC®
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Industrial connectors



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