INDRIVE Technologies AG

INDRIVETEC AG

"bricks up" flexible energy storage systems

25 Years experience in power electronics 600 Megawatt worldwide experience and installations 102 Members in Switzerland, Bulgaria and Germany 305 Projects confirms the international standards for quality



INDRIVETEC AG

"bricks up" linear motor drives and energy storage systems

"BRICK" FlexConvert-PCS

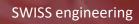
"BRICK" FlexConvert-BESS

"BRICK" FlexConvert-SCES

"BRICK" LSM-Motors

"BRICK" Converter and Drives





Energy Storage Systems

Modular and flexible electrical energy storage systems for reliable power supply ICIV (e(Cm

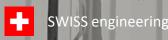
Optimized asset performance by stabilizing frequency and voltage

Increase of Self-Consumption

Back-up power for commercial and industrial application

Power buffering for charging stations





Energy Storage Systems

Multiple uses in the industrial, commercial and utility sector

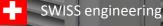
Operation in highly developed and weak grids

Balancing of various energy various sources

Islanding and black start capability

Scalable up to the multi-MW-range





FlexConvert-PCS

Fully integrated unit including interface to BMS Integrated On-grid and Off-grid operation modes Compatible for various energy storage systems Innovative cooling concept (compact and energy-efficient) UL and VDE-AR-N 4110 / 4120 certification

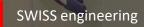


FlexConvert-PCS

No power derating with high DC-voltages up to 1500 VDC Smallest unit volume and lowest weight per kW Optional cooling system for operation without derating up to 50° C Standard operation down to – 20° C

Outdoor solutions





Drive Inverters

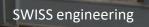
Inverters to operate and control all kind of electric motors and generators

Inverters for speed and torque control

Inverters for pumping, ventilation and traction applications

Designed for rough ambient conditions, e.g. mining





Drive Inverters

Safe Torque Off Interface

Parameters:

Lifetime:

Power supply: Operation temp:

10 years 24 VDC ± 5 %, 2 A -25°C to + 70°C

CERTIFICATE

No. Z10 18 06 99402 001

Holder of Certificate:

INDRIVETEC AG Hagenholzstrasse 71 8050 Zürich SWITZERLAND

Factory(ies):

Product:

Model(s):

E

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RTIFICAD

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99398

Certification Mark:



Safety components

STO PCB Control Interface





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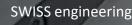
Linear Motor Drives

Linear Synchronous PM Motors (Magnet-Runners and Stators) Low voltage frequency inverters 0.5 MVA - 7.0 MVA to feed power to the motors via a central or decentral drive topology

Speed and position sensor system

Energy-storage based on SuperCaps





Linear Motor Drives

Powerful, maintenance free launch system

High system productivity

High forces

High dynamic response

Wide variety of use





Special-purpose-Inverters

DC-DC converters

Water Treatment Converters

H-bridge circuits

Compensation units





Special-purpose Inverters

Customized solution

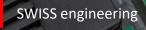
Prototyping

Multi functional converters

Power quality solution

Special designs



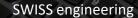


Engineering

Special requirements and situations require unique solutions Wealth of practical experience and technical competence in a very wide variety of projects and applications

Well thought-through product brief, for solving even complex tasks effectively, both technically and economically





Development

More than 25 years of experience

In house developed DSP/FPGA control unit and power electronics

Prototype design assembling

Hardware in the loop design and testing

Manufacture-independent supply chain resources

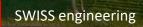


Production

ISO 9001 certified production in Bulgaria and Switzerland, serial production for high volume orders

Prototype assembling, functional and type testing, costumer acceptance





Production

ISO 9001 certified production in Bulgaria and Switzerland, serial production for high volume orders

Prototype assembling, functional and type testing, costumer acceptance

Beta



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ISO 9001 certified production in Bulgaria and Switzerland, serial production for high volume orders

Prototype assembling, functional and type testing, costumer acceptance



Test Infrastructure

3.0 MW test bay for active power testing

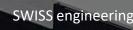
6 MVA test bay for reactive power testing

High voltage testing

Heat chamber up to 60° C

Customized testing



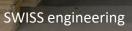


Test Infrastructure FC-BESS

Charging and discharging test, cycling test and communication test

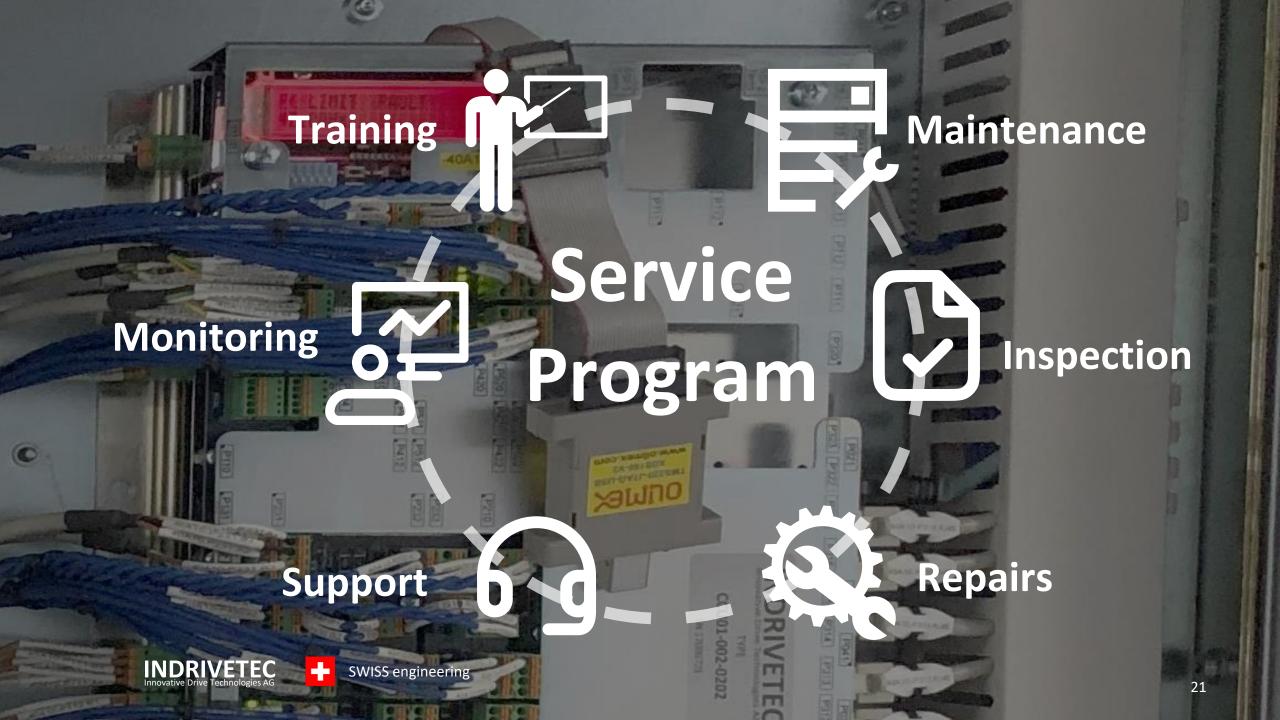
Full power test of FC-BESS and air conditioning and factory acceptance test











RE Training Program 3

Level 1 – "basic knowledge", safety functions of PCS, coolant system, visual checks and low-level maintenance

Level 2 - "authorized service partner", cold commissioning, hot commissioning, alarm handling, high-level maintenance, troubleshooting with IDT support hotline





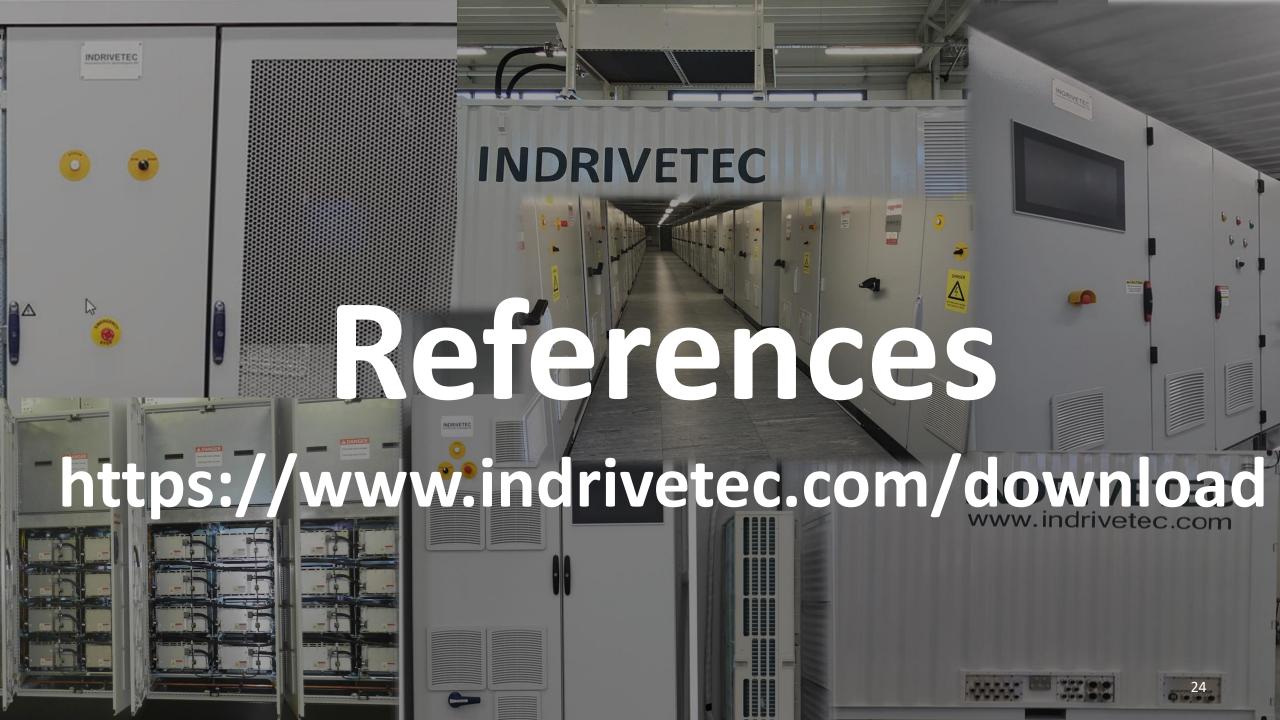
Innovative Des Peccessions AG

Level 1 – "basic knowledge", safety functions of PCS, coolant system, visual checks and low-level maintenance

Level 2 - "authorized service partner", cold commissioning, hot commissioning, alarm handling, high-level maintenance, troubleshooting with IDT support hotline

has passed the FlexConvert Level 2 - training.





INDRIVETEC AG proud member of following organisations

BVES







iBAT Association



Swiss innovations for Battery Applications and Technologies

electro suisse





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Thank you for your attention!

Indrivetec AG

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