TRUEDATA X-HVT

Charge-Discharge Units

EMISSIONS
ELECTRIFICATION
CAV
DATA

- Advanced IGBT technology with extremely low noise design and integrated impedance measurement
- Outstanding security features for fulfillment of performance level “d”
- Programmable control loop architecture to accommodate different test tasks
- Data acquisition with hightes accuracy and reproducibility

HORIBA
Automotive

TRUEDATA X-HVT

The TrueData X-HVT chareg-discharge units of HORIBA FuelCon provide excellent accuracy at high system dynamics. With a single unit voltages up to 1,500 V, currents up to 1,500 V, and outputs up to 1,000 kW can be covered. Parallel alignment enables higher currents and power.

Fully programmable control circuits (CC, CV, CP) allow optimum adaption to the inspection needs, including map control. The modern IGBT technology enables optimized energy recovery. For multi-channel configurations, the energy can be distributed in an intermediate circuit, this reducing the power input required.

Especially with End-of-Line (EOL) applications and test fields, this property displays as particularly advantageous. An integrated sequencer (program memory) allows the generation of highly dynamic loading cycles and userspecific tests. The optional integrated impedance measurement (CCMod) is an idispensable tool for the continuous investigation of electrochemical phenomena and efficient diagnostic strategies.

GENERAL FACTS	
POWER RATING	20 - 200 kW in 20 kW steps 200 - 400 kW in 50 kW steps 400 - 1,000 kW in 100 kW steps further types on request
OVERALL EFFICIENCY AT POWER RATING	≥ 95 %
NOISE	≤ 70 dB (A) bei 1 m (160 kW, 600 A)

ELECTRIC SPECIFICATION	
OPERATING MODES	CC, CV, CP, CC_{MOD}
VOLTAGE RANGE	100 V; 300 V; 600 V; 800 V; 1,000 V; 1,200 V; 1,500 V (optional 4-quadrant operation)
CURRENT RANGE	± 600 A, ± 1,000 A, ± 1,200 A
MEASUREMENT ACCURACY	± 0.03 % MV, ± 0.015 % FS
RESOLUTION	16 bit
SAMPLING RATE	10 µs (100 kHz)
SRORAGE RATE	3.0 ms

DYNAMIC SPECIFICATION	
RIPPLE	< 0.1 % eff. FS
RISK ASSESSMENT	< 3 ms

EIS SPECIFICATION	
FREQUENCY RANGE	0.1 mHz to 10 kHz (optional up to 50 kHz)
IMPEDANCE RANGE	5 µΩ up to 100 Ω
IMPEDANCE ACCURACY	± 1 % ± 100 µΩ
PHASE ANGLE ACCURACY	± 1 °
MAX. MODULATION CURRENT	± 10 A_{AC}

SAFETY	
SAFETY CONTROLLERS	Emergency stop (twoc channels) DC-Stop (two channels) DC-On (two channels) Signal of ISO-controller
ISO-controller	Insulation resistance HV Plus and HV Minus Analog processing of insulation resistance Safe disconnection of DC contactors
SAFETY VERSION ACCORDING TO ISO 13849 / EN 60204-1	Galvanically isolated IGBT half bridges
Verification of the functional safety (audit trail) incl. creation of validation certificate ISO 13849	

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