



**POLARISATION
RECTIFIER**

BDTe Polarisation 50–2200 A / 10–570 V

Key features

- ▶ Based on well proven technology platform
- ▶ Design life of 25–30 years
- ▶ Latest digital control technology
- ▶ Clear structured front panel
- ▶ State of the art communication software
- ▶ Fully monitored system platform
- ▶ Rugged and heavy industrial design
- ▶ Intelligent battery management

Operational benefits

- ▶ High reliability
- ▶ Long durability
- ▶ High degree of customization and flexibility
- ▶ Easy operation and control
- ▶ Easy access and intuitive communication
- ▶ Low operational costs
- ▶ Low maintenance costs
- ▶ Extremely high degree of availability

BDTe – the standard in reliability, functionality and serviceability

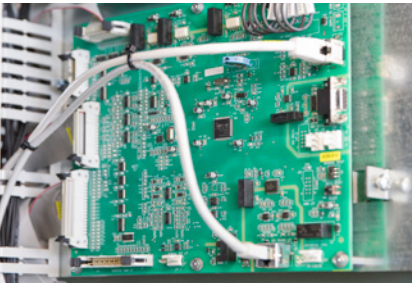
The BDTe is a heavy-duty, thyristor-controlled rectifier, specifically designed for the harshest operating environment in industrial applications, such chemical plants where some processes need to be permanently energised like chlorine production. The modular and flexible system concept together with a high number of options enables a fully customised solution that allows to meet any requirement – irrespective where in the world and no matter how specific it is.



Reliability through excellent design

The outstanding reliability of the BDTe is ensured by a combination of high-end technology and robust design. In detail, the advantages are based on:

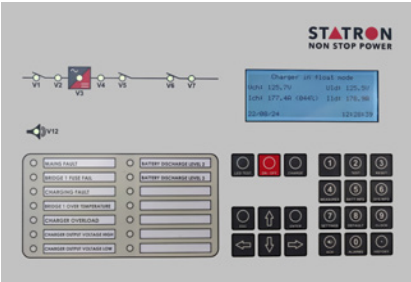
- Leading microprocessor-controlled thyristor technology
- Internal power supply with 3 independent DC converters including health monitoring
- Integrated watchdog circuits
- RS485 internal communication bus
- Ultra-cap real-time clock (RTC) backup with time synchronization
- Dedicated I/O board with numerous configurable analogue and digital inputs
- CAN bus for parallel operation for robust digital communication
- 12-pulse operation with active load sharing (option)
- Control scheme for best diesel generator compliance
- Fully segregated, independent and redundant measuring facilities including mains power meter
- Fully integrated earth fault monitor with leakage current indication
- Real time temperature display and monitoring



Durability due to use of proven technology

UPS solutions engineered by Statron have been protecting industrial installations for more than four decades. The outstanding durability of the BDTe is based on:

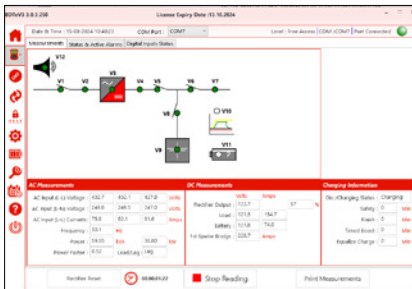
- Well proven system platform BDT
- Use of high-quality rugged industrial components
- Design life of 25–30 years
- Compliance to all relevant ISO and IEC/EN standards
- Electrical and physical integrated galvanic isolation
- Designed to withstand harsh environmental conditions (up to IP54)



Easy Operation & Control

The front panel of the BDTe facilitates a comprehensive and flexible human machine interface (HMI). An easy and intuitive operation and control of the system is achieved through:

- Colour-coded and animated LED mimic flow diagram adapted to actual configuration
- Comprehensive 8-line LCD display
- Multi-language support
- 14 programmable alarms / indications
- Real time event recorder for 2500 events
- Continuous battery health check
- Multi-level user management
- Front access to key components to allow fast and cost-effective maintenance



Easy accessible interface & intuitive communication

State of the art communication software and gateway supports the monitoring and control of the BDTe. Intuitive communication is achieved through:

- RS232/RS485 serial interface with MODBUS protocol
- Modbus TCP/IP interface
- PROFIBUS and IEC 61850 interface
- TCP/IP network interface with on-board web-server
- USB-stick interface for event log
- Remote display
- Programmable relays cards
- Digital inputs for EPO, generator operation etc.
- Programmable analogue inputs with clear text messages



Local or remote control

The unit can be locally controlled over the HMI or the unit can be remotely controlled via a bus or dedicated signals like an external 4-20 mA.

- Local control via HMI
- Remote control via:
 - A bus signal like Modbus TPC or RTU or
 - A dedicated digital on / off, voltage constant or current constant operation mode
- Remotely given 4-20 mA signal to set the unit to the desired voltage / current

Technical specification | BDTe Polarisation 50–2200 A

DC current (rating)		50 A	100 A	150 A	200 A	300 A	400 A	500 A	600 A	800 A	1000 A	1200 A	1400 A	1600 A	1800A	2000 A	2200A	
Rectifier input																		
Rectifier AC input voltage		3x208/380/400/415/480/500/690 V ±10% (others on request)																
Rectifier input frequency		50 Hz / 60 Hz ±5%																
Rectifier input power factor		Typical > 0.8 ind.																
Rectifier DC output																		
Nominal voltage		24 / 48 / 60 / 110 / 125 / 220 / 380 VDC																
Setting range:	Voltage window	10–150% of nominal voltage																
	Voltage range	10–570 V																
	Voltage range to be set	10–100%																
DC voltage tolerance	Static	±1%																
	Dynamic	max. ±10% Vrms / ±2% Vrms within 100 ms																
Maximal rectifier power		300 kW																
General Data																		
Efficiency		82% – 94% depending on model and DC load																
Noise level		55 dB(A) – 75 dB(A)																
Cooling		forced air cooling or natural convection (optional)									forced air cooling (redundant and/or demand controlled)							
Operating temperature		–10 to +40 deg C (up to 55 deg C optional)																
Storage temperature		–30 to +80 deg C																
Maximum altitude without derating		1000 masl (up to 4000 masl with derating)																
Allowable relative humidity		< 95% (non condensing)																
Protection degree		IP20 (up to IP54)																
Colour / Paint		RAL 7035 (other colour optional)																
Safety		IEC/EN 62040-1																
EMC		IEC/EN 62040-2																
Performance & Test		IEC/EN 60146-1-1 / IEC/EN 62040-5-3																
Conformity		CE-Label																
Quality / Environment		ISO 9001:2008 / ISO 14001:2004																
Dimension (IP20, basic configuration)																		
Height* (mm)		1900 (2100, 2300 optional)																
Width* (mm)	24 V	600	600	600	600	600	800	800	1000	1200	1200	1200	1200	1200	1200	1200	1400	1400
	48/60 V																	
	110/125 V																	
	220 V																	
	380 V																	
800	1200	1200	1400	1800	2400	N/A	N/A	N/A	N/A	N/A	N/A	N/A						
Depth* (mm)	24 V	800										1000						
	48 V	800										1000						
	110/125 V	800										1000						
	220 V	800										1000						
	380 V	800										1000						

* dimensions for IP20 and basic configuration
Further data available on request

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