Powerstax

Drake® TR Series

Industrial Thyristor Controlled Transformer Rectifiers

DRAKE® TR SERIES

- Thyristor controlled
- 415VAC 3-Phase input
- <1% output stability
- <5% output ripple
- Short circuit protection
- Integral fan cooling
- Remote control / monitoring options
- Top or bottom entry options
- Analogue or digital voltage & current display

POWER SUPPLY DESIGN EXCELLENCE

Drake® TR Series Transformer Rectifiers are available up to 750kVA and use digitally controlled thyristors to achieve the required voltage and current profile. Switched-mode technology is available for smaller systems. Systems can be air, oil or water cooled and sealed to IP65 using purge and pressure techniques for Zone 1 and 2 areas. Standard systems are IP54.

TYPICAL APPLICATIONS

- Water Treatment
- Electrochlorination
- Electrochemical and Plating
- Electrowinning
- Cathodic Protection & Anti-Fouling
- Electrophoretic Processes
- Laboratory
- Aircraft Ground Support
- Frequency Converters
- Marine & Offshore
- Industrial
- Engine Starting

STANDARD MODEL	OUTPUT VOLTAGE [1]	OUTPUT CURRENT [2]	INPUT CURRENT (per phase)	INPUT VA	CABINET
01-415V15V1500A-A	15V	1500A	38A	30kVA	A
01-415V30V2000A-A	30V	2000A	97A	70kVA	A
01-415V60V3000A-A	60V	3000A	285A	205kVA	B
01-415V75V1000A-A	75V	1000A	120A	120kVA	A
01-415V150V1200A-A	150V	1200A	285A	205kVA	B
01-415V400V500A-A	400V	500A	315A	225kVA	B

Notes:
1. Voltage can be adjusted from 0V to full voltage when in voltage control mode.
2. Current can be adjusted from 0A to full current when in current control mode.

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CME CompuMess Elektronik Power mit System

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SPECIFICATIONS	
Control Type	Thyristor constant current/voltage
Type	Fan air-cooled silicon thyristor, full wave rectification
Output Voltage	see model table
Output Current	see model table
Input Voltage	415VAC 3 Phase (3 wire + PE)
Input Frequency	50/60Hz
Control Supply	110VAC 1 Phase (derived internally)
Input Current	see model table
Input Power	see model table
Output Ripple	5% max. at full output
Control Modes	Constant Current control with voltage limit Constant Voltage control with current limit
Output Stability	1.0% at any voltage setting
Meters	Analogue Ammeter (Digital optional) Analogue Voltmeter (Digital optional)
Indicators	Supply ON DC LIVE Rectifier Fault
Safety Controls / Interlocks	Door Isolator Input Main Contactor Emergency STOP pushbutton
Setting Controls	Set current Potentiometer Set voltage Potentiometer
Data Recording (option)	Videographic recorder – 12 channel digital recorder including compact flash memory storage and Ethernet port
EMC	AC line filter included
Overload Protection	Input thermal overload relay protection, self limiting electronic current control via thyristor control system, backed up with high-speed semiconductor fuses
Operating Conditions	Continuous indoor use in a 30°C ambient temperature
Output Connections	Heavy duty busbar
Surge Protection	DV/DT suppression circuits fitted to each thyristor device. DC suppression circuit fitted across main DC output
Remote Control (option)	The control system is designed to take in remote isolated input signals from a remote computer source, these can 0-10V DC ,0-20mA or 4-20mA. The unit can also be fitted with isolated signal transducers to provide remote feedback of DC output current and voltage.
IP Rating	IP54 except for air exhaust

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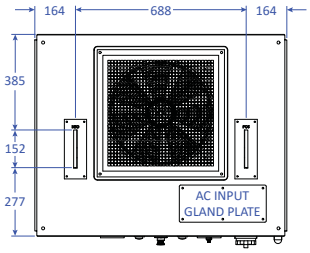
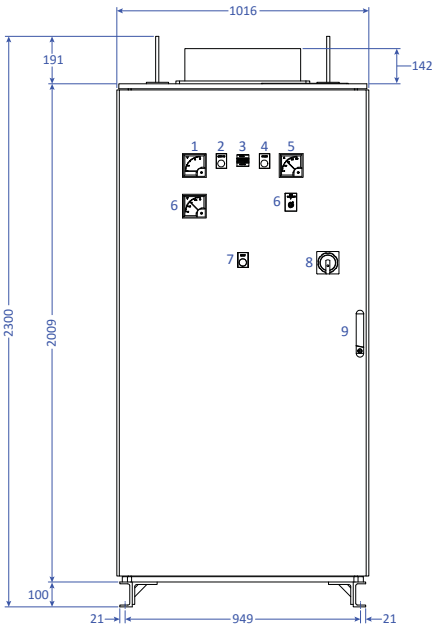
MECHANICALS

CABINET A

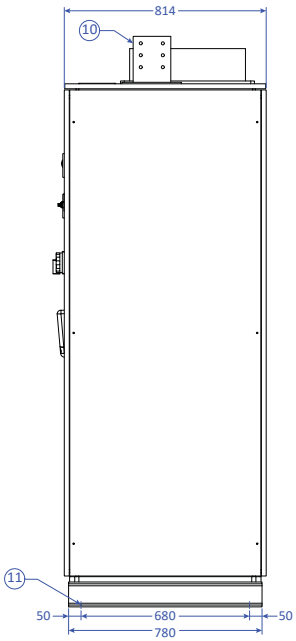


TOP VIEW

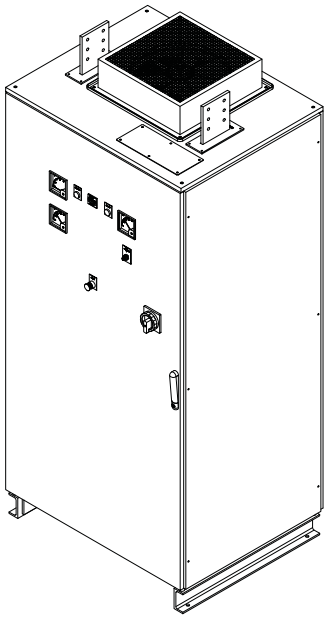
1 - VOLTMETER
2 - MAINS ON LAMP
3 - HOURS RUN METER
4 - DC LIVE LAMP
5 - AMMETER
6 - POTENTIOMETER
7 - RESET PUSHBUTION
8 - AC ISOLATOR
9 - LOCK (3 POINT)
10 - DC OUTPUT BARS
11 - FIXING HOLES (14mmØ) 4x



FRONT VIEW



SIDE VIEW



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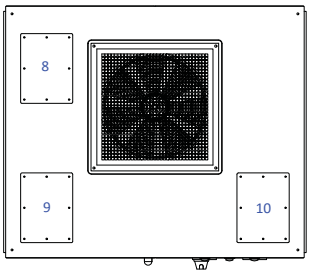
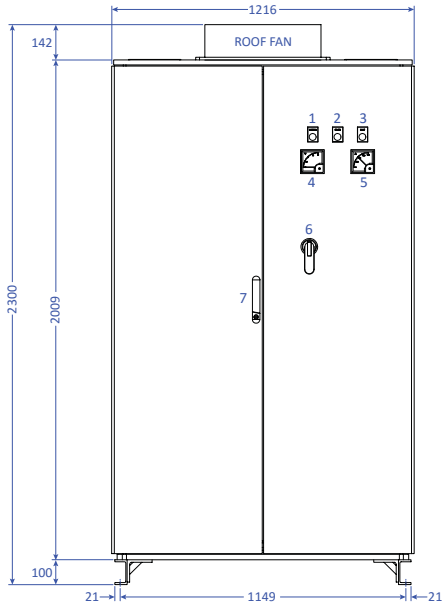
MECHANICALS

CABINET B

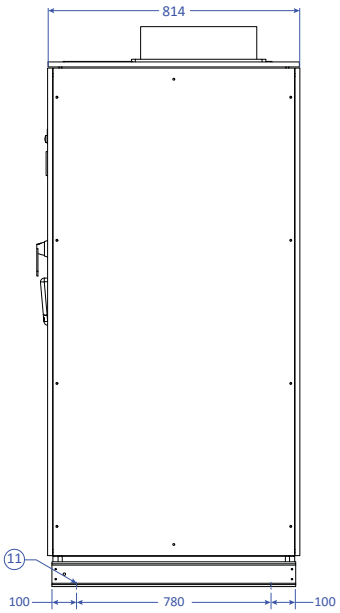


TOP VIEW

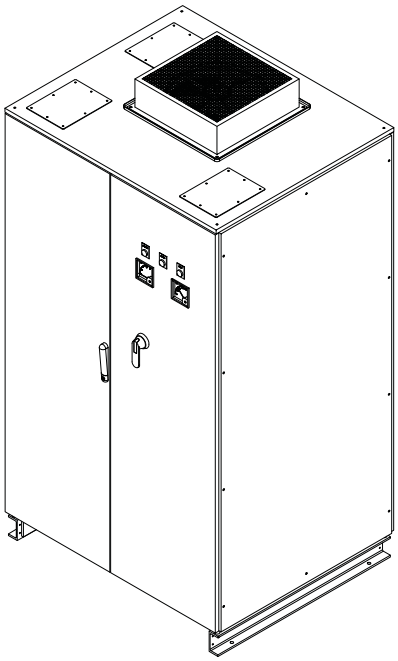
1 - MAINS ON LAMP
2 - DC LIVE LAMP
3 - FAULT LAMP
4 - VOLTMETER
5 - AMMETER
6 - AC ISOLATOR
7 - DOUBLE DOOR LOCK (3 POINT)
8 - DC OUTPUT GLAND PLATE
9 - CONTROL GLAND PLATE
10 - AC INPUT GLAND PLATE
11 - FIXING HOLES (14mmØ) 4x



FRONT VIEW



SIDE VIEW



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