CRS

INDUSTRIAL POWER EQUIPMENT

Quasar
Switch-mode Rectifiers

- ENERGY SAVING
- SPACE SAVING
- MODULAR POWER PLATFORM
- MULTI-TOWER INTERCONNECTION
- FAST RESPONSE TIME
- HIGH STABILITY TO LOAD VARIATION
- RS485 SERIAL COMMUNICATION INCLUDED
- HIGH POWER FACTOR (> 0.9)
- HIGH EFFICIENCY (> 89%)
- VERY LOW CURRENT RIPPLE
- OUTPUT STABLE PARAMETERS

Q100
IP31

Q300
NEMA12

Q300
IP21

Q500
IP42

Q500
IP32

Q500
IP65

Quasar switch-mode rectifiers are designed to meet all galvanic surface treatment requirements. Based on high speed IGBT technology, they provide high efficiency and performance. Compact dimensions and reduced weight versus conventional rectifiers without compromising reliability.

From a unit of 50A to 500A...

... to a powerful installation of 32'000A!

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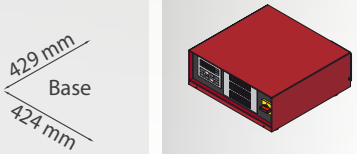
www.crspower.com

Quasar 100
Switch-mode Rectifiers

- Air Cooled - IP31
- Water Cooled - IP43
- 1 power module / reverse module
- Available in all types:
  DC - Direct Current / DCR - Reverse of polarity
  PP - Pulsed / PPR - Pulsed with Reverse of polarity

- Sizes: 50A / 100-150A / 200-250A / 300A / 400A / 500A
- Available with buzzer and push button for E-coat applications

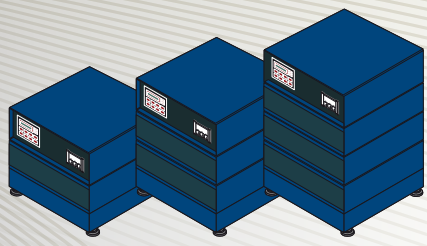


	01
Configuration:	
Height:	154 mm
Weight - air cooled:	25 kg
Weight - water cooled:	25 kg

Quasar 300
Switch-mode Rectifiers

- Air Cooled - IP21
- Up to 3 power modules / reverse modules
- Available in all types:
  DC - Direct Current
  DCR - Reverse of polarity
  PP - Pulsed
  PPR - Pulsed with Reverse of polarity

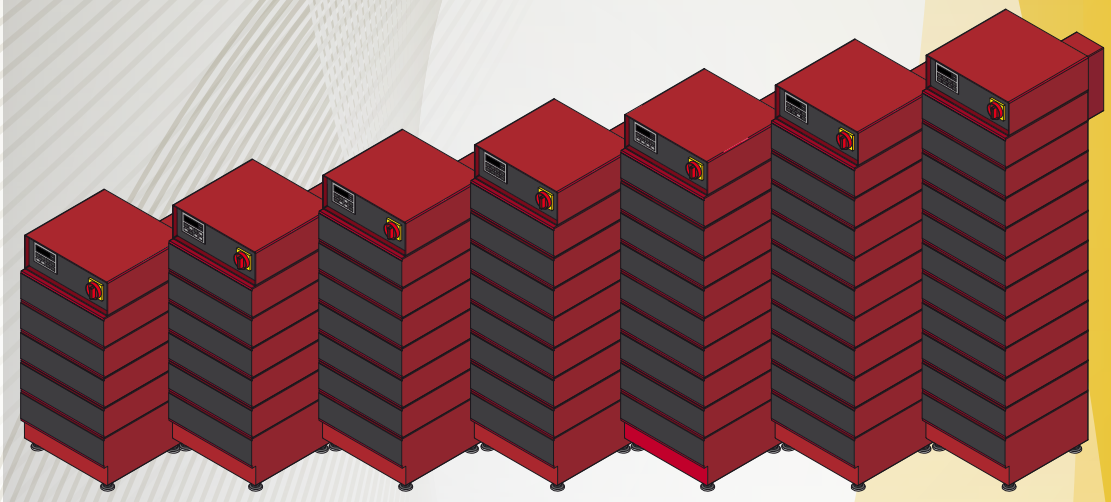
- Sizes: Config 01-1 up to 550A DC / 250A DCR
  Config 02-2 up to 1100A DC / 550A DCR
  Config 03-3 up to 1700A DC / 1100A DCR
- Available in IP52 (NEMA 12)



	01-1	02-2	03-3
Configuration:			
Height:	369 mm	501 mm	633 mm
Weight - air cooled:	45 kg	69 kg	89 kg
Weight - water cooled:	-	-	-

Quasar 500
Switch-mode Rectifiers

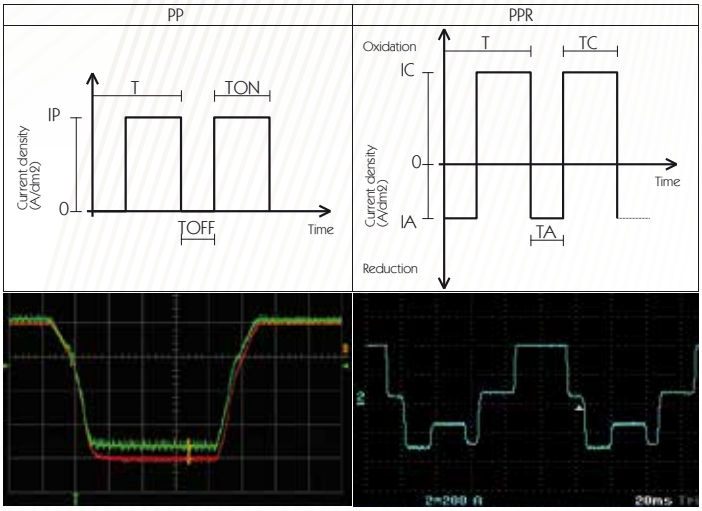
- Air Cooled - IP32
- Water Cooled - IP42
- Up to 9 power modules / reverse modules
- Available in all types:
  DC - Direct Current
  DCR - Reverse of polarity
  PP - Pulsed
  PPR - Pulsed with Reverse of polarity
- Up to 8000A in one tower.
  Multi-tower expansion for higher requirement
- Available in IP65 (water cooled)



429 mm
Base
424 mm

	05	06	07	08	09	10	11
Configuration:							
Height:	897 mm	1029 mm	1161 mm	1293 mm	1425 mm	1557 mm	1689 mm
Weight - air cooled:	143 kg	163 kg	183 kg	203 kg	223 kg	243 kg	267 kg
Weight - water cooled:	160 kg	184 kg	208 kg	232 kg	256 kg	280 kg	306 kg

Pulse plating & pulse anodizing



- Available in all models Q100/Q300/Q500
- Up to 50% energy saving
- 30% less process time for the same deposit thickness
- Increase temperature of anodizing solution due to the reduction of oxidation voltage
- Reduced barrier-layer
- Pulses help avoid burned parts and improve surface uniformity
- Same rectifier can be used for anodizing and coloring
- Different programmable waveform for different process applications

Rectifier options

COMMUNICATION ADAPTERS

- Communication adapters for Profibus-DP, DeviceNet, Profinet, EthernetIP, Modbus/TCP networks

REMOTE CONTROL

- REM is a remote control unit that communicates with the rectifier

4-LINE DISPLAY

- Simultaneous display of 4 lines of data
- Immediate display of messages
- Easier to read
- Remotable up to 4 meters
- Available parameters:
  - Measured Value
  - Set point values and messages
  - Ramp time / Phase time
  - Partial AH / Partial limit AH
  - Total AH / Total limit AH
  - Grand Total AH

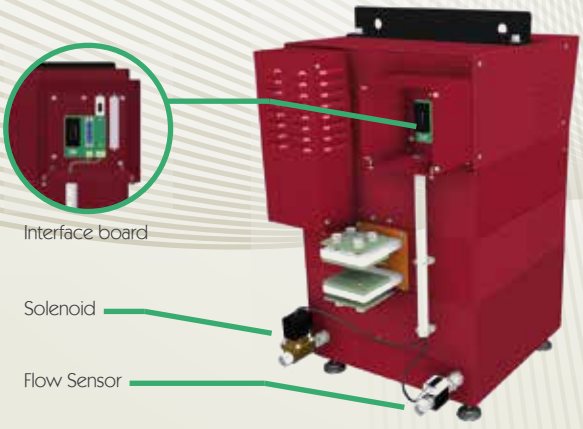
ANALOGUE INTERFACE

- ANL provides 6 digital inputs and 6 outputs and 2 analogue inputs and 2 outputs

INPUT/OUTPUT SCREW INTERFACE

- Replaces the junction box
- Easy installation

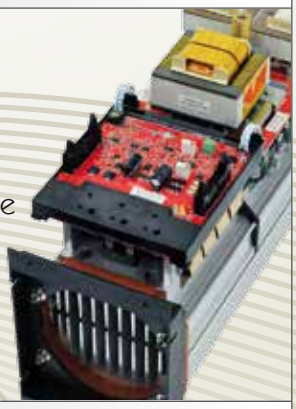
WATER FLOW SENSOR AND SOLENOID



- Water cooled rectifier optional for low water flow rate alarm
- Features:
  - adjustable Flow Sensor to assure minimum required flow rate
- Benefits:
  - assures minimum water flow rate
  - solenoid can be used to stop circulation of cold water when rectifier is in stand-by, thus preventing potential condensation

CTRD02

- Recommended for voltage controlled processes
- Fast feedback loop and fully differential output feedback:
  - Lower Current Output Ripple (especially 300 Hz)
  - Reduced Voltage output ripple from 10% to 3% (in voltage mode operation)



RECTIFIER SIMULATOR

- Test the rectifier behavior without the need of a real rectifier
- Use the panel keyboard, the analog card or every one of the available communication protocols (Modbus, ASCII, Profibus-DP, DeviceNet, Profinet, EthernetIP, Modbus/TCP)

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