ACORE Industrie s.a.

Electrical and Electronic Equipment

THYRISTOR CONTROLLED RECTIFIERS

A technology complying with the needs of your proper utilization:

- Entirely static voltage or current adjustment requiring no maintenance;
- Stepless voltage or current adjustment from 0 to 100% of the rated value;
- Output ripple 4,2% of the rated value. In order to bring the output ripple to a desired ripple value when operating at reduced voltage, it is necessary to provide filtering (optional)
- Electronic voltage or current control
- Response time<100ms (value given without filtering)
- Reduced dimensions and weight versus its autotransformer controlled equivalent

ELECTRICAL DATA:

Mains supply
- Triphased 400V (230V on request) 50 Hz (60 Hz on request).

Utilization
- Normalized voltage in volt: 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20 - 25 - 30 - 50 - 100 - 200 - 300 - 400;
- Normalized currents in amps: 300 - 500 - 750 - 1000 - 1250 - 1500 - 2000 - 2500 - 3000 - 4000 - 5000 - 6000 - 8000 - 10 000 - 15 000 - 20 000 - 25 000,

Cooling
- Natural or forced air cooling;
- Water cooling.

Transformer
- E or F class.

Electronics
- The phase reference is ensured by a synchronization transformer,maintaining the controlled current or voltage constant;
- The thyristors are excited by a burst of sized pulses.This device allows fine and accurate adjustment of the output values under all temperature and heating -up conditions and electrical stresses;
- The components are mounted on long-oil varnish circuits simplifying maintenance operations and ensuring efficient protection;
- Prewiring for automatism interface particularly with a numerical serial link RS485.

Control
- Section switch, switches out of operation / operation ,on/off;
- Potentiometer voltage control;
- Potentiometer current control.

Check
- Pilot lamps power on, operating, on;
- Voltmeter, Ammeter.

Securities
- Thermorelay;
- Ultra-quick fuses;
- Electronic voltage and current limitation;
- Total reading of the output current by shunt, class 1.

DESCRIPTION

MECHANICAL DATA:

- Steel cabinet with front door and removable panels allowing easy access to all internal components.Protection IP21;
- Epoxy paint (fired);
- Bichromate and zinc plated screws and bolts.;
- Assembly of the diodes and thyristors on tapped convectors.

Our material has been developed for continuous utilization within temperatures between -10° and 40°C and a relative humidity of 80%
The output data guaranteed for the mains voltage ± 5%.

A few tips to help you in the choice of your rectifier:
Different connections can be proposed, particulary:

- Double Y connexion with interphase choke, thyristors on primary of the transformer.Economic connexion.The looses and the magnetizing energy of the transformer are proportional to the voltage adjustment.Thyristors on primary make it more reliable, and reduce maintenance costs too.
- Double Y connexion with interphase choke, thyristors on secondary of the transformer;

  Connexion necesary to realise a polarity static inverter.
- Three-phase bridge connexion;
- Connexion which allows to have high output voltage, necesary for treatment like cataphoresis.
- Twelve-phase connections : Each of these connections corresponds to a special utilization..
  This connexion allows to have less harmonic waves (eliminates regular harmonics 5 and 7) and improves the power factor to 0,988 instead of 0,955 for other connections.

12V 50 000A IP55

16V 15 000A twelve -phase

The thyristor controlled rectifier generates reactive energy and harmonic waves on the power network.
In order to minimize them,it is necessary to operate as close as possible to the rated data. Consequently with your requirements.
For important operation capacities it will be profitable to provide capacitor batteries in order to reduce your energy consumption.

OPTIONS:

- Ampere-hour-meter;Ampere-minute-meter;
- Pole inverter : static, electromechanical;
- Digital voltmeter, digital ammeter;
- Remote control;
- Interface circuits with galvanic protection for computerized control;
- Numerical serial port RS-485 for computerized control;
- Programmer for the progressive, multi-step voltage or current raise;
- Filter;

ACORE Industrie s.a.
Electrical and Electronic Equipment
60, rue du Ruisseau Z.I. De Tharabie 38295 SAINT QUENTIN FALLAVIER
Tél.:33 (0) 4 74 94 33 33 Fax: 33 (0) 4 74 95 63 25
E-mail: contact@acore-industrie.com URL: http://www.acore-industrie.com