

Automatic voltage regulators mod. S2006

Automatic voltage regulators for Brushless alternators for hydroelectric thermoelectric and diesel power stations (500 KW -150 MW).



S2006 is the new model of digital controller manufactured by BELTRAME CSE. It controls alternators excitation and its easy programming software makes it suitable for a wide range of alternators. It also enables a big flexibility on parameters optimization.

FEATURES

Functions

- Five control modes:
 - Manual mode
 - Automatic Voltage Regulation (AVR)
 - Automatic Current Regulation (FCR)
 - Power Factor Regulation (PF)
 - Reactive power regulation (VAR)
- In AVR and FCR modes the voltage regulation is made by "soft-start" ramp
- Wide range of regulations and "set points" for each functioning mode
- Protection for over excitation (OEL) and under excitation (UEL) when working in AVR, VAR and PF modes
- Compensation for under-frequency or limitation of the tension/frequency ratio [V/Hz]
- Parallel managing with Main or with other AVR S2006
- Eight generator protection functions:
 - Protection from excitation over-voltage
 - Protection from excitation over-current
 - Protection from generator over-voltage
 - Protection from generator under-voltage
 - Surveying timer
 - Lack of sensing
 - Excitation diodes controlling device (optional)
 - Lack of field voltage
- Generators parallel connection with "droop" reactive compensation and differential reactive compensation

Inputs and Outputs

- Single-phase or three-phase rms bus voltage sensing (60÷480V ac/dc 40÷500Hz)
- Single phase or three phases rms generator voltage sensing (100÷500V ac)
- Single phase generator current (nominal 1A or 5A)
- Analog inputs (±10 Vdc and 4÷20 mAdc) providing a proportional

and remote control to the regulating point

- Eleven digital inputs for the interface with the PLC
- Redundant AC/DC power supply
- Power output up to a maximum of 25A in continuous duty and positive ceiling voltage of 40
- Ten exit relays for controlling the system or for warning

HMI Interface

- The HMI front panel includes control buttons and LED indicators
- Five communication ports:
 - RS-232 port, for PC communication
 - CANBUS port for specific communication with a redundant AVR S2006
 - RS-485 communication port
 - USB communication port
 - Ethernet communication port

Technical Features

Maximum output current in continuous duty:	25A
Maximum output current per 10 sec. :	40A
Auxiliary input frequency range:	50Hz ÷ 500Hz
Alternator nominal frequency:	50Hz or 60Hz
Temperature range in duty:	0°C ÷ +55°C
Temperature range in stock :	-20°C ÷ 80°C
Dimensions (mm):	wide 300 mm, length 400 mm height 115 mm

APPLICATIONS

In the typical application described hereinafter, the AVR S2006 controls the excitation field of a synchronous generator. The front control panel, the indicators and the serial communication ports using the PC software, ease the on-site/remote use of the system.



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SISTEMI E APPARECCHIATURE PER IL CONTROLLO
E LA GESTIONE DELL'ENERGIA PER SMART GRID,
ECCITATRICI STATICHE,
REGOLATORI DI TENSIONE DIGITALI,
REGOLATORI DI GIRI DIGITALI,
ENERGIE ALTERNATIVE,
ALTERNATORI

Beltrame CSE has designed and produced Regulation systems for over thirty years. Our technical expertise is guaranteed by the application of the ISO 9001 standard.

We offer products and services ensuring regulation safety during the generation of electric power.

Customised service, fast delivery, competitive prices and careful client needs assessment have earned us a reputation. We are now one of the most trusted actors in the regulation business and our competitive advantage stems out of our flexibility and capacity to listen to and support our clients.

Our qualified and motivated staff plays a vital role in conceiving and providing cutting-edge products and services. Research and promptness to innovative solutions are two of our most valuable assets.

Beltrame CSE's products are 100% made in Veneto (North-East Italy) and they include components of leading brands only. Our main suppliers are Microchip, Fairchild and Siemens.

Beltrame CSE's devices are covered by a 12-month warranty as of the date of delivery.

Deliveries are guaranteed within 24 hours from the order thanks to our well-stocked warehouse and the efficiency of our sales and logistics department. 48 more hours are required for shipments to islands or abroad.

Beltrame CSE also provides customised devices meeting our clients' requirements. Moreover, in order to reduce downtimes, top priority is given to clients experiencing serious technical failures.

Our technical staff is available 24 hours a day, seven days a week providing support, including on-site interventions and after-sale services.

As electric power is a costly and limited resource, we aim at efficiency of use.



THIRTY YEARS OF CUTTING-EDGE TECHNOLOGY AND SUPPORT IN ENERGY MANAGEMENT

OUR MAIN CLIENTS:

