



The American company WOODWARD, world leader in its field, offers a complete range of products for generator control: displays, generator protection, mains protection, motor control; source inverter control, generator coupling between them and to the mains. These latest technology integrated solutions offer very advanced functions at a very competitive cost: Modbus communication, Profibus, SAEJ1939, Ethernet, Internet, remote monitoring, configuration/programming by front panel or PC, ... DSF Technologies, Woodward's European distributor, ensures the supply, after-sales service and interventions throughout France.

Transducer and multifunction relay



MFR 300: transducer for monitoring single-phase and three-phase supply systems. The MFR 300 has voltage and current inputs for measuring a power supply. A digital processor allows accurate measurement of true RMS values, independent of harmonics, transients or disturbance pulses. The main measured and calculated values can be transmitted via the CANopen interface to a supervisory control system.

MFR 500: Multifunction relay that combines measurement and protection capabilities into a single system.

Synchronization and distribution modules



DSLC2/MSLC2: The DSLC2 TM Woodward is a microprocessor synchronizer/load regulator, designed for use on three-phase alternators, equipped with Woodward or compatible speed regulators and compatible automatic voltage regulators. The MSLC2 communicates via its own LAN (Local Area Network; with Echelon® Lon network technology Works™*) to regulate real and reactive loads in relation to the mains using alternators equipped with DSLC2. If the MSLC2 is used with DSLC2s with reduced function, the latter does not share their VAR/PF on an isolated bus (mains breaker opens).



DTSC-200: The DTSC-200 module offers great flexibility, intuitive ease of use for multiple applications. The graphic display allows the user to easily connect to the controller.

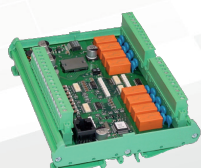
DTSC-50: This digital ATS module is an economical controller for emergency applications with a single generator.

Advanced automatic start modules

EASYGEN 1500: Based on a single configurable module, the following functions are available:



- Management of 0, 1 or 2 circuit breakers (normal + emergency),
- Interactive 128x64 pixel graphic display,
- Menus and information available in 6 languages,
- Display of all motor and electrical parameters,
- Complete motor and electrical protection,
- 2 fully configurable analog inputs,
- 8 digital inputs and 11 digital outputs as standard,
- Programmable operates logic,
- CANbus port for numerous extensions: communication gateway (ethernet, internet, J1939, Profibus,...), additional I/O (IKD1 module), remote display, communication with PLC,
- Archiving of 50 time-stamped events,
- CE, UL, GL, LR certification,
- Advanced Auto Start Modules.



«All-in-one» control modules with paralleling functions

This family of modules integrates all the functions necessary to manage a generator to be coupled to another source. All modules can be configured via the front panel or PC with free software.



EasYgen 3400/3500

EASYGEN 3400XT/3500 XT : this module is the most advanced of the easYgen series. Its great flexibility and intuitive use (5.7» screen, wide choice of language) make it the ideal tool for managing simple or complex power plants.

The easYgen-3000 series is available in two variants, the easYgen 3400 for installation at the back of a cabinet which can be combined with a remote panel, and the easYgen 3500 with a graphic colour display.

The easYgen 3400XT/3500XT can control 32 generators in a network through automatic sequences. It manages the power setpoint to the network and the coupling in production and clipping mode.

The easYgen 3400XT/3500XT is probably one of the most flexible modules on the market. The same module can manage all coupling modes by simple:

- Coupling between groups (island),
- Coupling a group to the network (permanent and fugitive),
- Multigroup coupling to the network,
- With classic power management functions: mains loss detection (AMF), active and reactive power regulation (groups and networks), clipping...

The easYgen 3400/3500 family allows a Woodward LS-5 Series module to be combined. The LS-5 series are synchronizers and load balancers with integrated protection functions. They are designed to enable complex power management applications with multiple networks and multiple circuit breakers.



LS-5

EASYGEN 3000XT: The new range of controllers can operate generators of all sizes and for all types of applications. These controllers include algorithms and logic specially designed for starting, stopping, controlling and protecting generators, circuit breakers and mains, if applicable. This allows standardized distributed power generation applications to be combined into a single generator controller.

FlexApp™: This function provides the tools to easily configure the number of circuit breakers that can be switched: None, GCB, GCB and MCB modes, GGB (Generator Group Circuit Breaker) and additional modes for Woodward LS-5 module interaction.

- Full connectivity for up to 32 generators and 16 LS-5 circuit breaker control devices in a single application.
- Circuit breaker control: synchronization by slip frequency / phase equalization, open-closing control, circuit breaker protection
- Off-load coupling and generator set dynamics
- Modes of operation: Auto, Off, Manual and Load/No Load Test modes via logic input
- Connectivity via logical and analog I/O expansion board (Woodward IKD 1 or Phoenix IL serial contact)
- ECU supported: special support Scania S6, MTU ADEC ECU7/8, Volvo EMS2 & EDC4, Deutz EMR2, MAN MFR/EDC7, SISU EEM, Cummins and Woodward E3
- Multilingual capability: English, German, Spanish, French, Italian, Portuguese, Japanese, Chinese, Russian, Turkish, Polish, Slovenian, Finnish, Swedish