

ECSopt

Optimized Energy Import for the Energy Control System

Version 2

Program features:

ECSopt optimizing software expands the functions of the U 1600 system (energy control system) from GOSSEN-METRAWATT GMBH with energy optimizing options. Taking advantage of capabilities provided by the ECS energy control system for the execution of user-specific programs makes it possible to influence the load characteristics of power consumers being monitored by the instrument, such that expensive peak loads are avoided when importing energy from the electrical distribution network.

Important optimization features:

- Control of up to 4 relays for influencing power consumption
- Consideration of available power values of the power consumers being controlled with the relays as fixed values, or as instantaneous power values for active meter channels
- Variable lock-out times for starting optimization with 15 minute intervals, as well as for enabling optimization channels after shutdown
- Tariff dependent limit values for 15 minute power values are taken into consideration.
- Relay switching sequence can be rotated.
- Relay delay-times can be specified in order to take reaction times of controlled devices into consideration, or for the read-out of advance warnings.
- A report including all switching operations can be read out to a printer connected to the summator.

All of the parameters required for optimization are configured in a special data entry window in the ECSwin parameters configuring program.

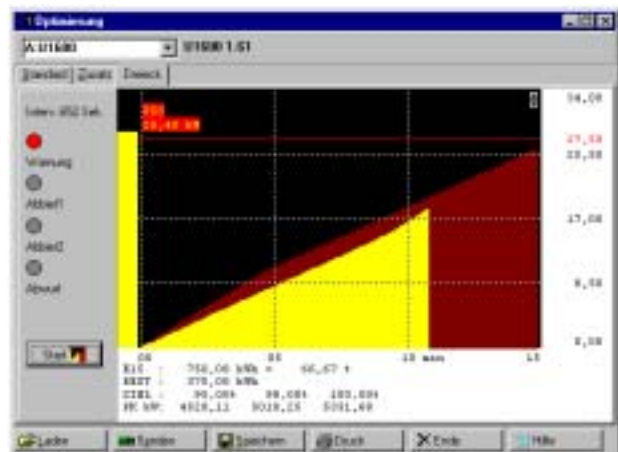
In addition to momentary quantities from the primary meter channel, available breaking capacities of connected power consumers can also be influenced as fixed quantities, or as quantities acquired by a meter channel, and can be utilized in the optimization process with the objective of ideally exploiting the maximum 15 minute power value (power limit value) agreed upon with the respective power utility. All available options for the creation of virtual channels for summing several physical channels within the U 1600 system can be taken advantage of, and the full scope of functions provided by the system is retained as well.

Power consumers to be influenced are controlled by means of the 4 relay outputs included in the basic instrument, or optionally via other relays within the ECS LAN. If a relay has been activated during the course of optimization, re-enabling can be triggered (reset to the initial state) either after expiration of a lock-out time which can be adjusted for all relays, or after the end of the respective 15 minute period.

The utilized optimization algorithm is designed to guarantee compliance with the power limit value when a relay has been activated. Activation of further relays only becomes necessary if, subsequent to a switching operation, remaining power for all other power consumers exceeds the value which prevailed at the moment the first relay was actuated. If it is necessary to avoid always influencing (shutting down) the same power consumer as a result of optimization, the next relay within the series can be treated as the first relay after a switching operation has taken place (rotation method).

Saturdays, Sundays and national holidays can also be taken into consideration if various tariff periods with different power limit value are specified. Control via channel 24, used as a tariff channel, is also possible. As a standard feature, four different power limit value changeover times are supported.

It is optionally possible to display optimization-relevant quantities at large format display monitors connected to the system (e.g. calculated power trends and/or correction power values).



ECSopt Power Triangle