POWER FACTOR CORRECTION SYSTEM

REEKS™ 6.0

REV. 1.2

USER MANUAL

UAB NAVITUS LT

Tel.: +370 5 23280 00, fax: +370 5 237 50 18

http://www.navitus.lt, e-mail: info@navitus.lt

Visorių g. 2, 08300 Vilnius

Vilnius

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Introduction

Reactive electrical power compensation system ("the System") is used for automatic connection of capacitor banks and/or batteries to the AC electricity grid where the reactive load is present. This system can be used in commercial, industrial, agriculture, transport and other companies where used equipment generates reactive power.

This User Manual presents technical specifications of the compensation system control unit, summarised structural diagram of the system, instructions for installation and operation.

The system is installed and operated by the specialist of electricity power grids who has experience in the field of work with low-voltage (up to 1,000V) electrical equipment, at least medium qualification in electrical safety group and is familiarised with this User Manual. Since the work with system requires information of electronic active and reactive electricity meters which is read via electrical communication interfaces, its installation requires the receipt of consent of organisation which supplies electricity. Electrical communication interface of electricity metering units is located in the terminal block under the sealed cover and only the representative of the power supply organisation has the right to remove the seals and the cover of the block and connect the wires to the contacts of the metering unit. Furthermore, only the representative of the power supply organisation has a right to perform the settings of communication interface of the metering unit, where necessary.

Equipment

The basis of the reactive power compensation system - a microprocessor-based control unit REEKS 6.0. The metering devices (electronic active and reactive electricity meters) and compensation batteries are connected to the control unit. The control unit is able to read the following electricity metering units: LZKM, LZMF, LZQM, EPQM, EPQS, EMS and GAMA-300 (G3A and G3B). REEKS 6.0 is manually-controlled, contains 6 buttons and the LCD screen which shows menu versions, readings of metering devices (MD) and allows to select system parameters. Additional system hardware and software allows to control the work with computer, remotely connect/disconnect compensation batteries, accept data of electricity meters by using the computer. The distance between individual system units (computer, electricity meters, condenser batteries) can be up to 100 meters, the connection between them is supported via 2-wire 20mA "current loop" interface.

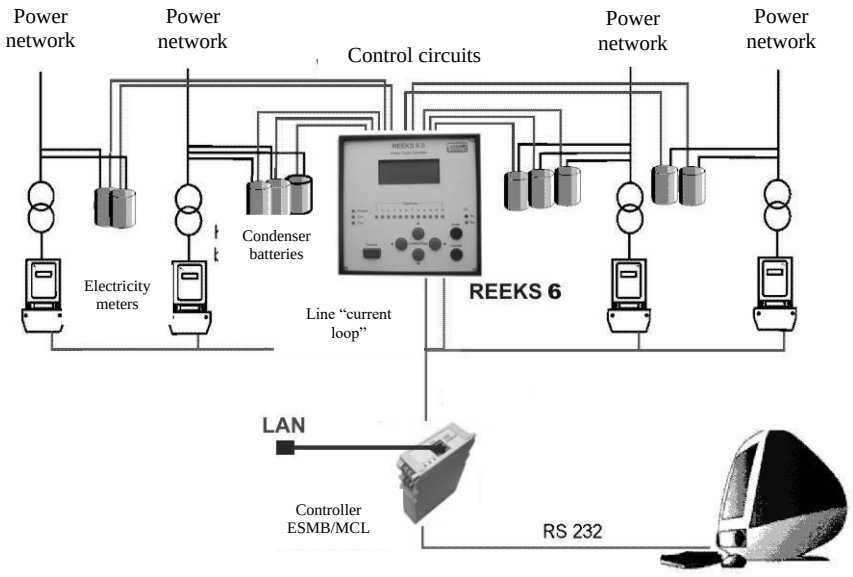


Fig. 1. Block diagram of reactive energy compensation system.

The main technical specifications of control unit REEKS 6.0:

• supply voltage	~230V 50Hz
• rated power	< 25W
• control circuit voltage	<250V
• control circuit current	<6A
• maximum power of control circuit	< 30W
• maximum number of control circuits (battery levels)	up to 12
• current loop input	1
• current loop output	1
• communication line length between REEKS 6.0 and metering unit when impedance is 0.072 Om/m	<500m
• communication line length between controller and personal computer when impedance is 0.072 Om/m	<2,500m
• speed of data exchange between the metering unit and the controller, baud	1,200…19,200
• speed of communication with personal computer, baud	1,200…19,200
• minimum compensation period	~ 10s
• maximum compensation period (not normed in STEP algorithm)	< 15min.
• maximum number of connected metering devices	2
• maximum number of grouped logic units	2
• request period of one measurement device	1s
• operating ambient temperature	-15…+45 °C
• operating period without turning off	unlimited
• dimensions, mm	144x144 x 102

- Mounting hole dimensions (width/height/depth), mm 136x138 x 120

Software of control unit REEKS 6.0 allows the following:

- to form one or two independent reactive power compensation systems (units) each one of which is provided with compensation batteries as well as electricity metering devices (MD) connected to the control unit;
- to compensate the reactive power by using manual or automatic control mode;
- to perform system configuration by using a keyboard and LCD screen of control unit;
- to control system work by using LCD screen;
- to carry out monitoring, i.e. register network's reactive power, voltage, changes of load current that exceed the values indicated in the parameters;
- to control system work through "current loop" line by maintaining the connection with personal computer;
- to set individual reading speed to each metering unit connected to REEKS 6.0;
- to protect the configuration of control unit with a password;
- to use external terminal for the control of REEKS 6.0 connected to "Console" interface.

Inputs and outputs of control unit

Reactive power compensation system control unit REEKS 6.0 is installed close to capacitor batteries. The distance between electricity metering devices (electricity meters) can be up to several hundred meters - their data are read via 2-wire "current loop" connection line. The main outputs of control unit are fitted in the back wall of the device, their purpose, layout, marking and diagram of wiring with external devices are provided in Fig. 2.

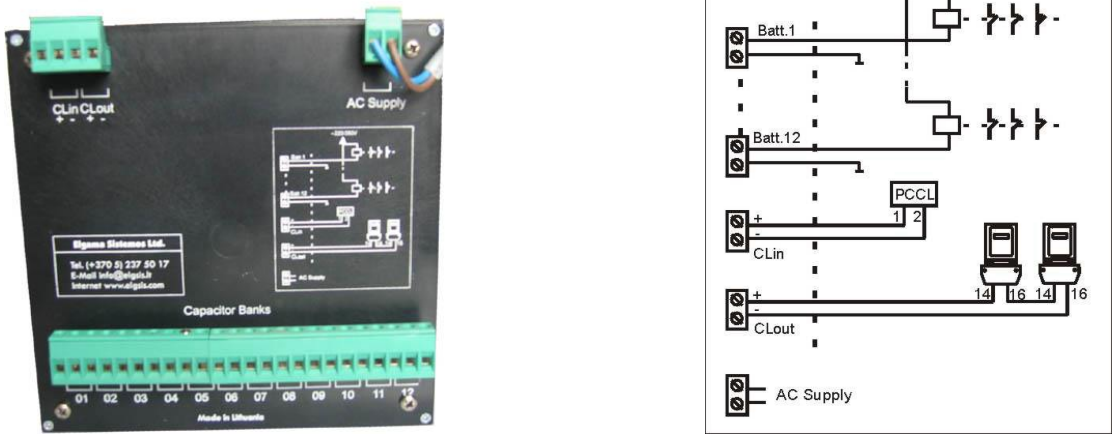


Fig. 2.

Compensation batteries are connected automatically and remotely. **Each battery should have an interim relay for magnetic start-up device**, one control circuit wire of which is connected to network phase, the other - to one of the outputs of controller REEKS 6.0, the other output is connected to network neutral wire.

Control unit front panel elements

The front panel of control unit REEKS 6.0 contains elements and their purpose is provided in the figure below.

Operating procedure

In case of installation of reactive power compensation system, it is first of all necessary to perform a configuration of control unit REEKS 6.0. All configuration operations can be performed by using control unit buttons and LCD. UAB NAVITUS LT also provides an additional special software (if it is specified in the supply agreement) which enables configuration via communication interfaces in the computer connected to the system. In such case, the computer can also be used to monitor and register data collected by all metering units connected to the system and momentary values of measured data. UAB NAVITUS LT data reading and display software "Enersis" can be used for this purpose.

To perform these operations and to carry out the system control, the parameters selected in the control unit are shown on the 4-row LCD screen.

The structure of REEKS 6.0 menu windows is represented in a diagram below:

COMMAND MENU
UNITS
BATTERIES
METERING UNITS
OTHER
DEVICE NUMBER
MANUFACTURER

MENU - UNITS
Operating mode
Compensation period
Disconnection period
Q residues (High Load)
Q residues (Low Load)
P load
Coefficients
Supported Q
-Q disconnection
Pause
Q control
Q control management
U control
U control management

MENU - BATTERIES
Connection
Setting
Metering unit
Clock
Voltage
Correction
Grounding

MENU - METERING UNITS
Momentary values
Numbers and passwords of metering units.
Types of metering units
Transformation coefficients
Voltage control management
Current control management
Voltage control
Current control
Control

MENU - OTHER
Automatic control
Algorithms
Connection ports
Connection
Alarm
Clock
Table
Configuration blocking
Password

MENU - DEVICE NUMBER

MENU - MANUFACTURER

The table below presents the menu windows and explains their purpose of use:

UNITS			
	Operating mode		
	a	Operating mode Bl Time Av. power 1 —— ———— 2 —— ————	The average integrated reactive power of units for the compensation period or the momentary value of reactive power [kVAr]. After compensation, starts from <0>. See the description of compensation algorithms.
	b	Operating mode Bl Load 1 ———— kW 2 ———— kW	Active power of units. The integrated value of 8 last seconds is shown [kW]. These values are used for the evaluation of the load of units.
	c	Operating mode Bl Voltage 1 ——.—— kV 2 ——.—— kV	Voltage of units. The integrated value of 8 last seconds is shown [kV]. These values are used for the evaluation of the voltage of units.
	Compensation period		
		Comp. period Bl Period 1 —— s 2 —— s	Compensation period of units or the time of connection of batteries 10…900 [s]. See the description of compensation algorithms.
	Disconnection period		
		Disconnection period Bl Period 1 —— s 2 —— s	Period of disconnection of unit batteries 5…900 [s]. See the description of compensation algorithms.
	Q residue High Load		
		Q residue HL Bl Induc. Capac. 1 —— —— 2 —— ——	Maximum allowable deviation of reactive power of units 0…255 [kVAr], from the value given in menu <Units / Supported Q>, when the active load exceeds the limit of load set in menu <Units / P load>.
	Q residue Low Load		
		Q residue LL Bl Induc. Capac. 1 —— —— 2 —— ——	Maximum allowable deviation of reactive power of units 0…255 [kVAr], from the value given in menu <Units / Supported Q>, when the active load does not exceed the limit of load set in menu <Units / P load>.
	P load		
		P load Bl P (kW) 1 —— 2 ——	Active load values 0…255 [kW]. These values are used to select which maximum allowable reactive power deviations will be used.

	Coefficients		
		Step coefficient Bl coeff. 1 1Q+ —.– 1 2Q+ —.– 1 tQ+ —.– 1 1Q- —.– 1 2Q- —.– 1 tQ- —.– 2 1Q+ —.– 2 2Q+ —.– 2 tQ+ —.– 2 1Q- —.– 2 2Q- —.– 2 tQ- —.–	Coefficients are used for the calculation of compensation parameters in STEP algorithm. See the description of compensation algorithms. Range 0.1...25.0
	Supported Q		
		Supported Q Bl Q (kVAr) 1 ±—— 2 ±——	The constant component (zero) of reactive power is set 0 ... 255 [kVAr].
	-Q disconnection		
		-Q disconnection Bl Status 1 Connected 2 Disconnected	In case of reactive power re-compensation to a negative side, the controller will automatically without waiting for the end of the compensation period disconnect some of batteries to eliminate re-compensation. Not used in STEP algorithm.
	Pause		
		Pause --- s	Delay of repeated connection of batteries (time of discharge) 0…255 [s].
	Q control		
		Q control Bl Induc. Capac. 1 —— —— 2 —— ——	Maximum non-registered deviation of reactive power 0 ... 255 [kVAr].
	Q control management		
		Q control management Bl Status 1 Connected 2 Disconnected	Connection/disconnection of power monitoring.
	U control		
		U control Bl par. value 1 Umax ----- V 1 Tmax ---- s 1 Umin ----- V 1 Tmin ---- s 2 Umax ----- V 2 Tmax ---- s 2 Umin ----- V 2 Tmin ---- s	Maximum voltage of batteries of units 1…20,000 [V] and reaction time 1…9,000 [s], for disconnection of batteries from surge. Minimum voltage of batteries of units 1…20,000 [V] and reaction time 1…9,000 [s], for restoration of the operating mode of batteries. *Umax:* voltage at which the calculation of time *Tmax* starts before blocking. *Umin:* when the use of batteries is blocked from surge, the expected network voltage will fall below this limit and the

			time *Tmin* starts to be calculated before unblocking.
	U control management		
		Q cont. management Bl Status 1 Connected 2 Disconnected	Connection/disconnection of battery surge monitoring.
BATTERIES			
	Connection		
		Connection Status No Bl power Connected 1 1 ±---- Disconnected 2 1 ±---- ...	Manual connection/disconnection of battery.
	Setting		
		Setting No Bl power 1 1 ±---- kVAr 2 1 ±---- kVAr ...	Attribution of batteries to logic units and introduction of reactive power 0…9,999 [kVAr]. 0 - means that there is no battery.
	Metering unit		
		Metering unit No times 1 ------- 2 ------- ...	Numbers of connection of batteries. (for information purposes only)
	Clock		
		Clock No time (hours) 1 ------.- 2 ------.- ...	Operating time of batteries (for information purposes only)
	Voltage		
		Battery Rated voltage Bl U(kV) 1 ---.--- 2 ---.---	Nominal rated voltage of unit batteries 0.001...999,999 [kV]. These values are used for the recalculation of capacity/reactive power of battery in view of the real network voltage.
	Correction		
		Bat. correction Bl Status 1 Connected 2 Disconnected	Connection/disconnection of calculation of capacity/reactive power of batteries according to the actual network voltage.
	Grounding		
	a	Grounding No Bl power 1 1 ±---- kVAr 2 1 ±---- kVAr ...	Selection of the desired battery according to the entered data.
	b	Ground # -- time ------.- numbers ------- Yes <No>	Deletion of the operating time and number of connections of selected battery.

METERING UNITS			
	Momentary values		
	a	Moment. values Bl metering u. 1 1 metering u. 2 metering u. 2 1 metering u. 2 metering u.	Review of momentary data of electricity meters. Selection of desired metering unit. The number of following windows depends on the type of metering unit.
	b	Metering unit - Q L1 ------.- kVAr L2 ------.- kVAr L3 ------.- kVAr	Representation of reactive power to each individual phase.
	c	Metering unit - ΣQ Σ: ------.- kVAr	The resultant reactive power of all three phases.
	d	Metering unit - P L1 ------.- kW L2 ------.- kW L3 ------.- kW	Representation of active power to each individual phase.
	e	Metering unit - ΣP Σ: ------.- kP	The overall active power of all three phases.
	f	Metering unit - cos φ -.--- -	power cosine and nature of reactive power: L – inductive, C – conductive.
	g	Metering unit - I L1 ----.- A L2 ----.- A L3 ----.- A	Phase current.
	h	Metering unit - U L1 ---.--- kV L2 ---.--- kV L3 ---.--- kV	Line-to-line voltage.
	i	Metering unit f --.—Hz	Network frequency.
	j	Metering unit ----.--.-- - --:--:--	Date and time of the metering unit.
	Numbers and passwords of metering units.		
	a	Metering u. numb./passw. Bl Metering u. Number 1 1 -------- 1 2 -------- 2 1 --------	Manufacturer's numbers of electricity metering units used in the system. 8 symbols. In case of shorter number of electricity metering unit, it is necessary to leave <0> at the front.

		2 2 --------	
	b	Metering u. numb./passw. Bl Metering u. Passw. 1 1 -------- 1 2 -------- 2 1 -------- 2 2 --------	User password of electricity metering units used in the system. 8 symbols.

	Types of metering units		
		Types of metering u. B S Type Speed 1 1 ----- ----- 1 2 ----- ----- 2 1 ----- ----- 2 2 ----- -----	Indicated types of electricity meters and communication speed values. LZQM type that also meets the LZKM and EPQM type electricity metering units. Possible types of electricity metering units: LZQM, LZKM, EPQM, EPQS, EMS, GAMA, supporting DLMS communication protocol. Possible connection speeds: 300, 1,200, 2,400, 4,800, 9,600, 19,200.
	Transformation coefficients		
		Transform. coeff. Bl Metering u. coeff. 1 1 U ---- 1 1 I ---- 1 2 U ---- 1 2 I ---- 2 1 U ---- 2 1 I ---- 2 2 U ---- 2 2 I ----	Transformation coefficients which are always used to multiply the readings of electricity meters 1 ... 9,999. If transformation coefficients are not necessary, they should be set to <1>.
	Voltage control management		
		Voltage c. manag. Bl Metering u. Status 1 1 Connected 1 2 Disconnected 2 1 Connected 2 2 Disconnected	Connection/disconnection of voltage monitoring.
	Current control management		
		Current c. manag. Bl Metering u. Status 1 1 Connected 1 2 Disconnected 2 1 Connected 2 2 Disconnected	Connection/disconnection of current monitoring.
	Voltage control		
		Voltage control Bl Metering u. U(kV) 1 1min ---.--- 1 1max ---.--- 1 2min ---.--- 1 2max ---.--- 2 1min ---.--- 2 1max ---.---	Maximum non-registered deviation of voltages 0.001 ... 999,999 [kV].

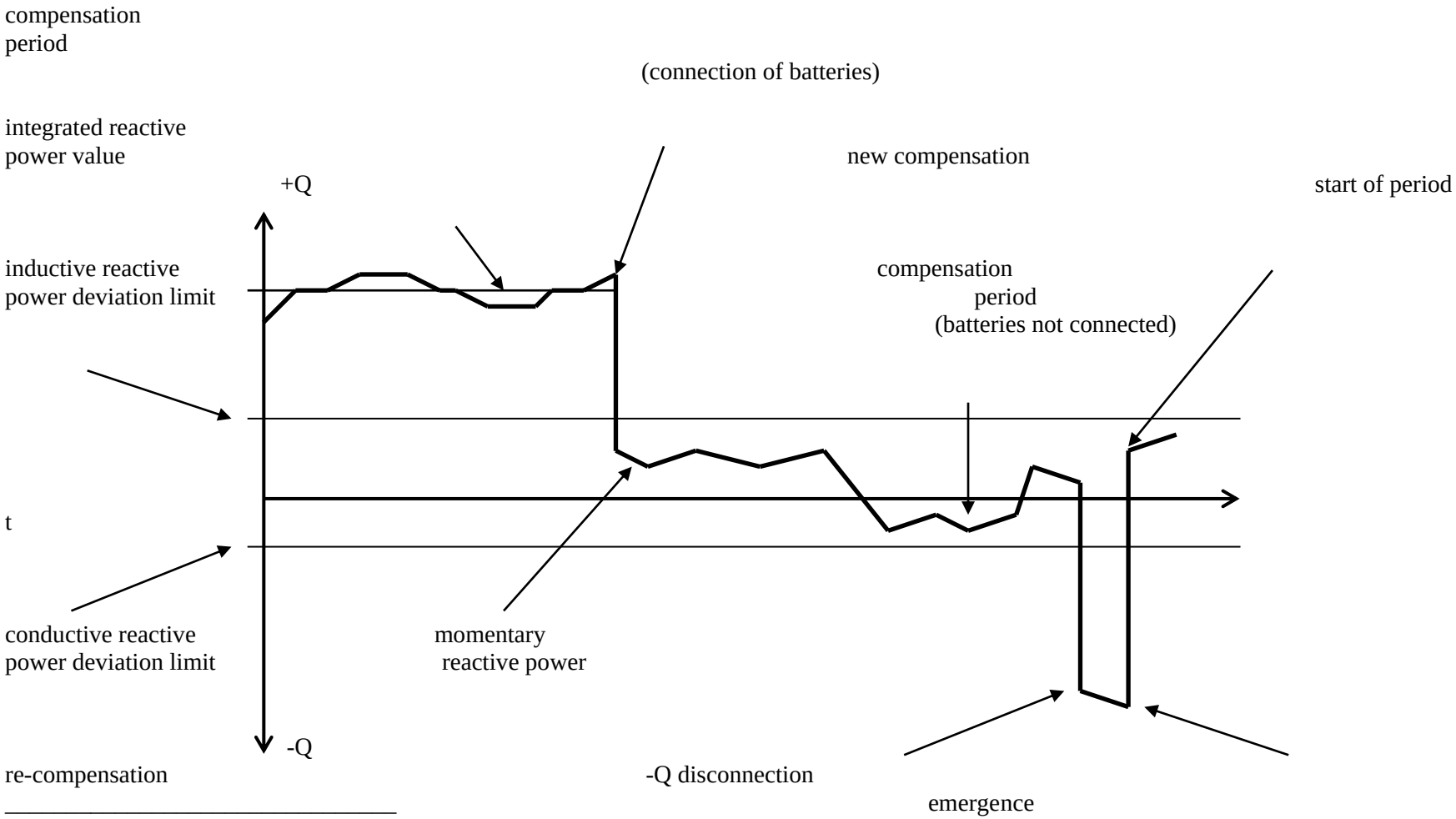
		2 2min ---.--- 2 2max ---.---	
	Current control		
		Current control Bl Metering u. I max(A) 1 1 ----.- 1 2 ----.- 2 1 ----.- 2 2 ----.-	Maximum allowable current 0.1 ... 9,999.9 [A].

	Control		
	a	Control Operating Q U I P -- -- - -	Represents the current values of control bytes (for information purposes).
	b	Control Alarm CRC T Q U I P U - - - -- - - -	Represents the current values of alarm bytes (for information purposes).
OTHER			
	Automatic control		
		Automatic control Status Disconnected	Connected/disconnected automatic compensation mode.
	Algorithm		
		Algorithm REEKS 5	Set algorithm of compensator operation. Possible values: REEKS-5, REEKS-3, STEPS. See the description of compensation algorithms.
	Connection ports		
		Connection ports CLin ----- b/s CLout ----- b/s	Current loop interface communication speeds. Electricity metering unit communication speeds are indicated separately to each metering unit in menu <Metering units / Types of metering units>.
	Connection		
		Connection Input REEKS+ES Output All	*Input:* can be used to set CLin communication interface only for polling of the controller or for polling of the controller and metering units connected after it to the CLout communication interface. Output: can be used to set CLout communication interface for polling any metering units or only those entered in the controller parameters in menu <Metering units / Numbers and passwords of metering units>.
	Alarm		
		Alarm control Bl Par. Status CRC Connected 1 P Disconnected. 1 I Connected. 1 Q Connected.	Connected/disconnected control of respective event. *CRC:* control of internal controller parameters against damage; *P:* loss of load (less than 1 kW); *I:* exceeding of the maximum current of electricity meter; *Q:* falling of reactive power out of the set maximum

		1 U Connected. 1 Ub Connected. 2 P Disconnected. 2 I Connected. 2 Q Connected. 2 U Connected. 2 Ub Connected.	allowable deviation, longer than 8 compensation periods; *U:* falling of electricity meter's voltage value out of the set maximum allowable deviation; *Ub:* exceeding of the maximum allowable surge of the unit. *I, Q, U, Ub:*respective monitoring must be connected for the alarms.
	Clock		
		Clock ----.--.-- --:--:--	Shows the internal time of controller. The controller does not have a clock, therefore, this time is taken from electricity meters.

	Table		
	a	Table --- ----.--.-- --:--:-- ----- -- -- --	Shows the numbers of the entry of the table of registered events, numbers of registration of events, flags and time in sequence.
	b	Table --- -- ---------- ...	Shows the number of the entry of the table and lists all registered events in a short text.
	Configuration blocking		
		Config. block. Opening keyboard PIN ****	Controller keyboard locking/unlocking.
	Password		
		Password PIN 0000	Entry of password (PIN code).
DEVICE NUMBER			
		MENU-DEV. NUMBER # -------- Ver.: 6.00.---- Date: ----.--.--	Controller ID number and software version and date.
MANUFACTURER			
		MENU-MANUFACTURER Elgama Sistemos www.elgsis.lt	

REEKS-3 ir REEKS-5 compensation algorithms

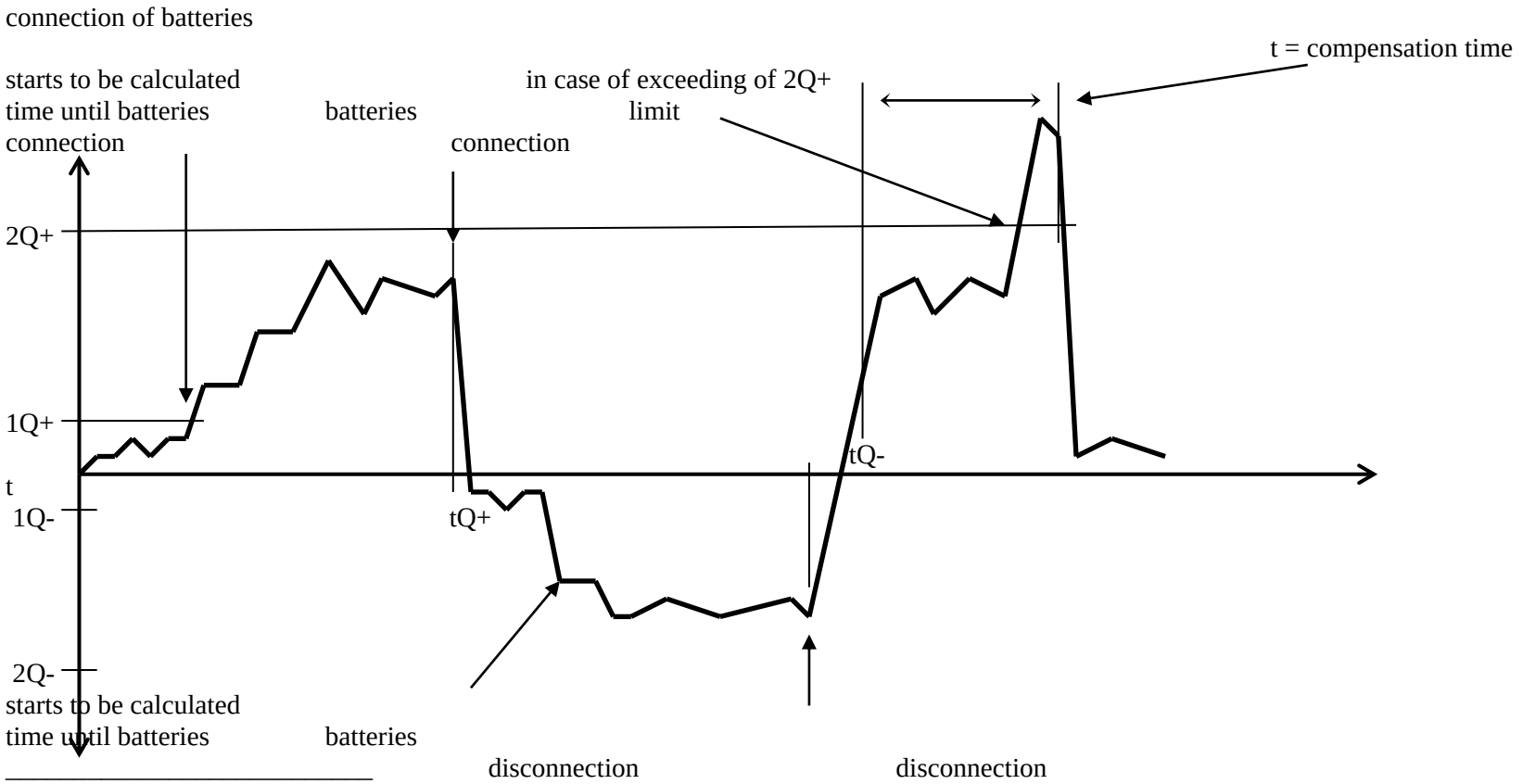


Reactive power deviations are selected in view of network load (High Load / Low Load).

REEKS-3 algorithm is aimed at maximum compensation.

REEKS-5 algorithm additionally evaluates the sizes of batteries and seeks to compensate with small batteries (< 12 kVAr), and connects the larger one only when it cannot compensate by using small batteries. To achieve full functioning of this algorithm, it is necessary to install a sufficient number of small batteries. Their number should be sufficient to cover the fluctuations of reactive power. The advantage of this algorithm is a more precise compensation because it can switch batteries faster, the use of large batteries is significantly lower (saves the equipment), system maintenance is cheaper due to the replacement of cheaper small batteries. However, it results in the use of more control channels for the input.

STEP compensation algorithm



Coefficients 1Q+, 2Q+, 1Q-, 2Q- are used to calculate the respective reactive power limits received by multiplying the respective coefficient of the lowest installed battery power. The lowest power of battery unit is taken from the parameters.

tQ+ coefficient is used to calculate battery connection delay which is received by multiplying the coefficient by the compensation period.

tQ- coefficient is used to calculate battery disconnection delay which is received by multiplying the coefficient by the disconnection period.

Compensation time is calculated as follows:

- when Q does not reach limit 1 - compensation is not performed;
- when Q reaches limit 1 - compensation time becomes equal to compensation or disconnection period multiplied by coefficient tQ;
- when Q reaches or exceeds limit 2 - compensation time becomes equal to compensation or disconnection period;

- when Q is between limits 1 and 2 - the compensation time is calculated as linear interpolation between compensation or disconnection period multiplied by respective coefficient and compensation or disconnection period without coefficient. The reaction time becomes shorter due to the increase in non-compensated reactive power.

Insertion of compensation parameters

During the performance of configuration of compensation system control unit it is necessary to connect supply voltage and disconnect voltage in battery control circuits. In all control unit programme windows, the change of parameters requires:

1. to set the value selection marker (►) at the changed value;
2. to set value editing status by pressing button "**Enter**". The value will turn into a flashing editing marker (_);
3. for determination of the position of edited figure and its value it is necessary to use buttons ↑,↓,←,;→
4. the edited value is saved by pressing the button "**Enter**"; in case of pressing "**Cancel**" no changes are saved. In any case, the value selection marker (►) is shown again or it is returned to the previous window.

To set the reactive energy compensation parameters, it is necessary to select the following menu in program window:

<Batteries | Setting> - the power of each battery connected to control unit is indicated and the battery attributed to I or II virtual unit.

<Units | Compensation period> - the period of switch between the batteries of I and II virtual units is set. Possible values (10…900) s.

<Units | Q residue HL> - the maximum allowable non-compensated reactive power of I and II virtual units is set when active load exceeds the set value (high).

<Units | Q residue LL> - the maximum allowable non-compensated reactive power of I and II virtual units is set when active load does not exceed the set value (low).

<Units | P load> - this parameter sets the value of active load in view of which the respective non-compensated reactive powers will be applied. The exceeding of this parameter means that the load is high. If this parameter is not exceeded, the load is considered to be low.

<Units | Supported Q> - this parameter defines the value of reactive power which remains (emerges) after the connection of batteries. The controller will try to maintain this power all the time when correcting the connection of batteries. Compensation balance can be changed from -255 to + 255 kVAr.

<Units | – Q disconnection> - it is necessary to set if certain batteries should be immediately disconnected in case of over-compensation to reduce or eliminate over-compensation at all.

<Units | Pause > - it is necessary to enter the delay value of repeated connection of batteries in seconds. If the batteries can be connected without discharge pauses, this parameter must be set to 0. After this parameter is set, the connection of batteries slows down and this impairs the compensation.

<Metering units | Numbers and passwords of metering units> - it is necessary to enter the manufacturer's numbers of electricity metering units attributed to each virtual unit. Electricity metering unit is not entered, if all numbers are equal to 0. The unit will function if at least one electricity meter is entered. The unit will also perform switches of batteries if at least one electricity meter of the unit maintains connection with compensator. In case of DLMS-type metering units, it is also necessary to indicate the user password of 8 symbols.

<Metering units | Types of metering units> - it is necessary to enter the type and connection speed via interface for each entered electricity metering unit. The speed of connection of electricity metering units is set in the factory or it is entered by the representative of the power supply organisation (in view of the operation conditions and user demands, by default - 4,800 b/s).

<Metering units | Transformation coefficients> - it is necessary to enter the coefficients of voltage and current transformation for each entered electricity meter. Some electricity meters do not have transformation coefficients to be entered, therefore, they should be indicated here. Readings of electricity metering units are always multiplied by transformation coefficients, therefore, if the coefficients are not used, they should be equal to 1. Coefficient values cannot be equal to 0 or any other unreal number.

<Others | Algorithm> - it is necessary to set which algorithm will be used for compensation. REEKS-3 algorithm seeks for maximum compensation of reactive power, while other criteria are not taken into account. REEKS-5 algorithm also considered the batteries and seeks for as little as possible connection/disconnection of magnetic start-up devices.

<Other | Auto. control> - connection/disconnection of automatic compensation mode.

In case of performance of these settings, it is necessary to check whether the connection between electricity metering units and control unit is functioning. Before that it is necessary to check if the communication interfaces of devices are properly connected, i.e. whether 3...4V constant voltage falls on electricity meter current loop terminals 14 and 16 (first current loop) (if the readings are approx. 1…2V, the terminal wires connected to the current loop should be placed in a reverse order) and to make sure if network voltage is connected to the electricity meters. Connection with each metering unit is checked in menu <**Metering units| Momentary values** >, by consistently reviewing the momentary data of all metering units connected to the system. If the control unit reads momentary data of all metering units, it is possible to connect the control voltage of compensating batteries and to start the automatic compensation of reactive power.

Additional functions of control unit

Manual control

If the nature of load does not change in the network for a long period of time and automatic compensation of reactive power is not necessary, the control unit allows to move to the manual control mode. In such case, it is necessary to select menu <**Batteries | Connection** > and, subject to LCD dialogue, it is necessary to connect the desired condenser batteries.

Review of momentary data of electricity meters.

Operation is performed by using menu <**Metering units| Momentary values>.**

Inspection of the status of batteries

The operation is performed by using menu **<Batteries|** ‘battery_number’**>.** The programme of control unit enables remote detection if the compensating batteries are connected and also enables to diagnose if their power has the actually possible value.

Manufacturer's warranties

The period of warranty service of controller - 24 months.

If the user observes the below stipulated rules, the hardware of the system and any noticed software errors are eliminated free of charge during the warranty period:

- avoids termination and short circuit in the communication lines, avoids their short-term and long-term connection with telephone, electricity and other lines that do not belong to the system;
- when changing the electricity meters in the system, their configuration or layout in the system, it is necessary to inform system producer hereof and to receive his consent;
- avoids connecting the controller REEKS 6.0 to the loads of controlling outputs exceeding the allowable loads indicated in the description;
- avoids damage to hardware seals and stickers.

During the period of warranty service of the system, the manufacturer shall present (free of charge) the new versions of the same software with eliminated defects noticed during the use and if the user agrees to cover the costs of the business trip of UAB NAVITUS LT specialist.

In case of conclusion of individual agreements with the User, the additional software can be delivered to him. Upon the expiry of the warranty period of system, the manufacturer undertakes to carry out technical maintenance of system and supplements of programmes for the additional fee.

UAB NAVITUS LT

Tel.: +370 5 237 50 17, fax: +370 5 237 50 18

http://www.navitus.lt, e-mail: info@navitus.lt

Visorių g. 2, LT 08300, Vilnius

TECHNICAL CERTIFICATE OF THE PRODUCT

REEKS 6.0

Serial No _____

Date of sale _____ Manufacturer _____

Authorised seller _____

Name and address of the company where REEKS 6.0 is installed:

_____

Date of installation _____

Installation performed by: _____
(First name, last name, signature)

Maintenance records

Date	Performed works, last name, signature