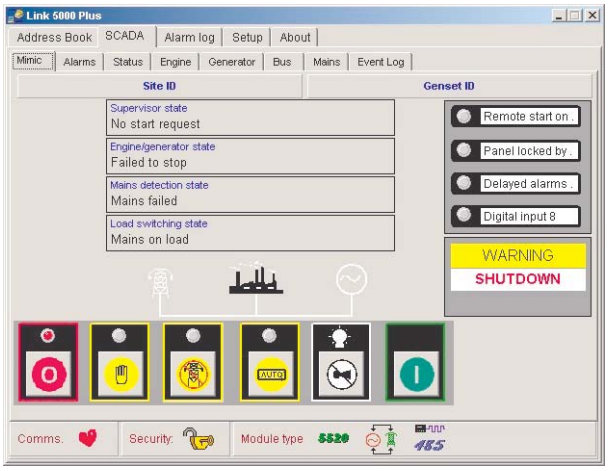
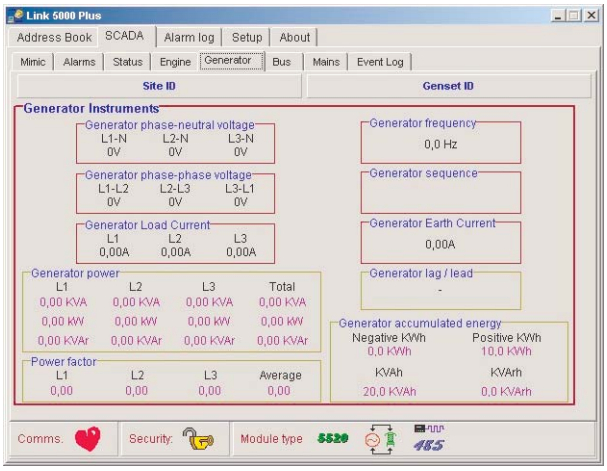
REMOTE MONITORING

Overall View on Communication

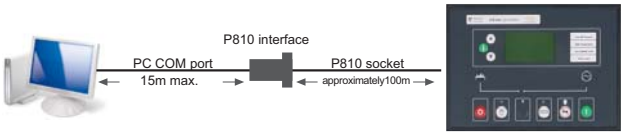
In this document RS232-RS485 and Ethernet interface access methods which commonly used in remote controlling and communication, are going to explain. Data communication contains many applications such as monitoring complex system parameters. This kind of monitoring process named supervisory control and data acquisition or as shortly S.C.A.D.A. Interface system's industrial standards which used during communication recognize by related establishments so many producers who fulfill these standards can maintain products for control and monitoring.





Usage of P810 interface

RS 232 interface is the most commonly used and most preferred communication method. One of disadvantageous of this communication is problems that caused by different earth potentials. That can prevent by maintaining electrical isolation between two devices. P810 module can maintain this isolation which occurs between one of 55xx devices and your personal computer. By using P810 module, the distance of communication line between P810 and 55xx can redound up to 100mt. For 9600 baudrate communication speed, computer and P810 module interval should be maximum 15mt. In newly released computer's standard package RS232 portal replaced with USP and some of the converters from RS232 to USP do not work properly so USP-P810 is also using this kind of communication. In this situation P810USP and computer will be connected with a very short cable because of the properties of USP port.

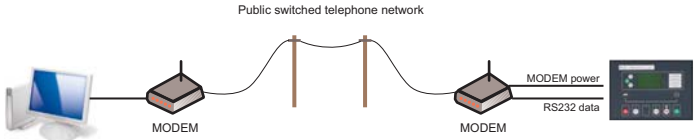


Communication with PTSN or GSM modem

With standard telephone line (PTSN) modems recommend by our, firm it's possible to communicate between personal computer and 55xx device over RS232. RS232 communication signals turn into sound signals over the standard telephone line by modem. This communication works in a sense of Modulator/Demodulator. Communication also provide with GSM modem. In this application mode that you pick must be eligible for your modem service supplier's frequency. (900, 1800, 1900 MHz)

If you wish in a GSM modem using system, control device can configures to send SMS in a case of emergency.

Even most modem producers obey the standards there can be different working code in the same brand modems. For this reason we suggest you to buy a modem which recommended by our firm.



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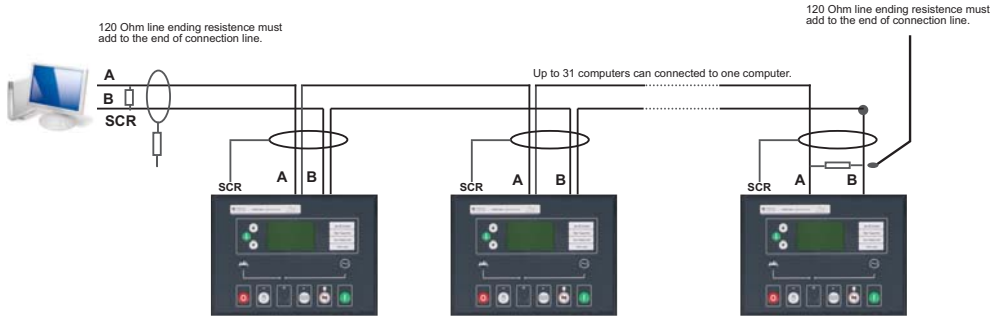
RS485 interface

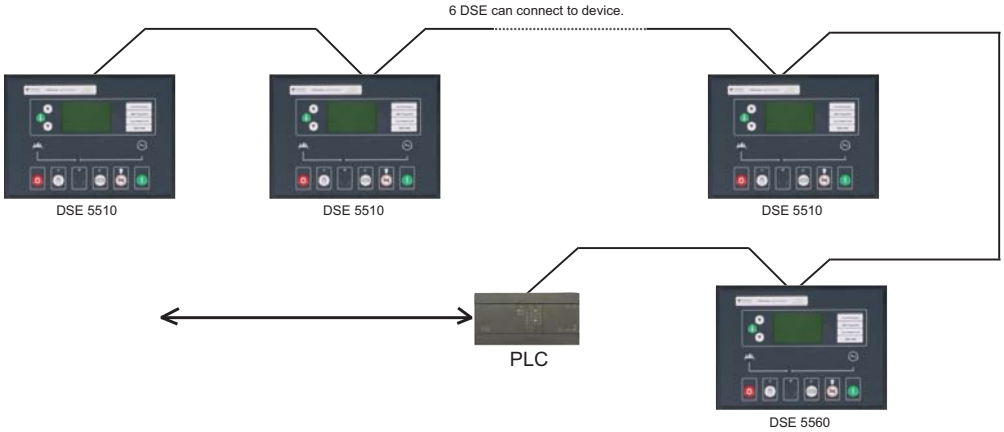
On RS232 communication interface at most 2 electronic devices limited maximum 15mt. cable length in 9600 baudrate communication speed. In a system when a different earth potential occur at the same time, necessity of optic isolation set forth RS485 interface as a different solution. RS485 is a communication system using differential voltage method which use 2 pole wire and can connect 32 devices from the same line. Every device that connects from this line has its own ID and cable link of this device's connected one device to another like a chain. This cables length can maximize up to 4095mt. depended on the quality of the cable. If the distance is longer than that, it is possible to extend distance by using enforcer to every 4095mt.

Warning: Cable that is using for RS485 is a special cable named BELDEN 9841 120ohm RS485. A 120 ohm line ending resistance should lock on to devices placed in beginning and end of the cable. If this resistance tied to RS485/232 or RS485/USP converter card which placed in your personal computer then the resistance at beginning of line should not lock on



Internet Connection

Synchronized system up to 6 generators can be seen in one indicator with internet connection package. With this program values which measured by six 55xx and 5560 device can be seen in addition to this generator's start and stop commands can be seen too.



Communication Protocols

Devices connected to RS232 and RS485 interface uses the same language to understand each other. This language has known as protocol. The devices lock on at our panels uses Modbus protocol for communication. Modbus is extremely enduring, master and slave methods using protocol which also answers to 55xx device and master your personal computer's program: Link5000Plus. Standards for this protocol are specific so it is appropriate all kind of SCADA which is working with this protocol.
** Device's Modbus address and information provided by our firm with a request