KSUA

Description of Modbus over TCP/IP.

Valid from week of manufacture 2013.05

Description

The KSUA is a control and monitoring unit designed to control various types of fire/smoke dampers and fans in a flexible way. This unit is a master unit. See also the main description of the KSUA.

Open Modbus

TCP/IP and Ethernet are used to transmit Modbus over the Internet or an intranet. This is a standard transmission method, and TCP/IP includes a special header that keeps track of data such as the addresses of the slave units in Modbus. This field is called UI (Unit Identifier).

Ethernet

The Ethernet input auto-detects 10 or 100 Mbps. RJ45 for twisted pair is standard. The KSUA includes the option of connecting an earth for the RJ45 contact. This is very rarely needed. The relevant jumper is called UA2.

Addressing

When TCP/IP and Ethernet are used, the system needs to keep track of a large number of addresses. The Ethernet has what is known as the MAC address. This is a fixed address, and there is usually no need to worry about this. The IP address is the address used to access KSUA over the Internet. It consists of four groups of numbers, for example 192.168.0.45. There are also the "usual" Modbus addresses between 1 and 247. The KSUA can handle addressing in various ways. The default for IP is static addressing. 192.168.0.220 with gateway address 192.168.0.1 and subnet 255.255.255.0 is used.

For Modbus, the address is entered in the display as usual.

Configuration

To use Modbus over TCP/IP, specify Ethernet in the Modbus I/O menu. Also use this menu to set the correct Modbus addresses. If you need to change the IP address or other parameters affecting TCP/IP, you must use the Ethernet interface.

You can download free software allowing you to do this from www.lantronix.com. Start by downloading DeviceInstaller. During installation, you may be requested for Microsoft's dotnetfx program. If the program is not already on your PC, download it too. When DeviceInstaller runs, it accesses the net to find Lantronix products. Click on the relevant product, then you will be able to set the IP address easily. You may need to set the default gateway and the subnet mask. If you are not familiar with these parameters, talk to your network administrator. TELNET must be used to change other parameters. DeviceInstaller also includes a TELNET client. Do not use the web interface provided. If you ever perform a factory reset, the communication parameters must be reset to 9600,8,E,1,RS232. Slave address=0.

Communication through a firewall

Modbus uses 502 in TCP, so this port must be enabled in any firewalls along the way.

Indications

The Ethernet interface has two LEDs in the RJ45 contact. The upper LED shows the link test with green for 100 Mbps and amber for 10 Mbps. The lower LED flashes when packets are received on the Ethernet. The Modbus LED on the front flashes as usual when a legal Modbus packet is received by the KSUA.

ON Control AB, Hjortstigen 5, SE-507 70 GÅNGHESTER, Sweden
Tel: +46 33 25 65 70, Mobile: +46 70 625 86 00, FAX: +46 33 25 69 20   Sid 1
Beskrivning KSUA TCP_IP ver2_eng.doc

Standard configuration of TCP/IP interface.