EKM-2 Converter

Applying Ethernet communication buses in industry is accompanied usually by adaptation problem to Ethernet network requirements of devices, equipped only with serial RS ports. Extra difficulty is variety and differentiation of communication protocols utilized in devices and upper layer systems.

Solution for this kind of problems is converter - hub EKM-2 RS/RJ45. It allows adaptation of protection, control and measurement devices, not equipped with Ethernet port, to requirements of upper layer systems, based on TCP standard.

Applying EKM-2 RS/RJ45, besides of hardware advantages, allows utilization of many communication protocols (e.g. Modbus RTU, ASCII, Modbus IP, DNP 3.0. and others) and even writing own or ordering dedicated protocols.
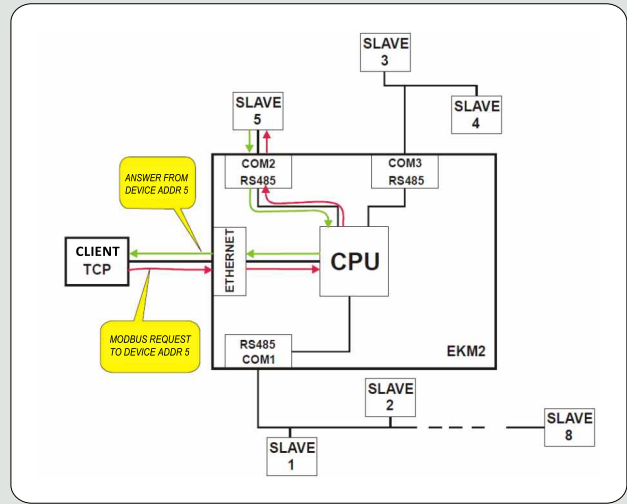
The device working principle is a gateway between Modbus RTU and Modbus TCP. From TCP/IP side it is visible as Slave (server) and on RS-485 network as Master.

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Main features:
- configuration without any mechanical components (switches, jumpers); all settings are done remote via www web page,
- exists a software tool to find converters in a network,
- 3 independent RS-485 ports with programmable terminators,
- possibility to grant IP address from DHCP server,
- useful address mapping system of Modbus slave devices.

Technical data		
Auxiliary supply voltage	nominal auxiliary supply voltage Upn	24 V DC
	working range of auxiliary supply voltage	0,8 ... 1,1 Upn
	allowed upper value of auxiliary supply voltage range	1,3 Upn (permanent)
	power consumption of auxiliary supply voltage circuit	1,5 W
Relay indication output - ratings	relay type	RM699BV-3011-85-1005
	contacts material	AgSnO2
	contacts voltage max.	400V AC , 125V DC
	continuous current max.	6A
	switching power AC1 max.	1500VA
Electric insulation	nominal insulation voltage	250V
	withstand voltage : - contacts to other circuits	2kV/50Hz/1min.
	- between open relay contacts	500V/50Hz/1min
Working environment	nominal temperature range	-10 ... +55o C
	border values of temperature range	-25 ; +70o C
	relative humidity	45 ... 75%
	atmospheric pressure	86 ... 106 kPa
	vibrations immunity	Class 1 according to EN 60255-21-1
Housing	to be assembled on a rail	Conbinorm-Compact CN22 Bopla
	dimensions	22,5/75/110,8
	weight approx.	0,350 kg
	ingress protection	IP20
	screw terminals	CTB9350 CAMDEN
Comm. Interface - RS485	transmission type	differential voltage
	transmission media	Twisted pair
	speed	up to 115200 bps
	max. length	1200m
	transmitter output voltage	±1,5 V min.
	receiver sensitivity	± 200 mV
Comm. Interface - Ethernet	standard	IEEE 802.3
	physical layer	10/100BaseT
	connection terminal	RJ45
	supported transmission types	half&full duplex
	extra functions	auto MDI/MDI-X

Converter is equipped with three push buttons to make following actions:
- Reset device – restarting
- Default settings – bring back factory preset parameters
- Blink – to switch on/off Blink functions

Blink function activates blinking the LED on a front panel, which helps to identify configured device.

Additional tool: Device Tool software to read and change configuration parameters.

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