CENTRAL PROCESSING MODULE

PRODUCT DESCRIPTION

M4.CPU.21 executes user's PLC program, manages I/O modules in its configuration and performs communication with uplink systems. Front side has 2 serial communication ports, 1 Ethernet port, LED indicators, USB device service port and a fault state relay output.

Operating system is Linux 2.6.33.7 / uClibc with Xenomai RT patch. Processor module can communicate with up to 16 I/O modules. An ordinary PC, with accompanying software, is used as the programming / debug tool. Programming is performed in two ways:

- functional block (FB) programming, built in accordance with the IEC 1131-3 standard,
- in C language using Eclipse environment

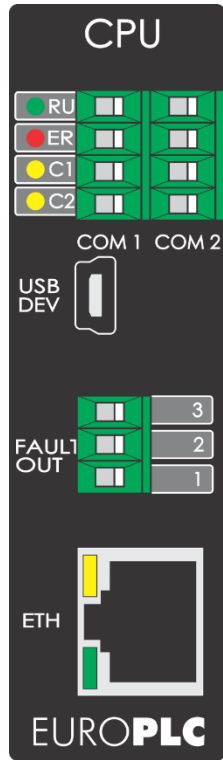Module is compliant with: EN 61131-1:2003, EN 61131-2:2003.

TECHNICAL DATA

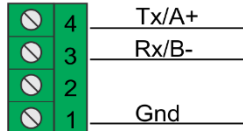| CPU CHARACTERISTICS	
Processor	Atmel AT91SAM9G20 (ARM9 architecture), 400 MHz, integrated WDT and RTC
RAM	128 MB SDRAM
Flash	512 MB NAND FLASH
Operating system	Linux 2.6.33.7 / uClibc with Xenomai RT patch
Word length	32 bit
EBUS communication	EBUS driver, up to 16 IO modules
Serial communication	RS232/RS485, half duplex, optically insulated, up to 115.200 kbps
Ethernet communication	10/100BASE-TX
USB device port	Full speed (12Mbit per second)
Addressing	- Address defined in the configuration file through a USB if RS485 communication is used - Defined by external DHCP server if Ethernet communication is used
DIGITAL OUTPUT CHARACTERISTICS	
Fault output	One programmable NO/NC relay Switching voltage range: 125 VAC/DC Switching current: 2 A (30 VDC), 0.5 A (125 VAC)
Scan time	5K instructions one I/O module in 0.8 ms
Response time	5K instructions one I/O module in less than 1.6 ms
ADDITIONAL SPECIFICATIONS	
Operating temperature	0.. +55 °C
Storage temperature	-30.. +80 °C
Operating humidity	Max 95% r.H., no condensation
Protection degree	IP20
Dimensions	108x86x27 mm
Weight	150 g
EBUS consumption	250 mA

PRODUCT FEATURES

» Two serial communication ports, optically insulated half duplex RS232/RS485
» 10/100BASE-TX Ethernet port
» USB device port, Type B

» Operating system: Linux 2.6.20.21 /uClibc with Xenomai RT patch
» EBUS driver supports up to 16 U/I modules
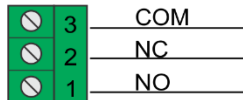» Programmable fault state relay output with NO and NC terminals
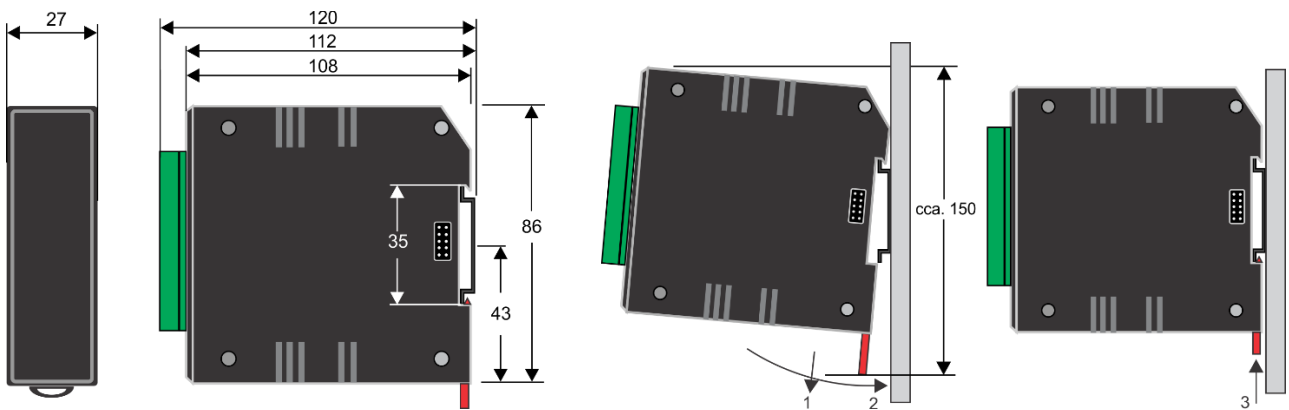
WIRING AND RESOURCES

COM1,2-RS232/RS485

4	Tx/A+
3	Rx/B-
2	
1	Gnd

USB DEVICE PORT

3	COM
2	NC
1	NO

ETHERNET PORT
10/100 TX BASE

DIMENSIONS AND MOUNTING

SAFETY NOTES

- The device is not allowed to be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- It may only be installed by suitably trained personnel.
- Any legal regulations or regulations issued by authorities must be observed during assembly.

- The device may only be opened at the manufacturer's site. It does not contain any parts that can be replaced or repaired by the user.
- The device contains electrical and electronic components and is not allowed to be disposed of as household refuse. All locally valid regulations and requirements must be observed.