



Elsist IEC61131-3 SlimLine Compact Eth CPU Module Instruction Manual

[Home](#) » [Elsist](#) » Elsist IEC61131-3 SlimLine Compact Eth CPU Module Instruction Manual 



SlimLine Compact Eth

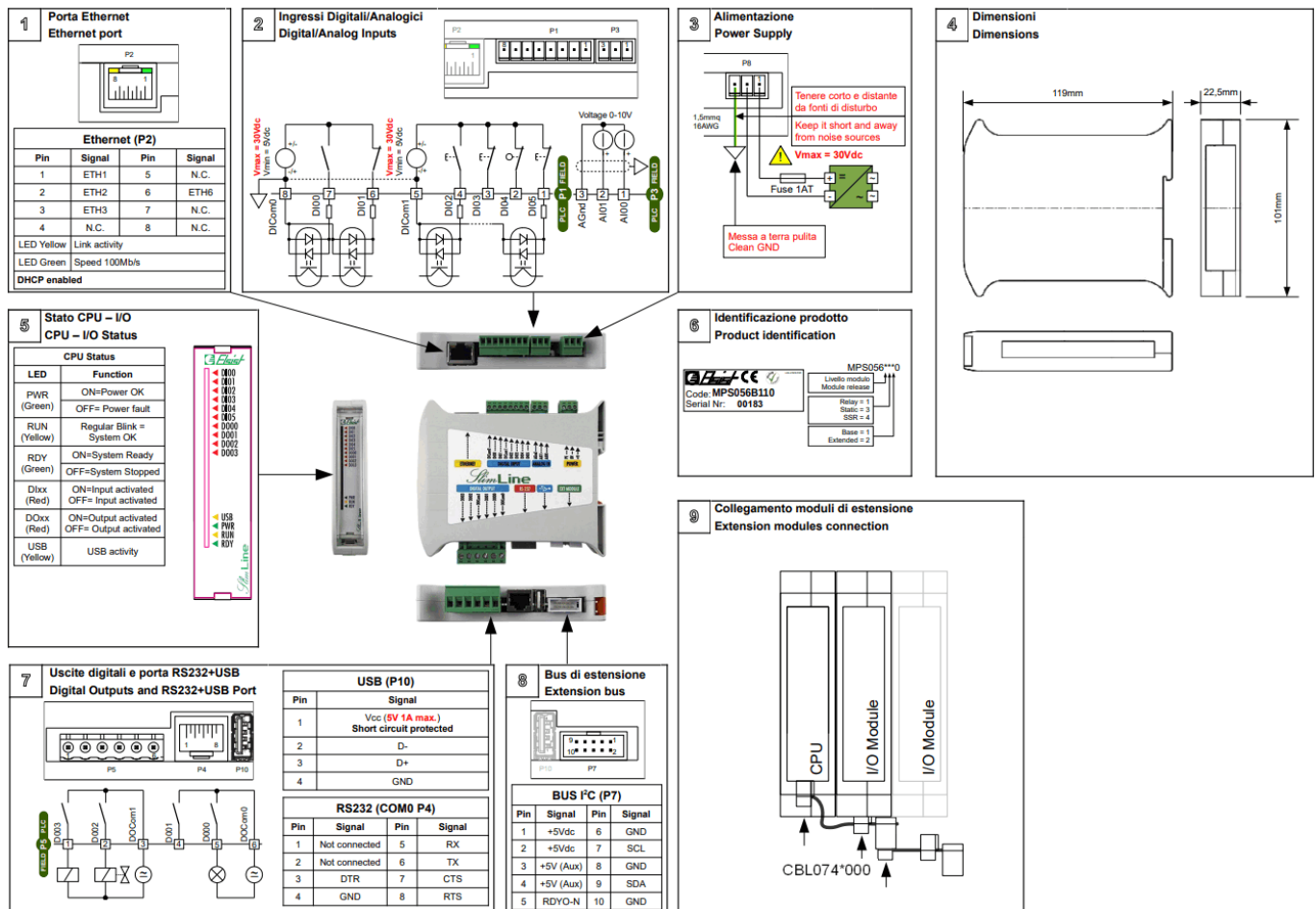
CE CPU Module Hardware
Instruction Manual



Contents

- 1 IEC61131-3 SlimLine Compact Eth CPU Module
- 2 Technical Specifications
- 3 Documents / Resources
- 3.1 References
- 4 Related Posts

IEC61131-3 SlimLine Compact Eth CPU Module



Connections

The SlimLine Compact Ethernet CPU module is provided of extractable TB to connect Power, I/Os and Field bus, IDC connector to connect the extension module, RJ45 connectors for RS232 COM port and Ethernet.

Power supply (Fig. 3)

The module can be powered with a DC source within the range 10-30Vdc. The power connection must be done according to the Fig. 2.

The power is signaled by the green LED "PWR".



WARNING! Values greater than the maximum allowed may damage the device seriously.

Ground connection (Fig. 3)

The device must be connected directly to Ground using the terminal block on the power supply connector (Fig. 3). The connection must be performed through a wire with section at least of 1.5mm², to a copper equipotential bar of adequate section.

To guarantee a good noise rejection, keep this connection as short as possible and take care to place it far away to the other cables.

Digital/Analog Inputs (Fig. 2)

The module is provided of 6 digital input and 2 analog input.

The digital input are galvanically insulated from the system and may be either PNP or NPN type as for your

convenience.

The digital Input DI00 may be used as a counter input with $F_{max}=10\text{KHz}$.

The analog Input are not insulated from the system and accept input voltages from 0 to 10Vdc.



WARNING! To connect the analog input use EXCLUSIVELY shielded cables, taking care to avoid placements close to noise sources.

Digital Outputs (Fig. 7)

The module is provided of 4 Digital outputs Relay , static OptoMOS or SSR (according to the version), galvanically insulated from the system.

Static OptoMOS outputs may be either PNP or NPN type as for your convenience.

SSR outputs are provided of Zero-cross feature and can be used on AC load ONLY.

WARNING! Shorts on the outputs may damage permanently the device.



For static OptoMOS versions it's suitable to place an extra rapid fuse 1AFF in series of the output common (DOComx) (i.e. Ferraz J084004P).

For SSR versions it's suitable to place an extrarapid fuse with I^2T specification of $8A^2s$.

Extension bus (where provided) (Fig. 8)

The communication bus with the extension modules uses the I2C™ interface (Fast mode) and it's available on the IDC10 connector (P7). The extension modules must be cascade connected through the special cables CBL074*000/CBL045**00 (to be ordered separately).

The Fig. 9 is an example of extension modules connection.

Up to 4 extension modules may be connected to the CPU (prior to check the maximum current needed).



WARNING! Before to connect the extension modules to the system, be sure that it's powered off. Missing this rule may produce failures in the modules.

RS232 Serial port + USB (Fig. 7)

The device is provided of one serial port DTE (Data Terminal Equipment). The connection between DTEs, such as Personal Computers, Operator Terminals etc., must be done through a Nullmodem cable of maximum cable length of 15 mt, according to EIA specifications.

This port isn't galvanically insulated from the system, it is recommended to verify, before to connect together different devices, the difference of potential on the ground.



WARNING! An excess of difference of potential on ground loop may cause damages to the devices.

The USB port is available on Extended versions only, and meets 2,0 specifications.

USB connector is A Type (Host mode).

Ethernet port (Fig. 1)

The module is provided of an Ethernet 10/100-Base T(x) available on the RJ45 connector P2; the connection, shown in Fig. 1, are compatible with the standard Ethernet IEEE 802.3 100-Base T.

To connect the device in an Ethernet network must be used UTP Cat. 5 cables RJ45, connected to an HUB or a switch, while to made a point to point connection it's enough to use an RJ45 patch cable without HUBs. The device is Auto-MDIX, so no cross cable is needed to connect it to a PC directly.

On P2 are available two LED for Ethernet status signaling: The green LED signals, when on, that the network is running at 100Mb/s speed.

The yellow LED signals the Ethernet link activity.

The module is supplied with DHCP enabled and, in case of lack of a DHCP server, the IP address can be assigned with the [Toolly – Elsisit](#).



WARNING! The module is supplied with Admin user credentials: User "Admin" e password "Admin". It is strongly recommended to change them before installation.

Status signaling (Fig. 5)

The device is provided of some LEDs to signal its status, particularly is signaled:

- PWR (Green LED)
Indicates that device is powered
- RUN (Yellow LED)
Regularly blinking indicates that the system is running without errors,
- RDY (Green LED)

When light indicates that the system is ready and it manages the I/O modules according to the user program.

When it's off it resets the output status on extension modules eventually connected to the system.

- DIxx (Red LED)

When light indicates activation of the corresponding DIxx.

- DOxx (Red LED)

When light indicates activation of the corresponding DOxx.

I²C™ is a trade mark of NXP Semiconductors

Technical Specifications

CPU Version		Relay	Static OptoMOS	SSR ZC
Power Supply		10-30Vdc 2W ⁽¹⁾		
Power to Exp. bus		5Vdc 1A max.		
Processor		Cortex M7 300MHz, 2MB FlashEPROM, 384kB SRAM		
Program memory	Base	65 kB User program ⁽²⁾ (131kB Option)		
	Ext.	131 kB User program ⁽²⁾		
Mass memory		398 kB User data ⁽²⁾ on FlashEPROM 4 MB Min. 100.000 erasing/programming cycles/page		
Data backup memory		6 kB User data ⁽²⁾ on FRAM 32 kB		
Data memory	Base	12 kB RAM User data ⁽²⁾ (20kB Option)		
	Ext.	20 kB RAM User data ⁽²⁾		
File System		FAT32 modified		
FTP Server		Yes		
Real Time Clock ⁽⁴⁾	Base	Yes, Backup time keeping optional ⁽³⁾		
	Ext.	Yes, Battery backup time keeping (5 years min.)		
USB I/F	Base	None		
	Ext.	USB 2.0, on USB A connector (host mode)		
Digital Input		6 Optoisolated PNP/NPN 5-30Vdc, 7mA@24V		
Counters		1 connected to DI00 (FMax 10kHz)		
		2 * 0-10Vdc common mode (or 1 differential) Resolution: 12Bit		

Analog Input		Conversion time: 1.1 mS (1 Ch) 2.2 mS (2 Ch)		
Digital Output		4 Relay (5) 5A@250Vac/5A@30Vdc max. Mechanical life: Min. 2 x 10 ⁷ (at 180cpm) Electrical life: Min. 10 ⁵ (2A 250Vac, 30Vdc, resistive load) Min. 5 x 10 ⁴ (2A 250Vac, 30Vdc, resistive load) (at 20cpm)	4 OptoMOS (5) 350mA@48V max. AC/DC , Vmin.: 0V ON Resistance: 2.5Ohm max. TOn: 4mS max., TOff: 1 mS max.(6)	4 SSR Zero-Cross (5) 2Arms 20-240Vrms (-20 to 25°C), 1Arms (70°C) I ² T for fusing: 8A ² s Zero-Cross Turn-On Voltage: 20V min Latching Current: 100mA min
PWM		N/A	2 connected on DO00/01 (FMax 1kHz)	N/A
Ethernet I/F		RJ45 10/100base-T(x) Auto-MDIX		
Expansion bus		I ² C™ (Fast mode)		
No max. exp. modules		4, (to be verified depending of type of module connected)		
RS232 I/F	Ports	1 * DTE on RJ45 connector		
	Baudrates	300, 600, 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps		
	Data bit	7 or 8		
	Stop bit	1 or 2		
	Parity	Even, Odd, None		
Status indicators		Power, RUN, READY, I/O Status		
Environment		Operating temperature: from -20 to +70°C		
		Storage temperature: from -40° to +80°C		
		Relative Humidity: Max. 90%		
Dimensions and weight		Dimensions: 22.5 mm L x 101 mm W x 120 mm H		
		Weight: 150g		
Approvals		CE, RoHS		
Notes		(1) Worst case (2) Firmware depending, Min. data retention 10years (3) Code PCK046*000/PCK052*000 (4) SNTP (Simple Network Time Protocol) supported (5) 1 common every 2Out (6) @10Vdc Rload=20Ohm		



<http://www.elsist.it>

Via G. Brodolini, 15 (Z.I.) 15033 CASALE M.TO (AL) ITALY

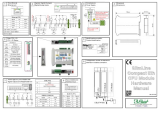
Phone +39-0142-451987 Fax +39-0142-451988

Internet: <http://www.elsist.it>





email: elsist@elsist.it

MNL197B100

Documents / Resources

	Elsist IEC61131-3 SlimLine Compact Eth CPU Module [pdf] Instruction Manual IEC61131-3 SlimLine Compact Eth CPU Module, IEC61131-3, SlimLine Compact Eth CPU Mod ule, Compact Eth CPU Module, Eth CPU Module, CPU Module, Module
---	---

References

-  [Elsist sistemi in elettronica dal 1983 - Home page](#)
-  [Elsist sistemi in elettronica dal 1983 - Home page](#)
-  [Toolly - Elsist](#)
-  [Toolly - Elsist](#)

Manuals+.