

Easylon®

For Automation With LONWORKS®



Interfaces

PC – LONWORKS Interfaces

Software

Communication with LONWORKS –
OPC, WEB, RNI

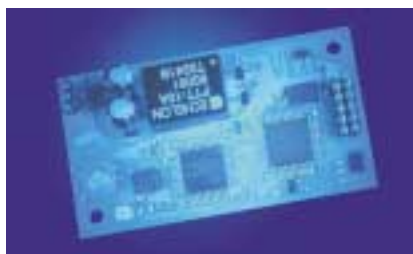


Application Modules

I/O Modules for Switching and Control

Network Components

From Repeater to Terminator



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Easylon® Products for LONWORKS®

Easylon ...

... these are devices, tools and connectivity solutions for easy configuration and intelligent operation of LONWORKS networks.

As European LONWORKS pioneer Gesytec develops since 1992 LONWORKS components for distributed, intelligent automation, also using them with success in own projects. With Easylon products we provide the user with the network-oriented components and tools to realize an efficient use of the LONWORKS technology.

As specialist for electronics and automation we introduced our ample know-how to development and use of components for automation networks to the Easylon products.



Large Range of Products

The product spectrum ranges from interfaces and gateways via control nodes to intelligent I/O nodes and infrastructure components for network operation. Many customers use Easylon tools for configuration and set-up of the networks – from design tool to analyzer..

Connectivity products for cross-system data communication complete the Easylon range of products for LONWORKS. The Gipsy Embedded PCs provide the complementary devices for efficient integration of the LONWORKS network into a manifold world of communication.

Individual Solutions

In addition, we also provide both application specific adaptation of the Easylon products and customer specific development of special components.

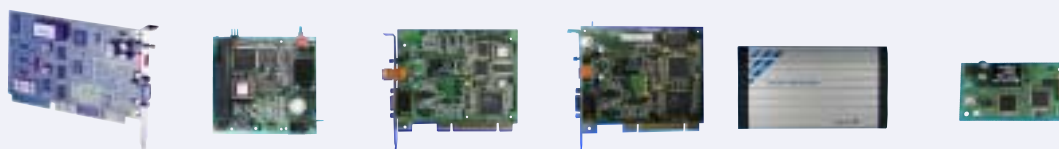
We are specialized in intelligent design solutions for your specific application. We have developed more than 100 LONWORKS components, either upon direct customer order or for the realization of automation projects. The basis of a multitude of existing solutions turns your requirement faster into a finished product.

The know-how combined of more than 25 years development services, application experience in automation and being LONWORKS provider right from the beginning makes Gesytec your ideal partner for development and series production of specific LONWORKS components.



Easylon® Interfaces

LonTalk® Adapter for PCs and other Computers



		PC Interface	PC/104 Interf.	PCI-Bus Interf.	VNI Interf. PCI	USB Interf.	USB Socket Interf.
Transceiver	TP78	+	+	+	(+)	–	–
	TP1250	+	+	+	(+)	–	–
	EIA-485	+	+	+	(+)	–	–
	FTT10A	+	+	+	+	+	+
	DC	(+) ¹	(+)	(+)	(+)	–	–
	Smart	(+)	(+)	(+)	–	(+)	(+)
Firmware	MIP	+	+	+	–	+	+
	NSI	+	+	+	–	+	–
	VNI	–	–	–	+	–	–
Driver	DOS	+	+	+	–	–	–
	Windows 95	+	+	+	–	–	–
	Windows 98 / 98SE	+	+	+	+	+	+
	Windows ME	+	+	+	+	+	+
	Windows NT	+	+	+	–	(+)	–
	Windows 2000	+	+	+	+	+	+
	WIN XP	+	+	+	+	+	+
	Windows CE 2.11	+	+	–	–	–	–
	Windows CE 3.0	+	+	–	–	+	+
	Windows CE 4.2	+	+	–	–	+	–
	LINUX	+	+	+	–	+	+
Options	Watcher	+	+	+	–	–	–
	Extend. temp. range	–	+	–	–	–	(+)
	Coating	–	+	–	–	–	(+)
	Cap for FTT-10A	(+)	(+)	(+)	(+)	–	(+)
Connector	Screw-plug terminal	+ ²	–	+ ²	+	+	–
	D-type	+	–	+	+	–	–
	RJ45	(+) ¹	–	(+) ¹	(+) ¹	+	–
	IDC	–	+	–	–	–	–
	Pin connector	–	(+)	–	–	–	+

- + standard
 – not possible
 (+) optional, on request
 (+)¹ optional, on request instead of D-type
 +² not with EIA-485 variants



Easylon® Interfaces

LonTalk® Adapter for PCs and Other Systems

A multitude of Easylon products is designated to access the data of the LONWORKS network for distributed, intelligent automation; especially the Easylon interfaces and Easylon software such as the OPC Server or the Remote Network Interface software.

Design and scope of performance of the Easylon interfaces are designated to the highest demands. We attach great importance to:

- Ability of use, especially for industrial applications;
- Support of current operating systems without canceling the support of older versions;
- Support of current bus systems and technical developments;
- Usability in LONWORKS networks either with or without LNS;
- To meet increasing requirements to networks demanding optimal performance for data access;
- The needs of users that have to access these interfaces with their own applications;
- The desire for the use of our products being as simple as possible.

These are the reasons why each and any Easylon interface offers a variety of variants though they have a lot in common, as compiled on this page.

However, shouldn't you be able to trace the solution you are looking for – just ask us. Maybe we already realized the solution for your problem for another customer in the past. You discover a lot more in a laboratory than in a catalogue.

Drivers

Windows operating systems from Windows 95 to the current ones, including Windows CE, are supported. A DOS driver is available for some boards. For most of the interfaces the scope of delivery includes Linux drivers.

Driver updates and versions for the latest operating systems can be downloaded any time from the support pages of the Gesytec web site. If you want others than standard feel free to ask. If necessary we can even help you out with a NT driver for the USB interface, just to mention an example.

WLDV32.DLL

The WLDV32.DLL, being part of the Easylon interface scope of delivery, offers a unique 32-bit driver interface for Windows operating systems.

Remote Network Interface (RNI)

Software for remote access from a networked PC (LAN, Internet) via TCP/IP to the LONWORKS interfaces at the network. The smartest solution to realize network management tasks in a remote LONWORKS network from your office PC. More details in the section software.

MIP or NSI Firmware

To access a LNS/LCA based LONWORKS network you will need Easylon interfaces with NSI firmware. The MIP version represents the cheaper variant for LNS-free networks and applications. Furthermore the MIP version includes a greater number of larger buffers; often an advantage for non-standard applications.

Easylon VNI

The most performant Easylon interfaces have just been developed. High data flow capacity, parallel network access, multi-client ability of the interface board, extended number of address table entries, communication with several network domains – all represent significant advantages of this EIA 709.1 based technology. The most important benefit however, is the fact that there is no need for the user to modify his applications when changing from traditional interfaces.

Transceiver

Free Topology (FTT) and Transformer Coupled Twisted Pair (TP/XF) are standard variants. Available are, depending on the type of interface, EIA-485, Smart Transceiver (FTX) and Direct Connect (DC) transceiver. Please refer to the respective technical specifications.

Easylon Watcher

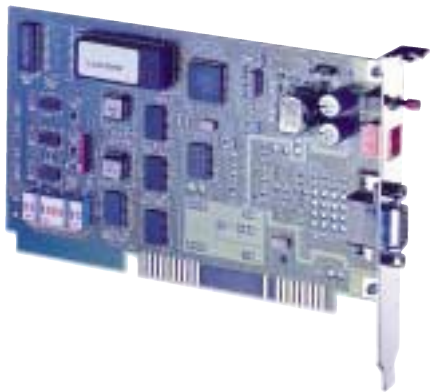
By means of the Easylon Watcher developed by Gesytec the interface board can listen in on the entire network traffic without additional bus load. This additional module available for some interfaces allows for capturing of even large amount of data, e.g. required for monitoring, visualization or data logging.

Ethernet Gateway

Gipsy 2000 LE is a performant Embedded PC at the LONWORKS network providing an Ethernet connection in addition to the LONWORKS interface. It enables the realization of gateway functions such as control and monitoring tasks. Some details:

- Embedded OPC server
- SQLdatabase
- PLC like programming according to IEC 61131-3





Easylon® PC Interface

LonTalk® Adapter for ISA Bus PC

The Easylon PC interface is an ISA bus PC interface board for connection to a LonWORKS network.

The board, CE and UL certified and proven in industrial environment is equipped with alternatively usable screw-plug terminal and D-type connector for connection to the LonWORKS network.

A variant with optically isolated EIA-485 transceiver is available further to the usual FTT-10 and TP/XF transceiver versions.

The short design of the board allows for integration even into compact PCs, making the Easylon PC Interface first choice for this kind of application.

- ▶ **FTT, TP/XF-78, TP/XF-1250 or EIA-485 transceiver**
- ▶ **For networks with or without LNS**
- ▶ **Drivers for DOS, Windows and Linux**
- ▶ **D-type plug and screw-plug terminal**
- ▶ **User programmable**
- ▶ **Easylon Watcher to listen in on the network traffic**

ISA bus Interface	8 bit data (I/O) according to personal computer bus standard P996
I/O addresses	4, setting by switches
Interrupts	5, 7, 9, 10, 11, 12, 15 software selectable
Coupling	parallel, slave_A mode
Memory	MIP 32 kbytes ROM, 24 kbytes RAM NSI 48 kbytes ROM, 9 kbytes RAM
Network Interface	
Transceiver variants	TPT/XF-78, TPT/XF-1250, FTT-10A or EIA-485 (39 Kbps)
Connectors	9-pin D-type and 2-pin screw-plug terminal (not with EIA-485)
Power Supply	
Voltage	5 V, from PC
Power consumption	1.5 W, typically
Display and Operation	
LED	service LED
Keys	service push button
Dimensions & Environmental Characteristics	
Dimensions	170 x 95 [mm], incl. connectors
Temperature	operating -0 - +50 °C storage -20 °C - +60 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
EMC	EN 50 081-1 EN 50 082-1

Easylon PC Interface for ISA-Bus PC with

- Transceiver type t and	
- MIP/P50 firmware	P.P1000t
- NSI firmware	P.P1001t

Easylon PC Interface for ISA-Bus PC with

- Watcher, transceiver type t and	
- MIP/P50 firmware	P.P1100t
- NSI firmware	P.P1101t

Transceiver types: t = 1 = TP/XF-78,
2 = TP/XF-1250,
3 = RS 485,
4 = FTT-10



Easylon® PC/104 Interface

LONWORKS® Interface Board for PC/104 Systems

The Easylon PC interface is PC/104 system interface board for connection to a LONWORKS network.

OEM versions of this board are interesting for the use in embedded systems. Other transceivers such Direct Connect or FTX can be used as well.

This board, proven in industrial environment, is also available in versions with extended temperature range and customer specific coating. These versions are compliant to EN 50155 as frequently used in railway technology. Further adaptations concerning plug position and type can also be realized.

- ▶ **FTT, TP/XF-78, TP/XF-1250 or EIA-485 transceiver**
- ▶ **For networks with or without LNS**
- ▶ **Drivers for DOS, Windows and Linux**
- ▶ **Versions for extended temperature range**
- ▶ **EN 50155 compliant**
- ▶ **Easylon Watcher to listen in on the network traffic**

PC/104-Bus Interface	8 Bitbit data (I/O) according to personal computer bus standard P996	
I/O-Adressen	4, setting by DIP switches	
Interrupts	3, 5, 7, 9, 10, 11, 12, 15 software selectable	
Coupling	parallel, slave_A mode	
Memory	MIP 32 kbytes ROM, 24 kbytes RAM NSI 48 kbytes ROM, 9 kbytes RAM	
Network Interface		
Transceiver variants	TPT/XF-78, TPT/XF-1250, FTT-10A, EIA-485, Direct Connect or FTX	
Connector	IDC	
Power Supply		
Voltage	5 V, from PC	
Power consumption	1.5 W, typically	
Display and Operation		
LED	- service LED - option: LON traffic LED, signal externally usable	
Keys	service push button	
Dimensions & Environmental Characteristics		
Dimensions	95 x 95,5 [mm], incl. connectors	
Temperature	operating	-0 - +50 °C
	storage	-20 °C - +60 °C
Version with extended temperature range		
	operating	-40 - +85 °C
	storage	-40 - +85 °C
Humidity	class F, accord. DIN 40 040	
EMC	EN 50 081-1	
	EN 50 082-1	
Certifications	EN 50155	

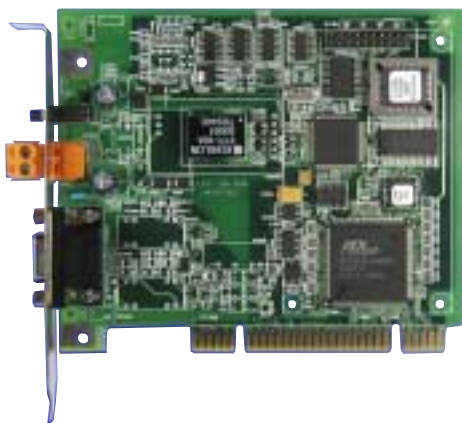
Easylon PC/104 Interface with

- Transceiver type t and
 - MIP/P50 firmware P.P1060t
 - NSI firmware P.P1061t

Easylon PC/104 Interface with

- Watcher, transceiver type t and
 - MIP/P50 firmware P.P1160t
 - NSI firmware P.P1161t

Transceiver types: t =
 1 = TP/XF-78
 2 = TP/XF-1250
 3 = RS 485
 4 = FTT-10



Easylon® PCI-Bus Interface

LonTalk® Adapter for PCI Bus PC

The Easylon PCI-Bus Interface is a PCI bus PC interface card for connection to LonWorks and other EIA 709.1 compatible control networks.

The board, proven in industrial environment is equipped with alternatively usable screw-plug terminal and D-type connector for connection to the LonWorks network..

A variant with optically-isolated EIA-485 transceiver is available further to the usual FTT-10 and TP/XF transceiver versions.

- ▶ **FTT, TP/XF-78, TP/XF-1250 or EIA-485 transceiver**
- ▶ **For networks with or without LNS**
- ▶ **Drivers for DOS, Windows and Linux**
- ▶ **D-type plug and screw-plug terminal**
- ▶ **User programmable**
- ▶ **Easylon Watcher to listen in on the network traffic**

PCI-Bus Interface	according to PCI-Bus standard 2.2; supports 3.3 and 5 V systems and PCI-X
Coupling	parallel, slave_A mode
Memory	MIP 32 kbytes ROM, 24 kbytes RAM NSI 48 kbytes ROM, 9 kbytes RAM
Network Interface	
Transceiver variants	TPT/XF-78, TPT/XF-1250, FTT-10A or EIA-485 (39 Kbps)
Connectors	9-pin D-type and 2-pin screw-plug terminal (not with EIA-485)
Display and Operation	
LED	service LED
Keys	service push button
Dimensions & Environmental Characteristics	
Dimensions	105 x 130 [mm], incl. connectors
Temperature	operating -0 - +50 °C storage -20 °C - +60 °C
Humidity	class F, accord. DIN 40 040
EMC	EN 50 081-1 EN 50 082-1

Easylon PCI-Bus Interface with

- Transceiver type t and	
- MIP/P50 firmware	P.P1020t
- NSI firmware	P.P1021t

Easylon PCI-Bus Interface with

- Watcher, transceiver type t and	
- MIP/P50 firmware	P.P1120t
- NSI firmware	P.P1121t

Transceiver types:	t =	1 = TP/XF-78 2 = TP/XF-1250 3 = RS 485 4 = FTT-10
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Easylon® VNI Interface PCI

EIA 709.1 Control Network Interface

The Easylon VNI Interface PCI is a PC plug-in card according to EIA 709.1 to connect PCI-bus PC to the LonWorks control network.

As a VNI board without Neuron the unit features increased performance, parallel transactions, multi-client capability and a larger number of address table entries. Protocol analyzing can be made. The EIA 709.1 controller can be software configured.

The Easylon VNI Interface PCI is compatible with other VNIs and even replaces standard Lontalk adapters without modification of the applications. A software gateway using an IP channel is not required.

The interface board is fitted with alternatively usable D-type and plug-screw connectors. to the LonWorks network.

In addition to the usual FTT and TP/XF transceivers, a variant with EIA 485 transceiver is available on request.

- ▶ **Full compatible VNI**
- ▶ **Transparent access**
- ▶ **Increased performance**
- ▶ **Local buffering**
- ▶ **D-type and plug-screw connector**
- ▶ **User programmable**

PCI-Bus Interface	according to PCI-Bus standard 2.2; supports 3.3 and 5 V systems and PCI-X
Network Interface	according to EIA 709.1
Transceiver	FTT-10A, TP/XF or RS-485
Memory	512 kbytes
Connectors	9-pin D-type and 2-pin plug-screw (not with EIA 485)
EIA 709.1 ID	in EEPROM
Operation and Display	
LED	Traffic LED
Push button	Service
Dimensions and Operating Conditions	
Dimensions	105 x 125 [mm], incl. connectors
Temperature	operating -0 – +50 °C storage -20 – +60 °C
Humidity	according DIN 40 040, Class F
EMC	EN 50 081-1 EN 50 082-1

Easylon VNI Interface PCI with
FTT-10A transceiver
others on request

P.V10204



Easylyon® USB Interface

USB Module for PC–LONWORKS® Connection

Easylyon USB interface is a handy sized interface module connecting the PC via USB to a LONWORKS network.

As flexible solution this LonTalk® adapter is suitable for both desktop PC and laptop. Being small, handy size and without an additional power pack it represents a favorable priced LONWORKS access.

With this plug & play device the laborious switchover of boards in case another computer requires the interface becomes obsolete on desktop computers.

▶ **For networks with or without LNS**

▶ **Drivers for Windows and Linux**

▶ **Firmware download**

USB Interface	according to Full Speed USB standard 1.1
Connector	USB type B
LED	status LED
Network Interface	
Memory	49,920 kbytes ROM, 9,216 kbytes RAM
Transceiver	FTT-10A, others on request
Connector	RJ 45 and 3pin screw-plug terminal (0.5–2.5 mm ²)
Operation and Display	
LED	Neuron service LED Status LED
Keys	Neuron service push button
Power Supply	
Voltage	5 V, form USB port
Input current	100 mA max.
Dimensions & Environmental Characteristics	
Dimensions	128 x 71 x 23 [mm]
Temperature	operating -0 – +50 °C storage -20 – +60 °C
Humidity	class F, accord. DIN 40 040
EMC	EN 50 081-1 EN 50 082-1

Easylyon USB Interface with

- FTT-10A transceiver and
- MIP/P50 firmware
- NSI firmware

P.P10304
P.P10314



Easylon® USB Socket Interface

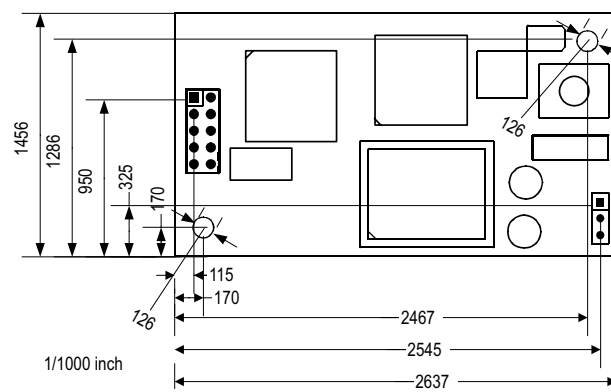
LONWORKS® Interface as Piggy Back Module

The Easylon USB socket interface meets the requirements of device manufacturers for an integrated LONWORKS interface. Connected to the motherboard by USB the plug-in module with FTT-10A transceiver realizes the connection to the LONWORKS network.

Further to the opportunity to integrate a completed solution the details of the integration are a crucial criteria. Location and design of the board connection, outlet of the LONWORKS interface from the housing, driver availability – these are design questions we are happy to resolve for this OEM module.

- ▶ **Integrable LONWORKS interface**
- ▶ **Reduced development effort**
- ▶ **Drivers for Windows and Linux**
- ▶ **Common interfaces**
- ▶ **Expert OEM supplier**

USB Interface	USB Slave, acc. to Full Speed USB standard 1.1 (12 MBit/s)
Connector	10-pin, accord. to ASUS board standard, OEM variants on request
Network Interface	
Transceivers	FTT-10A, FT-X1
Connector	3-pin, OEM variants on request
Display & operation	service LED, service push button
Power Supply	
Power Supply	from USB interface
Dimensions & Environmental Characteristics	
Dimension	37 x 66 [mm]
Temperature	operating -0 – +50 °C storage -20 – +70 °C
Mounting	screw mounting



Easylon USB Socket Interface with
FTT-10A transceiver MIP/P50 firmware

P.P10504



Gipsy 2000 LE

Embedded PC with Ethernet & LonWorks Connectivity

The Gipsy 2000 LE closes the gap between fieldbus and Intranet/Internet. Providing LONWORKS and Ethernet interface this embedded PC can be used as data logger, network interface, gateway, local controller, and embedded server for remote monitoring and control.

As a compact and reliable embedded PC with low power consumption it lacks all components not used for the task such as the user interface or parts prone to wear like fan or hard disk. At system level and especially at the LONWORKS network the Gipsy 2000 LE provides PC functionality. Standard solutions can be realized based on the Gipsy Remote Control Suite software. Additional Windows CE programs take care of plant or system specific requirements and special applications or integrate this OEM device into larger automation solutions.

Flexibility in communication is offered by the PCMCIA slot which – dependant on the desired functionality – can be used for modem ISDN, or serial adapters as well as for additional memory.

The device's SQL data base is basis for many applications. Network data are stored in it, which then are used by e.g. OPC or Web server or control programs. PLC like programming and operation according to IEC 61131-3 of the Gipsy 2000 LE is an option offering a widely used standard to the users.

With optionally available embedded OPC server data exchange with visualization programs and office applications becomes as easy as a child's play.

Additional to the standard network access and the remote network interface functionality the LONWORKS interface of the Gipsy 2000 LE optionally allows the use of the Easylon® Watcher Interface. Bypassing the NEURON Chip® the Watcher's chipset opens a powerful access to read in the network traffic. Thus it is possible to monitor network data without polling nodes and without the need of an additional binding. The Easylon Watcher makes use of the full band. This is especially useful for large networks or networks crammed with traffic.

Optionally a LONWORKS API is available for the Gipsy 2000 LE. Supporting development of dedicated applications the LONWORKS API provides a library of network access functions, such as e.g. scan/upload, or send NV.

Remote Control Suite

Gipsy Standard Software:

- Windows CE operating system (Mincomm)
- http and ftp server
- SQL data base for data acquisition
- PCShell - PC access to Gipsy v_ia ethernet
- Drivers for ISDN, analog modem, GSM

Gipsy Software Options:

- Configuration tool for SQL data base
- Embedded OPC server for LonWorks
- PLC like programming and operation according to IEC 61131-3

- Data acquisition and communication Box
- Control node at the network
- OPC and Web server
- Telemonitoring unit
- Access node for remote network management

CPU	AMD ELAN SC400 (486 processor at 66 MHz)
Memory	RAM 8 Mbytes DRAM
	Program 128 Kbytes bootflash
	8 Mbytes flash for OS and application
Interfaces	
Control Network Interface	
	Neuron 3150, 10 MHz
Memory	32 Kbytes EPROM
	24 Kbytes SRAM
Transceiver	FTT-10A
Features	Service button, ~ LED
Connector	3-pin screw-plug connector
Ethernet Interface	
	10 Mbps
Connector	10BaseT (TP) at 8-pin Western (RJ45),
LED	2 LEDs for signalling
Serial Interface	
	Interface according to EIA/TIA562
	modem cap. Tx/D/Rx/D/RTS/CTS/DTR/DSR/DCD/RI
Parallel Port	
	Available on pcb
PC Card Interface	
	Based on integrated PC card interface
	1 PCMCIA slot with card ejection, for 5 V PC cards
Operation & Display	
Switches	4 mini DIP switches for options setting
LED	1 LED for device status
	1 LED available for application
Features & Functions	
RTC	
	Integrated real-time clock of CPU, buffered by 0.22 F gold-cap (16 h typ.) or battery (option)
Watchdog	Voltage monitor. 3.3 V with PowerOn, time >= 1s
Power Supply	
	24 V AC / DC ±15%, 5 W approx.
Dimensions & Environmental Conditions	
Dimensions	approx. 165 x 105 x 45 [mm]
Mounting	DIN rail mounting
Temperature	operating 0 °C – 50 °C
	storage -10 °C – 60 °C
Humidity	Class F accord. DIN 40040

The Gipsy 2000 LE is available as standard device with different options concerning hardware features and additional software packages.

Gipsy 2000 LE	Standard device incl.:	P.LE0005
	- Windows CE ¹	
	- LonWorks driver ¹	
	- Standard Gesytec embedded PC firmware and software ¹	

Gipsy 2000 LE Watcher	P.LE0005 + Easylon Watcher	P.LE1005.
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GipsyLON-API	Software package ¹ "LON Application Programmers Interface" and "LON Host Application" for Gipsy 2000 LE.	P.LE0A00
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¹Run time licenses



EasyLON® Software

Communication with LONWORKS®

Remote Network Interface

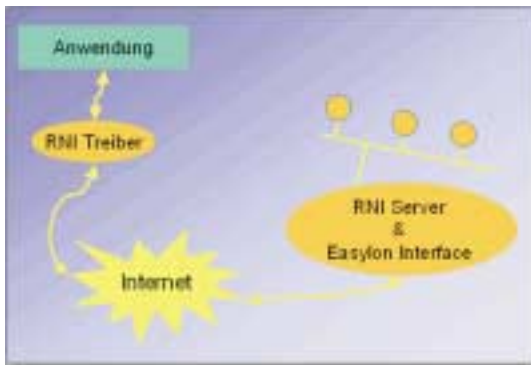
TCP/IP access to remote LONWORKS networks

OPC Server

The OPC Servers for LONWORKS networks with or without LNS

WebServer

Browser access to LONWORKS Data



EasyLyon® Remote Network Interface

TCP/IP Access to Remote LONWORKS® Networks

Similar to a server EasyLyon Remote Network Interface (RNI) enables the access via a TCP/IP or dial-up connection to a PC-LONWORKS interface from a remote PC where the specific RNI client is installed, thus enabling the access to LONWORKS data either via LAN or the Internet.

Status monitoring, maintenance, download of modified programs– all this can be done from a remote PC with Internet connection using the RNI software. Condition: The LONWORKS network is equipped with a PC with Internet access, EasyLyon Interface and the RNI software plus current EasyLyon Interface driver for Windows 98 / ME / 2000 / XP / CE are installed.

The RNI driver can logically represent several LONWORKS interfaces. The settings are realized via the Device Manager, where the IP address of the RNI server is stated or an additional phone number for the connection via the Windows dial-up network can be entered. Thus logical LONWORKS interfaces can be assigned to different remote servers. By selecting the desired LONWORKS interface in a LONWORKS tool the connection to a specific remote server can be established.

Existing systems can be upgraded easily and free of charge by installing the latest drivers and the RNI software. The RNI driver software required for the remote PC can also be installed quickly and subsequently you can handle the network management or use data in visualization programs from your networked desktop. Furthermore you can benefit from the EasyLyon Watcher enabling to capture volume data without network load.

The EasyLyon RNI is especially of interest for networks without LNS, otherwise without possibilities for remote access via TCP/IP to the LONWORKS network. Due to the availability of 16 bit drivers for the EasyLyon Interfaces a modern communication channel opens up even for "old-fashioned" programs with EasyLyon RNI.

EasyLyon RNI is available free of charge for all EasyLyon Interfaces and at a minor license fee for PC-LONWORKS interfaces from other manufacturers.

- **Software for remote access to LONWORKS networks**
- **Network management, status monitoring via standard PC Communication**
- **Free of charge for all EasyLyon Interfaces**

EasyLyon Remote Network Interface

P.S20101

Software is include in the scope of delivery of EasyLyon Interfaces.

Separate orders are necessary only for interfaces of other manufacturers.



Easylon® OPC Server

The OPC Servers for LONWORKS®

The Easylon OPC Server enables the access to LONWORKS data from any OLE (or ActiveX) compatible program. OPC (OLE for Process Control) is an interface standard for process automation which is used by the SCADA systems of almost all providers as well as, for example, Excel, Visual Basic or Access. Process visualization, control and monitoring or data exchange with other fieldbus systems can be realized via OLE.

The Easylon OPC Server is available in two versions:

- Easylon OPC Server M for LONWORKS networks not using LNS,
- Easylon OPC Server L for LONWORKS networks using LNS verwenden.

Both programs express Gesytec's experience of many years with OPC servers. The easy comprehensible user interface displays the individual components of the LONWORKS network in a tree structure allowing data handling. Data access can be achieved by polling or binding. The Easylon Watcher for recording the network traffic can as well be used. Both programs accept multiple clients and run simultaneously in several instances. Diagnostic features such as logging of the LNS and client communication and a hierarchical survey of client access to the server are implemented. A simulation mode allows testing by generating values off-line.

OPC server operates in a client/server architecture. The Easylon OPC Server runs on a PC at the LONWORKS network. It provides, in an always updated database, information about the LONWORKS network objects (nodes, network variables) as OPC objects and realizes packaging, conversion and update of these objects.

As server the Easylon OPC Server accepts subscriptions from several clients and takes care of updating subscribed NV's as soon as their value changes within the LONWORKS network or due to external settings.

- **Connects LONWORKS Networks to Process, Visualization, SCADA, Office and Control Software**
- **Multi-Client, Multi Instance**
- **Diagnosis Functions**
- **For Windows Operating Systems**

Easylon OPC Server M

For LONWORKS networks not using LNS, software for Windows PCs from Windows 98 onward.

- Captures unknown networks
- No LNS database required
- Usable with all Echelon compatible interfaces
- SNVT formatting even of sub fields
- Values are displayed in server too
- Value writing out of the OPC server
- LNS PlugIn for integration of the LNS database
- Alias names for NV's to facilitate the comprehension

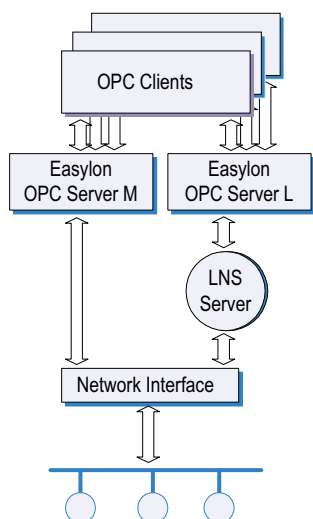
Easylon OPC Server L

For LONWORKS networks using LNS, software for Windows PCs from Windows 2000 onward.

- Access to LONWORKS data as data points or monitor sets via LNS server
- Use of network variables and configuration properties
- Definition of monitor sets by drag and drop
- Use of all LNS compatible network interfaces
- Also operates as remote client
- Writing of values out of the OPC server
- SNVT/SCPT or UNVTs/UCPT formatting
- Export and import of configuration data in CSV or Excel format

Embedded OPC Server

Even for Gesytec's Gipsy Embedded PCs there is an OPC server as standard interface to the LONWORKS control network.



Easylon OPC Server
 Easylon OPC Server M
 Easylon OPC Server L

P.S10301
 P.S10401



Easylon® WebServer

Browser Access to LONWORKS® Data

The Easylon WebServer allows for remote or on site access to the LONWORKS network either via Internet or Intranet. The requirements are minimal: Besides the Easylon WebServer software, all you need is a PC with a network interface at the LONWORKS network (such as Easylon PCI Bus Interface or USB Interface) and a standard web browser.

As connection server the Easylon WebServer runs in addition to an Internet Information Server, establishing the interface between Java Applets and the LONWORKS network.

Remote control, monitoring, visualization and maintenance can herewith be realized from any place on earth – time or distance doesn't matter.

- Control, monitoring, visualization and maintenance can be realized on site from any computer via the company intranet
- The web site URL and a password allow easy access to the automation system, even abroad
- Internet technology stands for multi-client ability. Visualization from a local PC, manufacturing data acquisition at the headquarters or manual access via modem can be made independently from each other.
- Easy access to any network even if it has not been installed with API or LNS tools. Neither LONWORKS specific requirements nor a network database are required
- Security measurements against unauthorized access are implemented. Gradual access authorization can be assigned and encoding ensures security

- **LONWORKS data via Internet/Intranet**
- **Platform independent by Java Applets**
- **Easy Java programming of applications on the Web Server**
- **Security by encoding**
- **Easy visualization via standard web browser**

Requirements and Recommendations

Network access	Easylon PC Interface or compatible
Operating System	from Windows 95
Internet Browser	Microsoft Internet Explorer from 4.0 or Netscape Navigator from 4.03
Java Editor	Microsoft Visual J++ (recommended)
HTML Editor	Microsoft FrontPage (recommended)








Easylyon® Application Modules

Controlling and Switching

As input/output nodes the Easylyon Application Modules enable the connection of sensors and actuators the LonWorks network. Modules with different I/O extent are available.

The modules are free programmable and designed for general use. Usually specific application programs are available for the individual module, designed according to the I/O extents and specific applications, such as lighting, generally based on the relevant LonMark® profiles. We would be happy to develop the matching application programs for your range of use. .

					
	I/O 44D	I/O 1212 D	I/O 22 AD	EMC4	I/O Box
Digital Input	4 x 24 V	12 x 24 V	2 x 5 V	4 x 15 V	12 x 24 V
Digital Output	4 x 24 V	12 x 24 V	2 x 230 V	4 x 230 V	12 x 230 V
Analog Input	–	–	2 x 0–10 V	4 x 0–10 V	–
Resolution			12 bit	10 bit	
Analog Output	–	–	2 x 0–10 V	4 x 0–10 V	–
Resolution			12 bit	10 bit	
Power Supply.	24 V	24 V	24 V	230 V	230 V
		AC / DC	AC	AC	AC
Transceiver FTT-10A	+	+	+	+	+



Easylyon® I/O 44 D

4 Digital In- and Outputs

Digital I/O module for LONWORKS with each 4 inputs and outputs and LED status display of all I/Os. The compact design allows for a direct convenient distribution to the process site and installation even where space is limited.

Integrated security functions (wire break and short circuit monitoring for inputs, overload for outputs, reading back of the outputs) enable the use in security related applications. Those signals are included in the software and can be used within the LONWORKS network.

The read in of the inputs is realized via 8 bit A/D converter. As the analog values are available to the software analog signals can also be processed.

- Favorably priced module with mixed digital I/O
- Inputs with wire-break and short circuit monitoring
- Outputs with short circuit monitoring and status control
- Temperature monitoring
- Application download

Network Interface

CPU	Neuron 3120, 10 MHz
Memory	2 kB EPROM, 2 kB RAM
Transceiver	FTT-10A or TPT/XF-78

Power Supply

Voltage	24 V +/- 20%
Power consumption	700 mW, according to DIN 19240

Digital Inputs

Number	4, for switches to +24 V
Input current	3.5 mA / 24 V
Filter time constant	1 ms, approx
Sampling frequency	software controlled, up to 60 Hz

Digital Outputs

Number	4, for switches to +24 V (source driver)
Load	continuous - 250 mA, 25% ED - 1 A (1s)
Overload protection	yes
Overtemp. shutdown	yes
Error signalling	yes
Line break detection	yes

Signals in connection with Easylyon I/O 44D standard program:

	w/o wire break detection	with wire break detection
Wire break	0 – 4 V	
Signal LOW	0 – 8 V	4 – 8 V
Signal HIGH	0 – 32 V	8 – 16 V
Short circuit		16 – 32 V

Dimensions & Environmental Characteristics

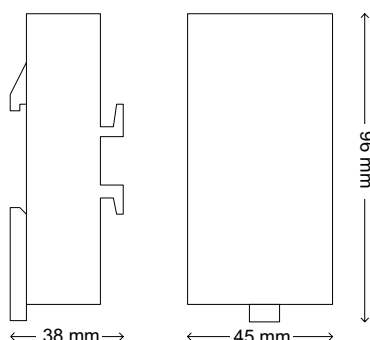
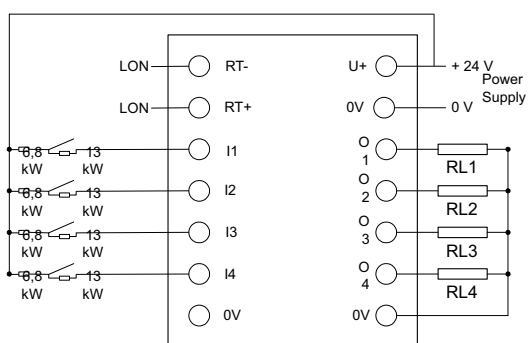
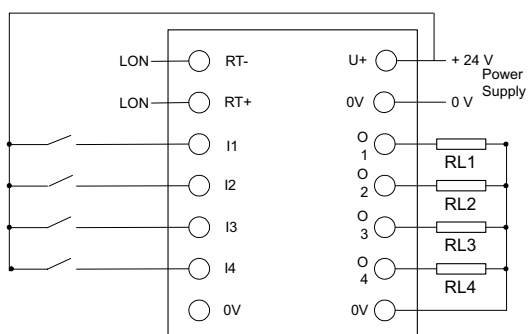
Dimensions	95 x 45 x 38 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Temperature	operating -20 – +60 °C storage -20 – +60 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
EMC	emission EN 55 022 A/B immunity EN50082-2

Easylyon I/O 44 D with
Transceiver FTT-10A

P.E10103

Configuration and documentation set
(please order separately)

P.E10000





Easyton® I/O 1212 D

12 Digital In- and Outputs

Digital I/O module for LonWorks with each 12 inputs and outputs. A manual operation level, available on a device variant, displays the status of the individual I/Os via LEDs. The digital outputs can individually be switched-on or -off manually.

The large amount of inputs and outputs, considering the dimensions of the module, allows for applications with a great number of data points at a very favorable price per data point.

By providing input and output the module can realize control applications on site. This functional unit of input and output optimizes the response time to external events. Control applications can run locally and uninterrupted by network events.

Remote I/Os can also be operated. The standard programs included allow for reading and writing of the digital inputs and outputs. For lighting control applications there is a scenery management application for the digital outputs. Application specific applications are optionally available.

- ▶ **Compact module with mixed digital I/O**
- ▶ **Variants with DC or AC supply**
- ▶ **Version with manual operation level and LED signals at all in- and outputs**
- ▶ **Application download**
- ▶ **LonMark certified**

Network Interface

CPU	Neuron 3150, 10 MHz
Memory	32 kB Flash-EPROM, 2 kB RAM
Transceiver	FTT-10A
Display, operation	service LED, service push button

Power Supply

DC-Variant	24 V DC +/- 20%
Consumption	1 W, approx. (all LEDs on)
AC-Variant	24 V AC +/- 20%
Consumption	1.5 W, approx. (all LEDs on)

Digital Inputs

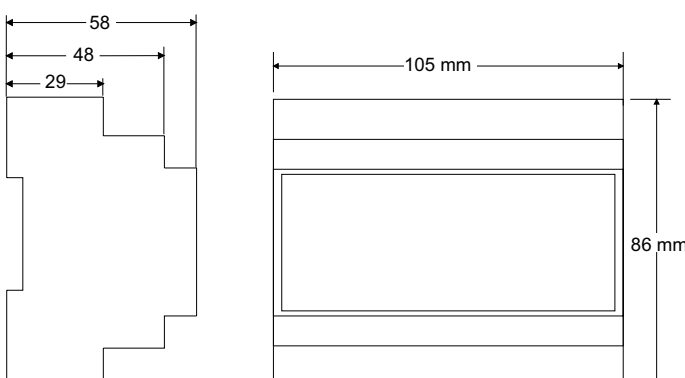
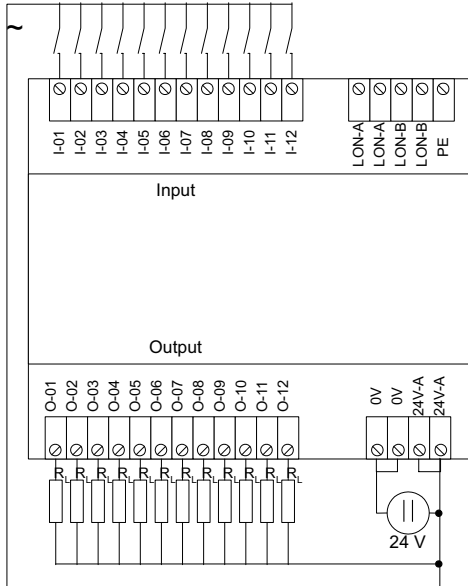
	12		
	U_{nenn}	Low	High
DC-Variant	24 V DC	< 6 V	> 18 V
AC-Variant	24 V AC	< 6 V	> 18 V
	Reaction time application	< 100 ms	

Digital Outputs

Type	12
	Switches to Vcc
	DC: MOSFET AC: TRIAC
Load DC-Variant	24 V DC +/- 20%, 250 mA (0.5 A at OT 25%, 1 A at OT 6%)
Load AC-Variant	24 V AC / max. 42 V AC, 250 mA (0.5 A at OT 40%, 1 A at OT 15%)
	OT: relative on-time, pulse width max. 1

Dimensions & Environmental Characteristics

Dimensions	105 x 56 x 90 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Temperature	operating -0 – +50 °C storage -20 – +60 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
Protection class	IP 20
EMV	emission EN 55 022 A/B immunity EN 61 000-6-2



Easyton I/O 1212 D with

Transceiver FTT-10A and	
- DC-supply	P.E30003
- AC-supply	P.E30103
- DC-supply and manual operation	P.E30013
- AC-supply and manual operation	P.E30113

Configuration and documentation set (please order separately)	P.E30000
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Easylyon® I/O 22 AD

2 Analog and Digital In- and Outputs Each

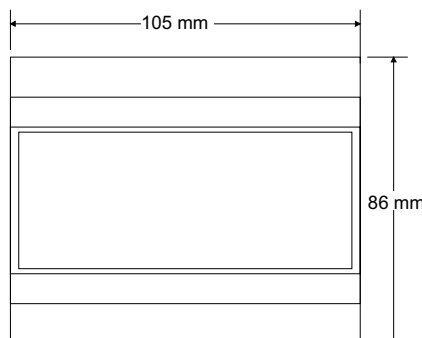
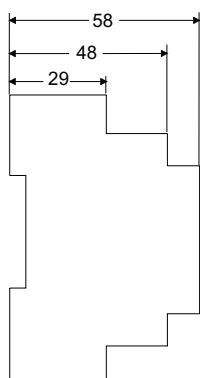
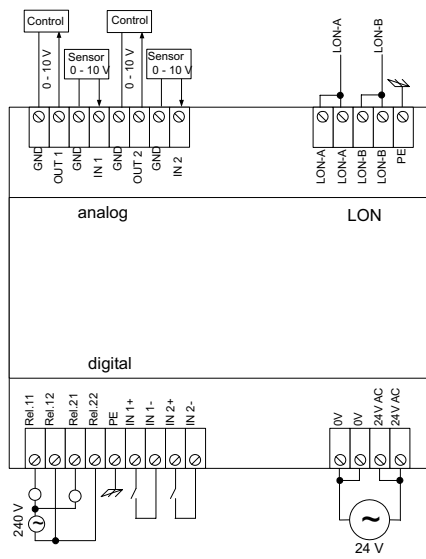
I/O module for LONWORKS with 2 digital and 2 analog inputs and outputs each. The module (also free programmable) is specially suited for status recording of thermic released fire shutters and the activation of airflow regulators. Special software is available for this purpose.

The network interface meets the LONWORKS standards. Further to the node object 2 objects each for fire shutters and airflow regulators are included.

Fire Shutters and Airflow Regulators

The Easylyon I/O 22AD is the ideal connection for airflow regulators and fire shutters, as those are frequently installed twofold within buildings. On the LONWORKS side the respective software represents the shutters by network variables (NV). A cyclic status transmission can be set by means of configuration properties. Further it can be determined channel wise if the digital input is designated to close or to open.

Airflow flow regulators are connected to a 0–10 V interface and a switching relay. The scaling is realized via two configuration properties. An offset can be defined for analog output. The nominal flow is defined by an input NV, either type SNVT_flow (nviFlow) or SNVT_hvac_overrid (nviManOverride). Time monitoring can be defined for nviFlow, generating a failure value in case of exceeding. For diagnosis purposes the module also states the voltage currently output. Same as for the fire shutter objects parameterization is made individually for each channel.



- **Ideal for fire shutters and airflow regulators**
- **Lonmark compliant network interface**
- **Application download**
- **For applications with mixed sensors and actuators**

CPU	Neuron 3150, 10 MHz
Network Interface	FTT-10A0 transceiver
Connector	screw-plug terminal, 0.2 – 2.5 mm ²
Power Supply	
Voltage	24 V AC, Tol. 20%
Power consumption	< 5 W
Connector	screw-plug terminal, 0.2 – 2.5 mm ²
Digital Inputs	2
Contact voltage	5 V
Digital Outputs	2 relays, close contact
Isolation	3.6 kV
Switching voltage	240 V AC
Switching current	3 A permanently, (20 A at switching)
Analog Inputs	2
Input voltage	0 – 10 V
Input resistance	100 kΩ
Resolution	12 bit
Analog Outputs	2
Output voltage	0 – 10 V
Output current	max 20 mA
Resolution	12 bit
Dimensions & Environmental Characteristics	
Dimensions	105 x 58 x 86 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Temperature	operating -0 – +50 °C storage -20 – +60 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
Protection class	IP 20
EMV	immunity EN 55 022 A/B EN 61 000-6-2
Display and Operation	
LED	Status
Service push button, -LED	yes

Easylyon I/O 22 AD with	
- Transceiver FTT-10A	P.E50103
Configuration and documentation set (please order separately)	P.E50000



Easylon® EMC4

4 Channel Multipurpose Controller

Multi-purpose controller with digital and analog I/O for building automation with LonWorks. The periphery coverage especially allows the use as room controller in cross-functional control of applications such as lighting, security, etc.

For lighting control the module realizes four independent channels, each with 2 digital inputs, one relay output and one analog output. For operation, switches and buttons as well as conventional occupancy detectors can be connected. The relay output is designated to control conventional lamps. The analog output operates electronic control gears in a voltage range of 0–10 V. An extended variant of Easylon EMC4 includes additional 4 analog inputs.

The implemented LonMark objects allow for flexible use of the Easylon EMC4. In addition, several timer functions for the operation with switches, buttons and motion detectors are included.

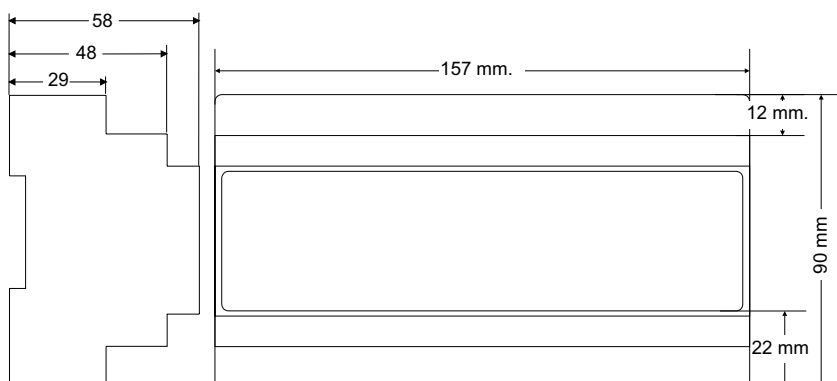
A plug-in is available for easy configuration of the implemented lighting application. Of course the module is free programmable in Neuron C. Due to the flash memory the application can be loaded via the LonWorks network. Thus the EMC4 is a versatile controller such as for the use as sunblind controller or individual room controller. The module ensures reliable operation of connected switches with a start-up peak for automatic contact cleaning of connected switches

- ▶ Room controller for cross-functional use
- ▶ 8 Digital inputs, 4 relay outputs
- ▶ 4 Analog outputs, 4 analog inputs
- ▶ LonMark objects for lighting control
- ▶ Contact cleaning of connected switches
- ▶ Plug-In for lighting control configuration available

CPU	Neuron 3150, 10 MHz
Memory	48 kB Flash, 8 kB SRAM
Network Interface	FTT-10A Transceiver
Digital Inputs	4
Isolation	500 V (not to analog outputs)
Contact voltage	15 V nominally
Contact current	100 mA initially, falling to 5 mA
Relay Outputs	4, type: switch over contact
Isolation	4 KV
Switch. voltage / -current	250 V AC (400 V AC max.) / 10 A
Analog Outputs	4
Isolation	500 V (not to digital outputs)
Output voltage	load 20 mA source: 0 – 10 V, load 50 mA sink: 0.7 – 10 V
Output current (max)	20 mA, source EMC4, 50 mA sink externally
Resolution	10 bit
Analog Inputs	4
Isolation	500 V (nicht gegen digitale Ausgänge)
Input voltage	0 – 10 V
Input resistance	20 kΩ
Resolution	10 bit
Power Supply	230 V AC, < 5 W
Dimensions & Environmental Characteristics	
Dimensions	157 x 90 x 58 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Temperature	operating -0 – +50 °C storage -20 – +70 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
Protection class	IP 20
Display & operation	power LED, Neuron service LED and push button, 1 LED for each relay output
EMC	EN50081-1/2, EN 55 022 A/B, EN 55 011 A/B, EN50082-2

LonMark-Profiles Implemented

Lamp Actuator (3040)
Switch (3200)
Scene Panel (3250)
Occupancy Sensor (1060)
Light Sensor (1010)
Constant Light Controller (3050)
Scene Controller (3251)
Occupancy Controller (3071)



Easylon EMC4	
- Standard	P.E40003
- additional analog inputs	P.E40013
Configuration and documentation set (please order separately)	P.E40000



Easylon® I/O Box

12 Digital In- and Outputs in a Compact Housing

The Easylon I/O Box is a compact device for connection of digital I/Os to a LonWorks network. It includes 12 digital inputs and 12 relays for switching 250 V AC, 16 A such as for lighting purposes. The LonWorks network is connected via FTT-10A transceiver.

The flat device with integrated power pack is especially suitable for under floor or ceiling installation.

A manual operation unit is available for testing purposes and set-up that can be directly connected on the board.

- ▶ **Compact I/O connection for LonWorks**
- ▶ **12 Digital inputs, 12 relays 250 V, 16 A**
- ▶ **Integrated power pack**
- ▶ **Ceiling, wall or under floor installation**

Network Interface

CPU	Neuron 3150
Transceiver	FTT-10A, electr. isolated from the system
Connector	5-pin screw-plug terminal
Display, operation	service LED, wink LED, service push button

Digital Inputs

Nominal voltage	24 V AC
contact current	4 mA

Relay Outputs

Switching voltage	250 V AC
Switching current	16 A, (100 A – 5 ms)
Insulation coil/contacts	6 kV (1.2 / 50 ms)

Power Supply

Voltage	230 V +/- 10 % AC, 50 Hz
Power consumption	40 VA
Connector	3-pin screw-plug terminal

Dimensions & Environmental Characteristics

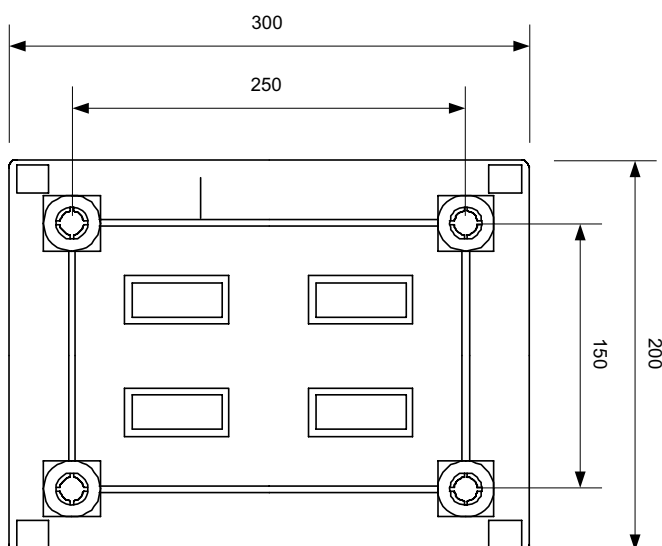
Dimensions	300 x 200 x 60 [mm]
Mounting	Wall, ceiling, under floor
Connectors	screw-plug terminal
Temperature	operating -0 – +50 °C, temperature rise in housing 15 °C max. storage -20 – +60 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
Protection class	IP 41
EMC	emission EN 55 022 B immunity EN 61 000-6-2

Easylon I/O Box

P.E60023

Configuration and documentation set
(please order separately)

P.E60000



Subject to technical modifications



Easylon® Network Components

From Repeater to Terminator

Repeater

Compact LONWORKS Repeater

Router

Router for LONWORKS Netze

Link Power Supply

Supply and Fieldbus on the same Line

Terminator

Bus Terminator for LONWORKS



Easylon® Repeater

Compact LONWORKS® Repeater

Compact repeater for free topology and link power LONWORKS networks, increasing the allowable communication distances by regeneration of the signals. A greater number of nodes within a physical network segment are also possible. The power supply of the top hat rail module can either be AC or DC.

- **Increase of the Communication Distance**
- **Regeneration of Network Signals**
- **AC and DC Power Supply**
- **Minimum Delay Between the Channels**
- **Communication of Data Packets of Any Length**
- **No Configuration Required**

Network Interface

Transceiver	FTT-10A
Connectors	2 pairs of screw terminals on each side

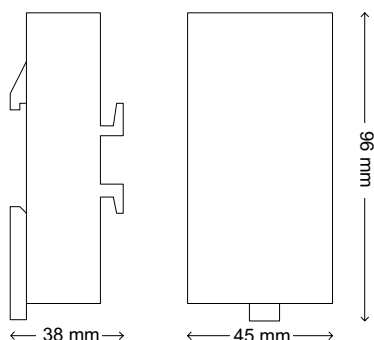
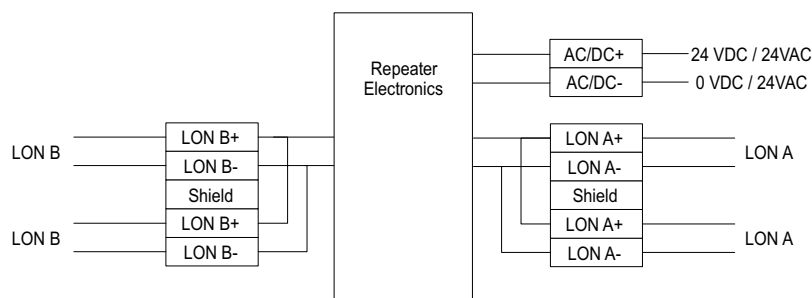
Power Supply

Voltage	24 V AC \pm 20% or 12 - 28 V DC
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Power consumption	1 W
Connector	screw terminal

Dimensions & Environmental Characteristics

Dimensions	95 x 45 x 38 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Transmission	max. bus length double terminated bus 2700 m free topology bus 500 m
Nodes per segment	maximum 64
Temperature	operating -0 – +60 °C storage -20 – +85 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
EMC	emission EN 55 022 A/B immunity EN 61 000-6-2



Easylon Repeater with
Transceiver FTT-10A

P.R10003



Easylon® Router

Router for LonWORKS®

LonWORKS Router module providing the most used transceiver types. Allows for operation of extended networks where nodes are distributed into logical and physical structures. Indispensable for crossover between different transmission media. Reduces the load in both connected partial networks if data are mainly exchanged within the partial networks.

Parameterization of the Easylon Router according to the LonTalk® protocol specification. Thus the Easylon Router can be configured with any network management tool that can parameterize routers.

- ✦ **Facilitates a greater number of LonWORKS Nodes**
- ✦ **Allows for larger networks**
- ✦ **Extends the available band width**
- ✦ **Connects different transmission media**

Power Supply

Voltage	24 V AC/DC
Power consumption	< 6 VA
Connector	screw terminal 0.5 – 2.5 mm ²

Network Interface A

Transceiver	FTT-10A, TP/XF-1250
Connector	screw terminal 0.5 – 2.5 mm ²

Network Interface B

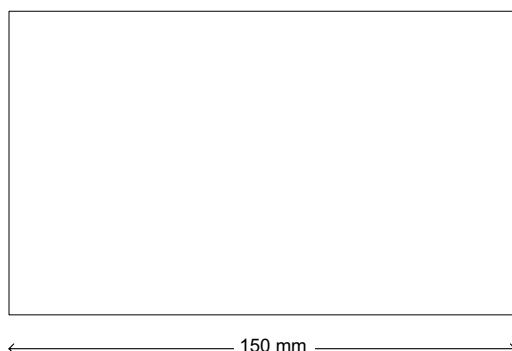
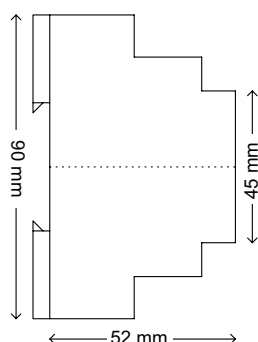
Transceiver	FTT-10A, TP/XF-78 or TP/XF-1250
Connector	screw terminal 0.5 – 2.5 mm ²

Dimensions & Environmental Characteristics

Dimensions	126 x 58 x 90 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Temperature	operating -5 – +55 °C storage -20 – +70 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
Protection class	IP 20

Display and Operation

LEDs	- power - service A - service B - packets
Push button	- service pin



Easylon Router

FTT-10A	- TP/XF-78	P.I20001
FTT-10A	- TP/XF-1250	P.I20002
FTT-10A	- FTT-10A	P.I20003
TP/XF-1250	- TP/XF-1250	P.I20004



Easylon® Link Power Supply

Supply and Fieldbus on the Same Line

Power supply for LONWORKS networks in Link Power technology. The Easylon Link Power Supply is designed for the use in networks with free and bus topology. It satisfies with both, its compact design with 7 top hat rail units and its excellent technical features: Over current limiting to 1.6 A, residual ripple of the output voltage below 100 mV, galvanic separation of in- and output voltage, internal no load, overload and short-circuit protection.

The high efficiency of the power pack of more than 75 % reduces heating of switching cabinets. The EMC classification makes the module the perfect choice for industrial as well as building and home automation networks.

The automatic restart of the Easylon Link Power Supply at failures increases the usability of the device and the possibility to set the bus termination externally is comfortable. No need to open the housing.

The Link Power technology allows for power supply of LONWORKS modules via the bus line. By using the bus line cabling charges for additional power supply become obsolete.

- ▶ **Low residual ripple of the output voltage**
- ▶ **Short circuit and over current monitoring**
- ▶ **Bus termination by external wire bridge**
- ▶ **Output current limitation**
- ▶ **Thermal monitoring**
- ▶ **For 120 V and 230 V supply**

Power Supply

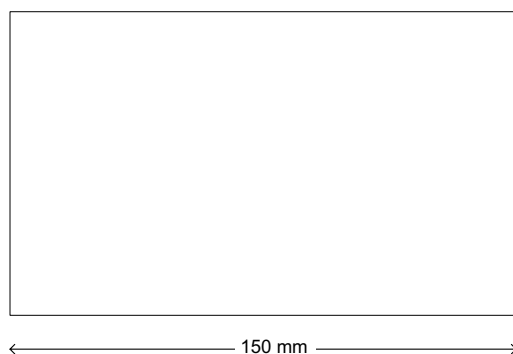
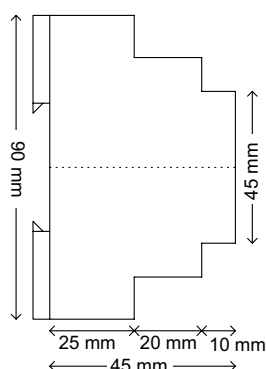
Rated input voltage	120/230 V AC (85 – 264 V)
Rated frequency	50/60 Hz (47 – 63 Hz)
Mains failure buffering	50 ms at $U_E = 195$ V
Rated input current	0.8 / 0.6 A
Inrush current	<30 A
Efficiency	> 75%, at nominal mode at 230 V

Output to bus

Output voltage	41.5 V (40.6 - 42.4 V)
Residual ripple	<100 mV (10 kHz < f < 200 kHz)
Output current	1 A at $U_E = 85 - 195$ V 1.3 A (max. permanent overload in rated operation 1.5 A) $U_E > 195$ V
Overcurrent limiting	1.6 A, permanent short-circuit proof with pulsing try of restart
Overvoltage protection	typ. 54 V
Outputs open-circuit and short-circuit proof	yes
Bus termination	settable by external bridge

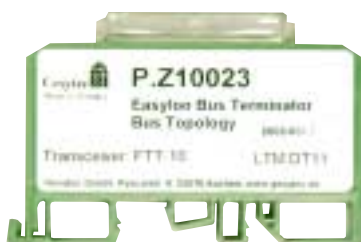
General

Connectors	screw terminal 0.5 – 2.5 mm ²
Temperature	operating 0 – 40 °C, convection storage -40 – +70 °C
Relative humidity	5 – 95 %, no condensation
Dimensions	126 x 58 x 90 [mm]
Mounting	top hat rail (EN 50022)
EMC	emission EN 50081-1, EN 55022 class B, living area immunity EN 50082-2 EN61000-4-2/3/4/5/6
Protection class	IP 20



Easylon Link Power Supply

P.110001



Easylon® Bus-Terminator

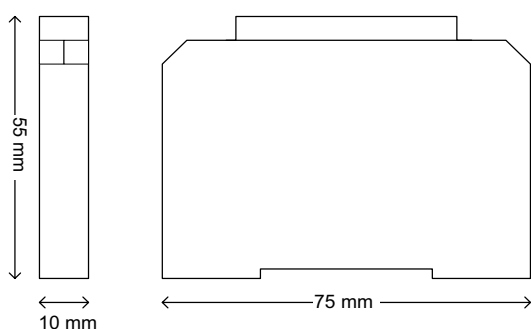
Bus Terminator for LONWORKS®

A bus terminator is required for correct operation of a LONWORKS network. The type of the bus terminator depends on the used transmission technology and the topology. Easylon Terminators are available for FTT-10/LPT-10 networks either for bus or free topology and TP/XF networks.

- ▶ For FTT-10, LPT-10 and TP/XF networks
- ▶ Variants for free and bus topology
- ▶ Top hat rail installation

Dimensions & Environmental Characteristics

Dimensions	75 x 55 x 10 [mm]
Mounting	top hat rail (EN 50 022, 35x15)
Temperature	operating - 0 – +60 °C storage -20 – +70 °C
Humidity	class F, accord. DIN 40 040, 5 – 93 %, no condens.
Protection class	IP 20
Network Interface	
Connector	screw terminal 0.5 – 2.5 mm ²



Easylon Bus-Terminator

FTT-10/LPT-10 for	- free topology	P.Z10013
	- bus topology	P.Z10023
TP/XF-1250, -78	- bus topology	P.Z10001



Easylon ...

... sometimes may be where one hardly expects it. Just ask us about solutions for tele monitoring with LONWORKS

Connectivity in Automation

Creating Connections....

... beyond the limits of fieldbus systems and computer platforms to the Intranet and Internet, that's the focus of our service offering that is reflected in Gipsy Embedded PCs and the Easylon products by Gesytec.

Connectivity means to be connected, the interaction of electronic systems. Connectivity ensures cross-functional data communication and information exchange beyond systems and regions.

Gesytec Connectivity solutions connect networks and devices in smart homes and systems, in building automation, facility management, industrial automation, tele monitoring and control.

Gesytec

To design the solutions with „Connectivity in Automation“ that endure the future – that's our aim. Smart homes, „intelligent“ devices communicating with each other in broad networks, the connection of system worlds in industry, facility and home – that's our world.

LONWORKS and Embedded PC are our basic technologies. With standard components, OEM versions and the Embedded PC Boxes we provide solutions to our customers enabling them to realize their ideas of modern automation; based on common software standards in order to protect our customers' investment at long-term.

Our staff works with tomorrow's technical ideas. They gather innovations; evaluate their benefits to create solutions for building and industrial automation. The connection of reputation and steadiness of an established system vendor with the mobility and the flat hierarchy of a start-up motivate our staff to committed deployment of their know-how for our customers. In the mean time, this makes us an attractive employer for the graduates of the Aachen universities with its worldwide known technical faculties.

Connecting Buildings

Add Connectivity to your facility management! Take advantage of the potentials offered by modern communication technology for efficient management of your LONWORKS automated buildings and properties. Just imagine you could manage, monitor and control all facilities from one single computer. The Gipsy boxes provide the building network with its Ethernet access. Performance data, statistics and consumption values are available at any place via Internet or telephone line. In the opposite direction commands control the network. By this Connectivity you can access the networks in all buildings from any place in the world and retrieve all relevant information. Management of spread properties gets an easy game – at least from the technical point of view.

Do you use Windows applications for evaluation and monitoring? The Easylon OPC Server establishes the connection between the LONWORKS networks and the SCADA systems or your Office suite.

Connect your PC to the LONWORKS network with Easylon Interfaces – no matter if ISA or PCI bus, USB interface or TCP/IP, Gesytec creates Connectivity.

Connectivity in Automation

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