

Product Description

The PO7094 Ethernet network interface is part of Ponto Series and is the successor of PO7092. This network interface allows the connection of Altus PLCs to open communication networks that uses the TCP/IP standard. It allows the communication of Altus PLCs with any other equipment that communicates through TCP/IP standard with ALNET II and/or MODBUS application level.



The picture shows the product mounted on its PO6402 base.

Its main features are:

- Integration with Altus PLCs connected to an Ethernet network through ALNET II or HTML/XML application protocols on the TCP/IP transport protocol
- MODBUS TCP/IP or MODBUS RTU Application Level protocols over TCP/IP (can't be used simultaneously)
- Connection method of MODBUS Application Level: Server
- WebServer using HTML and XML, allowing to create dynamic web pages with process data
- Allows the development of supervision systems using technologies like Flash, Java, JavaScript and VBScript. There is no need for a special software or configuration on the stations that access this network interface, except for a standard web browser
- Support for database access, event logging and sending e-mails
- Ethernet 10/100 Base-Tx Physical level, UTP standard and auto-detecting network speed (10/100 mbps)
- Allows memory expansion for websites and files
- Hardware write-access protection
- Local diagnosis through panel LEDs
- Compatible CPUs can support up to two Ethernet interfaces.

Ordering Information

Included Items

The product package contains the following items:

- PO7094 Module
- Mini CD
- Installation Guide

Product Code

The following code is used when ordering this product:

Code	Description
PO7094	MODBUS TCP Ethernet Interface

Mandatory Related Products

The following products are mandatory when using the PO7094 network interface:

Code	Description
PO6402	Industrial Ethernet Interface 10/100 mbps Base

Notes

- **PO6402** is the base for Ethernet Network Interfaces, and it's used for connection to the Ponto Series Bus.

Related Products

The following products must be acquired separately when necessary:

Code	Description
PO8541	mcard 128 mbytes
MT7000	WebView: Web Supervision and Control Software
AL1518	Power Supply 24 Vdc – 5 A
AL1532	Full Range Power Supply 24 Vdc – 3 A

Notes

PO8541 is a module for memory expansion.

MT7000 is a package of Java Applets to be used on HTML page development, allowing the visualization through a standard web browser of the operands of Ponto Series CPU that supports WebServer feature.

Product Features

General Features

	PO7094
Module Type	MODBUS TCP Ethernet Interface
Ethernet Channel	Physical Level: RJ45 – 10/100 Base-Tx – 10/100 mbps Link Level: Ethernet DIX2 Network Level: IP Transport Level: TCP
Application Level Available Protocols	ALNET II over TCP/IP (Altus S.A. proprietary protocol) FTP: Web interface file transferring HTTP: Communication with standard browser (this protocol is available when using the PO3342 and PO3247 CPUs) MODBUS TCP/IP (Server connection type) MODBUS RTU over TCP/IP (Server connection type) SMTP: e-mail sending TDS 4.2: Database access
Default server port	405 for ALNET II over TCP/IP 502 for MODBUS TCP/IP and MODBUS RTU over TCP/IP
Maximum number of connections	25
Compatible browser	Internet Explorer 5.0 or higher
Available XML commands	Read and Write of operands State Read
Access security system	Individual user access rights Encrypted password
Flash memory for local pages	Local memory of approximately 150 kbytes Expansion possible using memory card
FTP	Yes
Supported formats	HTML, XML, JAVA, JAVA SCRIPT, FLASH
Diagnostics indication	LED DG – error in GBL communication, error when accessing memory card
State indication	LED NT – Ethernet channel traffic LED HS – Ethernet connection at 100 mbps LED MA – Memory card access
Hot swapping	Yes
Ethernet Channel Isolation	750 Vac for 1 minute
Bus current consumption	25 mA
Power Supply input voltage	19 to 30 Vdc, including ripple.
Power Supply input current	170 mA @ 19 Vdc 130 mA @ 24 Vdc
Maximum input power	3,25 W
Protections	Internal fuse, 1 A
Operation temperature range	0 to 60 °C
Installation	Installed on a TS35 DIN Rail
Dimensions	99,2 x 51,9 x 84 mm (W x H x D)
Standards	IEEE 802.3 Consult the general characteristics of Ponto Series on CT109000
Compatible base	PO6402

Notes:

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Network interface:

- Compatibles UCPS support in its bus only one Ethernet interface with ALNET II Client on TCP/IP protocol active
- The MODBUS TCP/IP and MODBUS RTU over TCP/IP protocols can't be activated simultaneously. It's necessary choose one of them on configuration or add another PO7094 network interface, activating different MODBUS protocols on each interface

Compatibility with other products

The PO7094 Ethernet Interface is compatible with the following Altus products that also have Ethernet Interface:

Code	Description
AL-3405	Ethernet communication interface 10 mbps
AL-3412	Ethernet communication interface 10/100 mbps
AL-3414	Redundant MODBUS TCP Ethernet Interface
PO7091	Industrial Ethernet Interface
PO7092	Industrial Ethernet Interface 10/100 mbps

The compatilite versions of programming tools and CPUs software must be checked according to the following table:

	Compatible version
MasterTool Extended Edition Programming – MT8000	Version 5.52 or higher
MasterTool ProPonto – MT6000	Version 1.63 or higher
PO3242 and PO3342 CPUs	Version 2.30 or higher
PO3x47 CPU	Version 1.30 or higher

The following table describes the PO7094 ALNET II over TCP/IP protocol compatibility with the main programming and communication supervision drivers available on the market.

Product	Description
MT8000	MasterTool Extended Edition
AL-2781	ALNET – Windows NT Driver for FIX-DMACS
AL-2785	OPC Communication Driver for Ethernet ALNET II
AL-2786	Driver for VXL Supervisory
ElipseSCADA	Elipse SCADA Driver
ALTCP1	Scan Driver for InTouch

Notes:

Scan Driver for InTouch. The compatibility depends on the driver configuration. The size of the data package, configurable in driver trough *Register ReadSize* parameter, must have a maximum value of 220 bytes to be compatible.

DANGER:

When replacing a PO7091 module with a PO7094 module, the PO6401 base must be replaced by a PO6402 base.

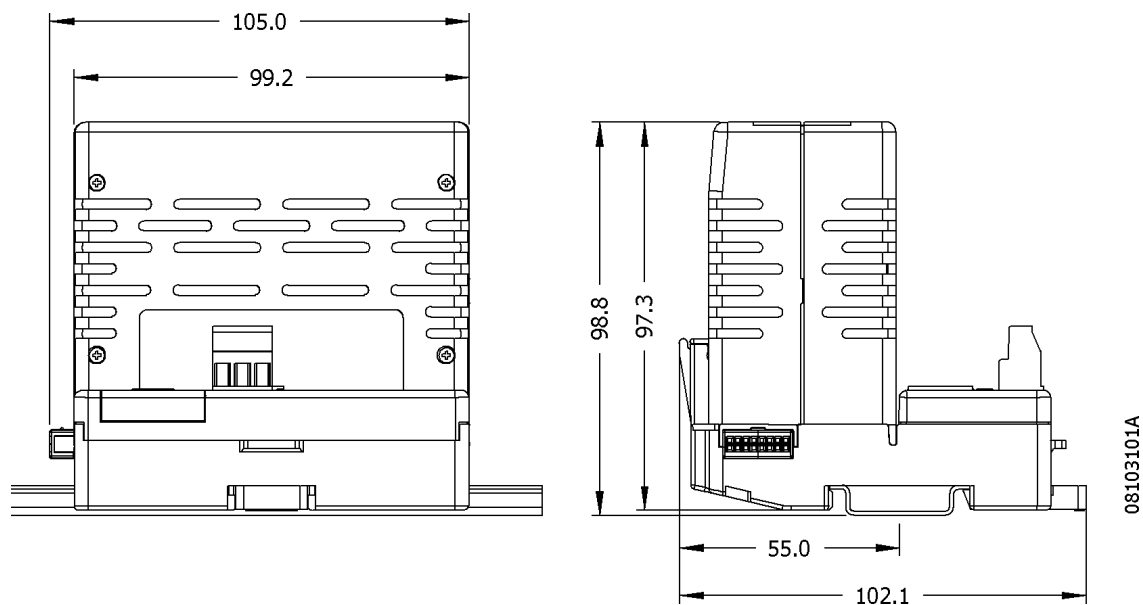
WARNING:

The MODBUS TCP/IP protocol implemented on Ethernet interface PO7094 complies with the standard established by the responsible organization – Modbus-IDA – (www.modbus.org), being compatible with any other device that complies with this standard.

Physical Dimensions

Dimensions in mm, considering the module mounted on its PO6402 base on a DIN TS35 rail.

The Ponto Series Utilization Manual - MU209000 must be consulted for the panel general dimensioning.



Manuals

The PO7094 (MODBUS TCP Ethernet Interface) Utilization Manual and the Application Note NAP080 (Development of Websites in PO9900 – WebGate) should be consulted for product utilization.

For further technical details, configuration, installation and programming of Ponto Series products, the following documents must be consulted:

Document Code	Descrição
CT109000	Technical Characteristics and Configuration of Ponto Series
MU209618	Utilization Manual PO7094
MU209000	Utilization Manual of Ponto Series
MU209104	Utilization Manual of UCPs PO3042/PO3142/PO3242/PO3342
MU209108	Utilization Manual of UCPs PO3047/PO3147/PO3247
MU299040	Utilization Manual MasterTool ProPonto MT6000
MU299604	Utilization Manual MasterTool XE MT8000
NAP080	Application Note – Development of Websites in PO9900 - WebGate
NAP103	Application Note – Ethernet Network Configuration

These documents are available in electronic format on the website www.altus.com.br.