TELEGROUP

// ENG
// User Manual
// EXP1050
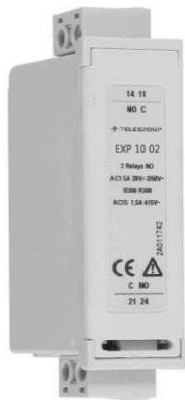
Expansion module
Ethernet connection

TELEGROUP

Isolated Ethernet interface

EXP 1050 User Manual

⚠️ **CAUTION!!**

The managers of the company departments have the obligation, in accordance with current regulations, to carefully read the contents of this document and to make it read to the suppliers and maintenance personnel, for the parts that are theirs. The time spent for this purpose will be largely rewarded by the correct operation of the module and its use in safety conditions

This instruction manual is an integral part of the expansion module and is intended to provide all the information necessary for:

- Know the product and its operation;

- Know the operational methods and the limits of use envisaged;

- The correct installation;

- Proper use and in safe conditions.

Before any intervention on the module, disconnect the voltage from the measurement and supply inputs, from the relay outputs

where present and short-circuit the current transformers.

● The manufacturer assumes no responsibility for any use not in accordance with this module instruction manual.

● The product described in this document is susceptible to changes or modifications at any time. The descriptions and data in

the catalog can not therefore have any contractual value.

● Clean the appliance with a soft cloth, do not use abrasive products, liquid detergents or solvents.

Introduction

The EXP expansion modules have been designed and developed to enhance the connectivity, I / O, storage and analysis functions of the regulator to which they are connected. The EXP 1050 module provides the function of an isolated serial interface of ETHERNET type.

The connection will be made simply by inserting the expansion module into the regulator in the special rear compartment; the controller will automatically perform the recognition. The module parameters are set very simply in the configuration menu in the controller.

The EXP 1050 module can be combined with a Telegroup product equipped with an expansion housing. Compatibility follows the following table:

Standard Device	Rev. SW standard device
PCRJ8	≥ 04 (ethernet function) ≥ 06 (web server function)
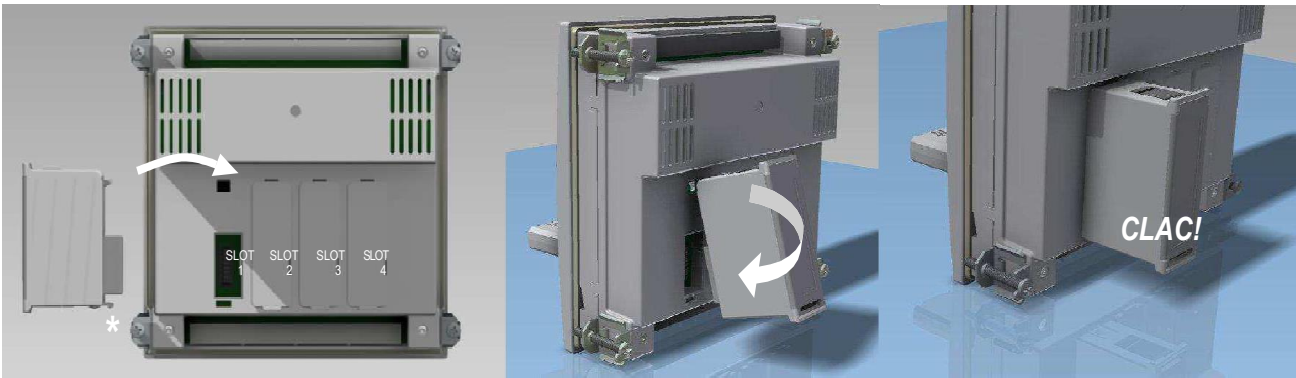
How to connect the module to the compatible controller

1. First of all, remove the voltage to avoid electrocution
2. Remove the removable terminal block.
3. Remove the cover cap of the slot where you want to insert the expansion.
4. Insert the EXP 1050 module as shown in the photo above.
5. Reconnect the removable terminal block.
6. Powering the controller will recognize the new expansion module.

NOTE: to remove the module, remove all dangerous voltage and repeat the operations from point 5 to point 2 in the opposite direction. Press in the point indicated by 1 to disengage the module.

Parameter programming

For the configuration of the module parameters, refer to the manual of the main instrument to which it is connected. Contact a network administrator to assign the connection parameters to the Ethernet module.

Webserver function

The web server function makes the main measures and functions of the PCRJ8 controller on which the EXP 1050 module is installed, without the need to install special software on the PC: access is possible via a simple browser.

NOTE: Access is limited to one user at a time; the browser must be compatible with Java (version 6 or higher): in case of need it is possible to download the Java libraries from the Internet for free (http://java.com/it/download/index.jsp) during the first access. It is possible that some antivirus or firewall can prevent the correct functioning of the application: contact your IT manager.

Access to the webserver from outside the local network (internet)

To access the webserver from outside the local network to which the device is connected (typically through the internet) it is necessary to properly configure the router of the company network. For this configuration it is strongly recommended to contact the IT manager of your local network.

In the example below:

• The PC (1) with address 225.213.7.32 is any PC that wants to access the PCRJ8 controller webserver. Its IP address is not relevant for network configuration purposes, but is only reported for example. The controller can be accessed from any PC connected to the internet, provided that only one connection is established at a time.

• The router (2) has a static and public address 127.34.73.214, visible from the internet. This is the address to be set in the browser of the external PC when you want to display the PCRJ8 controller status.

• IP address 10.39.0.254 is the local address of the router. It is not relevant for configuration purposes.

• The PCRJ8 controller (3) has the local address 10.39.0.69. This must be entered in the COMMUNICATION menu parameters. This address must be used when you want to access the controller from a PC on the local network.

• The PC (4) with address 10.39.0.100 is an example of a PC on the local network. Your address is not relevant for configuration purposes. If you want to access the controller (3) from this PC, you must set 10.39.0.69 in the browser
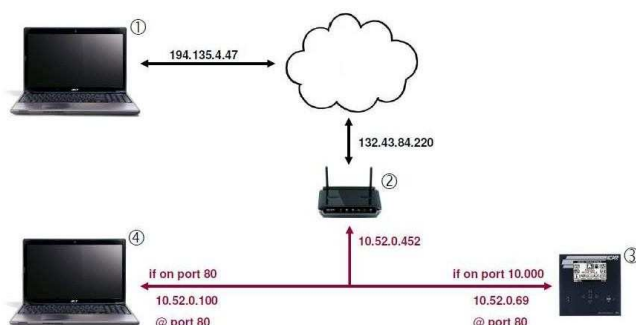
IP address

The router has an IP address related to the local network, but also has an external IP address, the one used when it interacts with devices placed outside the local network. To access EXP1013 from outside it is necessary to use this "external" IP address, in the image of the previous example 127.34.73.214.

When accessing your network from outside, you need to know the external IP address of your router. To get it quickly you can connect to http://www.whatismyip.com from within your local network.

Port forwarding

The Webserver uses 3 IP ports to work:

• **Port 80** for the http connection;

• **Port 30718** (reading configuration EXP 1050);

• The port specified in the controller configuration, M16 COMMUNICATION menu: parameter P20.2.08 (TCP-IP PORT) which is **port 1001** in our example.

It is therefore necessary to configure your router to forward incoming traffic on all three ports to the IP address of your device (10.39.0.69).

The router can also be set to change ports, in the previous example there are two servers that use both port 80: when accessing the network using port 80, the router forwards requests to 10.39.0.100 that will respond appropriately. When the router receives requests on port 10000, it forwards them to 10.39.0.69 also changing the port to 80. This way you can have other servers in your network without having to change their configuration.

NOTE: The use of non-standard ports could be detected by antivirus or firewall software as a suspicious activity, in which case it is necessary to add security exceptions to use the web server. This could in some cases constitute a security vulnerability for your PC, so it is advisable to manage these configurations with due precaution.
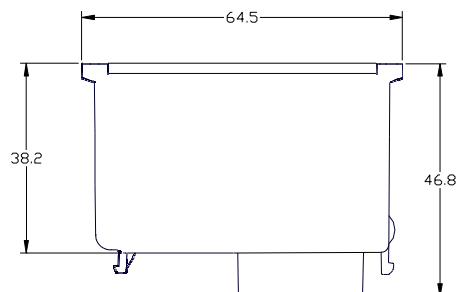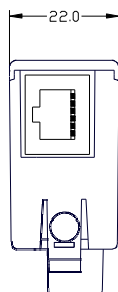
Java configuration

In case of communication problems, it may be necessary to configure the Java options as follows:

• Go to the **PC control panel** and select **Java** to open the Java control panel.

• Press the **Network Settings ... button to** open the network settings

• Select **Direct Connection**

Mechanical dimensions [mm]

Technical Features

Supply	
Supply Voltage	5V= (supplied by main instrument)
Supply Current	250mA
Power Consumption/dissipation	1,25W
Ethernet Interface	
Network Interface	Ethernet RJ45 10BASE-T or 100BASE-TX (auto-sensing)
Compatibility	Ethernet: Version 2.0/IEEE802.3
Supported Protocols	ARP, UDP/IP, TCP/IP, Telnet, ICMP, SNMP, DHCP, BOOTP, TFTP, Auto IP, e HTTP
Insulation Voltage	
Rated voltage impulse withstand Uimp	4 kV
Power Frequency withstand voltage	2 kV
Connection to standard product	
Terminal Type	Plug in connector
Ambient operating conditions	
Operating temperature	-20 - +60°C
Storage temperature	-30 - +80°C
Relative humidity	<90%(IEC/EN 60068--2-70)
Maximum pollution degree	Degree 2
Overvoltage category	3
Climatic sequence	Z/ABDM (IEC/EN 60068-2-61)
Shock resistance	15g (IEC/EN 60068-2-27)
Vibration resistance	0.7g (IEC/EN 60068-2-6)
Housing	
Dimensions	64,5mmx38,2mmx22mm
Mounting	For inclusion in the EXP plug in expansion slot
Material	Polyamide RAL 7035
Degree of protection	IP20
Weight	64g
Certifications and compliance	
Certifications obtained	cULus
Reference standards	IEC/EN 61010-1, IEC/EN 61000-6-2 IEC/ EN 61000-6-3 UL508 e CSA C22.2-N°14
UL Marking	Use only copper conductors (CU) 60°C/75°C

INFORMATION AND TECHNICAL ASSISTANCE

For information contact:

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