

WEBS

WEBS: interface module between MCP XT controller and Ethernet network with Web-Server function

WEBS module has been developed to be used in all applications of **CONTATTO** system where it is required to control the domotic system through an Intranet or Internet connection, without difficult configuration procedures; for this kind of applications, in association with the specific program for the development of graphical maps, WEBS module is very user-friendly.

To use WEBS module, *MCPGraph upgraded to the latest available version is required*; this can be freely downloaded from the website www.duemmegi.it. **WEBS requires MCP XT controller with firmware 3.0 or higher (main micro-controller).**

WEBS module can be used in two different operating modes: in the first one it acts as a "bridge" between a local Ethernet network and **CONTATTO** system, while in the second operating mode it can be used as a true WEB-Server, with web pages that can be created by the user.

WEBS module allows to manage any **CONTATTO** bus variables, like:

- inputs status
- status and command of real outputs
- status and command of virtual points
- registers
- system clock

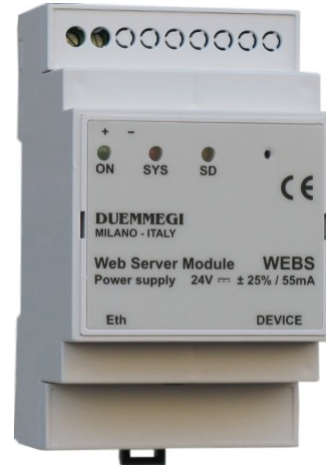
WEBS module has a 2-way terminal block for the connection to power-supply in the range 9 to 24V= (terminals + and -). On the opposite side, the module features an Ethernet connector and a 10-way connector allowing the connection to MCP XT controller by means of the provided flat cable. Three LEDs on the front panel show the operating status of the module: the green LED is on when the module is supplied, while the yellow and the red LEDs report more complex information (for more details see the "LEDs meaning" paragraph).

A little hole on the front panel allows accessing to the Reset button; for more details see the related paragraph. WEBS module is housed in a 3M DIN standard module.

The development of the maps to be loaded into WEBS module is supported by the specific tool named MCP-Graph; for details about the development of maps, see the manual "Graphical Maps".

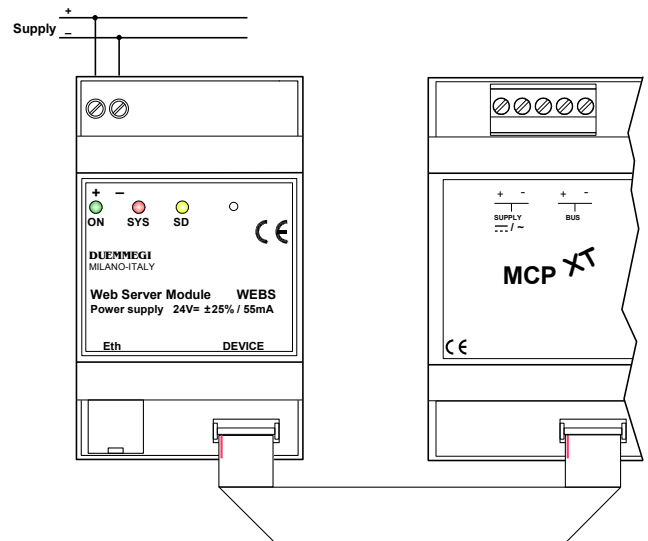
WARNING: the present technical sheet is applicable to WEBS module with firmware upgraded to the latest available release.

NOTE: the WEBS module can be used in Domino and Contatto plants, with the same firmware, because it is able to automatically recognize if the module is connected to DFCP or MCPXT; for the Domino case, refer however to the specific technical sheet.



Module Connection

The connections for the proper operation of WEBS module are shown in the next schematic diagram.



As shown before, WEBS module must be connected to a dc power supply in the range 9 to 24V. After that it is necessary to connect the module to the Ethernet network and to **CONTATTO** MCP XT controller; in this way WEBS module will be full operating.

WARNING: for the connection to an Ethernet HUB, a straight cable category 5 must be used, whereas for the direct connection to a PC a cross cable is needed (both these cables are not provided).

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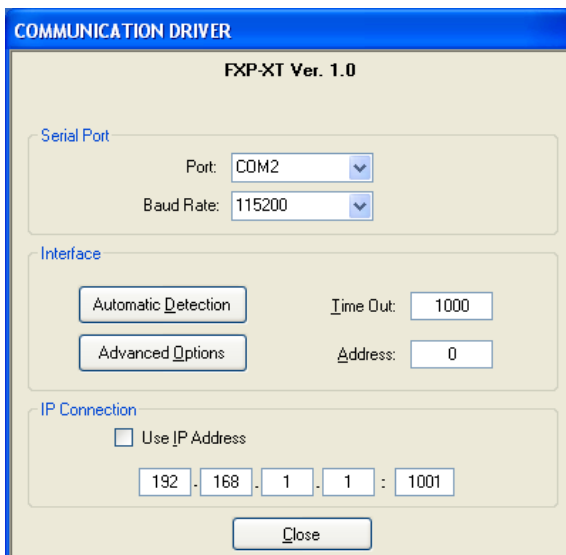
Operation

WEBS module has been developed to be used in association with MCP XT **CONTATTO** bus controller, which does not require any configuration procedure.

As said above, WEBS module can be used in two ways, as bridge (interface between MCP XT and Ethernet) or Web-Server.

WEBS: bridge mode

By means of the bridge operating mode, it is possible to make each operation allowed by the programming and diagnostics Tools (MCPGraph, MCP IDE). It is possible to use these tools through the local network (LAN) or through Internet (but in this case a VPN has to be enabled, or anyway the router must be set in a proper way) after having entered the IP address assigned to WEBS in the opening communication window used for the connection; in this way it will be possible to interact with **CONTATTO** system from any location in the world (see "Configuration and setting up").



The bridge modality is MONO-CLIENT, therefore WEBS allows the access to only one user at a time (although at the same time with Web-Server users).

WEBS: Web-Server mode

By means of this modality it is possible to upload into WEBS a series of customized WEB pages that have been created through the proper Tool MCPGraph upgraded to the latest available version. Through this modality, WEBS module allows the interfacing to a common Web-browser (FireFox, Internet Explorer, etc.); to navigate across the WEB pages, a password will be required (even if this is optional). The pages loaded by the browser and stored inside the WEBS memory, must be created and customized according to the plant and to the user's requirement. About the development of these pages, see the "Graphical Maps" manual.

Web-Server modality is MULTI-CLIENT; it is possible the simultaneous access to a maximum of 4 users (plus one user in bridge mode).

It is also possible to use 5 different login/passwords, each one with its own credentials; it is possible to set username and password for an Admin user and 4 different usernames and passwords for the other users.

It is possible to differentiate, in this way, the maps for each user and therefore the controls that each user can perform.

LEDs meaning

Three LEDs (green, red and yellow) on the front panel of WEBS show the operating status of WEBS module. The green LED shows the power on condition; the red LED features the function of System LED (SYS) and it offers a visual signaling and flashing with different duration depending on the module operating status; the next table lists these modes:

Red LED	On [sec]	Off [sec]
MCP XT connected	0.1	1.5
MCP XT not connected	0.9	0.1
Wrong MAC address	Fisso	-----
SD-Card not present	0.5	0.5
Reset in progress	0.1	0.1

If a polling is running through the bridge mode, the flashing of red LED is fast and irregular. In the case of firmware upgrading, the red LED flashes with "dimming" effect.

The yellow LED (SD) shows the access to the SD-card memory and it flashes in irregular mode when a client is connected in Web-Server mode.

Reset button

A little hole on the front panel allows the access to the Reset button; this button must be used only in the case of effective needing and it has the following functions:

Reset of the module: while the module is powered, push and hold down the button; when the Red LED starts to flash quickly (after 2 seconds about) release the button.

Restoring of default parameters: while the module is powered, push and hold down the button; after 2 seconds about the Red LED starts to flash quickly. The flashing continues for 3 seconds about, after that the flashing slows down; after further 10 seconds, the Red LED return to flash quickly. At this time release the button and the default parameters (IP address, password, etc.) will be restored.

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Configuration and setting up

After having properly connected the WEBS module, several simple configuration procedures must be executed in order to make the module well operating.

To access to the configuration panel of the WEBS module it is possible to use any browser (FireFox, Internet Explorer, Google Chrome, etc.).

WARNING: to modify the settings and the configuration of WEBS module, it is necessary to access as administrator.

Step 1: users and password configuration

In the address bar of the browser enter the following:

http://192.168.1.253/webpass.htm

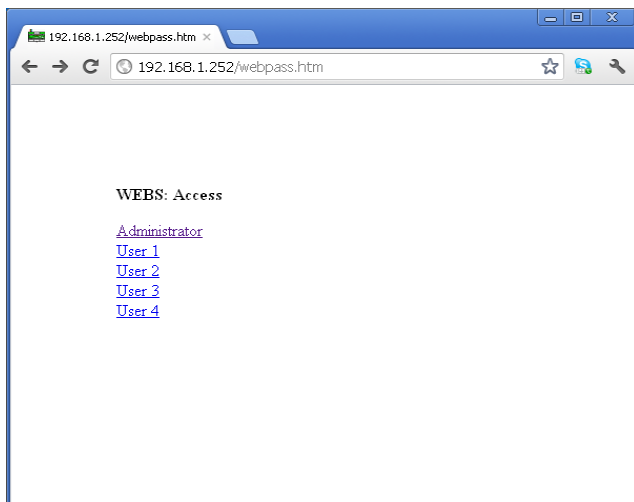
A window asking for user name and password will be shown; the default ones for the administrator access are:

username: *admin*

password: *admin*

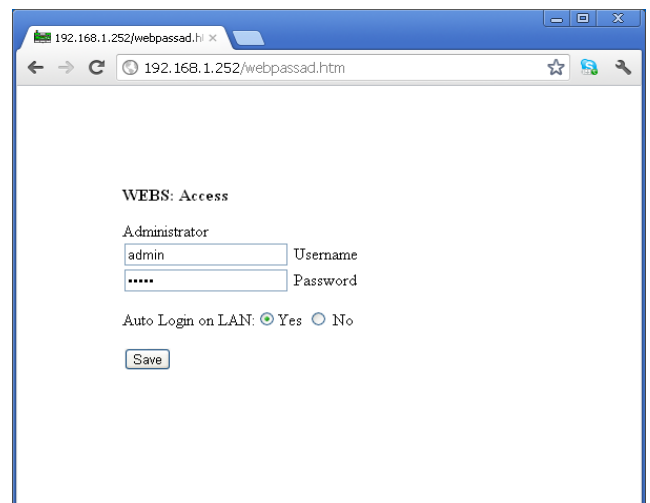
It is a good practice, first of all, to change the administrator and users login/password before to use the module. User names and passwords, as the other parameters, can be modified in any moments according to the requirements.

The configuration page for passwords configuration is the following:



It is necessary to choose the wanted voice to modify and then, for each one, save the new settings.

It is possible to enable or disable the Auto login of each user in the event of a LAN connection: in practice for which the user has enabled the Auto Login, when connected to the LAN, will no longer provide the login credentials. However, using a remote connection, the login credentials are always required. To enable or disable the Auto Login is necessary, following the selection of user from the previous window, select Yes to enable Auto Login, or No to disable Auto Login. If each user have selected Yes for this option, the WEBS module proceed with the following hierarchy: user 1, user 2, user 3, user 4, Administrator. Taking the example of the admin user, the configuration window of the Auto Login option will be as follows:



For each saving the following page will be shown:

WEBS updated successfully!

[IP Configuration](#)

[Passwords](#)

[Reset WEBS](#)

To proceed with users configuration, select Passwords, otherwise select Reset WEBS to make operating the new settings. Otherwise select IP Configuration to proceed with the web parameters configuration described in the following.

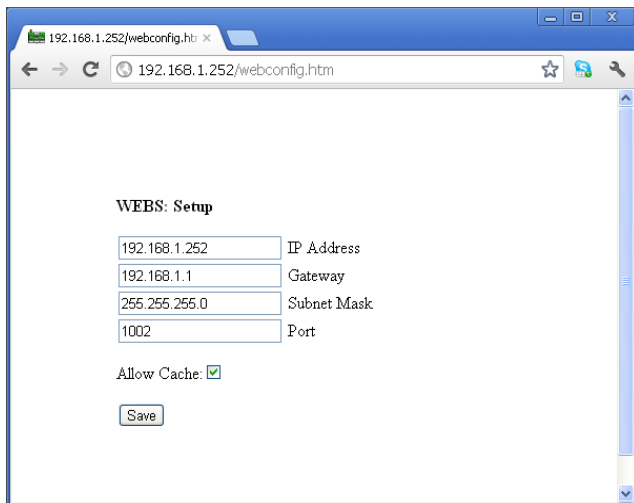
Step 2: IP configuration and web parameters

After the configuration of the passwords it is possible to access to the configuration page. In the address bar of the browser enter the following:

http://192.168.1.253/webconfig.htm

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The configuration page looks like the following:



It is possible, in this configuration page, to set the wanted parameters for IP address, Gateway, Subnet Mask, and the Bridge Port. The shown values in the previous picture are the default ones.

Change these parameters as required and then press the Save button; in this way will appear the following page:

WEBS updated successfully!

[IP Configuration](#)

[Passwords](#)

[Reset WEBS](#)

Select Reset WEBS to make operating the new settings; will appear the next message:

WEBS: Resetting ... (Redirecting to home page in 5 seconds)

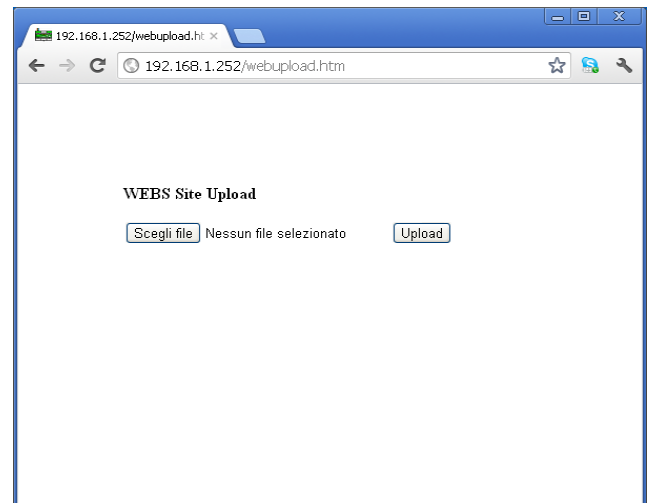
A new login request will appear after 5 seconds.

Step 3: uploading of html pages

For the uploading of html pages (the user Web site), as mentioned in the Graphical Maps manual, it is necessary to enter in the address bar of the browser the following (assuming to have assigned the IP address 192.168.1.253 to WEBS module):

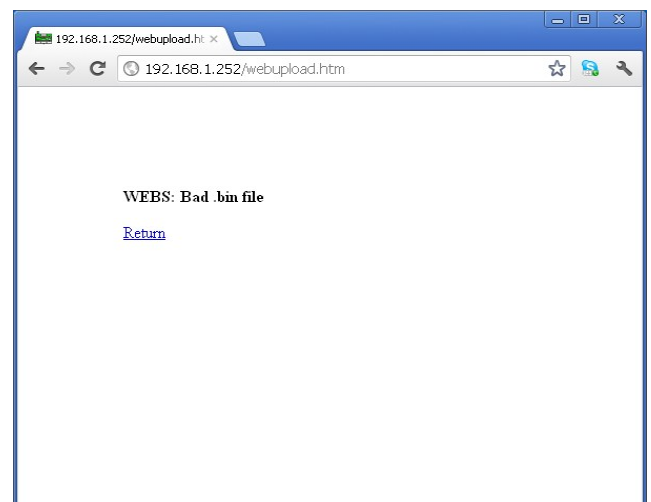
<http://192.168.1.253/webupload.htm>

The upload page looks like the following:



To upload the user's Web pages, push the button "Browse" and select the .BIN file previously created on your computer (see Graphical Maps manual); at this time push the "Upload" button.

If an error occurs during the upload, the following message will be shown:



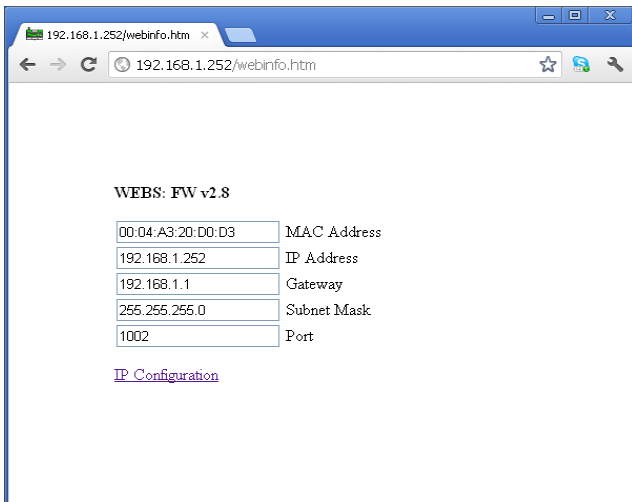
Information Pages

Entering the following address (the WEBS IP address 192.168.1.253 is supposed):

<http://192.168.1.253/webinfo.htm>

it is possible to show any parameters of WEBS module, as shown in the following picture:

WARNING: the access to information page of WEBS module is granted only to Administrator.

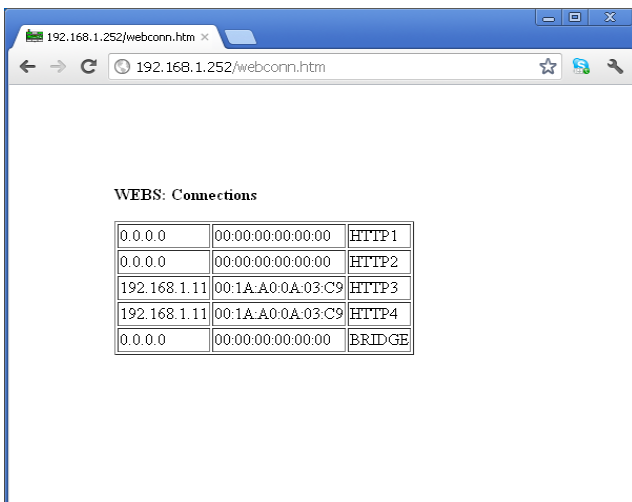


This page shows all settings previously assigned, and the Firmware version of WEBS (FW v2.0 for the example in the previous picture); from this page it is not possible to modify any parameters. By clicking on IP Configuration it is possible to go back to the configuration page of WEBS module (.../webconfig.htm).

Connected users info

It is possible to monitor the connected users in Web-Server and Bridge modality: in the address bar of the browser enter the following:

<http://192.168.1.253/webconn.htm>



As shown in the previous screen-shot, the first 4 lines report the IP address of the connected users in Web-Server modality, and the fifth-line reports the connected user in Bridge modality.

WARNING: the access to the connected users page is granted only to the Administrator.

Diagnostics

In the address bar of the browser enter the following:

<http://192.168.1.253/webdiag.htm>

in this way it is possible to show the SD-CARD status and the connected unit. The related screen-shot is the following:



WARNING: the access to diagnostic page is granted only to the Administrator.

Logout

To close the connection with WEBS module, however optional operation, it is necessary to execute the logout from the module entering in the browser bar the following address:

<http://192.168.1.253/weblogout.htm>

A message confirming the logout will be then shown.

Remote Reset

If unexpected events occur, causing the blocking of WEBS module, it is possible to use a special command to execute the RESET of the module from a remote location (through the network); this RESET is similar to the hardware reset of module. In the browser bar enter the following address:

<http://192.168.1.253/webreset.htm>

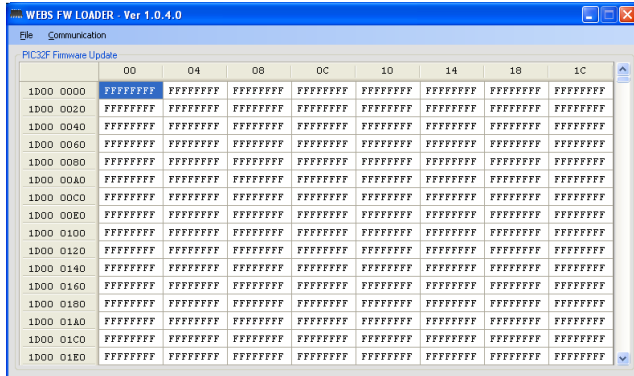
WARNING: the reset of WEBS module is granted only to the Administrator. Each time that a change has been made to the configuration parameters, it is necessary, to be operative, to RESET the module.

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Firmware Updating

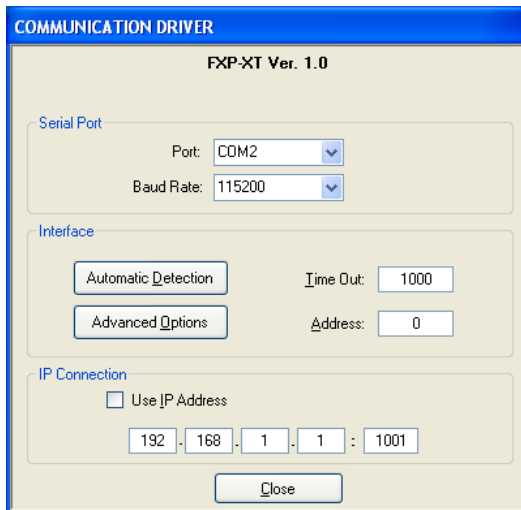
To execute the Firmware Update of WEBS module, the program **BootWEBS** upgraded to the **latest available version**. It also requires that the PC is connected to the RS232 serial port of **MCP-XT** (or, in alternative, **RS485** by a specific converter). MCP-XT must be connected to the WEBS module to be updated through the specific flat cable. MCP-XT must have main firmware upgrade.

Start the BootWEBS program, the following will be shown:



From the menu select **“Communication”**; the window shown in the following picture will be opened.

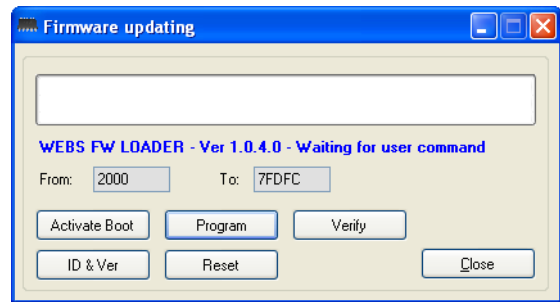
Press the button **“Automatic Detection”** to enable the communication with MCP XT, then press the button **“Close”**.



An Ethernet connection can be used by the specify of the IP address of connected converter to the serial port of MCP-XT; this converter can NOT be the same WEBS in bridge modality.

From the program menu select **“File”** and then **“Open”**; it is possible, in this way, to load the **.HEX** file to be downloaded into WEBS module.

Select **“Communication”** and the **“Program”**; in this way the following window will be shown.



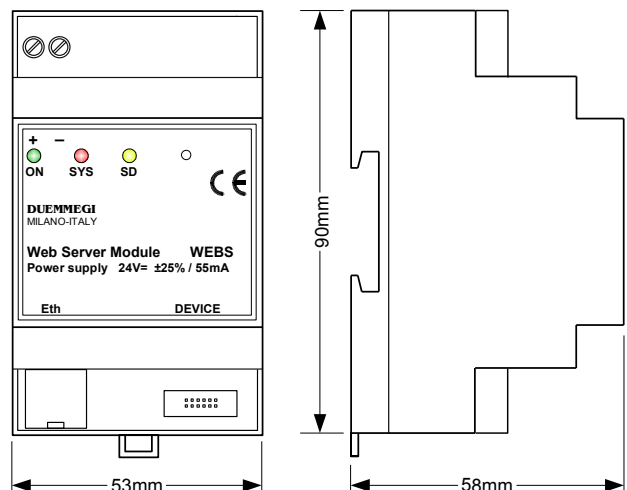
The **“ID & Ver”** button allows to visualize the current version of the firmware uploaded in the WEBS module.

Click on the button **“Activate Boot”**; the red LED on WEBS module will start to flash with **“dimming”** effect, shown that the module is ready to receive the new firmware. Then press the button **“Program”** and wait for the end of the operation. At the end of upgrading, to make operating the module, click on button **“Reset PIC”**, then select **“Close”** to quit the program.

Technical characteristics

Power Supply	9 ÷ 24V SELV
MAX current consumption	105mA @ 9V 55mA @ 24V
MCP XT Interface	Proprietary SPI interface
Ethernet interface	10/100BaseT Ethernet
Housing	DIN standard 3M per guida DIN
Operating temperature	-5 ÷ +50 °C
Storage temperature	-20 ÷ +70 °C
Protection degree	IP20

Outline dimensions



Smaltimento

Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla sua confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.

L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno. L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientalmente compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura. Lo smaltimento abusivo del prodotto da parte dell'utente comporta l'applicazione delle sanzioni amministrative previste dalla normativa vigente.

Prescrizioni di installazione e limitazioni d'uso**Norme e disposizioni**

La progettazione e la messa in servizio di impianti elettrici deve avvenire attenendosi alle norme, direttive, prescrizioni e disposizioni in vigore nella rispettiva nazione. L'installazione, la configurazione e la programmazione dei componenti deve essere eseguita esclusivamente da personale qualificato. L'installazione ed il collegamento della linea bus e dei dispositivi correlati deve essere eseguita in conformità alle indicazioni del costruttore ed alle norme vigenti. Tutte le norme di sicurezza vigenti, come per esempio norme antinfortunistiche o leggi su mezzi o strumenti di lavoro, devono essere rispettate.

Indicazioni di sicurezza

Proteggere l'apparecchio, sia durante il trasporto, l'immagazzinaggio e durante il funzionamento, da umidità, sporcizia e danneggiamenti vari. Non utilizzare l'apparecchio in modo non conforme ai dati tecnici specifici. Non aprire mai il contenitore. Se non diversamente specificato, installare in contenitore chiuso (es. quadro elettrico). Se previsto, collegare il terminale di terra. Non ostacolare il raffreddamento dell'apparecchio. Tenere lontano dalla portata dei bambini.

Messa in servizio

L'assegnazione dell'indirizzo fisico e la configurazione di eventuali parametri si realizza con gli specifici programmi forniti o con l'apposito programmatore. Per la prima messa in funzione del dispositivo procedere nel modo seguente:

- Accertarsi che l'impianto non sia in tensione
- Indirizzare il dispositivo (se previsto)
- Montare e cablare il dispositivo secondo gli schemi indicati sul foglio tecnico di riferimento
- Solo successivamente inserire la tensione d'esercizio 230Vca per l'alimentatore del bus e gli altri circuiti correlati.

Conformità normativa

Questo dispositivo è conforme ai requisiti essenziali delle direttive:
2004/108/CE (EMC)
2006/95/CE (Low Voltage)
2002/95/CE (RoHS)

Nota

Le caratteristiche dichiarate ed il presente foglio tecnico possono essere soggetti a modifiche senza preavviso.