

DFTouch: touchscreen video terminal

DFTouch video terminal is a simple customizable graphical interface allowing an easy management of the domotic plant realized with **Domino** bus. The main characteristics of DFTouch video terminal (equipped with firmware 1.2 or higher) are the following:

- Direct connection to bus **Domino** bus
- Monochromatic display 240x320
- Time controlled back lighting and adjustable contrast
- Up to 50 user's pages
- Customization of any page with a background image and icons (animations) for the displaying of the status of bus points and to send commands to the outputs
- Page switching through buttons on the display which can be freely customized
- Page recall at the occurrence of a status change on one or more bus points; this function is useful for alarm management
- Acoustic beeper (buzzer) inside the device whose operation can be programmed as required
- Displaying of temperatures measured by bus modules (e.g. DFTA and DFTE), both in numerical and graphical format (bargraph)
- Displaying and editing of date and time reported on the bus (this requires DFCK3 or DFCP module)
- Displaying of electrical parameters of the plant, measured by DFCC module
- Management of sceneries: DFTouch allows to create, edit and save many sceneries, therefore this operation can be done by the final user without the intervention of a qualified installer. The sceneries can be recalled by buttons on DFTouch or by physical pushbuttons connected on the bus. Each scenery can control lights, shutters, blinds, brightness level of dimmer modules, the temperature setpoint of the clima system and many more
- Screen saver function with customizable image and time out
- DFTouchTools program free of charge, user friendly for the development of the pages to be displayed on DFTouch
- RS232 serial port for the uploading of the application (Prg connector), with provided adapter cable

Each page can have a background image in bitmap format, thus easily customizable; in addition, the development software is provided together to a wide library of symbols. More DFTouch terminals can be installed in the same plant.

DFTouch housing allows the mounting in a standard wall box model 506E. For details on the programming, refer to the related manual.

DFTouch power supply

DFTouch terminal can be supplied by an external power supply or, if the plant has been correctly dimensioned, directly by the bus **Domino** bus.



Supplying DFTouch by the bus depends basically on the following conditions:

- how many bus power supply (DFPW2 modules) have been installed in the plant
- how many modules have been installed in the plant
- how many DFTouch terminals must be installed
- bus length

A single bus power supply DFPW2, in a **Domino** system, can feed up to 50 "generic" modules about (in other words the classic input and output modules of **Domino** family).

DFTouch terminal has a "weight", from the current consumption point of view, equal to 8 modules. For instance, in a plant of 32 **Domino** modules and a single DFPW2 module, the following amount of DFTouch can be installed:

$$(50 \text{ moduli} - 32 \text{ moduli}) / 8 = 2.25 = 2 \text{ DFTouch}$$

If DFTouch terminals, in the same example, are 4, then another DFPW2 module must be installed.

Take in account that this rule to calculate how many DFTouch terminals can be supplied by the bus does not consider the length of the bus itself, the wires section and the positioning of DFPW2 modules. Remember that DFPW2 power supply module performs a LED to report the over load condition, thus allowing to understand if the plant shows an excessive current consumption in respect of the installed power supplies installed; for more details, refer to the technical sheet of >DFPW2 module.

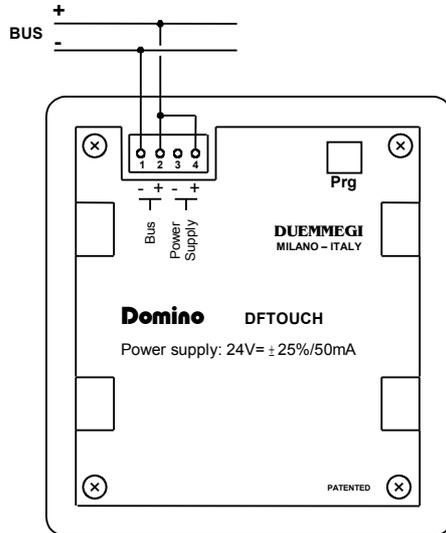
As option, as said above, DFTouch terminals can be supplied by an auxiliary standard power supply in the range 12÷24V ~~~ or 12V~.

Connection of DFTouch

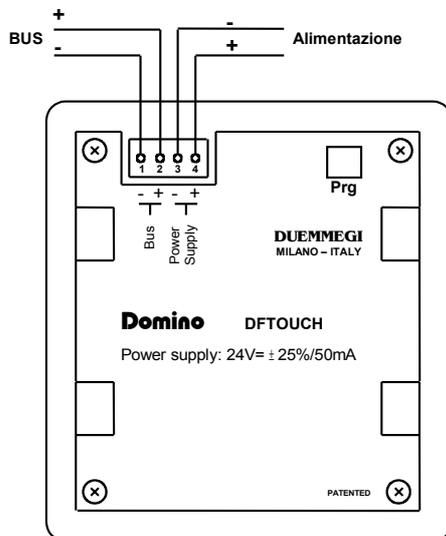
The connector on the rear side of DFTouch module provides 2 terminals (1 and 2) for the connection to the **Domino** bus and 2 terminals (3 and 4) for the connection to the external power supply.

DFTouch

As said in the previous paragraph, DFTouch video terminal can be supplied directly by the **Domino** bus, thus simplifying the installation because only two wires are required. In this case, terminals 2 and 4 must be shorted together as in the following schematic diagram.



If instead DFTouch video terminal will be supplied by an auxiliary power supply, the connections to be made must be as in the following schematic diagram.



There is no polarity to be observed when using an ac power supply; anyway, if the ac voltage supplies more than one DFTouch modules, the connection +/- on the several DFTouch must be the same.

Note: terminals 1 and 3 are internally shorted together.

DFTouchTools development program

To develop the application to be uploaded to DFTouch video terminal, the program DFTouchTools is available free of charge (for Windows© XP, 7).

This program allows a quick and easy development of the graphical pages and any other function required to DFTouch.

For details about the using of this program, refer to DFTouch Programming Manual.

Multipoint configuration

DFTouch video terminal cyclically polls the input and output modules on the **Domino** bus, in order to maintain an updated virtual image of the field.

When more than one DFTouch terminals are connected on the same **Domino** bus, it is mandatory that only one of them executes this cyclic polling: this DFTouch will be the Master while all other ones will be the Slaves. The development program DFTouchTools allow to configure each video terminal as Master or as Slave as required. Only one must be configured as Master on the same bus.

Images and icons

Each page can have a background image in bitmap format, 240x320 pixels monochromatic. This allows to have as background small maps or any other desired image.

In addition, up to 32 icons can be placed on each page; the icon (or animation) is a symbol like push-buttons, lamps, LEDs, etc. The allowed dimension of the icons is in the range 16x16 pixels to 240x240 pixels. The icons can be animated; this means that DFTouch loads different symbols depending, for instance, on the input or output digital status to which that icon is referred to.

Also the button can be easily animated, in order to have the perception of the pressing.

In addition, other specific symbols can be placed on each page, like numeric displays with characters of various dimensions (for instance for displaying of the temperature) and bargraphs (for instance for a graphical representation of a dimmer output level).



DFTouch

Management of special Domino modules

DFTouch allows the management of some special **Domino** modules. At the moment these modules are:

- DFCK3: displaying and edit of date and time and management of the schedule times for several zones
- DFCT: management of temperature and scheduler for the clima regulation of a room

The sceneries

One of the useful function of DFTouch video terminal is the possibility to manage the sceneries. A scenery is a “well defined configuration” of more output points that can be immediately recalled by pressing a “virtual” button on the touch panel or a physical button on the field.

The outputs points that can be involved in the sceneries can belong to several categories: ON/OFF, open/closed, dimmer output level, change of the temperature setpoint, and so on. For instance it is possible to create a scenery named FILM; when recalled, it switches off the main lamps of the living room, it regulates the brightness of the rear wall lights to 40% and that one of the front wall lights to 30%, it unrolls the projection screen and it changes the DFCT setpoint.

The amount of sceneries that can be defined depends on the total amount of digital and analog point to be managed; for instance, up to 55 different sceneries can be defined each one controlling a total of 10 points, or up to 26 sceneries involving 30 points each one. For more details on the sceneries, refer to the DFTouch programming manual.



Uploading the application to DFTouch

The application (or customization) developed using DFTouchTools program must be uploaded to DFTouch through the adapter cable named CVXT, connected to the Prg connector on the rear side of the video terminal and, the other cable end, to the PC (RS232 port or USB port using a proper converter).

Of course, it is also possible to download the application from a DFTouch to the PC in order to reconstruct the source of the application itself.

Installation

DFTouch video terminal must be installed in a standard wall box model 506E, with the long side of the box toward the vertical axis.

Connect the bus cable to the related terminals on the rear side of the module (and the power supply if this option was chosen). Upload the application to DFTouch by a PC connected via RS232 using the provided cable CVXT.

After having checked the correct operation of the uploaded application, insert DFTouch in the wall box and fix it using the 4 provided screws, tightening them with moderation. Pay attention to the orientation of the panel (the terminal block on the rear side must be placed top). Insert then the chosen frame (not provided).

Unlike the majority of the modules of the **Domino** family, DFTouch video terminal does not require any address.

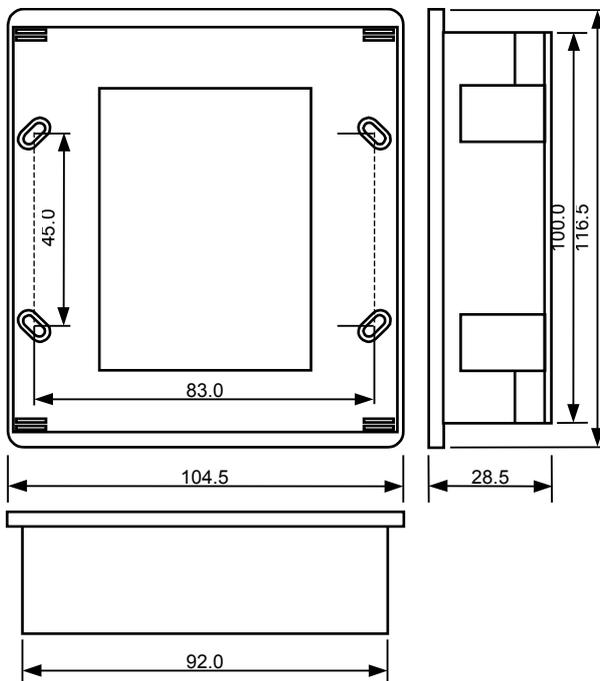
Firmware upgrade

The firmware of DFTouch video terminal can easily upgraded by a PC connected to Prg Connector. This feature allows to maintains the module always upgraded with the latest enhancements.

Technical characteristics

Supply voltage	By Domino bus or 12+24V $\overline{\text{---}}$ SELV $\pm 20\%$ or 12V $\sim \pm 10\%$
MAX current consumption	0.1A @ 12V $\overline{\text{---}}$ 0.05A @ 24V $\overline{\text{---}}$ 0.1A @ 12V \sim
Display	4" LCD 240x320 monochrome, LED back lighting
Visible Area	62.0 x 81.8 mm
Contrast regulation	via touch panel
PC interface	RS232, adapter cable CVXT provided
Baud rate on RS232	Fixed 57600
Number of user pages	50
Images format	Bitmap (.BMP) and icon (.ICO)
MAX number of icons for page	32
Icons dimensions	16x16 pixels to 240x240 pixels
Acoustic beeper	Internal buzzer with programmable operation
Housing	For standard wall mounting box model 506E
Operating temperature	0 \div +50 °C
Storage temperature	-20 \div +70 °C
Protection degree	IP20

Outline dimensions



Correct disposal of this product



(Waste Electrical & Electronic Equipment)
(Applicable in the European Union and other European countries with separate collection systems). This marking on the product, accessories or literature indicates that the product should not be disposed of with other household waste at the end of their working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate these items from other types of waste and recycle them responsibly to promote the sustainable reuse of material resources. Household users should contact either the retailer where they purchased this product, or their local government office, for details of where and how they can take these items for environmentally safe recycling. This product and its electronic accessories should not be mixed with other commercial wastes for disposal.

Installation and use restrictions

Standards and regulations

The design and the setting up of electrical systems must be performed according to the relevant standards, guidelines, specifications and regulations of the relevant country. The installation, configuration and programming of the devices must be carried out by trained personnel.

The installation and the wiring of the bus line and the related devices must be performed according to the recommendations of the manufacturers (reported on the specific data sheet of the product) and according to the applicable standards.

All the relevant safety regulations, e.g. accident prevention regulations, law on technical work equipment, must also be observed.

Safety instructions

Protect the unit against moisture, dirt and any kind of damage during transport, storage and operation. Do not operate the unit outside the specified technical data.

Never open the housing. If not otherwise specified, install in closed housing (e.g. distribution cabinet). Earth the unit at the terminals provided, if existing, for this purpose. Do not obstruct cooling of the units. Keep out of the reach of children.

Setting up

The physical address assignment and the setting of parameters (if any) must be performed by the specific softwares provided together the device or by the specific programmer. For the first installation of the device proceed according to the following guidelines:

- Check that any voltage supplying the plant has been removed
- Assign the address to module (if any)
- Install and wire the device according to the schematic diagrams on the specific data sheet of the product
- Only then switch on the 230Vac supplying the bus power supply and the other related circuits

Applied standards

This device complies with the essential requirements of the following directives:

- 2004/108/CE (EMC)
- 2006/95/CE (Low Voltage)
- 2002/95/CE (RoHS)

Note

Technical characteristics and this data sheet are subject to change without notice.