Fidelix

FX-3000-C
All-in-one BMS controller

> Freely programmable PLC
> Webserver, history logging, energy reports, trending, weather forecast anticipation, user management, ...
> BACnet, Modbus and M-Bus communication
> Integrated WiFi router (802.11b/g/n) with WPS
> DIN-rail mountable

Full control
Ultimate compatibility

The FX-3000-C is a building automation controller with BACnet B-BC profile. It is 100% freely configurable, communicates using Modbus, M-Bus or BACnet, serial, UDP or TCP and has an on-board NAT router with 802.11b/g/n Wi-Fi.

Out of the box fully equipped with web server, history recording, user management, energy reporting capabilities and many more features, the FX-3000-C is an all-you-need solution for all your building management needs.

Programming and parametrising the FX-3000-C is done with our software suite FX-Editor, offering a clear and efficient project overview. It makes programming the controller not only an easy, but also a speedy task.

Combining the controller with our FdxCompact I/O's is done easily by using the click-on connectors on a DIN-rail, through which both power and communication is connected.

Technical features

Dimensions:	99 x 68 x 112 mm
Weight:	350 gr
Power consumption:	3-6 W
Operating voltage:	24 VDC (+/- 15%)
Operating temperature:	0 to +40°C
Storage temperature:	-40 to +85°C
Maximum relative humidity during operation:	90%, no condensation
IP-Class:	20

Power supply: Power can be provided either from the side (next to the Wi-Fi antenna), or from the bottom, through the click-on connector on the DIN rail. With this connector, FdxCompact modules can be connected to the same power supply. The controller can handle a load of maximum 7A.

Modbus communication: The controller has one built-in serial port (RS485) to connect up to 63 FdxCompact modules. Using the click-on connector inside the DIN rail, they can be connected directly to the controller, and will be automatically detected when they are.

With the Fdx-Terminal-C set (providing screw terminals), the RS485 communication loop can be closed at the last module, or continued towards classic modules or other equipment.

Remove the sticker on the side to access the connection port for the FX-RS485-C module. This module hosts 2 more RS485 ports that can be directly connected to the controller (COM4 and COM5).

Using the multiLINK, more serial ports can be parametrised.

USB: The controller has 2 USB ports. With the Update Tool software, the USB1 port can be used to update, consult or reset certain settings that require local intervention. The USB2 port is allocated to the internal router.
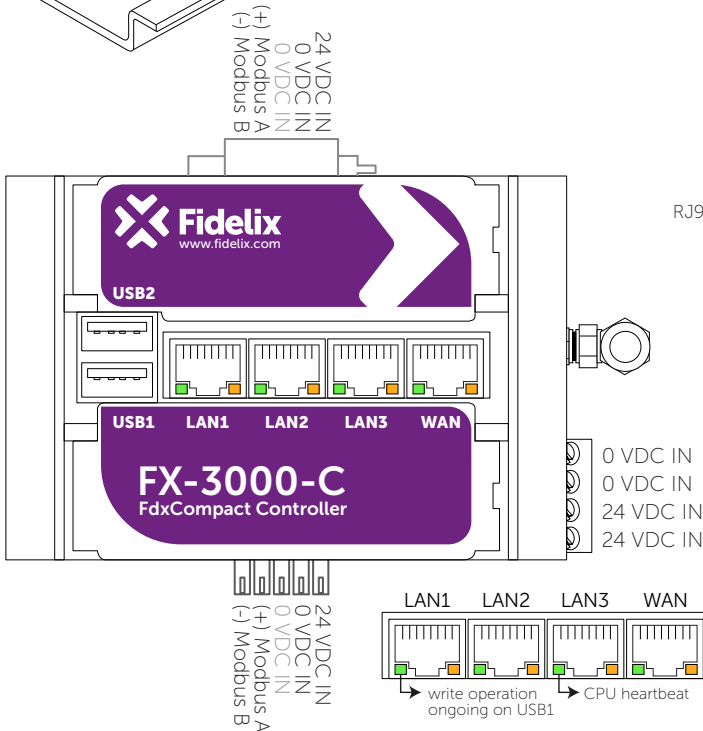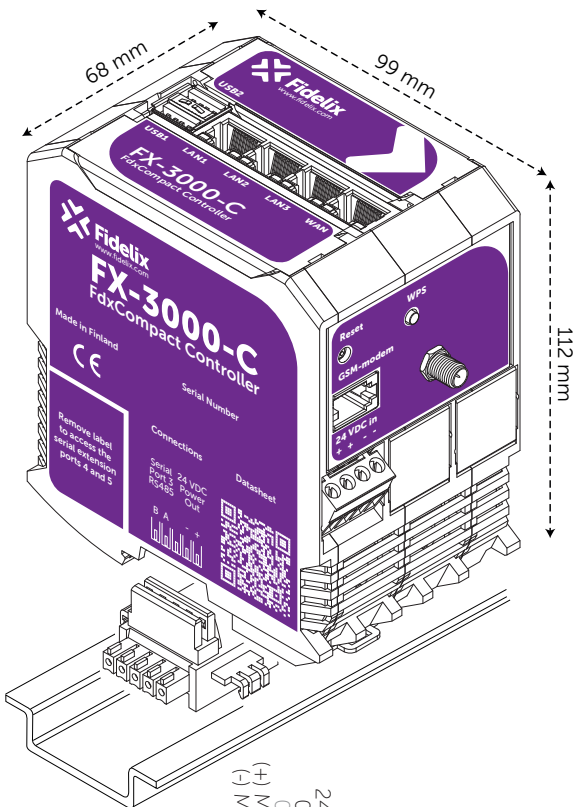
Networking: The controller has one Ethernet port, marked 'WAN', to connect the controller to an external network. The three other ports, marked 'LANx' can be used to connect a VISIO-15-C touchscreen display, extend the local network (daisy-chain), connect multiLINK modules, or to connect field devices. All ports operate at 10/100 Mbit/sec and have automatic speed negotiation (MDI / MDI-X). The built-in router operates fully independent and offers IEEE 802.1X support. The default IP address of the controller on the WAN port is 10.100.1.198, the default address on the LAN ports is 192.168.11.1

Wi-Fi: The wireless network is hosted by a chip with 1T1R at 2.4GHz and offers a 150 Mbps connection via 802.11b/g/n modes. There is a WPS button on the side of the controller next to the antenna to connect devices without the use of passwords. The default IP address of the controller on the Wi-Fi network is 192.168.12.1.

Network ports' LEDs: The orange LEDs indicate network activity for each port, the green LEDs are used for other indications; the green LED of LAN1 indicates write operations to the memory stick connected to USB1. The green LED of LAN3 is the controller's "heart beat"; slow blinking with 2 second intervals indicates normal CPU operation. The green LED of LAN2 is briefly lit when the power supply is switched on. The green LED of the WAN port is not used.

Web server: The FdxCompact FX-3000-C has an embedded FTP and web server. This means that the user interface shown on the optional FdxCompact VISIO-15-C touchscreen display is the same as what is shown remotely in a browser.

GSM-modem: The RJ9 port next to the Wi-Fi antenna offers an RS232 interface to the COM1 port of the controller. This is used to send out alarms as SMS messages via an serial modem.

μSD card: The μSD card sits behind the lower little door at the front side of the controller. The FX-3000-C automatically makes weekly backups to the μSD card.

Reset button: Pressing the reset button will trigger a saving of the point data and subsequently restart the controller.

Power consumption: The controller is to be powered with 24 VDC and consumes between 3 and 6 W, with peak load up to 10 W.

Chip: The controller has an NVidia Tegra 2 dual core Cortex-A9, 1 GHz processor, 512 MB NAND Flash memory (8 bit), 256 MB DDR2 RAM memory (32 bit) and runs Microsoft Windows Embedded CE 6.

Battery: The internal real time clock is powered by a replaceble CR2016 battery when the controller's power supply is not connected. It is located behind the lower little door at the front side of the controller.

Other: The EMC immunity / emission follows the EN 50491-5-2 standard.