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e-Display

EN

Display for fan-coil control with temperature sensor and pushbuttons
Ref: RD. 970000-000, e-Display
Ref: RD.670001-000, e-Display Modbus
Ref: RD.671002-000, e-Display HR Modbus

Instruction Sheet

e-Display **is an interface for control and management of a climate zone through a fan-coil controller. The device is including a temperature sensor for ambient temperature measurement, a large backlighted display and some push-buttons to manage the climate control.**

The product is based in a family of devices with different features and protocols, including an specific model for the *e-Room Controller* **fan-coil control and some other models with Modbus protocol for BMS remote management, with different sensors for measuring some parameters in the zone.**

Product description

The visualization display *e-Display* is a device based in a product family with different features and protocols, used to manage a fan-coil controller directly or through a remote control. The device is including in all models, a large backlighted display where the ambient temperature can be displayed, but also the setpoint temperature, fan-coil speed and some icons to inform about the climate control status and the zone status. A temperature sensor and some pushbuttons are also included in the device. An RS-485 interface is available to communicate the device with other devices in the network.

The *e-Display* model, ref. *RD-970000-000* is used to manage the different models of the *e-Room Controller* fan-coil controller, the stand-alone models and also the ones with remote communication. When the *e-Display* is managing an stand-alone device, it is used to configure the different parameters of the controller through an easy to use configuration menu.

The *e-Display Modbus* model, ref. *RD.670001-000* is including the Modbus communication protocol with some registers to configure, monitor and control the display remotely from a BMS management system.

The *e-Display HR Modbus*, ref. *RD.671002-000*, is including in addition to the temperature senor, a humidity sensor. All those parameters are sent using the Modbus protocol to a BMS management system.

Product installation

This device should not be installed on shelves, behind curtains, above or near heat sources, or exposed to direct sunlight. For fast and accurate ambient temperature measurement, the controller should be installed such that air may circulate vertically. Installation height should be approximately 1.5 m from the floor.

Caution:

- Prior to installing or removing the device, ensure that there is no mains voltage present in the wiring to be connected or near the unit.
- Do not cut or roll up the wires to be connected to the device.
- Do not work on the wiring with wet hands.
- Do not open or drill through the device.
- Keep the device and the supply wires away from moisture and dust.
- Use a damp cloth to clean the device.

Installation steps:

1º Install the flush mount back box on the wall
2º Connect all wires to the appropriate device terminals ensuring that there isn't voltage on it, following the wiring diagram.
3º Insert and screw the device in the box
4º Fit the frame onto the device
5º Remove the front panel anti-scratch protective foil
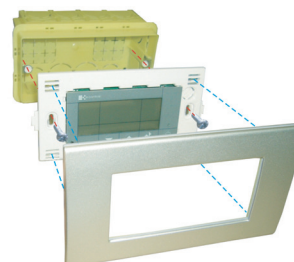
Supply power

Model RD.970000-000

Operating voltage. 12Vcc
Maximum rated current . . . . 28 mA

Models RD.670001-000 / RD.671002-000

Operating voltage. . . . . 24Vcc, 24 Vca ±20%, 50/60Hz
Maximum rated current . . . . 50 mA

Communications

Interface RS-485
Terminals . . . . A-, B+, GND
Protocol (RD.670001-000 / RD.671002-000) . . . . Modbus RTU
Transmission speed configurable . . . . . 1200..115200 Baud
Modbus Configuration. 8E1, 8O1, 8N1, 8N2

Built-in temperature sensor

Temperature measuring range .+5ºC to +45ºC (+41ºF to 113ºF)
Resolution 0,5ºC

Humidity sensor

Measuring range . . . . 5-95 %HR
Resolution . . . . ±4 %HR

LCD display

Type . . . . .Backlight liquid crystal
Dimensions visible area 64x26mm
Lighting type . . . . Blue LED

LED front panel indicator

Climate switch on . . . . Led switched off
Standby .Green Led switched on
Reset device / Communication error . . . Red Led switched on

Front panel pushbuttons

+T / -T / Fan-Coil Speed / ON-OFF

Temperature

Operating . . . . 0ºC a +50ºC (32ºF a 104ºF)
Storage . . . . -20ºC a +85ºC (-4ºF a +185ºF)

Humidity (non condensing)

Operating . . . . 10% a 90% RH a 50ºC
Storage. 95% RH a 50ºC

Mechanical installation

Installation type . . . . Flush mounting
Flush mount back box . . . . .Bticino 504E

Mount recommended heigh . . . . 1,5mts from floor
Frame (not included) LNA4804XX

Mechanical features

Dimmensions (with frame)) . . . . .142x86x26 mm
Net weight . . . . 110 g
Plug-in connectors . . . . Yes
Cross sectional area conductor . . . . 0,2 mm^2 to 1,0 mm^2
Protection index . . . . IP20 (EN 60529:1991)
Electrical safety . . . . Class III

CE Conformity

Low Voltage Directive (LVD) 2006/95/EC
Electromagnetic Compatibility Directive 2004/108/EC

Standards

Product standard .EN 60730-1:2011
EN 50491-3:2009
Electrical safety . . . . EN 60730-1:2011
EN 50491-3:2009
EN 50491-4-1:2012
Electromagnetic compatibility . . . . .EN 60730-1:2011
EN 50491-5-1:2010
EN 50491-5-2:2010

RD.970000-000 - e-Display

RD.670001-000 - e-Display Modbus
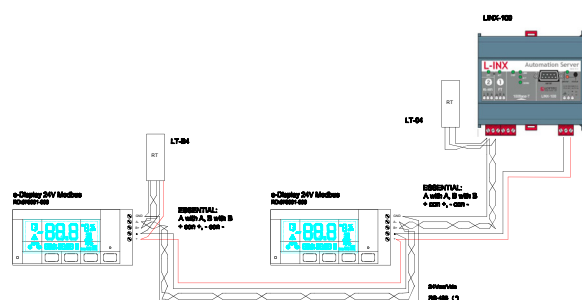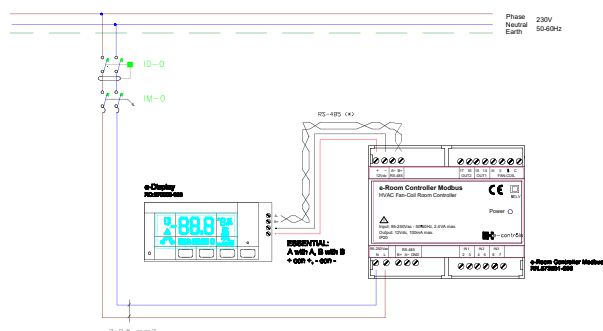
Herein is defined a functional diagram. It shall be the responsibility of the installer to protect the installation properly in accordance with the applicable regulations of each country.

Product reference

e-Display, 4 pushbuttons, LCD, Temperature sensor, 12Vcc, with network terminator RD.970000-000

e-Display Modbus, 4 pushbuttons, LCD, Temperature sensor, 24Vac/Vdc, Modbus, without network terminator RD.670001-000

e-Display HR Modbus, 4 pushbuttons, LCD, Temperature sensor, Humidity sensor, 24Vac/Vdc, Modbus, without network terminatorv. RD.671002-000

Documentos relacionados

Configuration Manual . . . . DMCEN
User Manual . . . . DMUEN

Installation diagram . . . . DEC

CE