



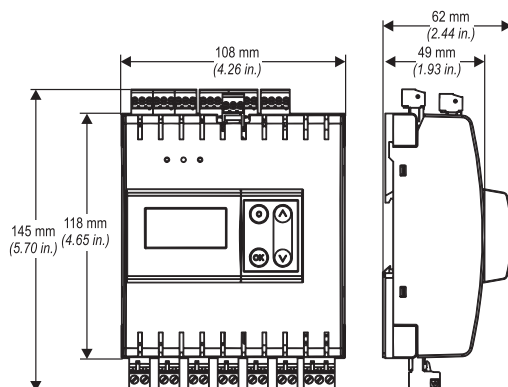
# techsystem

automatyka klimatyzacja wentylacja

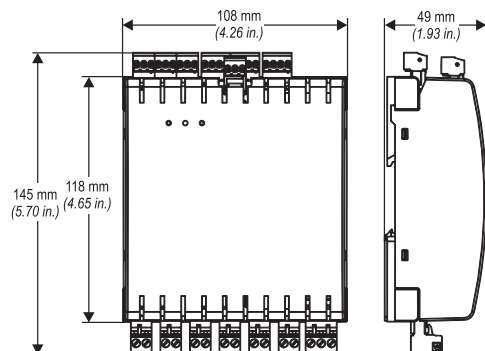
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### Facility Explorer Controllers Platform

#### FX07 Field Controller (1/4)



**FX07 Field Controller Display Model**  
Dimensions in mm (inches)



**FX07 Field Controller Without Display Model**  
Dimensions in mm (inches)

#### Description

The FX07 is a terminal unit controller in the Facility Explorer range of products. The controller is designed specifically for commercial Heating, Ventilating, Air Conditioning, and Refrigeration (HVACR) applications. The controller has 17 physical inputs and outputs and supports a wide range of temperature sensors and actuating devices. Active sensors for the measurement of humidity, pressure, and other variables are also supported.

The FX07 also includes an onboard Real-Time Clock to support the start-stop scheduling of equipment and real-time based control sequences.

The FX07 has an optional attractive Liquid Crystal Display (LCD) with a set of graphic status icons used in the most common HVACR applications. The controller also supports a remote panel or wall mounted Medium User Interface (MUI).

Communication cards are available to enable the controller to be integrated into an N2 Open or LonWorks® network of a building automation system. For stand-alone applications, the FX07 Field Controller also features communications services to transmit event notification messages via Short Messaging Service (SMS). Using the FX Tools software package, the FX07 terminal unit controller is fully configurable for a wide range of commercial HVACR applications. These applications include small refrigeration compressors, close control units, roof-top air handlers, fan coil units, unit ventilators, and chilled or heating ceiling beam installations.

#### Features

- Freely Programmable Controller
- Network Communication Card Options
- Remote Communication Services
- Optional Integral Liquid Crystal Display User Interface with Four Control Buttons
- Analog Outputs with Pulse Width Modulated (PWM) Option
- Models with Various Output Configurations of Solid State Triacs and Line Voltage Relays

#### 24 VAC/VDC Models - Selection Table

Description	Ordering Codes	
	Without Display	With Integral Display
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), no communication card	<a href="#">LP-FX07D00-000C</a>	<a href="#">LP-FX07D50-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), N2 Open card	<a href="#">LP-FX07D01-000C</a>	<a href="#">LP-FX07D51-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), LonWorks® card	<a href="#">LP-FX07D02-000C</a>	<a href="#">LP-FX07D52-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), RS-232C card	<a href="#">LP-FX07D03-000C</a>	<a href="#">LP-FX07D53-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), no communication card	<a href="#">LP-FX07D20-000C</a>	<a href="#">LP-FX07D70-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), N2 Open card	<a href="#">LP-FX07D21-000C</a>	<a href="#">LP-FX07D71-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), LonWorks® card	<a href="#">LP-FX07D22-000C</a>	<a href="#">LP-FX07D72-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), RS-232C card	<a href="#">LP-FX07D23-000C</a>	<a href="#">LP-FX07D73-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs), no comm. card	<a href="#">LP-FX07D30-000C</a>	<a href="#">LP-FX07D80-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs), N2 Open card	<a href="#">LP-FX07D31-000C</a>	<a href="#">LP-FX07D81-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs), LonWorks® card	<a href="#">LP-FX07D32-000C</a>	<a href="#">LP-FX07D82-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs) RS-232C card	<a href="#">LP-FX07D33-000C</a>	<a href="#">LP-FX07D83-000C</a>

**Facility Explorer Controllers Platform**
**FX07 Field Controller (2/4)**
**90-240 VAC/VDC Models - Selection Table**

Description	Ordering Codes	
	Without Display	With Integral Display
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), no communication card	<a href="#">LP-FX07A00-000C</a>	<a href="#">LP-FX07A50-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), N2 Open card	<a href="#">LP-FX07A01-000C</a>	<a href="#">LP-FX07A51-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), LonWorks® card	<a href="#">LP-FX07A02-000C</a>	<a href="#">LP-FX07A52-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V or PWM), 6 DOs (Relays), RS-232C card	<a href="#">LP-FX07A03-000C</a>	<a href="#">LP-FX07A53-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), no communication card	<a href="#">LP-FX07A20-000C</a>	<a href="#">LP-FX07A70-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), N2 Open card	<a href="#">LP-FX07A21-000C</a>	<a href="#">LP-FX07A71-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), LonWorks® card	<a href="#">LP-FX07A22-000C</a>	<a href="#">LP-FX07A72-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (4 Relays, 2 Triacs), RS-232C card	<a href="#">LP-FX07A23-000C</a>	<a href="#">LP-FX07A73-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs), no comm. card	<a href="#">LP-FX07A30-000C</a>	<a href="#">LP-FX07A80-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs), N2 Open card	<a href="#">LP-FX07A31-000C</a>	<a href="#">LP-FX07A81-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs), LonWorks® card	<a href="#">LP-FX07A32-000C</a>	<a href="#">LP-FX07A82-000C</a>
4 AIs, 5 DIs, 2 AOs (0-10 V), 6 DOs (3 Interlocked Relays, 1 Free Relay, 2 Triacs) RS-232C card	<a href="#">LP-FX07A33-000C</a>	<a href="#">LP-FX07A83-000C</a>

**Communication Card - Selection Table**

Description	Ordering Codes
N2 Open Communication Card	<a href="#">LP-NET071-000C</a>
LonWorks® Communication Card	<a href="#">LP-NET072-000C</a>
RS-232 Communication Card	<a href="#">LP-NET073-000C</a>

**User Interfaces - Selection Table**

Description	Ordering Codes
Remote Medium User Interface (MUI Version 3) - Panel Mount (non-isolated model)	<a href="#">LP-DIS60P20-0C</a>
Remote Medium User Interface (MUI Version 3) - Wall Mount (isolated model)	<a href="#">LP-DIS60P21-0C</a>
Link cable for the connection of the FX07 to the Panel Mount MUI display - 3 m (9.8 ft)	<a href="#">LP-KIT007-000C</a>

**Software - Selection Table**

Description	Ordering Codes
FX Tools Pro CD-Rom (FX Builder, FX Builder Express, FX CommPro N2, FX CommPro LON) New User	<a href="#">LP-FXTPRO-0</a>
FX Tools Pro CD-Rom (FX Builder, FX Builder Express, FX CommPro N2, FX CommPro LON) Upgrade	<a href="#">LP-FXTPRO-6</a>

**Accessories - Selection Table**

Description	Ordering Codes
FX Programming Key	<a href="#">LP-KIT100-000C</a>
Power Supply Adapter for Programming Key: 230 VAC/12 VDC	<a href="#">DT-9100-8901</a>
Null modem cable for computer connection, 3 m (9.8 ft)	<a href="#">LP-KIT007-013C</a>
Null modem cable for computer connection, 15 m (49.2 ft)	<a href="#">LP-KIT007-014C</a>

Facility Explorer Controllers Platform

FX07 Field Controller (3/4)

Room Command Modules - Selection Table

Room Sensor Modules – 80 mm x 80 mm (3.15 x 3.15 in.), °C (TM Series without Display)

Description	Ordering Codes
Room Sensor Module, temperature sensor only	TM-2140-0000
Room Sensor Module, occupancy button and LED	TM-2150-0000
Room Sensor Module, 12-28 °C setpoint dial, occupancy button and LED	TM-2160-0000
Room Sensor Module, 12-28 °C setpoint dial, occupancy button and LED, fan speed override	TM-2160-0002
Room Sensor Module, +/- setpoint dial, occupancy button and LED	TM-2160-0005
Room Sensor Module, +/- setpoint dial, occupancy button and LED, fan speed override	TM-2160-0007
Room Sensor Module, 12-28 °C setpoint dial	TM-2190-0000
Room Sensor Module, +/- setpoint dial	TM-2190-0005

Room Command Modules - Selection Table

Network Room Modules with Serial Bus Connection to FX07 – 80 mm x 80 mm (3.15 x 3.15 in.), °C

Description	Ordering Codes
Network Room Module, temperature sensor only, no display, no setpoint dial	LP-NRM001-000C
Network Room Module with LCD display, temperature sensor, setpoint dial, occupancy function	LP-NRM002-000C

Digital (Binary) Outputs for Specific Models

Model	Channel	Type	Remark/Application
FX07D0x-xxx FX07D5x-xxx FX07A0x-xxx FX07A5x-xxx	DO1, DO2, DO3 DO4, DO5, DO6	SPST 8(3)A, 250 VAC Relay SPST 3(1)A, 250 VAC Relay	Heavy duty relays that can be used to switch electric heater up to 2 KW at 230 VAC. (Europe only) Each relay contact is independent with its own common terminal. Each relay contact is independent with its own common terminal.
FX07D2x-xxx FX07D3x-xxx FX07D7x-xxx FX07D8x-xxx	DO1, DO2	0.5A/24 VAC Triacs	Low voltage 3-point incremental actuators and thermal actuators
FX07A2x-xxx FX07A3x-xxx FX07A7x-xxx FX07A8x-xxx	DO1, DO2	0.5A / 250 VAC Triacs	Line voltage 3-point incremental actuators and thermal actuators. Can also be used to switch 24 VAC low voltage devices.
FX07D2x-xxx FX07D3x-xxx FX07D7x-xxx FX07D8x-xxx FX07A2x-xxx FX07A3x-xxx FX07A7x-xxx FX07A8x-xxx	DO3 DO4 – DO6	SPST 8(3)A, 250 VAC Relay SPST 3(1)A, 250 VAC Relay	Heavy duty relay that can be used to switch electric heater up to 2 KW at 230 VAC (Europe only). On the FX07x2x-xxx and FX07x7-xxx models, each relay contact is independent with its own common terminal. On the FX07x3x-xxx and FX07x8-xxx model, DO4, DO5, DO6 Relays are physically interlocked such that only one output can be closed at one time. Application: 3-speed fan motors.

Facility Explorer Controllers Platform

FX07 Field Controller (4/4)

Technical Specifications

<b>Product Codes</b>	LP-FX07xxx-xxx		
<b>Power Supply Requirements</b>	<b>LP-FX07Dxx-xxx:</b> 24 VAC/DC $\pm 15\%$ , 50/60 Hz - SELV (Europe) - Class 2 North America <b>LP-FX07Axx-xxx:</b> 90 to 240 VAC, 50/60 Hz		
<b>Power Consumption</b>	<b>LP-FX07Dxx-xxx:</b> 9 VA maximum <b>LP-FX07Axx-xxx:</b> 17 VA maximum		
<b>Protection Class</b>	IP20 CEI/EN60529		
<b>Ambient Operating Conditions</b>	-40 °C to 50 °C (-40 to 122 °F), 10 to 95% RH (non condensing) <i>Note that the integral user interface does not operate below -20 °C (-4 °F)</i>		
<b>Ambient Storage Conditions</b>	-40 °C to +70 °C (-40 to 158 °F), 10 to 95% RH (non condensing)		
<b>Dimensions (H x W x D)</b>	145 mm (5.7 in.) including terminals x 108 mm (4.26 in.) x 49 mm (1.93 in.) - 62 mm (2.45 in.) with display		
<b>Weight (with package)</b>	0.60 kg (1.32 lb)		
<b>Integral LCD Display Resolution</b>	-999 to 999 or -99.9 to 99.9		
<b>Digital Inputs</b>	Voltage free contacts Transition counter function at 50 Hz (minimum 10 ms ON and minimum 10 ms OFF)		
<b>Analog Inputs and Accuracy at 20 °C (68 °F) Ambient (sensor error not included)</b>	Not isolated. Software configurable.		
	<b>Sensor Type</b>	<b>Range</b>	<b>Accuracy</b>
	A99	-40 to 100 °C (-40 to 212 °F)	$\pm 0.5$ °C ( $\pm 1$ °F)
	NTC K10	-20 to 70 °C (-4 to 158 °F)	$\pm 0.5$ °C ( $\pm 1$ °F)
	PT1000 Extended	-40 to 160 °C (-40 to 320 °F)	$\pm 0.5$ °C ( $\pm 1$ °F)
	Ni1000	-40 to 120 °C (-40 to 248 °F)	$\pm 0.5$ °C ( $\pm 1$ °F)
	Active 0...10 V	0..10 VDC	$\pm 0.05$ VDC
	Active Ratio-metric	0.5 to 4.5 VDC	$\pm 0.05$ VDC
<b>Analog Outputs</b>	0...10 VDC, 3 mA, not isolated for actuating and control devices. Pulse Width Modulation (PWM) Signal at 100 Hz cycle frequency		
<b>Relay Outputs</b>	Dielectric test voltage on open relay contact: 1,000 VAC RMS Maximum relay switching rate at nominal load: 6 operations / min Average relay contact life: 30,000 operations at maximum load.		
<b>Connection Terminals for outputs and Power Supply</b>	Screw terminals for max 2 x 1.5 mm <sup>2</sup> (AWG16) wires, included in the package.		
<b>Connection Terminals for inputs and LON/N2 Open Bus</b>	Screw terminals for max. 1 x 1.5 mm <sup>2</sup> (AWG16) wires or 2 x Belden cable, 2-core twisted pair with shield $\geq 0.8$ mm (AWG20), included in the package		
<b>CE Compliance</b>	89/336 EEC directive: EN 61000-6-3, EN 61000-6-1 73/23 EEC directive: EN 60730		
<b>UL Compliance</b>	UL873, UL916		