

FACILITY EXPLORER BUILDING MANAGEMENT SYSTEM

SUPERVISORY CONTROLLERS



FX80

SUPERVISORY CONTROLLER & LICENSES

The FX80 Supervisory Controller is a web-based supervisory-class controller in the Facility Explorer® product family. The FX80 controller manages networks of field controllers using open communication protocols, such as BACnet®, LonWorks®, and N2 protocols. The FX80 controller supports a full set of building automation features, such as scheduling, alarming, historical data collection and management, data sharing, energy management, totalization, customized control routines, tagging, templates, search, and hierarchies, which are specifically designed for commercial facilities.

Each FX80 controller includes a graphical system user interface with an HTML5 web profile, a configuration tool that you can access with the web browser, and robust security. Remote access is easily achieved using a wired or wireless connection from the Internet or intranet. Multiple users can concurrently connect to the FX80 controller. You can manage security and presentation preferences through user profiles, login IDs, and passwords. The FX80 Supervisory Controller is a compact DIN rail mountable controller with the capability for remote external input and output points.

In addition, the FX80 controller's hardware and software design is modular, so you can plug in accessories, such as communications option modules, if needed. The device and point licensing options allow you to select the device and point capacity most appropriate for the size of your facility and those options best needed to control it. And, in many cases, future expansions do not require the replacement of hardware.

Refer to the FX80 Supervisory Controller Product Bulletin (LIT-12012250) for important product information.

FEATURES

- **Web-based user interface** - Provides rich, graphical displays for system operation and analysis.
- **Adoption of industry standard communication protocols** - Allows for the integration of a wide variety of field controllers, including Facility Explorer field controllers and controllers provided by others without intermediate gateways or translators.
- **Embedded Configuration Tool** - Requires no proprietary or desktop software to configure the FX80 controller. You only need a web browser for basic configuration and monitoring.
- **Modular design** - Allows you to select only those components needed to meet specific project requirements.
- **Small, compact design** - Installs easily.
- **FX Workbench** - Reduces engineering and installation time by easily and quickly creating the FX80 database from field controller configurations offline.
- **Niagara® analytics** - Allows you to apply a variety of analytical algorithms and diagnostics to both historical and real-time data.



SUPERVISORY CONTROLLERS

FX80 SUPERVISORY CONTROLLERS

ORDERING INFORMATION

FX80 SUPERVISORY CONTROLLER

CODE	DESCRIPTION
FX-SC8BDWIFI-OE	FX80 Supervisory Controller and micro Secure Digital (SD) card, licensing required and purchased separately, disabled WLAN

FX80 BUNDLES

CODE	DESCRIPTION
FX-SC8D100M1-OE	FX80 Disabled Wifi, 100 points core license, Initial 18 months software maintenance for up to 499 points.
FX-SC8D250M1-OE	FX80 Disabled Wifi, 250 points core license, Initial 18 months software maintenance for up to 499 points.
FX-SC8D500M1-OE	FX80 Disabled Wifi, 500 points core license, Initial 18 months software maintenance for up to 1249 points.
FX-SC8D01KM1-OE	FX80 Disabled Wifi, 1250 points core license, Initial 18 months software maintenance for up to 4999 points.
FX-SC8D05KM1-OE	FX80 Disabled Wifi, 5000 points core license, Initial 18 months software maintenance for up to 9999 points.
FX-SC8D10KM1-OE	FX80 Disabled Wifi, 10000 points core license, Initial 18 months software maintenance for 10000 points.

FX80 CORE POINTS LICENSES

- Each FX80 controller requires the purchase of a core points license.
- Core points licenses have unlimited device counts, only point limit is counted.

CODES	DESCRIPTION
FX-SC8CL100-OE	FX80 Supervisory Controller core license, 100 points
FX-SC8CL250-OE	FX80 Supervisory Controller core license, 250 points
FX-SC8CL500-OE	FX80 Supervisory Controller core license, 500 points
FX-SC8CL01K-OE	FX80 Supervisory Controller core license, 1,250 points
FX-SC8CL05K-OE	FX80 Supervisory Controller core license, 5,000 points
FX-SC8CL10K-OE	FX80 Supervisory Controller core license, 10,000 points
FX-SC8CLDEMO-OE	FX80 Supervisory Controller demo license, 25,000 points. Enables all features needed to engineer and demonstrate FX Supervisory Controllers and FX Server stations. Intended for installing contractors. Requires annual support fee. Expires yearly.



ORDERING INFORMATION

INITIAL PURCHASE FX80 CONTROLLER SOFTWARE MAINTENANCE

- Each order for an FX80 must include a core license order and initial software maintenance. Software Maintenance must match the core points license e.g. FX-SC8BDWIFI-0E + FX-SC8CL500-0E + FX-SC8P500M1-0E
- Maintenance cannot be purchased for any period beyond December 31, 2025.

CODES	DESCRIPTION
FX-SC8P250M1-0E	Initial 1 year software maintenance for FX80 Supervisory Controller with 100 and 250 points
FX-SC8P250M3-0E	Initial 3 year software maintenance for FX80 Supervisory Controller with 100 and 250 points
FX-SC8P250M5-0E	Initial 5 year software maintenance for FX80 Supervisory Controller with 100 and 250 points
FX-SC8P500M1-0E	Initial 1 year software maintenance for FX80 Supervisory Controller with 500 points
FX-SC8P500M3-0E	Initial 3 year software maintenance for FX80 Supervisory Controller with 500 points
FX-SC8P500M5-0E	Initial 5 year software maintenance for FX80 Supervisory Controller with 500 points
FX-SC8P01KM1-0E	Initial 1 year software maintenance for FX80 Supervisory Controller with 1,250 points
FX-SC8P01KM3-0E	Initial 3 year software maintenance for FX80 Supervisory Controller with 1,250 points
FX-SC8P01KM5-0E	Initial 5 year software maintenance for FX80 Supervisory Controller with 1,250 points
FX-SC8P05KM1-0E	Initial 1 year software maintenance for FX80 Supervisory Controller with 5,000 points
FX-SC8P05KM3-0E	Initial 3 year software maintenance for FX80 Supervisory Controller with 5,000 points
FX-SC8P05KM5-0E	Initial 5 year software maintenance for FX80 Supervisory Controller with 5,000 points
FX-SC8P10KM1-0E	Initial 1 year software maintenance for FX80 Supervisory Controller with 10,000 points
FX-SC8P10KM3-0E	Initial 3 year software maintenance for FX80 Supervisory Controller with 10,000 points
FX-SC8P10KM5-0E	Initial 5 year software maintenance for FX80 Supervisory Controller with 10,000 points

FX80 CONTROLLER SOFTWARE MAINTENANCE (POST INITIAL)

- Points capacity is equal to the sum of the core points license and any additional points license applied to the FX80 controller. Select the points capacity that is equal or greater than the sum.
- Maintenance cannot be purchased for any period beyond December 31, 2025.

CODES	DESCRIPTION
FX-SC8P250M1-6E	1 year software maintenance for FX80 Supervisory Controller with 100 & 250 points
FX-SC8P250M3-6E	3 year software maintenance for FX80 Supervisory Controller with 100 & 250 points
FX-SC8P250M5-6E	5 year software maintenance for FX80 Supervisory Controller with 100 & 250 points
FX-SC8P500M1-6E	1 year software maintenance for FX80 Supervisory Controller with 500 points
FX-SC8P500M3-6E	3 year software maintenance for FX80 Supervisory Controller with 500 points
FX-SC8P500M5-6E	5 year software maintenance for FX80 Supervisory Controller with 500 points
FX-SC8P01KM1-6E	1 year software maintenance for FX80 Supervisory Controller with 1,250 points
FX-SC8P01KM3-6E	3 year software maintenance for FX80 Supervisory Controller with 1,250 points
FX-SC8P01KM5-6E	5 year software maintenance for FX80 Supervisory Controller with 1,250 points
FX-SC8P05KM1-6E	1 year software maintenance for FX80 Supervisory Controller with 5,000 points
FX-SC8P05KM3-6E	3 year software maintenance for FX80 Supervisory Controller with 5,000 points
FX-SC8P05KM5-6E	5 year software maintenance for FX80 Supervisory Controller with 5,000 points
FX-SC8P10KM1-6E	1 year software maintenance for FX80 Supervisory Controller with 10,000 points
FX-SC8P10KM3-6E	3 year software maintenance for FX80 Supervisory Controller with 10,000 points
FX-SC8P10KM5-6E	5 year software maintenance for FX80 Supervisory Controller with 10,000 points



ORDERING INFORMATION

FX80 CONTROLLER ADDITIONAL FIELD POINTS LICENSES

- Additional points licenses are used to expand capacity from the core license in Europe.
For example, you can order the FX-SC8PL01K-0E with the FX-SC8CL500-0E for 1750 points.

CODES	DESCRIPTION
Initial purchase	
FX-SC8PL500-0E	License enabling an additional 500 points for one FX80, initial purchase only
FX-SC8PL01K-0E	License enabling an additional 1,250 points for one FX80, initial purchase only
FX-SC8PL02K-0E	License enabling an additional 2,500 points for one FX80, initial purchase only
After initial purchase	
FX-SC8PL500-6E	License enabling an additional 500 points for one FX80; upgrade after initial purchase
FX-SC8PL01K-6E	License enabling an additional 1,250 points for one FX80; upgrade after initial purchase
FX-SC8PL02K-6E	License enabling an additional 2,500 points for one FX80; upgrade after initial purchase

NIAGARA ANALYTICS LICENSES

- Niagara Analytics products require Niagara Analytics N4 certification. Niagara Analytics certification training requires Niagara 4 TCP Certification.

CODES	DESCRIPTION
FX-ASCL100-0E	License enabling 100 analytic points for Niagara Analytics on an FX80 Supervisory Controller at FX Supervisory Family Software Release 14.2 or greater. Only available to partners that are Niagara Analytics TCP trained.
FX-ASCL250-0E	License enabling 250 analytic points for Niagara Analytics on an FX80 Supervisory Controller at FX Supervisory Family Software Release 14.2 or greater. Only available to partners that are Niagara Analytics TCP trained.
FX-ASCL500-0E	License enabling 500 analytic points for Niagara Analytics on an FX80 Supervisory Controller at FX Supervisory Family Software Release 14.2 or greater. Only available to partners that are Niagara Analytics TCP trained.
FX-ASCL1000-0E	License enabling 1000 analytic points for Niagara Analytics on an FX80 Supervisory Controller at FX Supervisory Family Software Release 14.2 or greater. Only available to partners that are Niagara Analytics TCP trained.

FX80 CONTROLLER SOFTWARE ACCESSORIES

CODES	DESCRIPTION
FX-SC8LCCN-0E	License enabling Carrier® Communication/ Comfort Network (CCN) driver for one FX80 Supervisory Controller; initial purchase
FX-SC8LAX-0E	License enabling AX 3.8 downgrade for one FX80; initial purchase
FX-SC8LCCN-6E	License enabling Carrier CCN driver for one FX80; upgrade after initial purchase
FX-SC8LAX-6E	License enabling AX 3.8 downgrade for one FX80; upgrade after initial purchase
FX-SC8LSMS-0E	License enabling SMS alarms



ORDERING INFORMATION

FX80 CONTROLLER HARDWARE ACCESSORIES

CODES	DESCRIPTION
FX-SC8SD-700E	FX80 micro SD replacement (micro SD only); no licenses
FX-SC8XLON-0E	LonWorks FX80 expansion module for the FX80 Supervisory Controller
FX-SC8XD485-0E	Dual port isolated RS-485 expansion module for the FX80 Supervisory Controller
FX-SC8X232-0E	RS-232 expansion module for the FX80 Supervisory Controller
FX-SC8AKIT-700E	FX80 accessory kit including replacement connectors
FX-SC8XKIT-700E	FX80 expansion module kit including one-size-fits-all replacement connector
FX-SC8XPS-0E	FX80 universal wall mount power supply 100–240 VAC/24 V includes United States, Europe, United Kingdom, and Australia style plugs
FX-SC8WKIT-700E	Extension cable and bracket for FX80 WLAN
FX-SC8XIOR16-0E	Remote input/output module for the FX Supervisory Controllers; includes 8 universal inputs, 4 relay outputs, and four 0–10 V analog outputs.
FX-SC8XIOR34-0E	Remote input/output module for the FX Supervisory Controllers; includes 16 universal inputs, 10 relay outputs, and eight 0–10 V analog outputs.



FX80 SUPERVISORY CONTROLLERS

TECHNICAL SPECIFICATIONS

FX80 SUPERVISORY CONTROLLER

Enclosure/mounting	Plastic/DIN Rail
Dimension	216 mm x 152 mm x 68 mm
Power supply	24 VAC/DC
Processor	TI AM3352: 1000MHz ARM® Cortex™ A8
RAM memory	1 GB DDR3 SD RAM
Flash memory	Removable micro-SD card with 4GB flash total storage, 2 GB user storage
Environment	
<i>Operating temperature</i>	-20°C to 60°C
<i>Storage temperature</i>	-40°C to 85°C
<i>Relative humidity</i>	5% to 95%, noncondensing
Onboard	2 Ethernet 10/100 Mbps; 2 RS-485 (Isolated); 1 USB, 1 Micro USB, Fast USB Bus; Wi-Fi
Plug-in options	Dual port RS-485 (Isolated); LON FT/TP-10; RS-232
Network drivers	
Embedded	N2, BACnet, Niagara
Direct I/O	
Onboard	None
Optional	Up to 256 by using 16 Remote I/O Modules
Local (NDIO)	None
Remote I/O	Up to 256 I/O by using 16 Remote I/O Modules
CE Compliance	Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive.

FX WORKBENCH REQUIREMENTS

The information relating to Processor in this table applies to both the FX Supervisory Software Release 14.x and FX Supervisory Software Release 6.x if using the AX license.

Processor	Intel® Pentium® 4, 1 GHz or higher 102 mm x 92 mm x 67 mm
Operating system	
32-bit	Windows® 10 Pro or Enterprise, Windows 8 Pro or Enterprise, Windows 7 Professional, Enterprise, or Ultimate, or Windows XP® Professional
64-bit	Windows® 10 Pro or Enterprise, Windows 8.1 Pro or Enterprise, Windows 8 Pro or Enterprise, Windows 7 Professional, Enterprise, or Ultimate, Windows Server 2012 Standard or Enterprise with SP2, or Windows Server® 2012 R2 Standard or Enterprise with SP2
Memory	1 GB minimum, 4 GB or more recommended for larger systems
Hard disk	4 GB minimum, more recommended depending on archiving requirements
Network support	Ethernet 10/100 Mbps with RJ-45 connector