# Advanced Application Field Equipment Controller (FAC) Catalog Page

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Refer to the QuickLIT website for the most up-to-date version of this document.

The Advanced Application Field Equipment Controller (FAC) Series Controllers are programmable controllers that can communicate using BACnet/IP, MSTP, or N2 communications protocols, depending on the model. The FAC4911 communicates using BACnet/IP communications protocol, and is a BACnet Advanced Application Controller (B-AAC). The FAC2513 and the FAC3613 communicate using the BACnet MSTP protocol. The other FAC Series controllers can be switched between MSTP and N2 Communications protocols. FAC controllers used as MSTP devices are B-AACs with integral RS-485 MSTP communications.

FAC Series Controllers feature an integral real-time clock. FACs support time-based tasks and maintain time-based control, which enables these field controllers to monitor and control schedules, calendars, alarms, and trends. FACs can continue time-based control and monitoring when offline for extended periods of time from a *Metasys*® system network.

FAC Series Controllers can also operate as stand-alone controllers in applications that do not require a networked supervisory device or for network applications where it is preferred to have the scheduling, alarming, and/or trending performed locally in the field controllers.

The FAC4911 controllers operate on BACnet/IP networks and integrate into Johnson Controls® and third-party systems.

The FAC3611 and FAC3613 models include a fast persistence feature that allows data values to be held at a configurable value, up to once per second. Persistence refers to how often samples of data are stored locally. In the event of a problem, such as a loss of power, data can be retrieved up to the rate that the data is persisted, minimizing the potential loss of data. When power is restored, previously persisted data, up to the rate of persistence, remains available and accessible. For example, if persistence is configured for once per second, you only risk losing one second of data. Persisting data may be essential for situations that require greater data accuracy, including certain methods of utility data collection and billing.

The FAC2612 controller features line-voltage relay outputs, which makes this controller well-suited for use in terminal units. The FAC2612-2 model uses a line-voltage power supply, which eliminates the need for a 24 VAC transformer in line-voltage applications.

The FAC2611, FAC2612, and FAC3611 controllers using the MSTP protocol support wireless communications using the ZFR or ZFR Pro Series accessories and the WRZ-7860 One-to-One Receiver.

Refer to the *Metasys® System Field Equipment Controllers and Related Products Product Bulletin (LIT-12011042)* for product application details.

If the product fails to operate within its specifications, replace the product. For a replacement product, contact the nearest Johnson Controls® representative.

**Figure 1: Advanced Application Field Equipment Controllers (FACs)**


## Features

- **Switchable Communications Protocols from MSTP to N2 Protocols**
- **Standard BACnet® Protocol** — Provides interoperability with other Building Automation System (BAS) products that use the widely accepted BACnet standard.
- **Standard Hardware and Software Platform** — Uses a common hardware design throughout the family line to support standardized wiring practices and installation workflows. Also uses a common software design to support use of a single tool for control applications, commissioning, and troubleshooting to minimize technical training.
- **ZFR Wireless Field Controller (FC) or Sensor/Actuator (SA) Bus Interface** — Both the ZFR1800 Series Wireless and WNC1800/ZFR182x Pro Series Wireless Field Bus (ZFR Pro) provide a wireless alternative to hard-wired *Metasys*® system counterparts, offering application flexibility and mobility with minimal disruption to building occupants.
- **Bluetooth® Wireless Commissioning** — Provides an easy-to-use connection to the configuration and commissioning tool.
- **Auto-Tuned Control Loops** — Reduce commissioning time, eliminate change-of-season re-commissioning, and reduce wear and tear on mechanical devices.
- **Universal Inputs, Configurable Outputs, and Point Expansion Modules** — Allows multiple signal options to provide input/output flexibility.
- **BACnet® Testing Laboratories (BTL) Listed** — Ensures interoperability with other BTL-listed devices. BTL is a third-party agency, which validates that BAS vendor products meet the BACnet industry-standard protocol.
- **32-bit Microprocessor**—Ensures optimum performance and meets industry specifications.
- **BACnet Automatic Discovery**—Supports easy controller integration into a *Metasys* BAS.
- **End-of-Line (EOL) Switch in MSTP Field Controllers** — Enables field controllers to be terminating devices on the communications bus.

- **Pluggable Communications Bus and Supply Power Terminal Blocks**—Expedites installation and troubleshooting.
- **Writable Flash Memory**—Allows standard or customized applications to be downloaded from the Controller Configuration Tool (CCT) and enables persistent application data.
- **DIS17 Remote Display and the MAP Gateway Support** — Enable monitoring and commanding of I/O and configuration parameters

**Table 1: FAC Series Model Information (Including Point Type Counts)**

| | | FAC2513 [1] | FAC2611 | FAC2612 | FAC3611[2] | FAC3613 [1] | FAC4911[3] |
|---|---|---|---|---|---|---|---|
| **Communication Protocol** | | BACnet MSTP | BACnet MSTP, N2 | | | BACnet MSTP | BACnet/IP |
| **Engines Supported** | | All Model types. Some NIE models support MSTP and N2 devices. Refer to the *Network Engines Product Bulletin (LIT-12012138)* for details. | | | | | NAE55, NAE85, ODS[3] |
| **Modular Jacks** | | 6-pin SA Bus Modular Port supports one communicating sensor. **Or** you can wire up to four communicating sensors to the SA Bus Terminal Block. They cannot be used at the same time. | | | | | |
| | | | 6-pin FC Bus for tool support | | | | |
| **Point Types** | **Signals Accepted** | | | | | | |
| Universal Input (UI) | Analog Input, Voltage Mode, 0–10 VDC<br>Analog Input, Current Mode, 4–20 mA<br>Analog Input, Resistive Mode, 0–2k ohm, resistance temperature detector (RTD) (1k NI [Johnson Controls], 1k PT, A99B SI), negative temperature coefficient (NTC) (10k Type L, 2.252k Type 2)<br>Binary Input, Dry Contact Maintained Mode | 4 (Current Mode not supported) | 6 | 5 | 8 | 8 | 10 |
| Binary Input (BI) | Dry Contact Maintained Mode<br>Pulse Counter/Accumulator Mode (High Speed), 100 Hz | 6 | 2 | 4 | 6 | 6 | 6 |
| Analog Output (AO) | Analog Output, Voltage Mode, 0–10 VDC<br>Analog Current Mode, 4–20 mA | 2 (Current Mode not supported) | 2 | | 6 | 6 | 4 |
| Binary Output (BO) | 24 VAC Triac | 2 (External Power only) | 3 | | 6 | 6 | 4 |
| Configurable Output (CO) | Analog Output, Voltage Mode, 0–10 VDC<br>Binary Output Mode, 24 VAC Triac | 2 | 4 | 4 | | | 4 |
| Relay Output (RO) | RO: Single-Pole, Double-Throw (SPDT)<br>RO: Single-Pole, Single-Throw (SPST) | | | 2 - SPDT and 3 - SPST line-voltage relays, 1/4 hp 120 VAC, 1/2 hp 240 VAC | | | |

1 This model is currently only available in Asia. Contact your local Johnson Controls representative for more information.
2 The FAC3611-0 model is available globally, while the FAC3611-0A is currently only available in Asia. Contact your local Johnson Controls representative for more information.
3 FAC4911 supports R9.0 or later versions of these engines.

**Table 2: FAC Series Ordering Information**

| Product Code Number | Description |
|---|---|
| **MS-FAC2513-0**[1] | 16-Point Advanced Application Field Equipment Controller with 4 UI, 6 BI, 2 CO, 2 BO, and 2 AO; 24 VAC; SA Bus; FC Bus; Integral Real-time Clock |
| **MS-FAC2611-0** | 17-Point Advanced Application Field Equipment Controller with 6 UI, 2 BI, 4 CO, 3 BO, and 2 AO; 24 VAC; SA Bus; FC Bus; Integral Real-time Clock |
| **MS-FAC2612-1** | 18-Point Advanced Application Field Equipment Controller with 5 UI, 4 BI, 4 CO, 2 SPDT and 3 SPST Line-Voltage ROs 1/4 hp 120 VAC, 1/2 hp 240 VAC; 24 VAC; SA Bus; FC Bus; Integral Real-time Clock; |
| **MS-FAC2612-2** | 18-Point Advanced Application Field Equipment Controller with 5 UI, 4 BI, 4 CO, 2 SPDT and 3 SPST Line-Voltage ROs, 1/4 hp 120 VAC, 1/2 hp 240 VAC; 100–240 VAC; SA Bus; FC Bus; Integral Real-time Clock |
| **MS-FAC3611-0** | 26-Point Advanced Application Field Equipment Controller with 8 UI, 6 BI, 6 BO, and 6 AO; 24 VAC; SA Bus; FC Bus; Integral Real-time Clock; Improved Fast Persistence |

**Table 2: FAC Series Ordering Information**

| Product Code Number | Description |
|---|---|
| **MS-FAC3611-0A** [1] | 26-Point Advanced Application Field Equipment Controller with 8 UI, 6 BI, 6 BO, and 6 AO; 24 VAC; SA Bus; FC Bus; Integral Real-time Clock |
| **MS-FAC3613-0**[1] | 26-Point Advanced Application Field Equipment Controller with 8 UI, 6 BI, 6 BO, and 6 AO; 24 VAC; SA Bus; FC Bus; Integral Real-time Clock; Improved Fast Persistence |
| **MS-FAC4911-0** | 28-Point Advanced Application Field Equipment Controller with 10 UI, 6 BI, 4 BO, 4 AO, and 4 CO; 24 VAC; SA Sensor Port; Integral Real-time Clock; 2 Ethernet Ports for BACnet/IP Communications |

1 This model is currently only available in Asia. Contact your local Johnson Controls representative for more information.

## Accessories

**Table 3: FAC Accessories**

| Product Code Number | Description |
|---|---|
| **Mobile Access Portal (MAP) Gateway** | Refer to the *Mobile Access Portal Gateway Catalog Page (LIT-1900869)* to identify the appropriate product for your region. |
| **MS-BTCVT-1** | Wireless Commissioning Converter with Bluetooth Technology |
| **MS-BTCVTCBL-700** | Cable Replacement Set for the MS-BTCVT-1 or the NS-ATV7003-0; Includes One 5 ft (1.5 m) Retractable Cable |
| **MS-DIS1710-0** | Local Controller Display: Refer to *Local Controller Display Product Bulletin (LIT-12011273)* for more information. |
| **NS Series Network Sensors** | Refer to the *NS Series Network Sensors Product Bulletin (LIT-12011574)* for specific sensor model descriptions. |
| **WRZ Series Wireless Room Sensors** | Refer to the *WRZ Series Wireless Room Sensors Product Bulletin (LIT-12011653)* for specific sensor model descriptions. |
| **WRZ-7860-0** | Receiver for One-to-One Wireless Room Sensing Systems - functions with WRZ Series Sensors room sensors |
| **WRZ-SST-120** | Wireless System Survey Tool |
| **ZFR1800 Series Wireless Field Bus System** | This system is used for installations that only support BACnet MSTP. Refer to the *WNC1800/ZFR182x Pro Series Wireless Field Bus System Product Bulletin (LIT-12012320)* for a list of available products. |
| **ZFR-USBHA-0** | USB Dongle with ZFR Driver provides a wireless connection through CCT to allow wireless commissioning of the wirelessly enabled FEC, FAC, IOM, and VMA16 controllers. Also allows use of the ZFR Checkout Tool (ZCT) in CCT.<br>**Note:** The ZFR-USBHA-0 replaces the IA OEM DAUBI_2400 ZFR USB dongle. For additional information on the ZFR-USBHA-0 ZFR dongle, refer to the *ZFR1800 Series Wireless Field Bus System Technical Bulletin (LIT-12011295)* or *ZFR1800 Series Wireless Field Bus System Quick Reference Guide (LIT-12011630)*. |
| **Y64T15-0** | Transformer, 120/208/240 VAC Primary to 24 VAC Secondary, 92 VA, Foot Mount, 30 in. Primary Leads and 30 in. Secondary Leads, Class 2 |
| **Y65A13-0** | Transformer, 120 VAC Primary to 24 VAC Secondary, 40 VA, Foot Mount (Y65AS), 8 in. Primary Leads and 30 in. Secondary Leads, Class 2 |
| **Y65T42-0** | Transformer, 120/208/240 VAC Primary to 24 VAC Secondary, 40 VA, Hub Mount (Y65SP+), 8 in. Primary Leads and Secondary Screw Terminals, Class 2 |
| **Y65T31-0** | Transformer, 120/208/240 VAC Primary to 24 VAC Secondary, 40 VA, Foot Mount (Y65AR+), 8 in. Primary Leads and Secondary Screw Terminals, Class 2 |
| **AP-TBK4SA-0** | Replacement MSTP SA Bus Terminal, 4-Position Connector, Brown (Bulk Pack of 10) |
| **AP-TBK4FC-0** | Replacement MSTP FC Bus Terminal, 4-Position Connector (Bulk Pack of 10) |
| **AP-TBK3PW-0** | Replacement Power Terminal, 3-Position Connector, Gray (Bulk Pack of 10) |
| **AS-CBLTSTAT-0** | Cable adapter for connection to 8-pin TE-6700 Series sensors |
| **MS-TBKLV03-0** | Terminal Block Kit - FAC Line Voltage AC Power - 3 Pieces |
| **MS-TBKRO02-0** | Terminal Block Kit - FAC 2-Position Relay Output - 9 Pieces |
| **MS-TBKRO03-0** | Terminal Block Kit - FAC 3-Position Relay Output - 6 Pieces |
| **MS-TBKCO04-0** | Terminal Block Kit - FAC 4-Position Configurable Output - 6 Pieces |
| **MS-TBKUI04-0** | Terminal Block Kit - FAC 4-Position Universal Input - 3 Pieces |
| **MS-TBKUI05-0** | Terminal Block Kit - FAC 5-Position Universal Input - 3 Pieces |
| **TL-BRTRP-0** | Portable BACnet/IP to MSTP Router |

## FAC Series Technical Specifications

**Table 4: FAC Series**

| | |
|---|---|
| **Product Code Numbers** | **MS-FAC2513-0**[1]: 16-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power<br>**MS-FAC2611-0**: 17-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power<br>**MS-FAC2612-1**: 18-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power<br>**MS-FAC2612-2**: 18-Point FAC with Integral Real-Time Clock and 100–240 VAC Supply Power<br>**MS-FAC3611-0:** 26-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power with Fast Persistence<br>**MS-FAC3611-0A** [1]: 26-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power<br>**MS-FAC3613-0**[1]**:** 26-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power with Fast Persistence<br>**MS-FAC4911-0:** 28-Point FAC with Integral Real-Time Clock and 24 VAC Supply Power; Communicates over BACnet/IP network |
| **Communications Protocol** | **MS-FAC2513-0**[1] **and MS-FAC3613-0**[1]**:**<br>BACnet MSTP<br>**MS-FAC2611-0, MS-FAC2612-1, MS-FAC2612-2, MS-FAC3611-0 , and MS-FAC3611-0A**[1]**:**<br>BACnet MSTP, N2<br>**MS-FAC4911-0**:<br>BACnet/IP |
| **Engines Supported** | **MS-FAC2513-0**[1]**, MS-FAC2611-0, MS-FAC2612-1, MS-FAC2612-2, MS-FAC3611-0, MS-FAC3611-0A**[1] **, and MS-FAC3613-0**[1]**:**<br>All Models except NIEs<br>**MS-FAC4911-0:**<br>NAE55, NAE85, ODS[2] |
| **Supply Voltage** | **MS-FAC2513-0**[1]**, MS-FAC2611-0, MS-FAC2612-1, MS-FAC3611-0, MS-FAC3611-0A**[1]**, MS-FAC3613-0**[1]**, and MS-FAC4911-0:** 24 VAC (nominal, 20 VAC minimum/30 VAC maximum), 50/60Hz, Power Supply Class 2 (North America), SELV (Europe)<br>**MS-FAC2612-2:** 100–240 VAC 50/60 Hz |
| **Power Consumption** | **MS-FAC2513-0**[1]**, MS-FAC2611-0, MS-FAC3611-0, MS-FAC3611-0A**[1]**, MS-FAC3613-0**[1]**, and MS-FAC4911-0:** 14 VA maximum<br>**MS-FAC2612-1:** 30 VA maximum<br>**MS-FAC2612-2:** 40 VA maximum<br>**Note:** VA ratings do not include any power supplied to the peripheral devices connected to Binary Outputs (BOs) or Configurable Outputs (COs), which can consume up to 12 VA for each BO or CO, for a possible total consumption of an additional 84 VA (maximum). |
| **Ambient Conditions** | **Operating:** 0 to 50°C (32 to 122°F), 10 to 90% RH noncondensing; Pollution Degree 2<br>**Storage:** -40 to 80°C (-40 to 176°F), 5 to 95% RH noncondensing |
| **Controller Addressing** | **For BACnet MSTP-configured controllers:** DIP switch set; valid field controller device addresses 4–127 (device addresses 0–3 and 128–255 are reserved)<br>**For BACnet/IP controllers:** 3 rotary switches to assign unique number for each controller on the subnet to identify it in the Controller Tool for uploading, downloading, and commissioning<br>**For N2-configured controllers:** DIP switch set; valid control device addresses 1–255 |
| **Communications Bus** | **RS-485, field selectable between BACnet MSTP and N2 communications on certain models:**<br>• 3-wire FC Bus between the supervisory controller and field controllers<br>• 4-wire SA Bus between field controller, network sensors, and other sensor/actuator devices, includes a lead to source 15 VDC supply power (from field controller) to bus devices.<br>**MS-FAC4911-0:**<br>• BACnet/IP over Ethernet cable<br>• 4-wire SA Bus between field controller, network sensors, and other sensor/actuator devices, includes a lead to source 15 VDC supply power (from field controller) to bus devices. |
| **Processor** | **MS-FAC2611-0, MS-FAC2612-1, and MS-FAC2612-2 :** H8SX/166xR Renesas® microcontroller<br>**MS-FAC3611-0 and MS-FAC3611-0A**[1]**:** RX630 32-Bit Renesas microcontroller<br>**MS-FAC2513-0**[1] **and MS-FAC3613-0**[1]: RX631 32-Bit Renesas microcontroller<br>**MS-FAC4911-0:** RX63N 32-Bit Renesas microcontroller |

**Table 4: FAC Series**

| | |
|---|---|
| **Memory** | **MS-FAC2611-0, MS-FAC2612-1, MS-FAC2612-2, MS-FAC3611-0, and MS-FAC3611-0A[1]:** 4 MB Flash Memory and 1 MB RAM<br><br>MS-FAC2513-0[1]and **MS-FAC3613-0[1]:** 16 MB Flash Memory and 8 MB SDRAM<br><br>**MS-FAC4911-0:** 16 MB Flash Memory and 8 MB RAM |
| **Input and Output Capabilities** | **MS-FAC2513-0[1]:**<br><br>4 - Universal Inputs: Defined as 0–10 VDC, 0–600k ohm, or Binary Dry Contact<br><br>6 - Binary Inputs: Defined as Dry Contact Maintained or Pulse Counter/Accumulator Mode<br><br>2 - Analog Outputs: Defined as 0–10 VDC<br><br>2 - Binary Outputs: Defined as 24 VAC Triac (external power source only)<br><br>2 - Configurable Outputs: Defined as 0–10 VDC or 24 VAC Triac BO<br><br>**MS-FAC2611-0:**<br><br>6 - Universal Inputs: Defined as 0–10 VDC, 4–20 mA, 0–600k ohm, or Binary Dry Contact<br><br>2 - Binary Inputs: Defined as Dry Contact Maintained or Pulse Counter/Accumulator Mode<br><br>2 - Analog Outputs: Defined as 0–10 VDC or 4–20 mA<br><br>3 - Binary Outputs: Defined as 24 VAC Triac (selectable internal or external source power)<br><br>4 - Configurable Outputs: Defined as 0–10 VDC or 24 VAC Triac BO<br><br>**MS-FAC2612-1 and MS-FAC2612-2:**<br><br>5 - Universal Inputs: Defined as 0–10 VDC, 4–20 mA, 0–600k ohm, or Binary Dry Contact<br><br>4 - Binary Inputs: Defined as Dry Contact Maintained or Pulse Counter/Accumulator Mode<br><br>4 - Configurable Outputs: Defined as 0–10 VDC or 24 VAC Triac BO<br><br>2 - Relay Outputs (Single-Pole, Double-Throw): UL 916: 1/4 hp 120 VAC, 1/2 hp 240 VAC; 360 VA Pilot Duty at 120/240 VAC (B300); 3 A Non-inductive 24–240 VAC; EN 60730: 6 (4) A N.O. or N.C. only<br><br>3 - Relay Outputs (Single-Pole, Single-Throw): UL 916:1/4 hp 120 VAC, 1/2 hp 240 VAC; 360 VA Pilot Duty at 120/240 VAC (B300); 3 A Non-inductive 24–240 VAC; EN 60730: 6 (4) A N.O. or N.C. only<br><br>**MS-FAC3611-0, MS-FAC3611-0A[1], and MS-FAC3613-0[1]:**<br><br>8 - Universal Inputs: Defined as 0–10 VDC, 4–20 mA, 0–600k ohms, or Binary Dry Contact<br><br>6 - Binary Inputs: Defined as Dry Contact Maintained or Pulse Counter/Accumulator Mode<br><br>6 - Binary Outputs: Defined as 24 VAC Triac (external power source only)<br><br>6 - Analog Outputs: Defined as 0–10 VDC or 4–20 mA<br><br>**MS-FAC4911-0:**<br><br>10 - Universal Inputs: Defined as 0–10 VDC, 0–600k ohms, or Binary Dry Contact<br><br>6 - Binary Inputs: Defined as Dry Contact Maintained or Pulse Counter/Accumulator Mode<br><br>4 - Binary Outputs: Defined as 24 VAC Triac (external power source only)<br><br>4 - Analog Outputs: Defined as 0–10 VDC or 4–20 mA<br><br>4 - Configurable Outputs: Defined as AO mode , 0–10 VDC or BO mode, 24 VAC Triac |
| **Analog Input/Analog Output Resolution and Accuracy** | Analog Input: 15-bit resolution<br><br>Analog Output: 15-bit resolution, +/- 200 mV accuracy in 0–10 VDC applications |

**Table 4: FAC Series**

| | |
|---|---|
| **Terminations** | **MS-FAC2513-0**[1]: |
| | Input/Output: Fixed Screw Terminal Blocks |
| | FC Bus, SA Bus and Supply Power: 3-wire and 4-wire Pluggable Screw Terminal Blocks |
| | SA Bus Port: RJ-12 6-pin Modular Jacks |
| | **MS-FAC2611-0, MS-FAC3611-0, MS-FAC3611-0A**[1]**, and MS-FAC3613-0**[1]**:** |
| | Input/Output: Fixed Screw Terminal Blocks |
| | FC Bus, SA Bus and Supply Power: 3-wire and 4-wire Pluggable Screw Terminal Blocks |
| | FC Bus and SA Bus Port: RJ-12 6-pin Modular Jacks |
| | **MS-FAC2612-1 and MS-FAC2612-2:** |
| | Input/Output: Pluggable Screw Terminal Blocks |
| | FC Bus, SA Bus and Supply Power: 3-wire and 4-wire Pluggable Screw Terminal Blocks |
| | FC Bus and SA Bus Port: RJ-12 6-pin Modular Jacks |
| | **MS-FAC4911-0:** |
| | Input/Output: Fixed Screw Terminal Blocks |
| | SA Bus and Supply Power: 3-wire and 4-wire Pluggable Screw Terminal Blocks |
| | SA Bus Port: RJ-12 6-pin Modular Jacks |
| **Mounting** | Horizontal on single 35 mm DIN rain mount (preferred), or screw mount on flat surface with three integral mounting clips on controller |
| **Housing** | Enclosure material: ABS and polycarbonate UL94 5VB, self-extinguishing; Plenum-rated Protection Class: IP20 (IEC529) (except the FAC2612 controller) |
| **Dimensions (Height x Width x Depth)** | **MS-FAC2513-0**[1]**:** 150 x 164 x 48 mm (5-7/8 x 6-7/16 x 1-7/8 in.) including terminals and mounting clips |
| | **MS-FAC2611-0:** 150 x 190 x 53 mm (5-7/8 x 7-1/2 x 2-1/8 in.) including terminals and mounting clips |
| | **MS-FAC2612-x:** 150 x 164 x 53 mm (5-7/8 x 6-7/16 x 2-1/8 in.) including terminals and mounting clips |
| | **MS-FAC3611-0, MS-FAC3611-0A**[1]**, MS-FAC3613-0**[1]**, and MS-FAC4911-0:** 150 x 220 x 57.5 mm (5-7/8 x 8-3/4 x 2-3/8 in.) including terminals and mounting clips |
| | **Note:** Mounting space for FAC models requires an additional 50 mm (2 in.) space on top, bottom, and front face of controller for easy cover removal, ventilation, and wire terminations. |
| **Weight** | 0.5 kg (1.1 lb) |
| **Compliance** | **United States:** UL Listed, File E107041, CCN PAZX, UL 916, Energy Management Equipment; FCC Compliant to CFR47, Part 15, Subpart B, Class A |
| | **Canada:** UL Listed, File E107041, CCN PAZX7, CAN/CSA C22.2 No. 205, Signal Equipment; Industry Canada Compliant, ICES-003 |
| CE | **Europe:** CE Mark – Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive. |
| | Johnson Controls, declares that the FAC2612-2 models are also in compliance with the essential requirements and other relevant provisions of the Low Voltage Directive. Declared as Independently Mounted, Intended for Panel Mounting, Operating Control Type 1.B, 4kV rated impulse voltage, 100°C ball pressure test. |
| | **Australia and New Zealand:** RCM Mark, Australia/NZ Emissions Compliant |
| | **BACnet International:** |
| | **MS-FAC261x-x:** BACnet® Testing Laboratories (BTL) Protocol Revision 7 Listed BACnet Advanced Application Controller (B-AAC) |
| | **MS-FAC3611-0 and MS-FAC3611-0A**[1]**:** BACnet® Testing Laboratories (BTL) Protocol Revision 9 Listed BACnet Advanced Application Controller (B-AAC) |
| | **MS-FAC2513-0**[1]**, MS-FAC3613-0**[1]**, and MS-FAC4911-0:** BACnet® Testing Laboratories (BTL) Protocol Revision 12 Listed BACnet Advanced Application Controller (B-AAC) |

1 This model is currently only available in Asia. Contact your local Johnson Controls representative for more information.
2 FAC4911 supports R9.0 or later versions of these engines.

*The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls shall not be liable for damages resulting from misapplication or misuse of its products.*

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