

Metasys® System UL 864 10th Edition Smoke Control System Catalog Page

Code No. LIT-1901048
Software Release 8.1
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The *Metasys*® system brings cost-effective code compliance to your facility by integrating the fire alarm and HVAC systems and providing an Underwriters Laboratories Inc.® (UL) 864 10th Edition UUKL/ORDC100-13 UUKLC Smoke Control System. The *Metasys* system monitors the building's fire alarm panel using BACnet® IP communications. In a fire emergency, responders can take manual control of the system through the Firefighters Smoke Control Station (FSCS).

The figure on this page shows the FSCS, fire panel, smoke control NAE, and field controllers. Field controllers include Field Equipment Controllers (FECs), Input Output Modules (IOMs), and Variable Air Volume Modular Assembly (VMA) controllers. You can select any combination of these field devices for the HVAC equipment used in the smoke sequences. Legacy N2 Bus controllers are also supported, including the Air Handling Unit (AHU), Extended Digital Controller (DX-9100), Unitary Controller (UNT), Variable Air Volume (VAV) Controller, Extension Modules (XTMs), Expansion Modules, and Function Modules (FMs).

The *Metasys* system Release 8.1 UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System meets the United States standard as well as the Canadian standard for smoke control. The smoke control listing applies to an indoor, dry environment only, where each air handling unit (AHU) is located in an indoor, enclosed space. This listing also applies to an application where a Rooftop Unit (RTU) is located outside but the smoke control panel servicing the RTU is mounted in an indoor, conditioned mechanical space, with conduit wire runs to the RTU. However, the listing does not support applications where smoke control equipment is mounted in the RTU itself, or where equipment is exposed to a damp or wet environment.

For important product application information regarding the use of the Smoke Control system, refer to the *Metasys*® System UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System Technical Bulletin (LIT-12012487), available from your local Johnson Controls® representative.

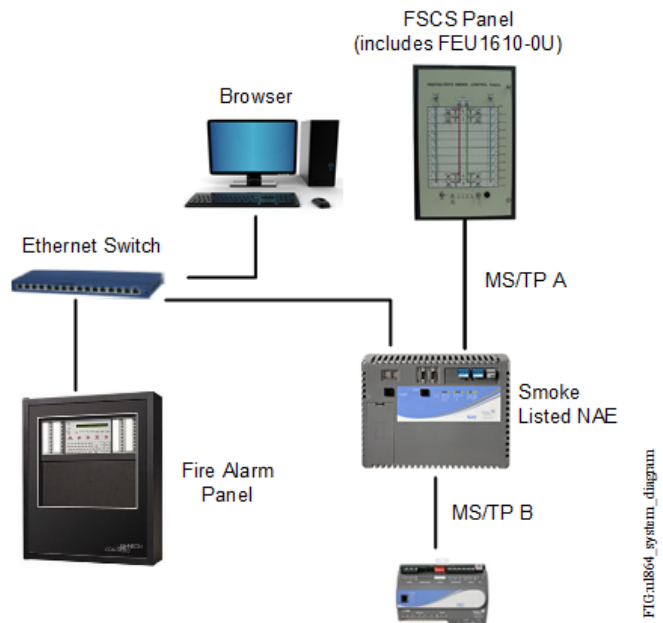
Features and Benefits

- **Large Selection of Compliant Devices**—Ensures the customer that a comprehensive line of *Metasys* network engines and field controllers comply with the UL/ULC certification and testing
- **Several Pre-Engineered Applications**—Offer customers with tested and proven applications that can easily adapt to their facility. Applications include Multi-story, Warehouse, and Single-Story Shopping Mall.
- **Supported Coexistence with Legacy 8th Edition Smoke Control Listing**—Protects original investment by allowing controls from

two different UL 864 Listings in the same facility separated by an Ethernet switch.

- **Flexible Network Configurations**—Enable smoke control and non-smoke control network engines to coexist at the same facility.
- **Standard and Custom Enclosures**—Offer customers with easy-to-order, UL/ULC approved factory enclosures that contain pre-wired controllers and network gear that is ready to install and commission.
- **Stairwell Pressurization Application**—Provides the logic that building operators can use to test the system periodically as required by the certification.

Figure 1: UL 864 System Diagram



Repair Information

To maintain an installed job site that is UL 864 10th Edition UUKL/ORD-C100-13 UUKLC listed for Smoke Control, Johnson Controls offers the MS-NAE5510-1U, MS-NAE5510-2U, and MS-NAE5510-3U as orderable repaired network engines. See [Repair Parts](#) for ordering information.

You may send in any supervisory or field controller for repair for *Metasys* Release 8.1 UL 864 10th Edition UUKL/ORD-C100-13 UUKLC listed products. Contact the Johnson Controls® Repair Center in Louisville, Kentucky, at 1-502-671-7312 to discuss if repair parts are available for these smoke control listed supervisory and field controllers.

Ordering Information

Important: You cannot purchase a similar third-party device and install it in a UL/ULC Listed smoke control system. Doing so voids the UL/ULC Smoke Control Listing. Third-party devices must be provided and labeled by the factory as described in the UL/ULC Smoke Control Listing.

Important: Only Johnson Controls® products listed in the following tables have been tested and listed by UL/ULC for use in a *Metasys System UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System*. Installation of a product that is not UL/ULC Listed and labeled for this application prevents the entire system from being UL/ULC Listed for smoke control.

Refer to the *Metasys System UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System Technical Bulletin (LIT-12012487)* for technical specifications of all certified smoke control products.

UL864 Standard Panels Ordering Information

Table 1: Johnson Controls Standard Panels

Code Number	Description
PAGN00U11EC0 (-- DISCONTINUED --)	<ul style="list-style-type: none"> MS-NAE5510-1U with two BACnet MS/TP (RS-485) or two N2 Bus trunks (or one BACnet MS/TP and one N2 Bus trunk) Hoffman enclosure (9.25 x 24 x 24 in.) with keyed lock EISK5-100T Contemporary Controls CTRLink 5-Port 10/100 Ethernet Switch APC PNET1GB Ethernet Surge Protection (4) PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (2) <p>Notes:</p> <ul style="list-style-type: none"> The MS-NAE5510-1U engine has been discontinued, but you may use an existing MS-NAE5510-1U engine for UL/cUL 10th Edition if you apply the WES2009 operating system upgrade. The PAGN00U11EC0 panel has been discontinued, but you may use an existing PAGN00U11EC0 panel for UL/cUL 10th Edition.
PAG100U11EC0-1	<ul style="list-style-type: none"> MS-NAE5510-2U with two BACnet MS/TP (RS-485) or two N2 Bus trunks (or one BACnet MS/TP and one N2 Bus trunk) Hoffman® enclosure (9.25 x 24 x 24 in.) with keyed lock EISK5-100T Contemporary Controls® CTRLink™ 5-Port 10/100 Ethernet Switch APC® PNET1GB Ethernet Surge Protection (4) PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (2)
PAG200U11EC0-1	<ul style="list-style-type: none"> MS-NAE5510-3U with two BACnet MS/TP (RS-485) or two N2 Bus trunks (or one BACnet MS/TP and one N2 Bus trunk) Hoffman® enclosure (9.25 x 24 x 24 in.) with keyed lock EISK5-100T Contemporary Controls CTRLink 5-Port 10/100 Ethernet Switch APC PNET1GB Ethernet Surge Protection (4) PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (2)
PAKGJJU12BC0-1	<ul style="list-style-type: none"> MS-FEC2611-0U and MS-IOM4711-0U with 12 UI, 4 BI, 6 BO, 4 AO, 8 CO Hoffman enclosure (9.25 x 24 x 36 in.) with keyed lock PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet PAN-96VAXFR-U 120/24 VAC, 96 VA, Transformer SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (3) SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (74), or three MOV boards with MS/TP protection and one MOV board without MS/TP protection
PAKGJPU12BC0-1	<ul style="list-style-type: none"> MS-FEC2611-0U and (2) MS-IOM4711-0U with 12 UI, 4 BI, 6 BO, 4 AO, 8 CO Hoffman enclosure (9.25 x 30 x 42 in.) with keyed lock PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet PAN-96VAXFR-U 120/24 VAC, 96 VA, Transformer SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (3) Three MOV boards with MS/TP protection and one MOV board without MS/TP protection
PAKG00U11AC0-1	<ul style="list-style-type: none"> MS-FEC2611-0U with 6 UI, 2 BI, 3 BO, 2 AO, 4 CO Hoffman enclosure (9.25 x 20 x 24 in.) with keyed lock PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (2) SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (37), or three MOV boards with MS/TP protection and one MOV board without MS/TP protection

Table 1: Johnson Controls Standard Panels

Code Number	Description
PAJJ00U11AC0-1	<ul style="list-style-type: none"> MS-IOM4711-0U with 6 UI, 2 BI, 3 BO, 2 AO, 4 CO Hoffman enclosure (9.25 x 20 x 24 in.) with keyed lock PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet SMK-MOVKIT-MSTP Transient Protection for MS/TP and SA Bus Communication (2) SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (37), or three MOV boards with MS/TP protection and one MOV board without MS/TP protection
PA5100U01FC0-1	<ul style="list-style-type: none"> EIS8-100T Contemporary Controls CTRLink 8-Port 10/100 Industrial Ethernet Switch Hoffman enclosure (6.62 x 16 x 20 in.) with keyed lock PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet APC PNET1GB Ethernet Surge Protection (8)
PA5200U15CC0 (-- DISCONTINUED --)	<ul style="list-style-type: none"> 2960-24TC-S Cisco Catalyst 24-Port 10/100/1000 Ethernet Switch Hoffman enclosure (9.25 x 30 x 42 in.) with keyed lock APC PNET1GB Ethernet Surge Protection (24) Tripp Lite® ISOBAR8 120 VAC Surge Protection <p>Note: The Cisco 2960-24TC-S switch has been discontinued, but this model can still be used for UL/cUL 864 10th Edition.</p>
PA5400U15CC0-1	<ul style="list-style-type: none"> Cisco 4000-16T4G-E (E232864) Industrial Ethernet (IE) 24-port 10/100/1000 Ethernet Switch Hoffman enclosure (9.25 x 30 x 42 in.) with keyed lock PWR-IE170W-PC-AC power supply APC PNET1GB Ethernet Surge Protection (24) Tripp Lite ISOBAR8 120 VAC Surge Protection
PA5300U11FC0-1	<ul style="list-style-type: none"> EISK5-100T Contemporary Controls CTRLink 5-Port 10/100 Ethernet Switch Hoffman enclosure (6.62 x 16 x 20 in.) with keyed lock PAN-PWRSP-U 120/24 VAC, 96 VA, Transformer with circuit breaker and 120 VAC outlet APC PNET1GB Ethernet Surge Protection (5)

UL864 Standard and Custom Hoffman Enclosures and Transformers

Table 2: UL/cUL 864 Standard and Custom Hoffman Enclosures, Transformers, and Power Supplies

Part Number	Description
Standard Hoffman Enclosures¹	
PAN-ENH1620WDP	6.62 x 16 x 20 in. Enclosure with door, latch, subpanel
PAN-ENH1620WD	6.62 x 16 x 20 in. Enclosure with door, latch
PAN-ENH2024WDP	6.62 x 20 x 24 in. Enclosure with door, latch, subpanel
PAN-ENH2024WD	6.62 x 20 x 24 in. Enclosure with door, latch
PAN-ENH2424WDP	6.62 x 24 x 24 in. Enclosure with door, subpanel
PAN-ENH2424WD	6.62 x 24 x 24 in. Enclosure with door
PAN-ENH2436WDP	6.62 x 24 x 36 in. Enclosure with door, subpanel
PAN-ENH2436WD	6.62 x 24 x 36 in. Enclosure with door
Custom Hoffman Enclosures¹ with Lift-Off Doors, Louvers, and Locks	
PAN-ENC1620WDP	6.62 x 16 x 20 in. Enclosure with door, lock, subpanel
PAN-ENC1620WD	6.62 x 16 x 20 in. Enclosure with door, lock
PAN-ENC2024WDP	9.25 x 20 x 24 in. Enclosure with door, lock, subpanel
PAN-ENC2024WD	9.25 x 20 x 24 in. Enclosure with door, lock
PAN-ENC2424WDP	9.25 x 24 x 24 in. Enclosure with door, lock, subpanel
PAN-ENC2424WDF	9.25 x 24 x 24 in. Enclosure with cut-out door, lock
PAN-ENC2424WD	9.25 x 24 x 24 in. Enclosure with door, lock
PAN-ENC2436WDP	9.25 x 24 x 36 in. Enclosure with door, lock, subpanel
PAN-ENC2436WDF	9.25 x 24 x 36 in. Enclosure with cut-out door, lock
PAN-ENC2436WD	9.25 x 24 x 36 in. Enclosure with door, lock
PAN-ENC3042WDP	9.25 x 30 x 42 in. Enclosure with door, lock, subpanel

Table 2: UL/cUL 864 Standard and Custom Hoffman Enclosures, Transformers, and Power Supplies

Part Number	Description
PAN-ENC3042WD	9.25 x 30 x 42 in. Enclosure with door, lock
PAN-ENC3648WDP	9.25 x 36 x 48 in. Enclosure with door, lock, subpanel
PAN-ENC3648WD	9.25 x 36 x 48 in. Enclosure with door, lock
Power Supplies	
PAN-PWRSP-U	96 VA 120/24 VAC Power Assembly (Transformer, Receptacle, 5 A Overcurrent Circuit Breaker)
PAN-PWRSP-IU	96 VA 220/240 VAC Power Assembly (Transformer, Receptacle, 5 A Overcurrent Circuit Breaker). This transformer is for special applications mainly in Middle Eastern high-rise buildings that require a UL 864 UUKL 10th Edition listed <i>Metasys</i> smoke control application.
PAN-96VAXFR-U	Transformer, Power, Panel Mount, 120 V Primary, 24 V Secondary, 96 VA, Split Bobbin, 4 A Secondary Circuit Breaker,
PA0P00010FC0-U	Power Distribution Panel and Enclosure - Contains four PAN-96VAXFR-U transformers, 120V,10 A Primary Circuit Breaker. For powering multiple VAV/VMAs
Vendor Enclosures	
A20N16BLP	CTRLink Ethernet Switch Enclosure - 20 x 16 x 8.62 in. Medium Type 1 Enclosure
A20N16MPP	CTRLink Ethernet Switch Backplate - NEMA Type 1, Perforated 17.00 x 14.50 in. Subpanel, fits 20 x16 in. Enclosure
UL/cUL Listed VAV Box Enclosures and Covers	
00-00051-01	Johnson Controls ENVIRO-TEC® (ETI of Largo, FL) - VAV Electronic Enclosure - 16 in. Enclosure, Electronic Control, 18 GA
00-00052-01	Johnson Controls ENVIRO-TEC (ETI of Largo, FL) - VAV Electronic Enclosure - 16 in. Cover, Electronic Control, 18 GA

1 All Hoffman custom enclosures have a factory-installed grounding strap (supplied by Hoffman) connecting the enclosure to the enclosure door.

UL864 Smoke Control Parts Ordering for Latest Controllers

Table 3: UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering and Software Tool Revision Information: Latest Controllers

Code Number	Description	N2	MS/TP	Software Tool Revision ¹
Johnson Controls Supervisory Controllers				
MS-NAE5510-1U	Supports two N2 Bus or two BACnet MS/TP (RS-485) trunks (or one of each); supports a maximum of 100 devices on the N2 Bus or BACnet MS/TP trunk; requires a 24 VAC power supply; includes two RS-232-C serial ports, two USB serial ports, one Ethernet port, and an MS-BAT1020-0 Data Protection Battery. Runs Microsoft Windows XP® embedded operating system with 512 MB SDRAM. Note: This engine has been discontinued, but to use an existing MS-NAE5510-1U engine for UL/cUL 10th Edition, you must purchase the WES2009 operating system upgrade.	x	x	SCT 12.0.0.3270 Launcher 1.6.0.141
MS-NAE5510-2U	Supports two N2 Bus or two BACnet MS/TP (RS-485) trunks (or one of each); supports a maximum of 100 devices on the N2 Bus or BACnet MS/TP trunk; requires a 24 VAC power supply; includes two RS-232-C serial ports, two USB serial ports, one Ethernet port, and an MS-BAT1020-0 Data Protection Battery. Runs Microsoft Windows Embedded Standard 2009 (WES2009) operating system with 1 GB SDRAM.	x	x	SCT 12.0.0.3270 Launcher 1.6.0.141
MS-NAE5510-2UW	Supports two BACnet MS/TP (RS-485) trunks (no N2 Bus); supports a maximum of 100 devices on the BACnet MS/TP trunk; requires a 24 VAC power supply; includes two RS-232-C serial ports, two USB serial ports, one Ethernet port, and an MS-BAT1020-0 Data Protection Battery. Runs Microsoft Windows Embedded Standard 2009 (WES2009) operating system with 1 GB SDRAM.		x	SCT 5.2.11.0200 No Launcher (Java Runtime installer required)
MS-NAE5510-3U	Supports two N2 Bus or two BACnet MS/TP (RS-485) trunks (or one of each); supports a maximum of 100 devices on the N2 Bus or BACnet MS/TP trunk; requires a 24 VAC power supply; includes two RS-232-C serial ports, two USB serial ports, one Ethernet port, and an MS-BAT1020-0 Data Protection Battery. Runs Johnson Controls OEM Version of Microsoft Windows Embedded Standard 7 with SP1 (WES7) operating system with 2 GB SDRAM.	x	x	SCT 12.0.0.3270 Launcher 1.6.0.141
Johnson Controls Field Equipment Controllers				

Table 3: UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering and Software Tool Revision Information: Latest Controllers

Code Number	Description	N2	MS/TP	Software Tool Revision ¹
MS-FEU1610-0U	Special field controller for use only in the FSCS panel manufactured by ADI. This controller cannot be altered or reprogrammed in the field. An MS-FEU1610-0U controller currently in use for an older UL Listing must be sent to ADI for software revision. Upgrading the controller in the field voids the UL 864 UUKL/UUKLC 10th Edition listing.		x	CCT 4.1
MS-FEC1611-1U	10-Point Field Equipment Controller with 2 UI, 1 BI, 3 BO, and 4 CO; 24 VAC, SA Bus, Mounting Base	x	x	CCT 10.3 with RM 10.2
MS-FEU2610-0U	17-Point Field Equipment Controller with 6 UI, 2 BI, 3 BO, 2 AO, and 4 CO; 24 VAC, SA Bus, Mounting Base	x	x	CCT 10.3 with RM 10.2
MS-FEC2611-0U	17-Point Field Equipment Controller with 6 UI, 2 BI, 3 BO, 2 AO, and 4 CO; 24 VAC, SA Bus, Mounting Base	x	x	CCT 10.3 with RM 10.2
MS-FEC2621-0U	17-Point Field Equipment Controller with 6 UI, 2 BI, 3 BO, 2 AO, and 4 CO; 24 VAC, SA Bus, Mounting Base; Integral display and 6-button navigational touchpad	x	x	CCT 10.3 with RM 10.2
MS-FAC2611-0U	17-Point Advanced Application Field Equipment Controller with 6 UI, 2 BI, 3 BO, 2 AO, and 4 CO; 24 VAC, MS/TP (FC) Bus, SA Bus, integral real-time clock	x	x	CCT 10.3 with RM 10.2
MS-FAC2612-1U	18-Point Advanced Application Field Equipment Controller with 5 UI, 4 BI, 4 CO, 2 SPDR RO, and 3 SPST RO; 24 VAC, MS/TP (FC) Bus, SA Bus, integral real-time clock	x	x	CCT 10.3 with RM 10.2
Johnson Controls Input/Output Modules				
MS-IOM1710-0U	4-Point IOM with 4 BI, MS/TP (FC) Bus and SA Bus Support		x	CCT 10.3 with RM 10.2
MS-IOM1711-0U	4-Point IOM with 4 BI, MS/TP (FC) Bus and SA Bus Support		x	CCT 10.3 with RM 10.2
MS-IOM2710-0U	6-Point IOM with 2 UI, 2 UO, 2 BO, MS/TP (FC) Bus and SA Bus Support		x	CCT 10.3 with RM 10.2
MS-IOM2711-0U	6-Point IOM with 2 UI, 2 UO, 2 BO, MS/TP (FC) Bus and SA Bus Support		x	CCT 10.3 with RM 10.2
MS-IOM3710-0U	12-Point IOM with 4 UI, 4 UO, 4 BO, MS/TP (FC) Bus and SA Bus Support		x	CCT 10.3 with RM 10.2
MS-IOM3711-0U	12-Point IOM with 4 UI, 4 UO, 4 BO, MS/TP (FC) Bus and SA Bus Support		x	CCT 10.3 with RM 10.2
MS-IOU4710-0U	17-Point IOM with 6 UI, 2 BI, 3 BO, 2 AO, 4 CO, 24 VAC, MS/TP (FC) Bus and SA Bus with Mounting Base		x	CCT 10.3 with RM 10.2
MS-IOM4711-0U	17-Point IOM with 6 UI, 2 BI, 3 BO, 2 AO, 4 CO, 24 VAC, MS/TP (FC) Bus and SA Bus with Mounting Base		x	CCT 10.3 with RM 10.2
Johnson Controls Variable Air Volume Modular Assembly Controllers				
MS-VMA1610-0U	Integrated VAV Controller/Actuator/Pressure Sensor (Cooling Only), and MS/TP (FC) Bus		x	CCT 10.3 with RM 10.2
MS-VMA1620-0U	Integrated VAV Controller/Actuator/Pressure Sensor (with Reheat and Fan Control), and MS/TP (FC) Bus		x	CCT 10.3 with RM 10.2
MS-VMA1610-1U	Integrated VAV Controller/Actuator/Pressure Sensor (Cooling Only), and MS/TP (FC) Bus, 3.3 volt model		x	CCT 10.3 with RM 10.2
MS-VMA1620-1U	Integrated VAV Controller/Actuator/Pressure Sensor (with Reheat and Fan Control), MS/TP (FC) Bus and SA Bus, 3.3 volt model		x	CCT 10.3 with RM 10.2
MS-VMA1615-0U	Integrated VAV Controller/Actuator/Pressure Sensor (Cooling Only), MS/TP (FC) Bus and SA Bus, 32-bit model	x	x	CCT 10.3 with RM 10.2
MS-VMA1630-0U	Integrated VAV Controller/Actuator/Pressure Sensor (with Reheat and Fan Control), MS/TP (FC) Bus and SA Bus, 32-bit model	x	x	CCT 10.3 with RM 10.2
MS-VMA1615-1U ¹	Integrated VAV Controller/Actuator/Pressure Sensor (Cooling Only), MS/TP (FC) Bus and SA Bus, 32-bit model, Isolation Optimized	x	x	CCT 10.3 with RM 10.2
MS-VMA1630-1U ¹	Integrated VAV Controller/Actuator/Pressure Sensor (with Reheat and Fan Control), MS/TP (FC) Bus and SA Bus, 32-bit model, Isolation Optimized	x	x	CCT 10.3 with RM 10.2

- 1 The software versions listed are approved by UL/cUL for smoke control. To see if approved patches are available, contact your local Johnson Controls branch office or visit the Field Support Center (FSC) Product Quick Patches page at: <https://my.jci.com/sites/BE/NAFieldSupport/quick-patches>
- 2 This model does not ship until existing inventory of equivalent model MS-VMA1615-0U is depleted.
- 3 This model does not ship until existing inventory of equivalent model MS-VMA1630-0U is depleted.

UL864 Smoke Control Parts Ordering for Legacy N2 Bus Controllers

Table 4: UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering and Revision Information: Legacy N2 Bus Controllers

Code Number	Description	Software Tool
Johnson Controls Air Handling Units		
AP-AHU102-0	AHU logic board	HVAC PRO
AP-AHU102-0G	AHU logic board, Buy American	HVAC PRO
AP-AHU103-300	AHU controller in UPM	HVAC PRO
Johnson Controls DX-9100 Field Controllers		
DX-9100-8454	Extended Digital Plant Controller, Version 2	GX-9100
DX-9100-8454D	Extended Digital Plant Controller, Version 2 - box of 10	GX-9100
DX-9100-8990F	Wall Mounting Base for DX-9100, includes MOVs	GX-9100
Johnson Controls/York Unitary Controllers		
AS-UNT110-1 YK-UNT110-1	6 analog inputs, 4 binary inputs, 8 binary outputs, N2 isolation, and triac--high or low side selectable, spade quick-connect terminations	HVAC PRO
AS-UNT110-101	UNT110 mounted in EN-EWC10-0 enclosure with 50 VA transformer	HVAC PRO
AS-UNT1108-0 YK-UNT1108-0	6 analog inputs, 6 binary inputs, 8 binary outputs, and N2 isolation	HVAC PRO
AS-UNT1008-0	6 analog inputs, 4 binary inputs, 8 binary outputs, and N2 isolation	HVAC PRO
AS-UNT1008-0A1	6 analog inputs, 4 binary inputs, 8 binary outputs, and N2 isolation	HVAC PRO
AS-UNT1026-0	6 analog inputs, 6 binary inputs, 2 analog outputs, 6 binary outputs, and N2 isolation	HVAC PRO
AS-UNT1044-0	6 analog inputs, 6 binary inputs, 4 analog outputs, 4 binary outputs, and N2 isolation	HVAC PRO
AS-UNT111-1 YK-UNT111-1	6 binary outputs, 2 analog outputs, N2 isolation, and triac--high or low side selectable, spade quick-connect terminations	HVAC PRO
AS-UNT111-101 YK-UNT111-101	UNT111 mounted in EN-EWC10-0 enclosure with 50 VA transformer	HVAC PRO
AS-UNT112-1	6 analog inputs, 4 binary inputs, 8 binary outputs (electrically isolated), triac--high or low side selectable, and N2 isolation	HVAC PRO
AS-UNT1126-0 YK-UNT1126-0	6 analog inputs, 6 binary inputs, 2 analog outputs, 6 binary outputs (electrically isolated), and N2 isolation	HVAC PRO
AS-UNT113-1	6 analog inputs, 4 binary inputs, 2 analog outputs, 6 binary outputs (electrically isolated), and N2 isolation	HVAC PRO
AS-UNT1144-0 YK-UNT1144-0	6 analog inputs, 6 binary inputs, 4 analog outputs, 4 binary outputs, and N2 isolation	HVAC PRO
AS-UNT120-1	UNT110 controller with heater (for low temperature use)	HVAC PRO
AS-UNT121-1	UNT111 controller with heater (for low temperature use)	HVAC PRO
AS-UNT121-1G	AS-UNT121-1 controller, Buy American	HVAC PRO
AS-UNT140-1	6 analog inputs, 4 binary inputs, 8 binary outputs (electrically isolated), triac--high or low side selectable, termination blocks, and N2 isolation	HVAC PRO
AS-UNT140-1G	AS-UNT140-1 controller, Buy American	HVAC PRO
AS-UNT140-101	UNT110 controller with screw terminals for field terminations and spare 6-pin Zone Bus phone jack, mounted in EN-EWC10-0 enclosure with 50 VA transformer	HVAC PRO
AS-UNT220-1	York version of AS-UNT120-1.	HVAC PRO
CC-UNT1126-0S01	6 analog inputs, 6 binary inputs, 2 analog outputs, 6 binary outputs (electrically isolated), and N2 isolation	HVAC PRO
Johnson Controls Variable Air Volume Units		
AS-VAV110-1	6 analog inputs, 4 binary inputs, 8 binary outputs, N2 isolation, and triac--high or low side selectable, spade quick-connect terminations	HVAC PRO
AS-VAV110-1D	AS-VAV110-1 controller, bulk package of 10	HVAC PRO
AS-VAV110-1G	AS-VAV110-1 controller, Buy American	HVAC PRO
AS-VAV111-1	6 analog inputs, 4 binary inputs, 2 analog outputs, 6 binary outputs, N2 isolation, and triac--high or low side selectable, spade quick-connect terminations	HVAC PRO

Table 4: UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering and Revision Information: Legacy N2 Bus Controllers

Code Number	Description	Software Tool
AS-VAV111-1D	AS-VAV111-1 controller, bulk package of 10	HVAC PRO
AS-VAV111-1G	AS-VAV111-1 controller, Buy American	HVAC PRO
AS-VAV111-1M	AS-VAV111-1 controller, direct to MX	HVAC PRO
AS-VAV140-1	6 analog inputs, 4 binary inputs, 8 binary outputs, N2 isolation, and triac--high or low side selectable, termination blocks	HVAC PRO
AS-VAV140-1G	AS-VAV140-1 controller, Buy American	HVAC PRO
AS-VAV141-1	6 analog inputs, 4 binary inputs, 2 analog outputs, 6 binary outputs, N2 isolation, and triac--high or low side selectable, termination blocks	HVAC PRO
AS-VAV141-1G	AS-VAV141-1 controller, Buy American	HVAC PRO
AS-VAVDPT1-1	VAV110-1 controller, with DPT-2015-1 different pressure sensor	HVAC PRO
AS-VAVDPT1-1G	AS-VAVDPT1-1, Buy American	HVAC PRO
AS-VAVDPT2-1	VAV111-1 controller, with DPT-2015-1 different pressure sensor	HVAC PRO
AS-VAVDPT2-1G	AS-VAVDPT2-1, Buy American	HVAC PRO
Johnson Controls Variable Air Volume Modular Assembly Controllers		
AP-VMA1410-0	3 analog inputs, 3 binary inputs, 2 binary outputs, integrated VAV controller/actuator/pressure sensor (cooling only) single pack	HVAC PRO
AP-VMA1410-0D	AP-VMA1410-0 controller, bulk package of 10	HVAC PRO
AP-VMA1410-0G	AP-VMA1410-0 controller, Buy American	HVAC PRO
AP-VMA1410-0M	AP-VMA1410-0 controller, sold in Mexico	HVAC PRO
AP-VMA1410-A01D	AP-VMA1410-0 controller, bulk package of 10	HVAC PRO
AP-VMA1415-0D	3 analog inputs, 3 binary inputs, 1 analog output, 2 binary outputs, integrated VAV controller/actuator/pressure sensor (cooling only), bulk package of 10 for China	HVAC PRO
AP-VMA1420-0	4 analog inputs, 3 binary inputs, 2 analog outputs, 2 binary outputs, integrated VAV controller/actuator/pressure sensor (cooling with reheat and/or fan power) single pack	HVAC PRO
AP-VMA1420-0D	AP-VMA1420-0 controller, bulk package of 10	HVAC PRO
AP-VMA1420-0G	AP-VMA1420-0 controller, Buy American	HVAC PRO
AP-VMA1420-0M	AP-VMA1420-0 controller, sold in Mexico	HVAC PRO
AP-VMA1420-A02D	AP-VMA1420-0 controller, bulk package of 10	HVAC PRO
AP-VMA1420-0A01	AP-VMA1420-0 controller, factory loaded with cooling only sequence	HVAC PRO
AP-VMA1420-0A02	AP-VMA1420-0 controller, factory loaded with cooling with incremental hot water reheat	HVAC PRO
AP-VMA1420-0A03	AP-VMA1420-0 controller, factory loaded with cooling with 3 stage electric reheat	HVAC PRO
AP-VMA1420-0A04	AP-VMA1420-0 controller, factory loaded with cooling, incremental box heating, and supplementary heating	HVAC PRO
AP-VMA1420-0A05	AP-VMA1420-0 controller, factory loaded with cooling, series fan, and incremental hot water heating	HVAC PRO
AP-VMA1420-0A06	AP-VMA1420-0 controller, factory loaded with cooling, parallel fan, and incremental hot water heating sequence	HVAC PRO
AP-VMA1420-0A07	AP-VMA1420-0 controller, factory loaded with cooling, series fan, incremental hot water reheat, and supplementary heating	HVAC PRO
AP-VMA1420-0A08	AP-VMA1420-0 controller, factory loaded with cooling, parallel fan, incremental hot water reheat, and supplementary heating	HVAC PRO
AP-VMA1420-0A09	AP-VMA1420-0 controller, factory loaded with cooling, series fan, and electric reheat	HVAC PRO
AP-VMA1420-0A10	AP-VMA1420-0 controller, factory loaded with cooling, parallel fan, and electric reheat	HVAC PRO
AP-VMA1430-0	4 analog inputs, 3 binary inputs, 2 analog outputs, 2 binary outputs, integrated VAV controller/pressure sensor (cooling only) single pack	HVAC PRO
AP-VMA1430-0D	AP-VMA1430-0 controller, bulk package of 10	HVAC PRO
AP-VMA1430-0G	AP-VMA1430-0 controller, Buy American	HVAC PRO
AP-VMA1440-0	4 analog inputs, 3 binary inputs, 2 analog outputs, 2 binary outputs, integrated VAV controller/pressure sensor (cooling only) single pack, for <i>Metasys</i> zoning package single pack	HVAC PRO
Johnson Controls Function Modules		
AS-FMK102-0	Functional Module kit for AS-AHU103	HVAC PRO

Table 4: UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering and Revision Information: Legacy N2 Bus Controllers

Code Number	Description	Software Tool
AS-FMK102-0G	AS-FMK102-0 Function Module, Buy American	HVAC PRO
FM-IAP101-0	Function Module, Input: 0 to 25 psi, 4 to 20 mA	HVAC PRO
FM-IAP101-0G	FM-IAP101-0 Function Module, Buy American	HVAC PRO
FM-IDP001-0	Function Module, Input: 0 to 0.1 in. WC, 4 to 20 mA	HVAC PRO
FM-IDP002-0	Function Module, Input: 0 to 0.25 in. WC, 4 to 20 mA	HVAC PRO
FM-IDP005-0	Function Module, Input: 0 to 0.5 in. WC, 4 to 20 mA	HVAC PRO
FM-IDP010-0	Function Module, Input: 0 to 1 in. WC, 4 to 20 mA	HVAC PRO
FM-IDP030-0	Function Module, Input: 0 to 3 in. WC, 4 to 20 mA	HVAC PRO
FM-IDP050-0	Function Module, Input: 0 to 5 in. WC, 4 to 20 mA	HVAC PRO
FM-IDP100-0	Function Module, Input: 0 to 10 in. WC, 4 to 20 mA	HVAC PRO
FM-OAP102-0	Output Analog Pneumatic: An Electric/Pressure Transducer controlling pneumatic devices (0-20 psi). Requires two slots.	HVAC PRO
FM-OAP103-0	Output Analog Pneumatic: An Electric/Pressure Transducer controlling pneumatic devices (0-20 psi). Requires two slots.	HVAC PRO
FM-OAP103-0G	FM-OAP103-0 Function Module, Buy American	HVAC PRO
Johnson Controls Extension and Expansion Modules		
XTM-105-5UL	Extension Module, N2 Communications interface and 24 VAC supply	XTM Configurator
XTM-905-5UL	Extension Module, XT Bus communication interface and 24 VAC supply	XTM Configurator
XPA-821-5UL	Expansion Module Analog, six analog inputs, two analog outputs without manual override	XTM Configurator
XPB-821-5UL	Expansion Module Binary, eight binary inputs	XTM Configurator
XPE-401-5UL	Expansion Module Binary, four binary inputs, three binary outputs (latching relays with manual override)	XTM Configurator
XPE-404-5UL	Expansion Module Binary, four binary inputs, four binary outputs (common supply) (electrically maintained relays with manual override, software configurable as On/Off or pulse type)	XTM Configurator
XPL-401-5UL	Expansion Module Binary, four binary inputs, three binary outputs (latching relays with manual override)	XTM Configurator
XPT-401-5UL	Expansion Module Binary, four binary inputs, four binary outputs (24 VAC triacs with manual override)	XTM Configurator
XPT-861-5UL	Expansion Module Binary, eight binary outputs (24 VAC triacs without manual override)	XTM Configurator
Johnson Controls XT/XP Modules		
XT-9100-8304	Extension Module for DX9100	HVAC PRO
XT-9100-8304D	XT-9100-8304 Extension Module, Bulk Pack	HVAC PRO
XP-9100-8304	Expansion Module for DX9100	HVAC PRO
XP-9102-8304	Expansion Module Analog, six analog inputs, two analog outputs	HVAC PRO
XP-9102-8304D	XP-9102-8304 Expansion Module, Bulk Pack	HVAC PRO
XP-9103-8304	Expansion Module Digital, eight Digital Outputs (triacs)	HVAC PRO
XP-9103-8304D	XP-9103-8304 Expansion Module, Bulk Pack	HVAC PRO
XP-9104-8304	Expansion Module Digital, four Digital Inputs, four Digital Outputs (triacs)	HVAC PRO
XP-9104-8304D	XP-9104-8304 Expansion Module, Bulk Pack	HVAC PRO
XP-9105-8304	Expansion Module Digital, eight Digital Inputs	HVAC PRO
XP-9105-8304D	XP-9105-8304 Expansion Module, Bulk Pack	HVAC PRO
XP-9107-8304	Expansion Module Digital, eight Digital Outputs (24V Relay)	HVAC PRO
Johnson Controls MOV Kits		
SMOKE-MOV9120	Transient protection kit for DX-9120 controller when NU-NET201-0 is installed	N/A
SMOKE-MOVKIT-0	Transient protection kit for termination blocks (12 MOVs per kit)	N/A
SMOKE-TRNKIT-0	Transorb transient suppressor for N2 Bus repeater when used in smoke control applications (1 per bag)	N/A
SMOKE-TRNKIT-1U	Transorb transient suppressor for N2 Bus repeater when used in smoke control applications (1 per bag)	N/A
AS-MOVKIT-0	Transient protection kit for spade quick-connect terminations (12 MOVs per kit); equivalent to newer SMOKE-MOVKIT-0	N/A

Table 4: UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering and Revision Information: Legacy N2 Bus Controllers

Code Number	Description	Software Tool
Johnson Controls Enclosures		
EN-EWC10-0	Universal Packaging Module without power components, single unit, exterior dimensions 9 x 16 x 7.5 in. (23 x 41 x 19 cm)	N/A
EN-EWC12-0	Universal Packaging Module with power entry box, single unit, exterior dimensions 9 x 16 x 7.5 in. (23 x 41 x 19 cm)	N/A
EN-EWC13-0	Universal Packaging Module with brackets and 50 VA power, single unit, exterior dimensions 9 x 16 x 7.5 in. (23 x 41 x 19 cm)	N/A
EN-EWC15-0	Universal Packaging Module with power entry box and 50 VA power, single unit, exterior dimensions 9 x 16 x 7.5 in. (23 x 41 x 19 cm)	N/A
EN-EWC20-0	Universal Packaging Module without power components, dual unit, exterior dimensions 16 x 16 x 7.5 in. (41 x 41 x 19 cm)	N/A
EN-EWC25-0	Universal Packaging Module with power entry box and 50 VA power, dual unit, exterior dimensions 16 x 16 x 7.5 in. (41 x 41 x 19 cm)	N/A
EN-EWC26-0	Universal Packaging Module with 2 brackets and 50 VA power, single unit, exterior dimensions 16 x 16 x 7.5 in. (41 x 41 x 19 cm)	N/A
EN-EWC30-0	Universal Packaging Module without power components, triple unit, exterior dimensions 23 x 16 x 7.5 in. (59 x 41 x 19 cm)	N/A
EN-EWC35-0	Universal Packaging Module with power entry box and 50 VA power, triple unit, exterior dimensions 23 x 16 x 7.5 in. (59 x 41 x 19 cm)	N/A
EN-EWC40-0	Universal Packaging Module without power components, quad unit, exterior dimensions 30 x 16 x 7.5 in. (77 x 41 x 19 cm)	N/A
EN-EWC45-0	Universal Packaging Module with power entry box and 50 VA power, quad unit, exterior dimensions 30 x 16 x 7.5 in. (77 x 41 x 19 cm)	N/A
EN-EXP101-0	Expansion cover and backbone kit; endcaps not included	N/A
AS-ENC100-0	Enclosure for AS-XFR100-1 transformer	N/A
FA-AHU103-300	AHU103 controller in UPM.	HVAC PRO
FA-UNT141-1	6 analog inputs, 4 binary inputs, 2 analog outputs, 6 binary outputs (electrically isolated), triac-high or low side selectable, termination blocks, and N2 isolation, Facilitator product line	HVAC PRO
FA-VAV140-1	6 analog inputs, 4 binary inputs, 8 binary outputs, N2 isolation, and triac-high or low side selectable, termination blocks, Facilitator product line	HVAC PRO
FA-VAV141-1	6 analog inputs, 4 binary inputs, 2 analog outputs, 6 binary outputs, N2 isolation, and triac-high or low side selectable, termination blocks, Facilitator product line	HVAC PRO
Johnson Controls Accessories		
AP-TMZ1600-01	Room sensor with LCD, compatible with VAVs, UNTs, and VMAs.	N/A
AS-XFR100-1	100 VA transformer, 120 VAC	N/A
AS-RLY002-0	Relay kit with enclosure, 2 relays	N/A
AS-RLY050-0	Relay kit with enclosure, 2 relays	N/A
AS-RLY100-1	Relay kit with enclosure, 4 relays	N/A
AS-RLY100-1G	AS-RLY100-1 Relay kit, Buy American	N/A
AS-FHI100-0	Fume hood interface controller, 6 analog inputs, 4 binary inputs, 2 analog outputs, 6 binary outputs	N/A
M8100xxxx	M8100 Poteau panels	N/A

Related Parts and Accessories

Table 5: UL/cUL 864 Smoke Control Accessories

Code Number	Description
NU-RPT101-1U	Acromag® MS/TP and N2 Bus Repeater, 120 VAC
NU-RPT24-0U	Acromag MS/TP and N2 Bus Repeater, 24 VAC
MS-BACEOL-0	BACnet End-of-Line Terminator Module that provides EOL termination on MS/TP and N2 Bus segments when the terminating field device does not have integral EOL termination capability.
SMK-TRNKIT-1U	Acromag MS/TP Repeater Kit - transorb transient suppressor for smoke control applications (1 per bag)
SMK-MOVKIT-MSTP	MOV transient protection for MS/TP Bus and SA Bus communication (1 per bag)
SMOKE-MOVKIT-0U	MOV transient protection for MS/TP I/O communication (1 per bag)

Table 5: UL/cUL 864 Smoke Control Accessories

Code Number	Description
SMK-UPLABL-1U	Software revision labels - Ten (10) labels for NAE controllers, 30 labels for MS/TP field controllers, and 30 labels for N2 Bus field controllers per bag (70 labels total). Labels are used to upgrade to UL/cUL 864 UUKL 10th Edition <i>Metasys</i> Release 8.1 listing.
SMK-MOVKIT-BRD	One MOV board with MS/TP protection, one MOV board without MS/TP protection, replacement for standard or custom UL 864 panels Note: The SMK-MOVKIT-BRD kits cannot be used with VAV box controller enclosures.

Table 6: Non-UL/cUL 864 MS/TP Accessories

Part Number	Description
NS-APA7001	SA Bus network sensor - SA Bus network sensor - 80x80 mm, surface mount, LCD, 2% RH, setpoint adjustment, override, modular jack
NS-APA7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, 2% RH, setpoint adjustment, override, screw terminal
NS-APB7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, 2% RH, setpoint adjustment, override, F/C toggle, modular jack
NS-APB7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, 2% RH, setpoint adjustment, override, F/C toggle, screw terminal
NS-BPB7001	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, 2% RH, setpoint adjustment, override, F/C toggle, modular jack
NS-BPB7002	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, 2% RH, setpoint adjustment, override, F/C toggle, screw terminal
NS-AHA7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, 3% RH, setpoint adjustment, override, modular jack
NS-AHA7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, 3% RH, setpoint adjustment, override, screw terminal
NS-AHB7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, 3% RH, setpoint adjustment, override, F/C toggle, modular jack
NS-AHB7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, 3% RH, setpoint adjustment, override, F/C toggle, screw terminal
NS-BHB7001	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, 3% RH, setpoint adjustment, override, F/C toggle, modular jack
NS-BHB7002	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, 3% RH, setpoint adjustment, override, F/C toggle, screw terminal
NS-ATA7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, override, modular jack
NS-ATA7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, override, screw terminal
NS-ATB7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, F/C toggle, override, modular jack
NS-ATB7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, F/C toggle, override, screw terminal
NS-ATC7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, fan control, override, modular jack
NS-ATC7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, fan control, override, screw terminal
NS-ATD7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, F/C toggle, fan control, override, modular jack
NS-ATD7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, F/C toggle, fan control, override, screw terminal
NS-ATN7001	SA Bus network sensor - 80x80 mm, surface mount, modular jack
NS-ATN7003	SA Bus network sensor - 80x80 mm, surface mount, screw terminal, address switches
NS-ATP7001	SA Bus network sensor - 80x80 mm, surface mount, warmer/cooler dial adjustment, override, modular jack
NS-ATP7002	SA Bus network sensor - 80x80 mm, surface mount, warmer/cooler dial adjustment, override, screw terminal
NS-ATV7001	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, F/C toggle, override, modular jack, VAV balancing feature Note: Fan control button is replaced by a light bulb button used in the balancing process.
NS-ATV7002	SA Bus network sensor - 80x80 mm, surface mount, LCD, setpoint adjustment, F/C toggle, override, screw terminal, VAV balancing feature Note: Fan control button is replaced by a light bulb button used in the balancing process.
NS-BTB7001	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, setpoint adjustment, override, F/C toggle, fan control, modular jack
NS-BTB7002	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, setpoint adjustment, F/C toggle, fan control, override, screw terminal
NS-BTN7001	SA Bus network sensor - 120x80 mm, wall or surface mount, modular jack
NS-BTN7003	SA Bus network sensor - 120x80 mm, wall or surface mount, screw terminal, address switches

Table 6: Non-UL/cUL 864 MS/TP Accessories

Part Number	Description
NS-BTP7001	SA Bus network sensor - 120x80 mm, wall or surface mount, warmer/ cooler dial adjustment, override, modular jack
NS-BTP7002	SA Bus network sensor - 120x80 mm, wall or surface mount, warmer/ cooler dial adjustment, override, screw terminal
NS-BTV7001	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, setpoint adjustment, F/C toggle, override, modular jack, VAV balancing feature Note: Fan control button is replaced by a light bulb button used in the balancing process.
NS-BTV7002	SA Bus network sensor - 120x80 mm, wall or surface mount, LCD, setpoint adjustment, F/C toggle, override, screw terminal, VAV balancing feature Note: Fan control button is replaced by a light bulb button used in the balancing process.

Table 7: Non-UL/cUL 864 TEC3300s

Part Number	Description
TEC3310-00-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating
TEC3311-00-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, Occ Sensor
TEC3312-00-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, RH Sensor
TEC3313-00-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, Occ & RH Sensor
TEC3320-00-000	TSTAT, Standalone, FCU/VAV, 0-10 VDC Prop
TEC3321-00-000	TSTAT, Standalone, FCU/VAV, 0-10 VDC Prop, Occ Sensor
TEC3322-00-000	TSTAT, Standalone, FCU/VAV, 0-10 VDC Prop, RH Sensor
TEC3323-00-000	TSTAT, Standalone, FCU/VAV, 0-10 VDC Prop, Occ & RH Sensor
TEC3330-00-000	TSTAT, Standalone, RTU/Heat Pump with Econ
TEC3331-00-000	TSTAT, Standalone, RTU/Heat Pump with Econ, Occ Sensor
TEC3310-01-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, w/o JCI Logo
TEC3311-01-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, Occ Sensor, w/o JCI Logo
TEC3312-01-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, RH Sensor, w/o JCI Logo
TEC3313-01-000	TSTAT, Standalone, FCU/VAV, On/Off or Floating, Occ & RH Sensor, w/o JCI Logo
TEC3320-01-000	TSTAT, Standalone, FCU/VAV, 0-10 VDC Prop, w/o JCI Logo
TEC3321-01-000	TSTAT, Standalone, FCU/VAV, 0-10 VDC Prop, Occ Sensor, w/o JCI Logo
TEC3610-00-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating
TEC3611-00-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, Occ Sensor
TEC3612-00-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, RH Sensor
TEC3613-00-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, Occ & RH Sensor
TEC3620-00-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop
TEC3621-00-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, Occ Sensor
TEC3622-00-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, RH Sensor
TEC3623-00-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, Occ & RH Sensor
TEC3630-00-000	TSTAT, MSTP or N2, RTU/Heat Pump with Econ
TEC3631-00-000	TSTAT, MSTP or N2, RTU/Heat Pump with Econ, Occ Sensor
TEC3610-01-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, w/o JCI Logo
TEC3611-01-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, Occ Sensor, w/o JCI Logo
TEC3612-01-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, RH Sensor, w/o JCI Logo
TEC3613-01-000	TSTAT, MSTP or N2, FCU/VAV, On/Off or Floating, Occ & RH Sensor, w/o JCI Logo
TEC3620-01-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, w/o JCI Logo
TEC3621-01-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, Occ Sensor, w/o JCI Logo
TEC3622-01-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, RH Sensor, w/o JCI Logo
TEC3623-01-000	TSTAT, MSTP or N2, FCU/VAV, 0-10 VDC Prop, Occ & RH Sensor, w/o JCI Logo
TEC3630-01-000	TSTAT, MSTP or N2, RTU/Heat Pump with Econ, w/o JCI Logo
TEC3631-01-000	TSTAT, MSTP or N2, RTU/Heat Pump with Econ, Occ Sensor, w/o JCI Logo

Table 8: UL/cUL 864 Ethernet Switches and Media Converters

Model Number	Description
EISK5-100T	Contemporary Controls CTRLINK EISK5-100T Industrial Ethernet Switch, 5-port copper switch 10/100 Base-T RJ45 Ethernet Ports
EIS8-100T	Contemporary Controls CTRLINK EIS8-100T Industrial Ethernet Switch, 8 each 10/100 Base-T RJ45 Ethernet Ports
EIS6-100T/FT	Contemporary Controls CTRLINK EIS6-100T/FT Industrial Ethernet Switch, 4 each 10/100 Base-T RJ45 Ethernet Ports, 100Base-FX Fiber ports
2960-24TC-S	Cisco Catalyst 2960-24TC-S 24-Port 10/100/1000 Ethernet Switch. Note: The Cisco Catalyst 24-Port Copper Switch is no longer available for ordering. The UL listing for the Cisco switch available at Release 5.2 is maintained, and the Cisco switch may be used in the <i>Metasys</i> UL 864 Tenth Edition listing if you have purchased it through Johnson Controls for a UL 864 Ninth Edition UUKL Release 5.2 job site.
IE-4000-16T4G-E	Cisco 4000-16T4G-E (E232864) Industrial Ethernet (IE) Switch, 10/100/1000 Base-T RJ45, 16 Ethernet ports Note: This switch must be factory mounted in a NEMA Type 1 enclosure with a listed power supply.
IE-4010-4S24P	Cisco 4010-4S24P (E232864) IE Switch, 10/100/1000 Base-T RJ45, 24 Ethernet ports Note: This switch must be factory mounted in a NEMA Type 1 enclosure with a listed power supply.
PWR-IE170W-PC-AC	Power supply for Cisco 4000-16T4G-E (E232864) Ethernet Switch
EIMK-100T/FT	Contemporary Controls Media Converter EIMK-100T/FT (Ethernet to Fiber) Note: To order a replacement device, use the Johnson Controls iPROC.
NU-RJ45SW1-0U	Asante® NU-RJ45SW1-0U 24-Port Ethernet Copper Switch Note: The Asante NU-RJ45SW1-0U Copper Switch is no longer available for ordering. The UL listing for the Asante switch available at Release 4.1 is maintained, and the Asante switch may be used in the <i>Metasys</i> UL 864 Tenth Edition listing if you have purchased it through Johnson Controls for a UL 864 Ninth Edition UUKL Release 4.1 job site.
FS105	Netgear® FS105 5-Port Ethernet Copper Switch Note: The Netgear FS105 Copper Switch is no longer available for ordering. The UL listing for the Netgear switch available at Release 4.1 is maintained, and the Netgear switch may be used in the <i>Metasys</i> UL 864 Tenth Edition listing if you have purchased it through Johnson Controls for a UL 864 Ninth Edition UUKL Release 4.1 job site.

Table 9: Third-Party Equipment

Part Number	Description
ISOBAR8Ultra	CDW - 025070 - Tripp Lite ISOBAR8Ultra Surge Suppressor http://www.cdw.com
ISOBAR12Ultra	CDW - 154600 - Tripp Lite ISOBAR12Ultra Rackmount Surge Suppressor http://www.cdw.com
ISOBAR EURO-4	CDW - 191962 - Tripp Lite ISOBAR EURO-4 Surge Suppressor http://www.cdw.com
PNET1GB	American Power Conversion (APC) - PNET1GB Ethernet Surge Suppressor http://www.apc.com
ADI FSCS Panel	ADI MSTP FSCS: http://www.adipanel.com Note: Custom product from Automation Displays, Inc. (ADI)

Repair Parts

Table 10: Repair Parts

Code Number	Description
MS-NAE5510-702U	Replacement MS-NAE5510-2U with two N2 Bus or two BACnet MS/TP (RS-485) trunks (or one of each). UL 864 10th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications.
MS-NAE5510-703U	Replacement MS-NAE5510-3U with two N2 Bus or two BACnet MS/TP (RS-485) trunks (or one of each). UL 864 10th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications.

Technical Specifications

Refer to the *Metasys System UL 864 10th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System Technical Bulletin (LIT-12012487)* for the technical specifications of all UL 864 listed smoke control products.



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