

# Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System

## Description

The Metasys® System brings cost-effective code compliance to your facilities by integrating the fire alarm and HVAC systems and providing an Underwriters Laboratories Inc.® (UL) 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System. The Metasys System monitors the building's fire alarm panel, such as the IFC2-3030, IFC2-640, IFC-320, or other approved third-party 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. Any combination of these field devices can be used for the HVAC equipment used in the smoke sequences.

The Metasys System Release 5.2 UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System meets the United States standard as well as the Canadian standard for smoke control.

The UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Listing (UL/ULC Listing) applies to an indoor, dry environment only, where each air handling unit (AHU) is located in an indoor, enclosed space.

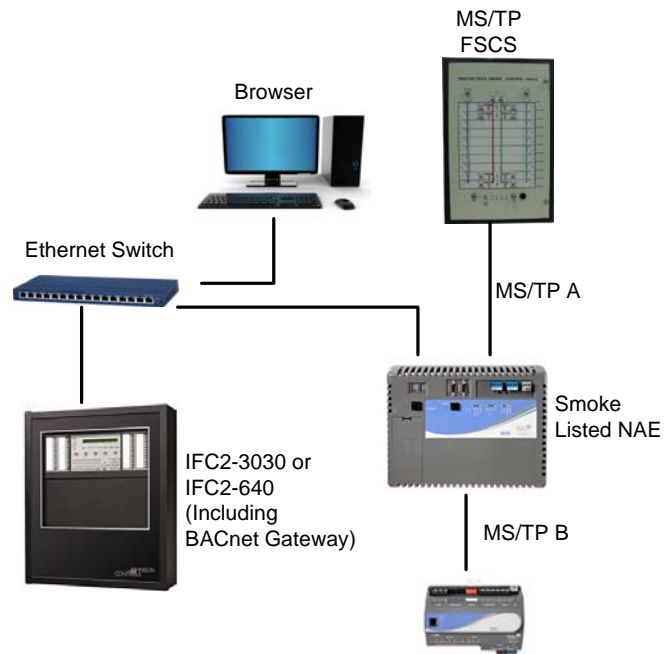
For more information on the UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System, refer to the *Metasys System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System Technical Bulletin (LIT-12011252)*.

## Features

- Select BACnet MS/TP Metasys engines and field controllers comply with UL/ULC certification and testing
- Monitors the Intelligent Fire Controller (IFC) and other third-party fire alarm systems
- Flexible network configuration with smoke control and non-smoke control engines
- Optional coexistence of Eighth Edition and Ninth Edition UL 864 systems

## Applications

- Provides tested UL 864 Multi-Story Building, Warehouse, and Single-Story Shopping Mall applications
- Provides tested logic for weekly testing of stairwell pressurization
- Provides easy-to-order factory UL 864 standard enclosures for numerous controller and network device configurations
- Provides easy-to-order factory UL 864 custom enclosures with UL/ULC approved controllers and devices
- Provides software revision labels to mark controllers that have been upgraded to the latest release



UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Example

## Repair Information

To maintain the installed UL 864 9th Edition UUKL/ORD-C100-13 UUKLC jobs, Johnson Controls offers the MS-NAE5510-1U and the MS-NAE5510-2U as orderable repaired supervisory controllers. See [Repair Parts](#) for ordering information.

All of the supervisory and field controllers may be able to be sent in for repair for Metasys Release 5.2 UL 864 9th 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 and Requirements

**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 table have been tested and listed by UL for use in a Metasys System UL 864 9th 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 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System Technical Bulletin (LIT-12011252)* for technical specifications of all certified smoke control products.



## Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System (Continued)

### UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering / Revision Information (Part 1 of 3)

Part Number	Description	Revision
<b>Johnson Controls Supervisory Equipment</b>		
MS-NAE5510-1U	NAE55 with MS/TP; supports two BACnet MS/TP (RS-485 port) trunks. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications	SCT 5.2.11.0200 <sup>1</sup>
MS-NAE5510-2U	NAE55 with MS/TP; supports two BACnet MS/TP (RS-485 port) trunks. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications	SCT 5.2.11.0200 <sup>1</sup>
MS-NAE4510-2U	NAE45 with MS/TP; supports one BACnet MS/TP (RS-485 port) trunk. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications	SCT 5.2.11.0200 <sup>1</sup>
MS-NAE3510-2U	NAE35 with MS/TP; supports one BACnet MS/TP (RS-485 port) trunk. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications	SCT 5.2.11.0200 <sup>1</sup>
MS-NCE2560-0U	NCE25 with MS/TP; supports one BACnet MS/TP (RS-485 port) trunk. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications	SCT 5.2.11.0200 <sup>1</sup>
<b>Johnson Controls Field Equipment Controllers</b>		
MS-FEU1610-0U	10-Point Field Equipment Controller with 2 UI, 1 BI, 3 BO, and 4 CO, 24 VAC, and SA Bus, with Mounting Base	CCT 4.1 <sup>1, 2</sup>
MS-FEC1611-1U	10-Point Field Equipment Controller with 2 UI, 1 BI, 3 BO, and 4 CO; 24 VAC, SA Bus, Mounting Base	CCT 5.1.8.0100 <sup>1</sup>
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	CCT 5.1.8.0100 <sup>1</sup>
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	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM1710-0U	4-Point IOM with 4 BI, FC Bus and SA Bus Support	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM1711-0U	4-Point IOM with 4 BI, FC Bus and SA Bus Support	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM2710-0U	6-Point IOM with 2 UI, 2 UO, 2 BO, FC Bus and SA Bus Support	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM2711-0U	6-Point IOM with 2 UI, 2 UO, 2 BO, FC Bus and SA Bus Support	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM3710-0U	12-Point IOM with 4 UI, 4 UO, 4 BO, FC Bus and SA Bus Support	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM3711-0U	12-Point IOM with 4 UI, 4 UO, 4 BO, FC Bus and SA Bus Support	CCT 5.1.8.0100 <sup>1</sup>
MS-IOU4710-0U	17-Point IOM with 6 UI, 2 BI, 3 BO, 2 AO, 4 CO, 24 VAC, FC Bus and SA Bus with Mounting Base	CCT 5.1.8.0100 <sup>1</sup>
MS-IOM4711-0U	17-Point IOM with 6 UI, 2 BI, 3 BO, 2 AO, 4 CO, 24 VAC, FC Bus and SA Bus with Mounting Base	CCT 5.1.8.0100 <sup>1</sup>
MS-VMA1610-0U	Integrated VAV Controller/Actuator/Pressure Sensor (Cooling Only), FC Bus and SA Bus	CCT 5.1.8.0100 <sup>1</sup>
MS-VMA1620-0U	Integrated VAV Controller/Actuator/Pressure Sensor (with Reheat and Fan Control), FC Bus and SA Bus	CCT 5.1.8.0100 <sup>1</sup>
MS-VMA1610-1U	Integrated VAV Controller/Actuator/Pressure Sensor (Cooling Only), FC Bus and SA Bus, 3.3 volt model	CCT 5.1.8.0100 <sup>1</sup>
MS-VMA1620-1U	Integrated VAV Controller/Actuator/Pressure Sensor (with Reheat and Fan Control), FC Bus and SA Bus, 3.3 volt model	CCT 5.1.8.0100 <sup>1</sup>
<b>UL/ULC Listed MS/TP Accessories</b>		
NU-RPT101-1U	Acromag® MSTP Repeater	N/A
SMOKE-TRNKIT-1U	Acromag® MSTP Repeater Kit - tranzorb transient suppressor for smoke control applications (1 per bag)	N/A
SMK-MOVKIT-MSTP	MOV transient protection for MS/TP communication (1 per bag)	N/A
SMOKE-MOVKIT-0U	MOV transient protection for MS/TP I/O communication (10 per bag)	N/A

## Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System (Continued)

### UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering / Revision Information (Part 2 of 3)

Part Number	Description	Revision
SMK-UPLABL-0U	Software revision labels (40 per bag) - Version 5.2 labels (10) for NxE controllers and Version 5.1 labels (30) for FEC, IOM, and VMA controllers	N/A
<b>Non UL/ULC Listed MS/TP Accessories<sup>3</sup></b>		
<b>Third-Party Communication Equipment</b>		
EISK5-100T	Contemporary Controls® CTRLink™ EISK5-100T Industrial Ethernet Switch, 5-port copper switch 10/100 Base-T RJ45 Ethernet Ports	N/A
EIS8-100T	Contemporary Controls CTRLink EIS8-100T Industrial Ethernet Switch, 8 each 10/100 Base-T RJ45 Ethernet Ports	N/A
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	N/A
2960-24TC-S <sup>4, 5</sup>	Cisco® Catalyst 24-Port 10/100/1000 Ethernet Switch	N/A
EIMK-100T/FT <sup>4</sup>	Contemporary Controls Media Converter (Ethernet to Fiber)	N/A
<b>Johnson Controls Enclosures / Transformers</b>		
<b>Standard Hoffman® Enclosures<sup>6</sup></b>		
PAN-ENH1620WDP	6.62 x 16 x 20 in. Enclosure with door, latch, subpanel	N/A
PAN-ENH1620WD	6.62 x 16 x 20 in. Enclosure with door, latch	N/A
PAN-ENH2024WDP	6.62 x 20 x 24 in. Enclosure with door, latch, subpanel	N/A
PAN-ENH2024WD	6.62 x 20 x 24 in. Enclosure with door, latch	N/A
PAN-ENH2424WDP	6.62 x 24 x 24 in. Enclosure with door, subpanel	N/A
PAN-ENH2424WD	6.62 x 24 x 24 in. Enclosure with door	N/A
PAN-ENH2436WDP	6.62 x 24 x 36 in. Enclosure with door, subpanel	N/A
PAN-ENH2436WD	6.62 x 24 x 36 in. Enclosure with door	N/A
<b>Custom Hoffman Enclosures<sup>6</sup> with Lift-Off Doors, Louvers, and Locks</b>		
PAN-ENC1620WDP	6.62 x 16 x 20 in. Enclosure with door, lock, subpanel	N/A
PAN-ENC1620WD	6.62 x 16 x 20 in. Enclosure with door, lock	N/A
PAN-ENC2024WDP	9.25 x 20 x 24 in. Enclosure with door, lock, subpanel	N/A
PAN-ENC2024WD	9.25 x 20 x 24 in. Enclosure with door, lock	N/A
PAN-ENC2424WDP	9.25 x 24 x 24 in. Enclosure with door, lock, subpanel	N/A
PAN-ENC2424WDF	9.25 x 24 x 24 in. Enclosure with cut-out door, lock	N/A
PAN-ENC2424WD	9.25 x 24 x 24 in. Enclosure with door, lock	N/A
PAN-ENC2436WDP	9.25 x 24 x 36 in. Enclosure with door, lock, subpanel	N/A
PAN-ENC2436WDF	9.25 x 24 x 36 in. Enclosure with cut-out door, lock	N/A
PAN-ENC2436WD	9.25 x 24 x 36 in. Enclosure with door, lock	N/A
PAN-ENC3042WDP	9.25 x 30 x 42 in. Enclosure with door, lock, subpanel	N/A
PAN-ENC3042WD	9.25 x 30 x 42 in. Enclosure with door, lock	N/A
PAN-ENC3648WDP	9.25 x 36 x 48 in. Enclosure with door, lock, subpanel	N/A
PAN-ENC3648WD	9.25 x 36 x 48 in. Enclosure with door, lock	N/A
PAN-PWRSP-U	96 VA 120/24 VAC Power Assembly (Transformer, Receptacle, 5 A Overcurrent Circuit Breaker)	N/A
PAN-96VAXFR-U	Transformer, Power, Panel Mount, 120 V Primary, 24 V Secondary, 96 VA, Split Bobbin, 4 A Secondary Circuit Breaker,	N/A
PA0P00010FC0-U	Power Distribution Panel and Enclosure - Contains four PAN-96VAXFR-U transformers, 120V, 10 A Primary Circuit Breaker. For powering multiple VAV/VMA's	N/A
00-00051-01	ETI VAV Electronic Enclosure - 16 in. Enclosure, Electronic Control, 18 GA	N/A
00-00052-01	ETI VAV Electronic Enclosure - 16 in. Cover, Electronic Control, 18 GA	N/A
A20N16BLP	CTRLink Ethernet Switch Enclosure - 20 x 16 x 8.62 in. Medium Type 1 Enclosure	N/A
A20N16MPP	CTRLink Ethernet Switch Backplate - NEMA 1, Perforated 17.00 x 14.50 in. Subpanel, fits 20 x16 in. Enclosure	N/A
<b>Third-Party Equipment</b>		
ISOBAR8Ultra	CDW - 025070 - Tripp Lite® ISOBAR8Ultra Surge Suppressor <a href="http://www.cdw.com">http://www.cdw.com</a>	N/A
ISOBAR12Ultra	CDW - 154600 - Tripp Lite ISOBAR12Ultra Rackmount Surge Suppressor <a href="http://www.cdw.com">http://www.cdw.com</a>	N/A

## Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System (Continued)

### UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control Part Ordering / Revision Information (Part 3 of 3)

Part Number	Description	Revision
PNET1GB	American Power Conversion (APC®) - PNET1GB Ethernet Surge Suppressor <a href="http://www.apc.com">http://www.apc.com</a>	N/A
<a href="http://www.adipanel.com">www.adipanel.com</a>	ADI MSTP FSCS <a href="http://www.adipanel.com">http://www.adipanel.com</a> Note: Custom product from Automation Displays, Inc. (ADI®)	N/A

1. This is the revision approved by UL/ULC for smoke control. To see if approved patches are available, contact your local Johnson Controls office or visit the Field Support Center (FSC) Product Quick Patch page at [http://publish.johnsoncontrols.com/content/controls/us/eng/fsc/ht/Metasys\\_Quick\\_Patches.html](http://publish.johnsoncontrols.com/content/controls/us/eng/fsc/ht/Metasys_Quick_Patches.html)
2. This must be at Metasys Revision 4.1 when used in the ADI FSCS panel.
3. For NS Series Network Sensors ordering information, see *NS Series Network Sensors Selection Charts*.
4. To order a replacement device, use the Johnson Controls iPROC.
5. Cisco offers an optional additional 2-year extended service agreement for this switch.
6. All Hoffman custom enclosures have a factory-installed grounding strap, supplied by Hoffman, connecting the enclosure to the enclosure door.

### UL 864 Standard Panels Ordering Information

For more information on the Johnson Controls standard panel offering, refer to the *Metasys System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Standard Smoke Control Panels Catalog Page (LIT-1900778)*.

#### Johnson Controls Standard Panels for UL 864 Smoke Control

Product Code Number	Description	Revision
PAG100U11EC0 <sup>1</sup>	MS-NAE5510-2U with two BACnet MS/TP (RS-485 port) trunks 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 Communication (2)	N/A
PAGE00U11EC0	MS-NAE4510-2U with one BACnet MS/TP (RS-485 port) 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 Communication	N/A
PAGJ00U11EC0	MS-NAE3510-2U with one BACnet MS/TP (RS-485 port) 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 Communication	N/A
PARE00U11BC0	MS-NCE2560-0U with one BACnet MS/TP (RS485) trunk and 10 UI, 8 BI, 7 BO, 4 CO, 4 AO Hoffman enclosure (9.25 x 24 x 36 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 Communication (2) SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (66)	N/A
PAKGJ0U12BC0	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 Communication (3) SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (74)	N/A
PAKG00U11AC0	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 Communication (2) SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (37)	N/A
PAJJ00U11AC0	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 Communication SMOKE-MOVKIT-0U Transient Protection for MS/TP I/O Communication (37)	N/A
PA5100U01FC0	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)	N/A
PA5200U15CC0	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	N/A
PA5300U11FC0	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)	N/A

1. Contact your Johnson Controls representative regarding availability.



## Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System (Continued)

### Repair Parts

#### Repair Parts

Product Code Number	Description
MS-NAE5510-701U	Replacement MS-NAE5510-1U with MS/TP; supports two BACnet MS/TP (RS-485 port) trunks. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications
MS-NAE5510-702U	Replacement MS-NAE5510-2U with MS/TP; supports two BACnet MS/TP (RS-485 port) trunks. UL 864 9th Edition UUKL/ORD-C100-13 UUKLC listed for smoke control applications

### NS Series Network Sensors Selection Charts

See the following tables for ordering NS Series Network Sensors (non-UL/ULC Listed accessory).

#### Network Zone Sensor Ordering Information — Temperature Only Models (Part 1 of 2)

Product Code Number	Size (mm), H x W	Vertical Wallbox-Mounted (WB) or Surface-Mounted (SM)	Johnson Controls Logo	LCD Display	Temperature Adjustment Setpoint (Set) or Warmer/Cooler Dial (W/C)	Occupancy Override	F/C Scale Toggle	Fan Control	Screw Terminals (ST) or Modular Jack (MJ)	Address Switches	VAV Balancing Feature
NS-ATA7001-0	80 x 80	SM	Yes	Yes	Set	Yes	No	No	MJ	No	No
NS-ATA7002-0	80 x 80	SM	Yes	Yes	Set	Yes	No	No	ST	No	No
NS-ATA7003-0	80 x 80	SM	Yes	Yes	Set	Yes	No	No	ST	Yes	No
NS-ATB7001-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	No	MJ	No	No
NS-ATB7002-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	No	ST	No	No
NS-ATB7003-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	No	ST	Yes	No
NS-ATC7001-0	80 x 80	SM	Yes	Yes	Set	Yes	No	Yes	MJ	No	No
NS-ATC7002-0	80 x 80	SM	Yes	Yes	Set	Yes	No	Yes	ST	No	No
NS-ATD7001-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	Yes	MJ	No	No
NS-ATD7002-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	Yes	ST	No	No
NS-ATF7001-0	80 x 80	SM	Yes	Yes	W/C	Yes	Yes	No	MJ	No	No
NS-ATF7002-0	80 x 80	SM	Yes	Yes	W/C	Yes	Yes	No	ST	No	No
NS-ATN7001-0	80 x 80	SM	Yes	No	N/A	No	No	No	MJ	No	No
NS-ATN7001-2	80 x 80	SM	No	No	N/A	No	No	No	MJ	No	No
NS-ATN7003-0	80 x 80	SM	Yes	No	N/A	No	No	No	ST	Yes	No
NS-ATN7003-2	80 x 80	SM	No	No	N/A	No	No	No	ST	Yes	No
NS-ATP7001-0	80 x 80	SM	Yes	No	W/C	Yes	No	No	MJ	No	No
NS-ATP7001-2	80 x 80	SM	No	No	W/C	Yes	No	No	MJ	No	No
NS-ATP7002-0	80 x 80	SM	Yes	No	W/C	Yes	No	No	ST	No	No
NS-ATP7003-0	80 x 80	SM	Yes	No	W/C	Yes	No	No	ST	Yes	No
NS-ATP7003-2	80 x 80	SM	No	No	W/C	Yes	No	No	ST	Yes	No
NS-ATV7001-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	No <sup>1</sup>	MJ	No	Yes
NS-ATV7002-0	80 x 80	SM	Yes	Yes	Set	Yes	Yes	No <sup>1</sup>	ST	No	Yes
NS-BTB7001-0	120 x 80	WB, SM	Yes	Yes	Set	Yes	Yes	No	MJ	No	No
NS-BTB7001-2	120 x 80	WB, SM	No	Yes	Set	Yes	Yes	No	MJ	No	No
NS-BTB7002-0	120 x 80	WB, SM	Yes	Yes	Set	Yes	Yes	No	ST	No	No
NS-BTB7003-0	120 x 80	WB, SM	Yes	Yes	Set	Yes	Yes	No	ST	Yes	No
NS-BTF7001-0	120 x 80	WB, SM	Yes	Yes	W/C	Yes	Yes	No	MJ	No	No
NS-BTF7002-0	120 x 80	WB, SM	Yes	Yes	W/C	Yes	Yes	No	ST	No	No
NS-BTN7001-0	120 x 80	WB, SM	Yes	No	N/A	No	No	No	MJ	No	No
NS-BTN7001-2	120 x 80	WB, SM	No	No	N/A	No	No	No	MJ	No	No
NS-BTN7003-0	120 x 80	WB, SM	Yes	No	N/A	No	No	No	ST	Yes	No
NS-BTP7001-0	120 x 80	WB, SM	Yes	No	W/C	Yes	No	No	MJ	No	No
NS-BTP7001-2	120 x 80	WB, SM	No	No	W/C	Yes	No	No	MJ	No	No
NS-BTP7002-0	120 x 80	WB, SM	Yes	No	W/C	Yes	No	No	ST	No	No
NS-BTP7002-2	120 x 80	WB, SM	No	No	W/C	Yes	No	No	ST	No	No
NS-BTP7003-0	120 x 80	WB, SM	Yes	No	W/C	Yes	No	No	ST	Yes	No

The performance specifications are nominal and conform to acceptable industry standards. For applications at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products. © 2014 Johnson Controls, Inc. [www.johnsoncontrols.com](http://www.johnsoncontrols.com)

## Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System (Continued)

### Network Zone Sensor Ordering Information — Temperature Only Models (Part 2 of 2)

Product Code Number	Size (mm), H x W	Vertical Wallbox-Mounted (WB) or Surface-Mounted (SM)	Johnson Controls Logo	LCD Display	Temperature Adjustment Setpoint (Set) or Warmer/Cooler Dial (W/C)	Occupancy Override	F/C Scale Toggle	Fan Control	Screw Terminals (ST) or Modular Jack (MJ)	Address Switches	VAV Balancing Feature
NS-BTV7001-0	120 x 80	WB, SM	Yes	Yes	Set	Yes	Yes	No <sup>1</sup>	MJ	No	Yes
NS-BTV7002-0	120 x 80	WB, SM	Yes	Yes	Set	Yes	Yes	No <sup>1</sup>	ST	No	Yes

1. In the VAV balancing models, the fan control button is replaced by a light bulb button used in the VAV balancing process.

### Network Zone Sensor Ordering Information — Temperature and Humidity Models without RH Display

Product Code Number	Size (mm), Height x Width	Vertical Wallbox-Mounted (WB) or Surface-Mounted (SM)	LCD Display, RH Display	Humidity Element Accuracy	Temperature Adjustment: Setpoint (Set) or Warmer/Cooler Dial (W/C)	Occupancy Override	F/C Scale Toggle	Screw Terminals (ST) or Modular Jack (MJ)	Address Switches
NS-AHA7001-0	80 x 80	SM	Yes, No	3%	Set	Yes	No	MJ	No
NS-AHA7002-0	80 x 80	SM	Yes, No	3%	Set	Yes	No	ST	No
NS-AHB7001-0	80 x 80	SM	Yes, No	3%	Set	Yes	Yes	MJ	No
NS-AHB7002-0	80 x 80	SM	Yes, No	3%	Set	Yes	Yes	ST	No
NS-AHB7003-0	80 x 80	SM	Yes, No	3%	Set	Yes	Yes	ST	Yes
NS-AHN7001-0	80 x 80	SM	None	3%	N/A	No	No	MJ	No
NS-AHN7001-2	80 x 80	SM	None	3%	N/A	No	No	MJ	No
NS-AHP7001-0	80 x 80	SM	None	3%	W/C	Yes	No	MJ	No
NS-APA7001-0	80 x 80	SM	Yes, No	2%	Set	Yes	No	MJ	No
NS-APA7002-0	80 x 80	SM	Yes, No	2%	Set	Yes	No	ST	No
NS-APB7001-0	80 x 80	SM	Yes, No	2%	Set	Yes	Yes	MJ	No
NS-APB7002-0	80 x 80	SM	Yes, No	2%	Set	Yes	Yes	ST	No
NS-APB7003-0	80 x 80	SM	Yes, No	2%	Set	Yes	Yes	ST	Yes
NS-BHB7001-0	120 x 80	WB, SM	Yes, No	3%	Set	Yes	Yes	MJ	No
NS-BHB7002-0	120 x 80	WB, SM	Yes, No	3%	Set	Yes	Yes	ST	No
NS-BHB7003-0	120 x 80	WB, SM	Yes, No	3%	Set	Yes	Yes	ST	Yes
NS-BHN7001-0	120 x 80	WB, SM	None	3%	N/A	No	No	MJ	No
NS-BHP7001-0	120 x 80	WB, SM	None	3%	W/C	Yes	No	MJ	No
NS-BPB7001-0	120 x 80	WB, SM	Yes, No	2%	Set	Yes	Yes	MJ	No
NS-BPB7002-0	120 x 80	WB, SM	Yes, No	2%	Set	Yes	Yes	ST	No
NS-BPB7003-0	120 x 80	WB, SM	Yes, No	2%	Set	Yes	Yes	ST	Yes

### Network Zone Sensor Ordering Information — Temperature and Humidity Models with Temperature or RH Display (Field Selectable Default Display)

Product Code Number	Size (mm), Height x Width	Vertical Wallbox-Mounted (WB) or Surface-Mounted (SM)	LCD Display, RH Display	Humidity Element Accuracy	Temperature Adjustment: Setpoint (Set) or Warmer/Cooler Dial (W/C)	Occupancy Override	F/C Scale Toggle	Screw Terminals (ST) or Modular Jack (MJ)	Address Switches
NS-AHR7101-0	80 x 80	SM	Yes, Yes	3%	Set	Yes	Yes	MJ	No
NS-AHR7102-0	80 x 80	SM	Yes, Yes	3%	Set	Yes	Yes	ST	No
NS-AHR7103-0	80 x 80	SM	Yes, Yes	3%	Set	Yes	Yes	ST	Yes
NS-APR7101-0	80 x 80	SM	Yes, Yes	2%	Set	Yes	Yes	MJ	No
NS-APR7102-0	80 x 80	SM	Yes, Yes	2%	Set	Yes	Yes	ST	No
NS-BHR7101-0	120 x 80	WB, SM	Yes, Yes	3%	Set	Yes	Yes	MJ	No
NS-BHR7103-0	120 x 80	WB, SM	Yes, Yes	3%	Set	Yes	Yes	ST	Yes



## Metasys® System UL 864 9th Edition UUKL/ORD-C100-13 UUKLC Smoke Control System (Continued)

### Network Zone Sensor Ordering Information — CO<sub>2</sub> Models

Product Code Number	Size (mm) Height x Width	Vertical Wallbox-Mounted (WB), or Surface-Mounted (SM)	LCD Display	CO <sub>2</sub> Measurement Range	Johnson Controls Logo	Screw Terminals (ST), or Modular Jack (MJ)	Sensor Addressing
NS-BCN7004-0	120 x 80	WB, SM	No	0 to 2,000 ppm	Yes	ST, MJ	DIP Switch (212 to 219)
NS-BCN7004-2	120 x 80	WB, SM	No	0 to 2,000 ppm	No	ST, MJ	DIP Switch (212 to 219)

### Network Zone Sensor Ordering Information — Flush-Mount Temperature Only Model

Product Code Number	Faceplate Dimensions, Height x Width	Mounting	LCD Display	Temperature Measurement Range	Terminations	Sensor Addressing
NS-FTN7003-2	4-1/2 in. x 2-3/4 in. (114 mm x 70 mm)	Flush-Mount	No	32.0°F/0.0°C to 104.0°F/ 40.0°C	Screw Terminal Block	DIP Switch (200 to 203)

### Network Discharge Air Sensor Ordering Information

Product Code Number	Dimensions, Height x Width x Depth	Temperature Probe Length	305 cm (10 ft) Wiring Lead Included	Terminations	Sensor Addressing
NS-DTN7043-0	3 in. x 3 in. x 2 in. (76 mm x 76 mm x 51 mm)	4 in. (102 mm)	Yes	Screw Terminal Block	DIP Switch (204 to 211)
NS-DTN7083-0	3 in. x 3 in. x 2 in. (76 mm x 76 mm x 51 mm)	8 in. (203 mm)	Yes	Screw Terminal Block	DIP Switch (204 to 211)