



Digital Sensors and Interfaces

NetSensors (Sensors and Operator Interfaces)

NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers					
Model	Display Type & Protocol	Optional Sensors	Buttons/Dials/Switches	Comments and Features	
KMD-1101	LED (KMD only)	None	6 buttons visible, 3 under cover	Discontinued, for replacement information, see KMD-1101/1104/1121/1124/1154/1174 NetSensors Replacement Cross-Reference on page 11	
KMD-1121		Humidity			
KMD-1104		None	Rotary setpoint dial, EasyView		
KMD-1124		Humidity			
KMD-1151		None	6 buttons visible, 3 under cover		KMDigital only, replaceable button labels
KMD-1154			Rotary setpoint dial, EasyView		Discontinued, for replacement information, see KMD-1101/1104/1121/1124/1154/1174 NetSensors Replacement Cross-Reference on page 11
KMD-1171		Humidity	6 buttons visible, 3 under cover		KMDigital only, replaceable button labels
KMD-1174			Rotary setpoint dial, EasyView		Discontinued, for replacement information, see KMD-1101/1104/1121/1124/1154/1174 NetSensors Replacement Cross-Reference on page 11
KMD-1161	LCD (BACnet or KMD)	None	3 buttons visible, 6 under cover*	Round Setpoint button	
KMD-1162			2 push buttons, 2 slide switches*	Hospitality (Heat-Off-Cool & High-Med-Low), 2-character display	
KMD-1164				Round Setpoint button	
KMD-1181		Humidity	3 buttons visible, 6 under cover*	Round Setpoint button	
KMD-1183				Round Mode button, Alarm button displays "ON/OFF"*	
KMD-1184				Round Setpoint button	
KMD-1185				Round Mode button, Alarm button displays "ALM/OFF"*	
KMD-1261		Motion	2 buttons visible, 6 under cover, and motion sensor*	Round Setpoint button replaced by motion sensor; Up/Down arrows take over its function	
KMD-1281		Motion & Humidity			

*See illustrations and information on the next page.

NOTE: **KMD-115x/117x (KMDigital only)** NetSensors connect to KMD-58xx and KMD-70xx series controllers via cables with modular plugs.

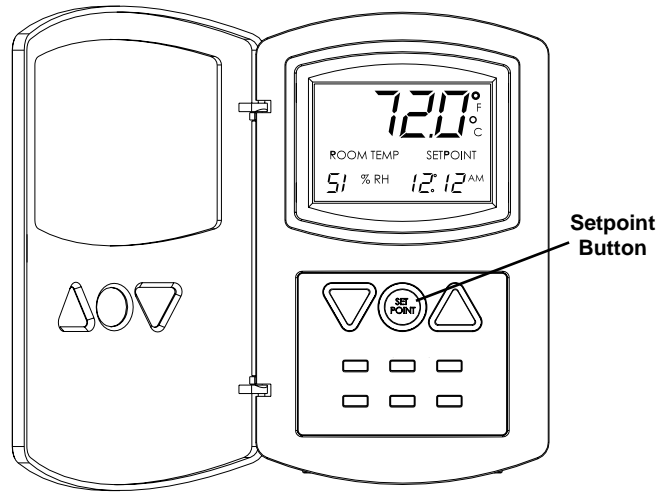
NOTE: **KMD-116x/118x/12x1** NetSensors connect to (BACnet or KMDigital) BAC/KMD-58xx and BAC/KMD-70xx series controllers via cables with modular plugs.

SEE ALSO: [NetSensor Selection Guide for Conquest BAC-59xx/9xxx Controllers on page 10](#) and [NetSensor Selection Guide for SimplyVAV BAC-8xxx Controllers on page 10](#).

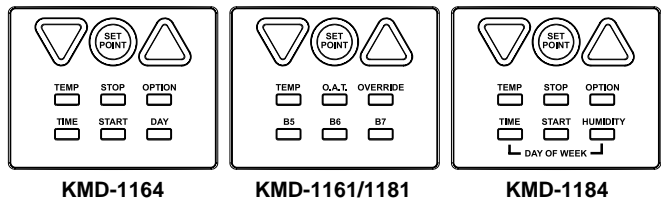
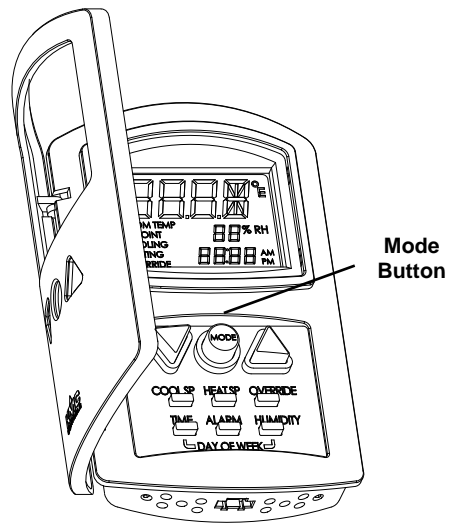


Digital Sensors and Interfaces

KMD-1161/1164/1181/1184



KMD-1183/1185



State	KMD-1183	KMD-1185
Alarm	Display shows room temperature. When Button 6 (ALARM) is pressed, "ON" is momentarily displayed.	Display shows flashing "ALM" (alternates with room temperature display). Pressing Button 6 suppresses "ALM" indication for 10 minutes, and if Button 6 is pressed again during the 10 minute suppression period, "ALM" shows momentarily. When "ALM" is flashing, if any button other than 6 is pressed, the display momentarily returns to the normal display corresponding to that button.
No Alarm	Display shows room temperature. When Button 6 is pressed, "OFF" is momentarily displayed.	

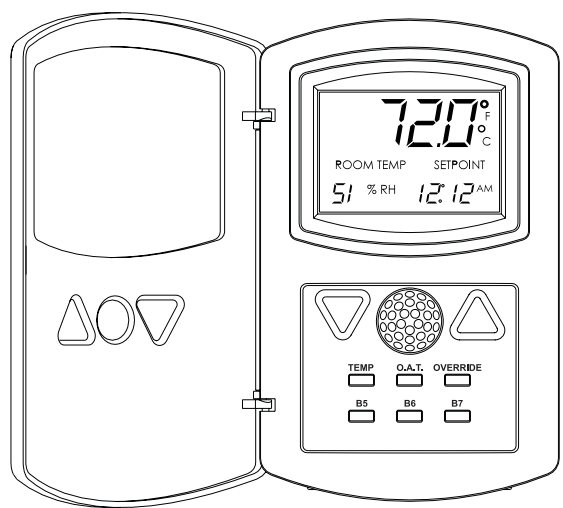
NOTE: The general-purpose KMD-1161/1164/1181/1184/1261/1281 NetSensors are most often used with controllers in **networked** VAV applications. The KMD-1183/1185 NetSensors are most often used with controllers in **stand-alone** (non-networked) systems.

NOTE: Humidity is shown only in KMD-1x8x models.

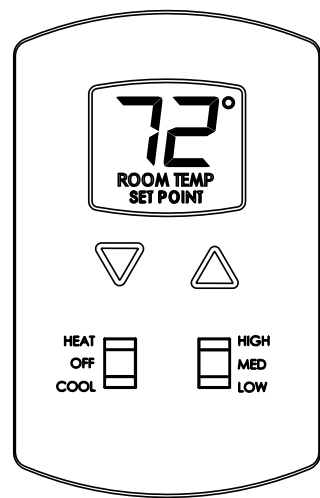
SEE: [KMD-1161/1164/1181/1184 NetSensors \(General, Networked\) on page 12.](#)

SEE: [KMD-1183/1185 NetSensors \(Stand-Alone or Small Network\) on page 13.](#)

KMD-1261/1281



KMD-1162



NOTE: Motion sensor replaces Setpoint/Mode button. Humidity is shown only in KMD-1281.

SEE: [KMD-1261/1281 NetSensors \(Motion Sensing\) on page 13.](#)

NOTE: FCU hospitality applications with slide switches rather than push buttons under cover. No swing-open cover.

SEE: [KMD-1162 Hospitality NetSensor \(FCU\) on page 12.](#)



NetSensor Selection Guide for Conquest BAC-59xx/9xxx Controllers				
Model*	Temperature Sensor	Humidity Sensor	Motion Sensor	CO ₂ Sensor
STE-9001W	✓			
STE-9021W	✓		✓	
STE-9201W	✓		✓	
STE-9221W	✓	✓	✓	
STE-9301W	✓			✓
STE-9321W	✓	✓		✓
STE-9501W	✓		✓	✓
STE-9521W	✓	✓	✓	✓

*A W at the end of the model number indicates a white case. To order the sensor with light almond color instead of white, drop the W on the end of the model number (e.g., STE-9001W is white and STE-9001 is light almond).



NetSensor Selection Guide for SimplyVAV BAC-8xxx Controllers		
Model*	Temperature Sensor	Motion Sensor
STE-8001W80	✓	
STE-8201W80	✓	✓

*Available in white only.



SEE ALSO: AppStat, FlexStat, and Simply VAV in the [SP-092 BACnet Catalog Supplement](#).



KMD-1101/1104/1121/1124/1154/1174 NetSensors Replacement Cross-Reference

Discontinued Model	Replacement Model
KMD-1101*	KMD-1151
KMD-1121*	KMD-1171
KMD-1104*	KMD-1151/1161/1164**
KMD-1124*	KMD-1171/1181/1184**
KMD-1154	KMD-1151/1161/1164**
KMD-1174	KMD-1171/1181/1184**

*NOTE: KMD-1101/1104/1121/1124 NetSensors are compatible only with the discontinued KMD-6000 controllers. For new installations, see the corresponding upgraded model shown in the chart at the right. If the NetSensor in an existing installation must be replaced with a newer model, the KMD-6000 controller must also be replaced.

**NOTE: KMD-1104/1124/1154/1174 NetSensors with rotary dials do not have direct replacements. Current NetSensors have a button interface, and the controller will require some reprogramming.

SEE ALSO: The [NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers on page 8](#).

SEE ALSO: The KMD-6xxx Controller Replacement Cross-Reference section in the [KMDigital Catalog Supplement \(SP-093\)](#).

KMD-1151/1171 (KMDigital Only) NetSensors (LED)



These NetSensors are wall-mounted, temperature-sensing, programmable, operator interfaces for use in a KMC KMDigital direct digital controls system. The simplicity of this design combined with its programmable functions allows for a wide variation of key assignments. They provide the following user features:

- Bright, four-character LED display with programmable on/off times for easy viewing.
- The NetSensor includes nine buttons, seven of which are user programmable, in a simple and functional design. Auxiliary wire leads provide connection for an additional digital input.
- Four-pin EIA-485 (formerly RS-485) data port on the side for easy temporary computer connection to the controller.

Main Features

- Large, 4-character, 7-segment, red LED
- Nine buttons total (seven of which are user programmable), three behind flip-open cover
- Powered by connected controller
- Compatible with KMD-5800 and KMD-7000 series controllers
- Light almond plastic
- Temperature only or temperature and humidity sensing
- Four-pin EIA-485 data port for easy temporary computer connection to the controller

NOTE: KMD-1151/1171s connect to KMD-5800 and KMD-7000 series controllers. They are **not** compatible with discontinued KMD-6000 series controllers as well as any KMC BACnet controllers.

Models

KMD-1151	Temperature Only
KMD-1171	Temperature and Humidity

SEE ALSO: [KMD-1151](#) and [KMD-1171](#) series web pages for details.

SEE ALSO: [NetSensor Accessories on page 23](#) and [NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers on page 8](#).



KMD-1161/1164/1181/1184 NetSensors (General, Networked)



These NetSensors are wall-mounted, temperature-sensing, programmable operator interfaces for use in a KMC direct digital controls system. The NetSensor allows easy, direct communication with the connected controller via a local access port.

The NetSensor includes nine function keys, seven of which are programmable. The simple and functional design combined with its programmable functions allows for a wide variety of key assignments.

SEE ALSO: [KMD-1161/1164](#) and [KMD-1181/1184](#) series web pages for details.

Main Features

- Large, four-character LCD display for easy temperature viewing, plus smaller characters for time and (if applicable) relative humidity
- Setpoint and up/down arrow buttons accessible through cover; six additional function buttons behind the flip-open cover
- Seven buttons may be programmed with the controller to display or control the state of any point in the attached controller
- Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller

Models

Temperature Only	
KMD-1161	Almond
KMD-1161W	White
KMD-1164	Almond
KMD-1164W	White
Temperature and Humidity	
KMD-1181	Almond
KMD-1181W	White
KMD-1184	Almond
KMD-1184W	White

SEE ALSO: [NetSensor Accessories on page 23](#) and [NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers on page 8.](#)

KMD-1162 Hospitality NetSensor (FCU)



This is a wall-mounted, temperature-sensing, programmable operator interface for use with a fan coil unit controlled by a KMC direct digital controls system. It includes intuitive-to-use setpoint buttons, and two **slide switches for heating/cooling change over and fan speed**. (Humidity is not sensed or displayed, and it does not have a hinged cover.) Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller.

SEE ALSO: [KMD-1162](#) series web pages for details.

Main Features

- Large, two-character LCD display for easy temperature viewing with automatic backlight
- Two up/down setpoint arrow buttons
- Two slide switches for heating/cooling change over and fan speed
- Designed primarily for fan coil units in hotel rooms or similar applications
- Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller

Models

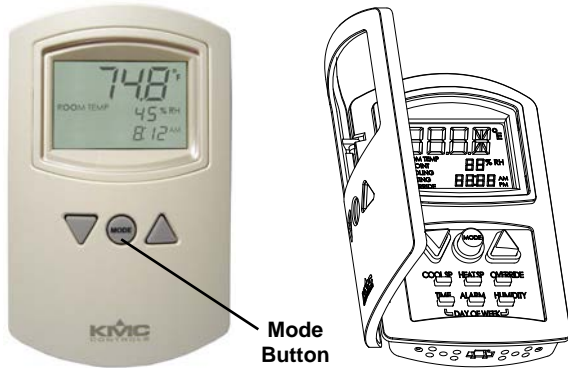
KMD-1162	Almond
KMD-1162W	White

SEE ALSO: [NetSensor Accessories on page 23](#) and [NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers on page 8.](#)



KMD-1183/1185

NetSensors (Stand-Alone or Small Network)



This is a temperature/humidity-sensing, wall-mounted, programmable operator interface for use in a KMC direct digital controls system. Compared to the KMD-1161/1164/1181/1184, the KMD-1183/1185 has many similar features except that it has different display configuration and button functions/labels:

- The center **Mode** button allows easy cycling between display/set options for room temperature, cooling setpoint, heating setpoint, and override.
- Flipping open the cover allows access to six function buttons: **Cooling Setpoint, Heating Setpoint, Override, Time***, **Alarm***, **Humidity***, and (two buttons pressed together) **Day of Week***. (*Three buttons and a fourth combination of buttons may be reassigned and programmed with the controller to display or control the state of any point in the attached controller.)

SEE ALSO: [KMD-1183/1185](#) series web pages for details.

Main Features

- Large, four-character LCD display for easy temperature viewing, plus smaller characters for time and (if applicable) relative humidity
- Mode and up/down arrow buttons accessible through cover; six additional function buttons behind the flip-open cover
- Seven buttons may be programmed with the controller to display or control the state of any point in the attached controller
- Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller

Models and Alarm Handling

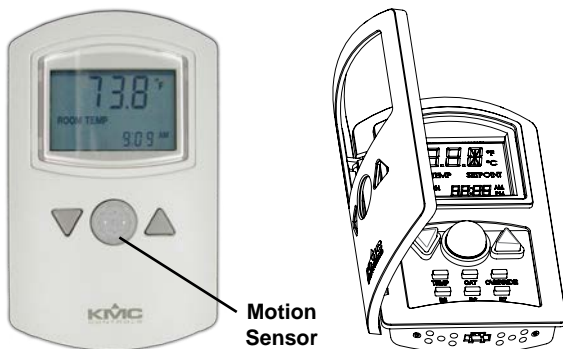
The only difference between the KMD-1183 and the KMD-1185 is how each NetSensor handles an alarm state signalled by the connected controller. The difference is described in the chart below.

State	KMD-1183	KMD-1185
Alarm	Display shows room temperature. When Button 6 (ALARM) is pressed, "ON" is momentarily displayed.	Display shows flashing "ALM" (alternates with room temperature display). Pressing Button 6 suppresses "ALM" indication for 10 minutes, and if Button 6 is pressed again during the 10 minute suppression period, "ALM" shows momentarily. When "ALM" is flashing, if any button other than 6 is pressed, the display momentarily returns to the normal display corresponding to that button.
No Alarm	Display shows room temperature. When Button 6 is pressed, "OFF" is momentarily displayed.	

SEE ALSO: [NetSensor Accessories on page 23](#) and [NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers on page 8](#).

KMD-1261/1281

NetSensors (Motion Sensing)



These models are wall-mounted, temperature and motion sensing, programmable operator interfaces for use in a KMC direct digital controls system. Compared to the KMD-1161/1164/1181/1184 models, the KMD-1261/1281 models have many similar features except a motion sensor is included (in the place of the center button). The motion sensor can detect room occupancy with a range of up to 33 feet. Model KMD-1281 also includes humidity sensing.

The simple and functional design combined with programmable buttons make these models an ideal choice for installations that require temperature, humidity, motion sensing, and an operator interface in one unit.

Main Features

- Large, easy to read, backlit LCD display for easy temperature viewing, plus smaller characters for time and relative humidity
- Detect room occupancy up to 33 feet with built-in motion sensor
- Convenient setpoint buttons accessible without opening the hinged cover; six additional buttons are located behind the cover
- Flexible applications with six buttons that may be programmed to display or control the state of any point in the attached controller
- Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller

Models

KMD-1261	Temperature only, light almond
KMD-12611W	Temperature only, white
KMD-1281	Temperature and humidity, light almond
KMD-1281W	Temperature and humidity, white

SEE ALSO: [KMD-1261/1281](#) series web pages for details.

SEE ALSO: [NetSensor Accessories on page 23](#) and [NetSensor Selection Guide for BAC-58xx/7xxx and KMD-58xx/7xxx Controllers on page 8](#).



STE-8001/8201 NetSensors (SimplyVAV)



These digital sensors are wall-mounted, temperature (and optional motion) sensors and integrated operator interface for use with BAC-8000 series SimplyVAV series controllers. They can be used as a service tool to set up SimplyVAV controllers—and then for normal operation optionally replaced with STE-6010/6014/6017 analog sensors. A motion sensor to detect space occupancy and control temperature setback is optional.

Main Features

- Plug-and-play functionality with SimplyVAV series controllers
- Large, easy to read, backlit LCD display for easy temperature viewing, plus smaller characters for other information
- Continuously displays temperature and time
- Simple three-button interface
- Optionally detects room occupancy and controls temperature setback with built-in motion sensor (with up to 33 feet range)
- Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller

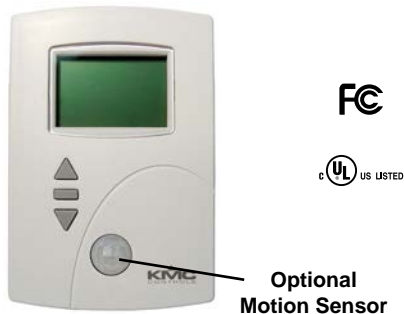
Models

STE-8001W80	Temperature only, white
STE-8201W80	Temperature and motion, white

SEE ALSO: [STE-8000](#) series web pages for details.

SEE ALSO: [NetSensor Accessories on page 23](#).

STE-9000 Series NetSensors (Conquest)



These wall-mounted digital space temperature sensors are designed for use with KMC Conquest™ BAC-5900/9000/9300 series controllers. Up to four sensors in a single package minimizes labor, wiring, and wall space, while optional humidity, motion, and CO₂ sensors allow expanded energy-efficient control of humidity, temperature setback, lighting, and ventilation.

A user-friendly three-button integrated operator interface provides occupant viewing and adjusting, and the LCD display is user-configurable to show parameters such as temperature, setpoint, system status, and time

It allows up to two separate passwords for adjusting setpoints and configuring/commissioning/balancing. It connects to a controller via a modular jack connection using standard Ethernet patch cables. It installs permanently as a room sensor or temporarily as a service tool; as a service tool, it commissions controllers without software, configures communication and application settings, and balances VAV air flow.

An HPO-9001 NetSensor distribution module allows up to eight STE-9000 series NetSensors to be linked to one controller or allows one STE-6010/6014/6017 analog temperature sensor to be connected with up to seven NetSensors

Main Features

- Temperature sensing to BAC-5900/9000/9300 series controllers for such applications as RTUs, HPUs, FCUs, AHUs, VAV terminal units, and unit ventilators.
- Optional humidity sensing is for dehumidification and/or humidification sequences.
- Optional motion sensing enhances occupancy-based control for lighting control, temperature setback, or self-learning schedules.
- Optional CO₂ sensing enables demand-control ventilation (DCV) for optimizing ventilation and energy efficiency.
- Large, easy to read, backlit LCD display for easy temperature viewing, plus smaller characters for other information
- Continuously displays temperature and time
- Simple three-button interface
- Optionally detects room occupancy and controls temperature setback with built-in motion sensor (with up to 33 feet range)
- Four-pin EIA-485 (formerly RS-485) data port on the underside for easy temporary computer connection to the controller

Models

STE-9001W	Temperature control only
STE-9021W	Humidity control for dehumidification/humidification
STE-9201W	Enhanced occupancy-based control (lighting/setback/self-learning)
STE-9221W	Humidity and occupancy control
STE-9301W	DCV (Demand-Control Ventilation)
STE-9321W	Humidity and ventilation control
STE-9501W	Occupancy and ventilation control
STE-9521W	Humidity, occupancy, and ventilation control

SEE ALSO: [STE-9000](#) series web pages for details.

SEE ALSO: [NetSensor Accessories on page 23](#).