K·SystemUL
Addressable Fire Detection

KSU-MULTI-7

Intelligent Multicriteria Smoke/Heat Detector 7th Edition

Features

- UL268 7th edition & UL521 7th edition listed
- FM (Factory Mutual) approved
- Multi-spectrum smoke categorization technology
- Fixed Temperature and Rate of Rise heat detection
- 11 configurable operating modes
- Designed to resist unwanted alarms from nuisance alarm sources
- 360º visibility status LED
- Automatic compensation for detector contamination
- Hochiki DCP communication protocol
- Vandal resistant security locking feature

FM APPROVED

UL CERTIFIED SIGNALING US S36973

Description

KSU-MULTI-7 is a Hochiki protocol multi-criteria detector containing both smoke and heat elements. The detector is listed to both UL268 7th edition and UL521 7th edition.

KSU-Multi-7 is compatible with Kentec's UL listed Taktis and Elite RS fire alarm control panels.

KSU-MULTI-7 features a new chamber design that enhances the smoke entry for early fire smoke detection, as well as a unique baffle design which allows smoke to enter the chamber while preventing external light from affecting the internal photodiode.

The smoke detection element of the KS-MULTI-7 utilizes the newly developed "Multi-spectrum smoke categorization technology" designed for early detection of smoke while reducing unwanted alarms from cooking or other unwanted nuisance sources. The detector uses light scatter of IR (Infra-Red) and blue LED light to determine the level of smoke density within the detection chamber.

The Heat detection element uses a newly designed precise thermistor circuit with one externally mounted thermistor providing both Fixed Temperature and Rate of Rise detection characteristics.

The heat detection element uses a newly designed precise thermistor circuit with one externally mounted thermistor providing both Fixed Temperature and Rate of Rise detection characteristics.

KS-MULTI-7 provides 11 modes of operation which allow the detector to be configured for optimum performance within the chosen environment, including features such as RFA (Reduced False Alarm). The operating modes can be configured on the Taktis UL and Elite RS fire alarm control panels using the LE2 configuration software – see table below).

Smoke and heat sensor sensitivity can be configured as required through the LE2 programming software, with different sensitivity levels configurable for day and night mode operation.

KSU-MULTI-7 occupies a single Signaling Line Circuit (SLC) address which is configured by using the TCH-B200 programmer.

The detector is compatible with the Analog Sensor Bases KSU-BASE-47 and KSU-BASE-67, Short Circuit Isolator (SCI) bases KSU-BASE-47-SCI and KSU-BASE-67-SCI as well as base sounder KSU-BSND7.

KS-MULTI-7 Operating modes	
+S	Operates as a standard smoke detector.
+S +RFA	Operates as a smoke detector with reduced false alarm function.
+S/H	Operates as a heat enhanced smoke detector i.e. As the heat sensor temperature rises the sensitivity of the smoke detector increases.
+S/H +RFA	Operates as a heat enhanced smoke detector with reduced false alarm function.
+FT	Operates as a Fixed Temperature heat detector.
+ROR	Operates as A Rate of Rise heat detector.
+FT +ROR	Operates as both a Fixed Temperature and Rate of Rise detector. The detector will alarm when either criteria is met.
+S/H, +S, +FT, +ROR	Provides individual operation of the smoke and heat elements – Smoke, Heat enhanced smoke, Fixed Temperature heat and Rate of Rise heat. The detector will activate an alarm when any of those criteria are met.
+S/H, +S, +FT, +ROR, +RFA	As above with the addition of the Reduced False Alarm function.
+S+FT+ROR	Provides individual operation of the smoke and heat elements - Smoke, Fixed Temperature heat and Rate of Rise heat. The detector will activate an alarm when any of those criteria are met.
+S+FT+ROR+RFA	As above with the addition of Reduced False Alarm function.

K·SystemUL
Addressable Fire Detection

Specification	
Ordering code & Description	KSU-MULTI-7 Multi-criteria Smoke and Heat Detector 7th Edition
Operating voltage	24 ~ 41 VDC
Standby current	340µA
Alarm Current	Status LED off – 340µA Status LED on – 8.5mA
Remote Indicator output current	8.0mA max
Smoke density range	1.40-3.30%/ft at 0-300 FPM open area
Heat Fixed Temperature range	135°F – 150°F
Heat Rate of Rise	20°F per minute
Operating Temperature Range	32°F (0°C) – 117°F (47°C)
UL Listed Ambient Temperature	32°F (0°C) – 1170F (47°C)
Storage Temperature Range	-22°F (-30°C) – 140°F (60°C) or less at 80% RH (104°F (40°C or less at 95% RH)
Maximum Operating Humidity	80% RH at 140°F (60°C), 95% RH at 104°F (40°C)
Color	Ivory
Dimensions	Ø 3.94" x H 2.15" (Ø 100mm x H 54.6mm)
Weight	3.4 oz. (96g)
Compatible Bases	KSU-BASE-47, KSU-BASE-67, KSU-BASE-47-SCI, KSU-BASE-67-SCI, KSU-BSND7

KSU-MULTI-7 panel configuration settings*

The following table details the configuration options available on the Kentec Taktis UL and Elite RS control panels:

Configuration Options	Taktis UL	Elite RS
Configurable location text	√	√
Map to zone	√	√
Input Actions	Fire , Supervisory	Fire, Supervisory
Input Action Message	√	√
Input Delay	X	X
Output Delay Bypass	√	√
Latching/Non-Latching**	X	X
Day/Night Sensitivity Settings	√	√
Pre-Alarm Indication	√	√
Polling LED	√	√

* KSU-MULTI-7 will be identified on the Taktis UL, Elite RS control panels and the LE2 configuration software as its Hochiki equivalent part number ACE-V.
** Latching/Non-latching configuration is only available when input action is supervisory.

Kentec Electronics Ltd. reserves the right to alter the specification of its products from time to time without notice. Although every effort has been made to ensure the accuracy of the information contained in this document it is not warranted or represented by Kentec Electronics Ltd. to be a complete and up-to-date description.