

Technical Bulletin

K3000 Detector Compatibility

TB 1013

The Kentec K3000 series panels have been tested for compatibility with a number of different manufactured detection devices. This document gives details of compatibility with the most commonly used devices and is not intended to be exhaustive.

For devices not listed, its compatibility can be approximated using the weighting method described below. However, full testing will be required, to ensure that there are no adverse affects due to detection device capacitance or cumulative effects due to many devices connected in parallel.

Weighting Factor

To calculate the maximum number of mixed devices that may be connected to the K3000 detection zone, a weighting system is employed.

Each device is given a "Weight" which is derived from the K3000 maximum zone current of 1.6mA. using the equation;

$$\text{Weight (W)} = \frac{1000 Q}{0.0016}$$

Where Q is the quiescent current for the detection device in Amps.

The weight W may also be calculated as: $W = q / 1.6$
Where q = quiescent current expressed in microamps (μA).

Example: *A detection device with a quiescent current of 35 μA has a Weighting factor of 21.875*

$$W = \frac{1000 \times 35 \times 10^{-6}}{1.6 \times 10^{-3}} = 21.875$$

Using Weighting Factors to check for compatibility

The weighting factors are added for all devices connected to a detection circuit. The sum of the weighting factors must be less than 1000 for permitted quantities.

Example:	10 x Ionisation Smoke Detectors (W = 30)	300
	5 x Photoelectric Smoke Detectors (W = 50)	250
	Total	550

In this case the maximum "Weight" is less than 1000 so the quantities are allowed.

Manufacturer	Model	Type	Number Per Zone	Weighting Factor	Comments
Apollo	Series 60	Ionisation	35	28	For use with Sav-Wire base – add 9.87 to detector weighting factor.
Apollo	Series 60	Photoelectric	35	28	
Apollo	Series 60	Heat	31	32	
BRK	1800EC	Ionisation	16	63	
BRK	2800EC	Photoelectric	12	78	
BRK	4850EC	Heat	16	63	
BRK	5850EC	Heat	16	63	
Cerberus	R7161	Photoelectric	13	77	All units tested with ZZ90 base
Cerberus	D900	Heat	12	83	
Cerberus	F7161	Ionisation	114	9	
Cerberus	DT1101	Heat	31	32	
Cerberus	DO1101	Photoelectric	18	55	
Gent	7430	Ionisation	32	31	
Gent	7440	Photoelectric	17	57	
Gent	7450	Heat	35	28	
Gent	7460	Heat	35	28	
Gent	7470	Heat	17	57	
Hochiki	SLK-E	Photoelectric	45	22	
Hochiki	SLK-ED	Photoelectric	45	22	
Hochiki	SIH-E	Ionisation	64	16	
Hochiki	DFE	Heat	No Limit	0	
Hochiki	HF-24	Flame	8	125	
Hochiki	SPB-E	Beam	33	30	
Hochiki	SLR-E-IS	Photoelectric IS	20 max	27	
Nittan	ST-I	Ionisation	40	25	
Nittan	ST-P	Photoelectric	47	21.5	<< Should be used with STP - 4SD base. Reset button needs to be held for 3-4 seconds for device to reset. Not suitable for Sigma panel.
Nittan	2KH	Photoelectric	66	15	
Nittan	2IC	Ionisation	66	15	
Nittan	NHD-G	Heat	66	15	
Nittan	NID-58	Ionisation	66	15	
Nittan	2KC/2KD	Photoelectric	66	15	
Nittan	2SA-LS	Heat	No Limit	0	
Nittan	TCA-70-L5	Heat	No Limit	0	
Nittan	NFD-18-2	Flame	3	312	
Nittan	NFD-18-5	Flame	3	312	
Nittan	NID48F	Ionisation	66	15	
Nittan	NS-12-L	Heat	No Limit	0	
Nittan	NC-9C-70T	Heat	No Limit	0	
Merlin Gerin	92811	Ionisation	38	27	The 92816 base is fitted with a BAT47 diode which causes a 0.44 volt drop on head removal.
Merlin Gerin	92812	Photoelectric	18	56	
Merlin Gerin	92813	Heat	42	24	
Merlin Gerin	92814	Heat	42	24	
Rafiki	Multipoint	Photo/Heat	26	39	Not suitable for LCMU use – high device capacitance
System Sensor	1151E	Ionisation	53	19	
System Sensor	2151E	Photoelectric	16	63	
System Sensor	1451E	Ionisation	13	75	
System Sensor	2451E	Photoelectric	13	75	
System Sensor	4451E	Heat	16	63	
System Sensor	5451E	Heat	16	63	
Tann	5401	Photoelectric	16	63	
Tann	5402	Ionisation	40	25	
Tann	5403	Heat	40	25	
Tann	5404	Heat	40	25	
Zeta	ZT600	Ionisation	30	33	All devices tested using a ZT110 passive base
Zeta	ZT602	Heat	12	83	
Zeta	ZT603	Heat	20	50	