

# 연기감지기 모듈(아나로그 출력형)

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MODEL : DC-SD-003



## 상 세 설 명

- 검지원리 : 이온화식(IONIZATION SMOKE CHAMBER)
- 검지범위 : 0.3 ~ 5 % / foot (저방사능)
- 응답속도 : 3초이내
- 동작전원: 9V BATTERY/아답터
- 경보방식:75dB 부저음
- 센서출력 : 아나로그 출력(0~5.5V)
- 시스템초기화시간 : 10초이내
- 사용온도 : -20℃~50℃
- 사용습도 : 0~95%R.H(NON-CONDENSING)
- 외부재질 : MONITORING UNIT-METAL, SENSOR UNIT-ALUMINUM  
미세한 연기까지 측정하여 농도값을 정확하게 전달한다.
- 사용처 : 화학단지, 2차 총방전지, 학교, 금연구역, 화재지역.휴대용 연기 감지기,  
화재경보기, 공기정화기범용형 ,빌딩내화장실등
- 영문 제품명 : Ionization Smoke Chamber
- 제조 회사 : Nemoto & Co., Ltd. (일본)
- \* foot는 감광율을 나타내는 단위
- 전용 IC가 판매되고 있을 정도로 미국을 비롯한 선진 외국에서 폭넓게 사용되고 있는  
감도가 우수한 화재 담배 연기 감지용 센서입니다. 이 연기센서에는 별도로 개발된  
전용 IC가 있어서 이 IC를 사용하면 간단하게 회로를 구성할 수 있습니다.  
센서와 함께 이 전용 IC도 공급하고 있습니다.

대 신 전 자

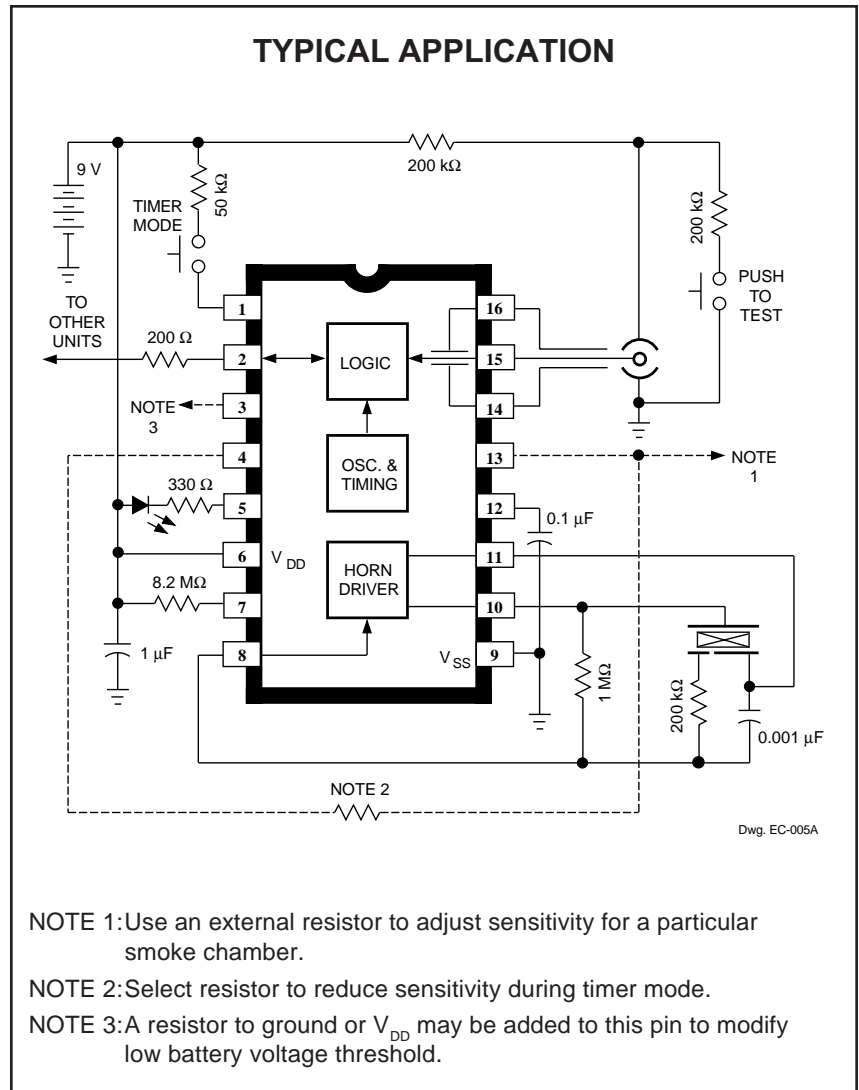
# 5348 SMOKE DETECTOR with INTERCONNECT and TIMER

**Sensitivity Adjust.** The detector sensitivity to smoke is set internally by a voltage divider connected between  $V_{DD}$  and  $V_{SS}$ . The sensitivity can be externally adjusted to the individual characteristics of the ionization chamber by connecting a resistor between pin 13 and  $V_{DD}$ , or between pin 13 and  $V_{SS}$ .

**Low Battery.** The low battery threshold is set internally by a voltage divider connected between  $V_{DD}$  and  $V_{SS}$ . The threshold can be increased by connecting a resistor between pin 3 and  $V_{DD}$ . The threshold can be decreased by connecting a resistor between pin 3 and  $V_{SS}$ . The battery voltage level is checked every 40 seconds during the 10 mA, 10 ms LED pulse. If an LED is not used, it should be replaced with an equivalent resistor (typically 500  $\Omega$  to 1000  $\Omega$ ) such that the battery loading remains at 10 mA.

**Timer.** An internal timer is provided that can be used in various configurations to allow for a period of reduced smoke detector sensitivity ("hush"). When a high-to-low transition occurs at pin 1, the internal timer is reset, the timer mode enabled, and the circuit reset to a no alarm condition. The LED will flash at a 10 second rate. If the level of smoke is increased such that the reduced sensitivity level is reached, the device will go into the alarm condition. The timer, however, will continue to completion of the nominal 10-1/4 minute period (368 clock cycles). If the timer mode is not used, pin 1 should be tied low.

**I/O.** A connection is provided at pin 2 to allow multiple smoke detectors to be commoned. If any single unit detects smoke (I/O is driven high), all connected units will sound their associated horns after a nominal 3 second delay. The LED is suppressed when an alarm is signaled from an interconnected unit.

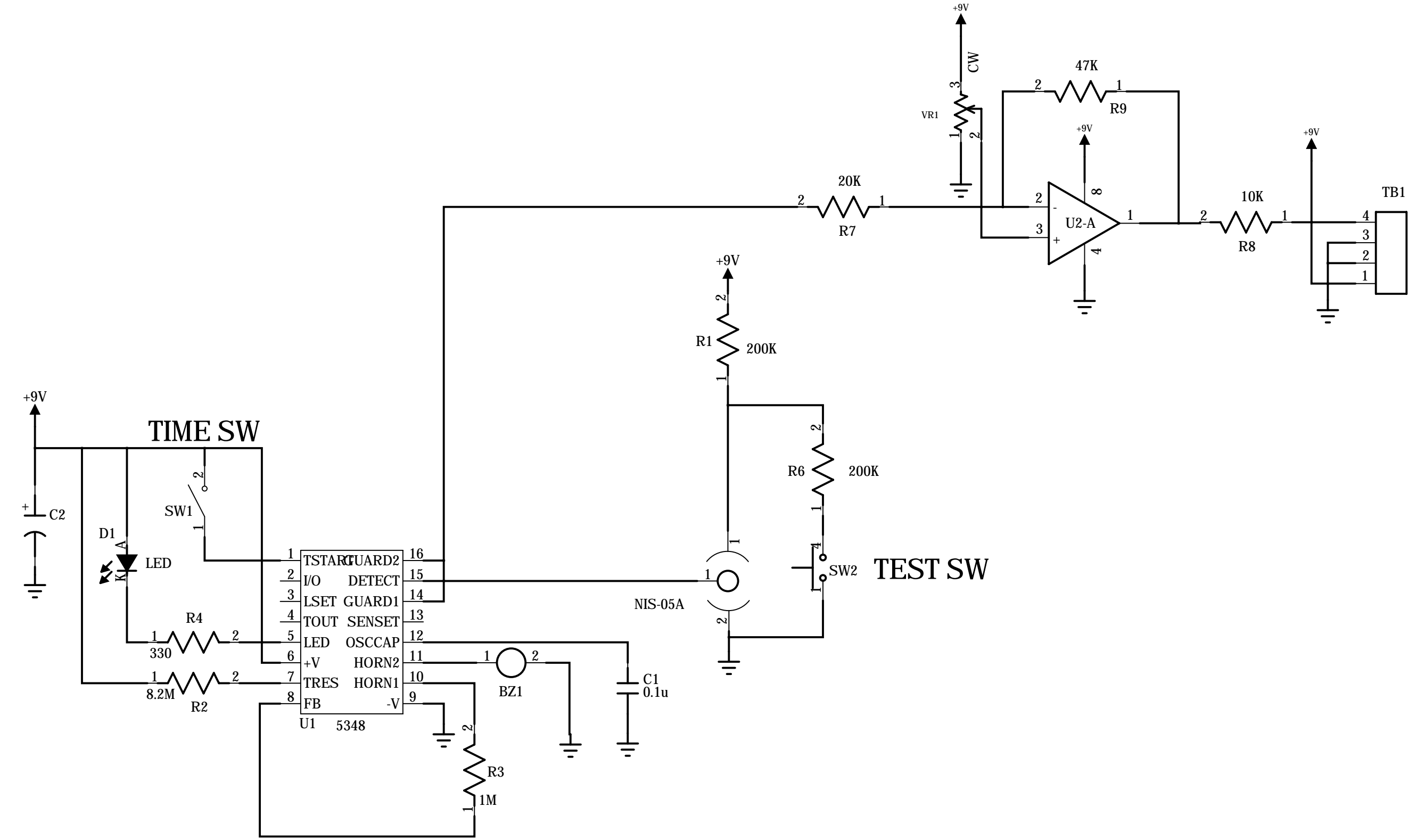


**Testing.** On power up, all internal counters are reset. Internal test circuitry allows for low battery check by holding pins 8 and 12 low during power up, then reducing  $V_{DD}$  and monitoring HORN<sub>1</sub> (pin 10). All functional tests can be accelerated by driving pin 12 with a 2 kHz square wave. The 10 ms strobe period must be maintained for proper operation of the comparator circuitry.

REVISION RECORD			
LTR	ECO NO.	APPROVED	DATE

# SMOKE DETECTOR DS-SD-003

No.	Reference	Name-Value	QTY.
1	U1	A5348CAT	1
2	BZ1	SF1205A	1
3	C1	CAP 104	1
4	C2	1uF/50V	1
5	LED1	RED LED	1
6	S1	NIS-05A	1
7	R3	R 1M	1
8	R1 R6	R 200K	2
9	R4	R 330	1
10	R2	R 8.2M	1
11	SW1	ON/OFF	1
12	SW2	TS-1180	1
13	R7	R 20K	1
14	R8	R 10K	1
15	R9	R 47K	1
16	VR1	VRES 103	1
17	TB1	CON 4 PIN	1
18	U2	LM358	1



COMPANY: DAESHIN ELECTRONICS CO., LTD.			
TITLE: DS-SD-003			
CODE:	SIZE:	DRAWING NO:	REV:
SCALE:			SHEET: 1 OF 1

DRAWN: HARRY PHAM	DATED:
CHECKED:	DATED:
QUALITY CONTROL:	DATED:
RELEASED:	DATED: