



# C100STE SERIES

## NAPCO's Adaptive<sup>®</sup> Dual Microwave/PIR Detectors automatically adjust to their environment, minute by minute, for the **ultimate false alarm immunity & reliability**

Upon installation, a NAPCO Adaptive Microwave/PIR Detector powers up, initialized in the first of its 12 sensitivity modes, i.e., the most sensitive, enabling it to sample prevailing environmental conditions. Faced with hostility or tranquility, the Adaptive detector automatically selects the most appropriate detection mode accordingly, optimizing both intruder catch and stability. Each time the sensors detect a stimulus strong enough to generate a signal, but insufficient in strength to indicate an alarm, the detector will automatically change sensitivity modes, effectively widening the gap between the detected signal and its alarm threshold. Therefore, environmental disturbances, those that register by the PIR and/or microwave sensor, are better tolerated and the threat of false alarms or nuisance alarms is dramatically reduced, far surpassing the performance of conventional dual technology devices. And, because a dynamic Adaptive Detector literally adjusts to its surroundings minute-by-minute, once disturbances quiet, e.g., the space heater turns off again, the

air conditioner stops blowing the blinds, power stops browning-out, animals vacate — the intelligent detector again escalates its sensitivity, mode by mode — so the premises always enjoys the greatest level of fast intruder-catch detection and false alarm protection possible.

The Napco Adaptive Sensor is the most forgiving sensor available because it is so smart and makes the sensitivity and critical range adjustments an experienced alarm professional would, if one were standing by, 24-hours a day, seven days a week to make them. Any activity beyond the unit's protected area, detected by the microwave section is also automatically compensated for. The unit even actively tests both its channels (PIR and Microwave), regularly activating each, to make sure it is on-the-job, performing to specification. An absolute solution to false alarms, callbacks and service calls — NAPCO Adaptive Detectors pay for themselves in the time and money they save.



standard wide angle lens



Manufacturing great security products is all we do. **It's that simple.**<sup>™</sup>

Two decades of NAPCO sensor engineering expertise combines to provide its sensors with unsurpassed false alarm prevention and intruder catch detection.

## FEATURES

- **Broad range and wide angle coverage suitable for most residential & commercial installations worldwide:** C100ST Series (30 x 35') 9.1 x 10.6m C100STE (US model); C100STE52 (European model); C100STE11(UK model); C100STLR Series (50 x 40' model) 15.2 x 12.2m: C100STLRE (US model); C100STLRE52 (European model); C100STLRE15(UK model).
- **Patented Adaptive® technology continuously monitors and dynamically self-adjusts the sensor to its environment.** This ensures intruder "catch" sensitivity is optimized minute-by-minute, while "phantom" false alarm sources, such as pets/animals, fans, sunlight, HVAC, are simultaneously counteracted.
- **Smart microprocessor-based false alarm discrimination.** The on-board A to D conversion microprocessor (Analog-to-Digital) analyzes all incoming microwave and PIR detected signals against its built in library of waveform signatures of known false alarm sources, like heaters, fans, blowing drapes/blinds and animals. The product of decades of sensor engineering and expertise, this inherent signal processing intelligence, enables Adaptive® Detectors provides unsurpassed false alarm discrimination the reliability and accuracy will save both time and money.
- **12 automatically selected, dynamic Adaptive® detection modes for optimal "intruder catch" and stability.** (Modes 1-12: 1 most sensitive, 12 most stable).
- **Dual technology microwave and PIR signal verification.** The detector combines the strengths of both heat- and motion-sensitive detection technologies to dually verify alarm conditions for ideal false alarm discrimination.
- **Active, automatic self-testing of all key components and circuits.** The unit will internally generate both a PIR signal and a microwave signal, in intervals of 11- 16 hours, which will fully test both channels independently. Any failure or internal trouble will be reported to the system for quick remedy, avoiding any false sense of security or breach thereof.
- **Superior RFI-/EFI-/lightning shielded protection Key components and resilient SMD circuitry are electronically-shielded to 30V/m.** This protects the unit's proper performance from nuisance interference due to static discharge, power surges, electric spikes, etc.
- **Optimized field-of-view with custom-engineered aspheric optics.** Napco's fresnel lenses are carefully designed to provide the ideal wide angle lens array and are easily-aimable during installation. Additional field-changeable lenses available: Pet Alley, Barrier and Long Range.
- **Critical Range Control.** Although the unit will adapt to effectively ignore activity/interference beyond the protected area, the detector enables manual, customizable range with a calibrated adjustable potentiometer to fine-tune range during walk-test, if desired.
- **True Automatic Temperature Compensation.** The unit's circuitry automatically adjusts for seasonal and climate variances, providing accurate detection despite extremes of heat or cold\*.
- **Fast, flexible mounting.** The detector is conveniently installed on walls or in a corner and may be more precisely aimed horizontally or vertically, and offers an optional SVLBKT Swivel Bracket for 180° range of coverage. Large wiring channel, generous terminal strip and captive PCB screw combine for fast, trouble-free, neat installations every time.



- **Tamper/Vandalism Supervision.** Defeats acts to sabotage or vandalize the unit by reporting them to the system if opening the enclosure is ever attempted. (International models also have secured enclosures for added protection.)
- **Added False Alarm Prevention Features.** The unit employs myriad features to ensure only valid alarms are reported in the system. This includes properties of its circuitry and fresnel optics, which include integral extra white light protection, a Napco-pioneered innovation.

• **Compliances: UL, CUL, CE, INCERT, NFA2P, NCP**

## SPECIFICATIONS

• Microprocessor:	2K ROM with A-D Converter
• Operating temperature*:	-10 to +50 degrees C (14 ° to 122° F)
• Mounting:	Wall or corner, 12' (3.6m) max.; For pet/animal applications 7' (2.1m) is recommended.
• Output relay:	Form A; normally closed
• Relay time:	Approx. 3 seconds
• Alarm Relay:	100mA, 24Vdc with internal 10 ohm current limiting resistor
• Multi-mode Trouble Output (Open collector)	
• Self-Test Interval:	11 - 16 hrs.
• Power supply requirements:	Filtered 10.6 to 16VDC nominal with battery backup form the control panel.
• Current drain:	28mA (idle/alarm) at 12VDC (nominal)
• Dimensions:	3.3"H x 2.5"W x 1.9"D (8.4 x 6.4 x 4.8 cm) (HxWxD)
• Shipping weight:	5 oz (142 gm)

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