

## SPECIFICATIONS

Power interrupt protection	Detector will not retune if power is lost for a minimum of three seconds and then restored. Prevents vehicle detection from being lost during brief power interruptions.	Fuse	▶ 12 VAC power	5 x 20 mm, .5A, Slo-Blo
			▶ 24 VAC power	5 x 20 mm, .5A, Slo-Blo
			▶ 120 VAC power	5 x 20 mm, .25A, Slo-Blo
			▶ 240 VAC power	5 x 20 mm, .25A, Slo-Blo
Power	▶ 12 - 28 VAC	50/60 Hz, 2.0 watts max.	▶ 12 VDC power	5 x 20 mm, .5A, Slo-Blo
	▶ 90 - 135 VAC	50/60 Hz, 6.0 watts max.	▶ 24 VDC power	5 x 20 mm, .5A, Slo-Blo
	▶ 180 - 270 VAC	50/60 Hz, 6.0 watts max.		
	▶ 10 - 32 VDC	2.0 watts max.		
	SFLV < 1 watt throughout voltage range.			
	SCLV < 2.0 watts throughout voltage range.			

PIN	BASE MODEL NO.							
	326-3	326SFLV-7	326-8	326-9	326-19	326SFLV-7	326SFLV-7	326-38
1	120 VAC, Line	12 or 24 VAC, Line	240 VAC, Line	120 VAC, Line	240 VAC, Line	12 VDC, (+)	24 VDC, (+)	240 VAC Line
2	120 VAC, Neutral	12 or 24 VAC, Neutral	240 VAC, Line	120 VAC, Neutral	240 VAC, Neutral	12 VDC, (-)	24 VDC, (-)	240 VAC, Neutral
3	Out. B Relay (N.O.)		Loop		Out. B Relay (N.O.)			
4	Spare		Out. B Relay (COM)	Loop		Spare		Out. B. Relay (COM)
5	Out. A Relay (COM)		Out. A Relay (N.O.)	Out. Relay A (N.C.)		Out. A Relay (COM)		Out. A. Relay (N.O.)
6	Out. A. Relay (N.O.)		Out. A Relay (COM)	Out. Relay A (COM)		Out. A Relay (N.O.)		Out. A. Relay (COM)
7	Loop		Out. Relay A (N.O.)		Loop			
8	Loop		Out. Relay B (COM)		Loop			
9	Out. B Relay (COM)		Spare		Out. Relay B (N.O.)		Out. B Relay (COM)	
10	Out. A. Relay (N.C.)		Out. A. Relay		Out. Relay B (N.C.)		Out. A. Relay	
11	Out. B Relay (N.C.)		Out. B Relay (N.C.)		Chassis ground		Out. B Relay (N.C.)	

NOTE: The N.O. and N.C. contacts shown above are with power applied, loop connected, and no vehicle present, and are for both failsafe and failsecure models.  
NOTE: The 326-38 is similar to the 326-8 except the connector locator key is positioned down.



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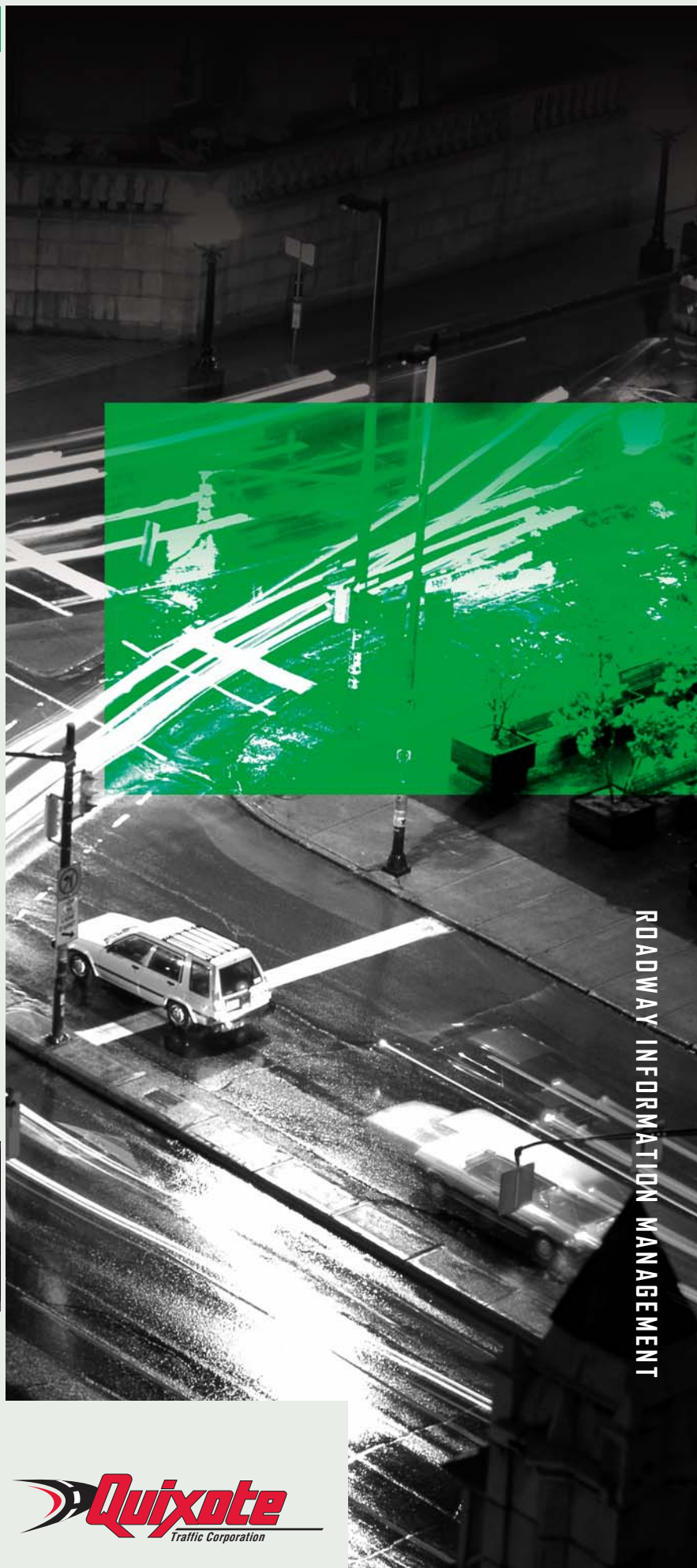
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Specifications are subject to change without notice to reflect improvements and upgrades.



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# MODEL 326 SERIES

## SINGLE CHANNEL, DIGITAL INDUCTIVE, LOOP VEHICLE DETECTOR

### 326LV SERIES FEATURING UNIVERSAL LOW VOLTAGE INPUT

## FEATURES & BENEFITS

- ▶ Compatible with all radio control and remote openers.
- ▶ Features latest state-of-the-art surface mount technology.
- ▶ Sensitivity Boost, selectable by setting an external DIP switch, eliminates possible detector dropout during passage of high bed vehicles - this feature is particularly useful in sliding gate situations.
- ▶ External rotary switch for 10 selectable sensitivity levels.
- ▶ Two color LED status indicator for Detect, Power, and Loop Fault indication.
- ▶ Self-tuning & complete environmental tracking.
- ▶ No warm-up required.
- ▶ Continuous Winky-Blink™ loop monitor which remembers and indicates intermittent and failed loops - a great troubleshooting aid.
- ▶ If intermittent or failed loops self-heal, the detector will resume normal operation without manually resetting the detector.
- ▶ Four front panel selectable loop frequencies permit complete elimination of crosstalk.
- ▶ Large loop inductance range: 20 to 2000 microhenries, allowing operation with a wide range of loops.
- ▶ 11-pin Amphenol rear connector.
- ▶ Two separate output relays:
  - Output A is presence output
  - Output B, programmable with external DIP switches, provides presence, pulse on entry, pulse on exit, or fail output
- ▶ An infinite presence mode is available by setting an external DIP switch.
- ▶ Both outputs can be delayed for 2 seconds, by setting an external DIP switch, causing the detector to ignore vehicles passing over the loop faster than about 5 miles per hour.
- ▶ Both outputs can be extended for 0 seconds, 2 seconds, 5 seconds, or 10 seconds, programmable with external DIP switches.
- ▶ Detector will not retune if power is lost for a minimum of 3 seconds and then restored. Prevents vehicle detection from being lost during brief power interruptions.
- ▶ ABS plastic case.
- ▶ LV Series - Universal Low Voltage Input, accepts 12V to 24V AC or DC. Only TWO configurations required: failsafe or failsecure. Standard models available in 120 VAC or 240 VAC, failsafe and failsecure.



# MODEL 326 SERIES

SINGLE CHANNEL, DIGITAL INDUCTIVE,  
LOOP VEHICLE DETECTOR

326LV SERIES FEATURING UNIVERSAL  
LOW VOLTAGE INPUT

## SPECIFICATIONS

Self-tuning	Automatically tunes itself and is fully operational within 1 second after application of power or after being reset. 30 seconds is required before full presence time is possible.
Environmental tracking	Completely automatic over the entire loop inductance range.
Loop inductance range	20 to 2000 microhenries with Q factor of 5 or greater [includes loop(s) plus feeder (lead-in or home run) cable up to the connector on the detector].
Loop feeder length	Up to 2,500 feet (762 m) maximum with proper feeder cable and appropriate loops.
Loop input	Transformer isolated.
Controls	All controls are externally accessible.
Loop frequency	Four switch selectable frequencies (normally in the range of 20 to 80 kilohertz). Note: Changing loop frequency switches may make Winky-Blink™ signal appear. Reset detector manually.
Reset	The detector can be manually reset by momentarily changing the sensitivity setting. The detector is reset automatically whenever power is interrupted for 30 seconds or more and then restored.
Grounded loop operation	The loop isolation transformer allows operation with poor quality loops (including a single point short to ground).
Lightning protection	Loop input fully protected per NEMA Specifications
Faulty/intermittent loop monitor	If the total loop input network inductance goes out of the range specified or suddenly changes more than 25%, both outputs immediately generate a continuous detect output in failsafe detector versions or no detect in failsecure detector versions and the LED begins displaying the Winky-Blink™ mode. This condition continues until the inductance returns to its previous value, at which time the detector outputs automatically resume normal

### Sensitivity

operation. However, the LED will continue in the Winky-Blink™ mode until the detector is reset. See Reset.

Vehicle detection results from a sufficient change in loop inductance ( $\Delta L/L$ ). 10 switch selectable sensitivity levels are shown below:

SENSITIVITY $\Delta L/L$		SENSITIVITY $\Delta L/L$	
Level 9	0.013%	Level 4	0.13%
Level 8	0.02%	Level 3	0.2%
Level 7	0.03%	Level 2	0.3%
Level 6	0.05%	Level 1	0.5%
Level 5	0.06%	Level 0	0.8%

### Sensitivity boost

Switch selectable, this option increases sensitivity only during the detect period but does not affect the sensitivity level of a vacant loop. When a vehicle enters the loop, the sensitivity is boosted two levels and remains boosted throughout the detect period. When the vehicle leaves the loop, the sensitivity returns to the vacant loop level.

*NOTE: Sensitivity Boost should only be activated at sensitivity levels 2 through 5. Activating sensitivity boost with sensitivity set higher than 5 can result in false calls.*

### Output A

Set for presence mode of operation only.

### Output B

May be switched for either presence, pulse, or fail mode of operation with a switch. In pulse mode, the pulse occurs on either entry or exit, as set by another switch. The pulse duration is 250 milliseconds. In fail mode, an output occurs whenever a loop fault occurs.

### Call delay option

Switch selectable, this option delays both outputs for 0 or 2 seconds. When set to 2 seconds, the detector will ignore cars passing over the loop faster than about 5 miles per hour.

## SPECIFICATIONS

Call extend option	Switch selectable, this option extends both outputs for, 2 seconds, 5 seconds, or 10 seconds.
Presence modes	Switch selectable. Applies to output B when output B is set to Presence. <ul style="list-style-type: none"> <li>▶ <b>NORMAL:</b> Hold time of 4 minutes minimum for any vehicle detected and is nominally 30 to 60 minutes for cars. Hold time depends on loop geometry and number of turns, vehicle size, and position of vehicle relative to the loop.</li> <li>▶ <b>INFINITE:</b> Continuous detect output is maintained as long as the vehicle remains on the loop and power is not interrupted for more than approximately 3 seconds.</li> </ul> <p><i>NOTE: Should be left "OFF" for parking, gate and door applications.</i></p>
Detect indicator	Dual color light emitting diode (LED) indicates output status of detector. <ul style="list-style-type: none"> <li>▶ <b>POWER ON/NO CALL:</b> Steady green.</li> <li>▶ <b>NORMAL CALL:</b> Steady red while a vehicle is being detected.</li> <li>▶ <b>FAILED OR OUT-OF-RANGE LOOP (WINKY-BLINK™):</b> Three 100 ms blinks 100 ms apart once every two seconds.</li> </ul>
Failsafe/failsecure	Specify version desired when ordering.
Operating temperature	▶ -40°F to +180°F (-40°C to +82°C).
Size	▶ 1.5" W x 2.7" H x 4.6" D (38 x 68 x 117 mm), excluding switches and connector.
Weight	▶ 10.4 oz (295 grams)
Internal circuitry isolation	▶ All internal electronic circuitry is isolated from the loop and outputs A & B.
Case	ABS plastic.

Connector	Amphenol 86-CP11 (on rear).
New installations	Recommend use of SKT0130 flush mount socket.
Existing installations	Use 802A cable.
Output conditions tables	Use to determine which version to order.

FAILSAFE	POWER OK				POWER OUT
	Normal		Loop Failed		
Outputs	Car	No Car	Car	No Car	
A (Presence)	N.O.	Closed	Open	Closed	Closed
	N.C.	Open	Closed	Open	Open
B (Pulse)	N.O.	Mom. Closed	Open	Closed	Closed
	N.C.	Mom. Open	Closed	Open	Open
B (Presence)	N.O.	Closed	Open	Closed	Closed
	N.C.	Open	Closed	Open	Open
B (Fault)	N.O.	Open	Open	Closed	Open
	N.C.	Closed	Closed	Open	Closed

FAIL SECURE	POWER OK				POWER OUT
	Normal		Loop Failed		
Outputs	Car	No Car	Car	No Car	
A (Presence)	N.O.	Closed	Open	Open	Open
	N.C.	Open	Closed	Closed	Closed
B (Pulse)	N.O.	Mom. Closed	Open	Open	Open
	N.C.	Mom. Open	Closed	Closed	Closed
B (Presence)	N.O.	Closed	Open	Open	Open
	N.C.	Open	Closed	Closed	Closed
B (Fault)	N.O.	Open	Open	Closed	Open
	N.C.	Closed	Closed	Open	Closed

Response time	Approximately 125 milliseconds after vehicle enters loop.
Relay contact ratings	10 A max at 250 VDC max; 8A max at 300 VAC max; 3 hp at 250 VAC.



ROADWAY INFORMATION MANAGEMENT