

# Model 320SL

## Dual Synchronized Microwave Intrusion Link

### Southwest Microwave Model 320SL Dual Synchronized Microwave Intrusion Link 600 ft (183 m) Detection Range

#### Features:



Model 320SL is a dual (stacked) perimeter microwave intrusion detection system designed for protection of high risk assets.

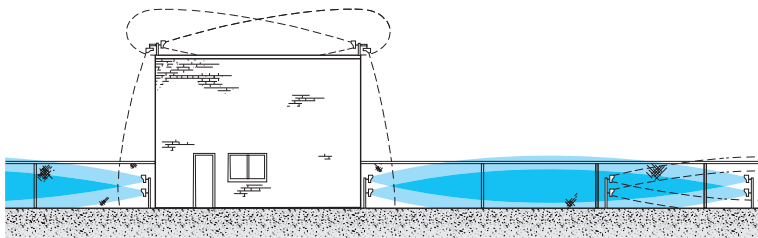
The lower link, typically mounted between 12 and 18 inches (300 to 460 mm) above grade, is a Southwest Microwave Model 310B. This link operates at K-band frequency (24.125 GHz) to provide a very narrow detection pattern that has been optimized to detect a slow prone crawling intruder (30 cm standard metal sphere radar target). The upper link, mounted between 30 and 40 inches (0.7 to 1 m) above grade, is a Southwest Microwave Model 300B. Operating at X-band frequency (10.525 GHz), this link provides a medium width detection pattern designed to detect a walking, running, or jumping intruder.

To detect bridging attempts, additional links may be stacked higher to increase the overall detection zone height. When it is advantageous to utilize additional 300B or 310B links or transceivers, a single twisted pair of wires may be connected between the transmitters of the links allowing them to be slaved together or connected to Model SMC10 Syncplexer for full synchronization. Any transmitter may be selected to be the master with the other slaved to it or both links synchronized from the crystal controlled SMC10 Syncplexer. Full synchronization absolutely prevents mutual interference between two or more X-band or K-band links or transceivers.

Model 320SL provides nearly perfect detection even on crawling or rolling intruders with a radar cross section as low as 0.2 square meters. Because the X- and K-band links are designed to detect specific targets, detection can be accomplished with very low sensitivity settings. For this reason, Model 320SL provides outstanding NAR/FAR performance - even in severe environments.



- ▶ X and K-band Multipath Detection for Ultimate Reliability
- ▶ Unaffected by Vibration, Wind, Rain, Snow, Dust or Temperature Extremes
- ▶ Ideal High Narrow Detection Pattern Over Entire Zone
- ▶ Self Contained Alignment Circuits and LED Troubleshooting Indicators
- ▶ Synchronized Operation Prevents Mutual Interference



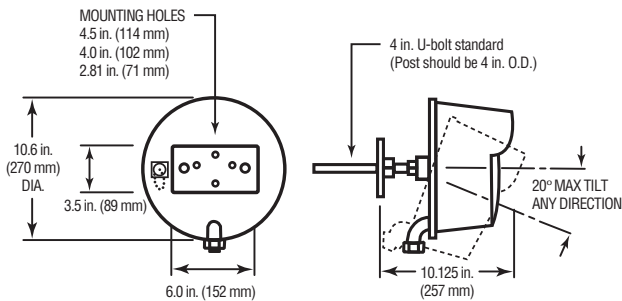
**Model 320SL Dual Synchronized Microwave Intrusion Links in conjunction with Southwest Microwave Model 380 or MS16 Dual Technology Sensor for total ground, wall and rooftop detection.**



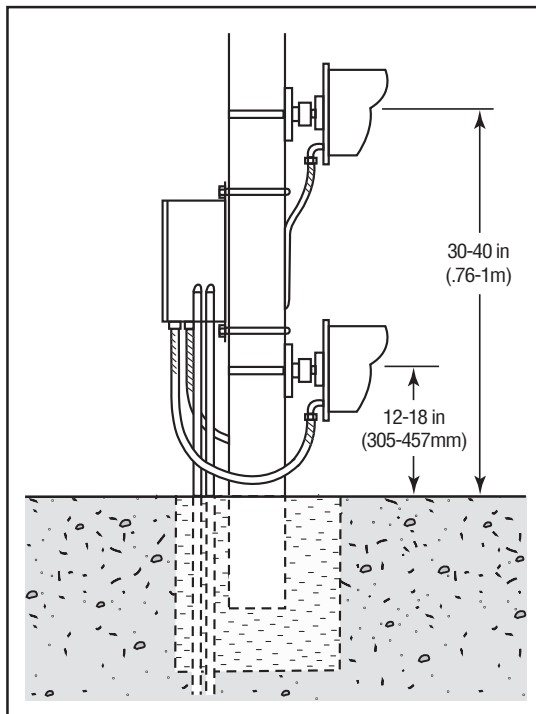
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## Dual Synchronized Microwave Intrusion Link

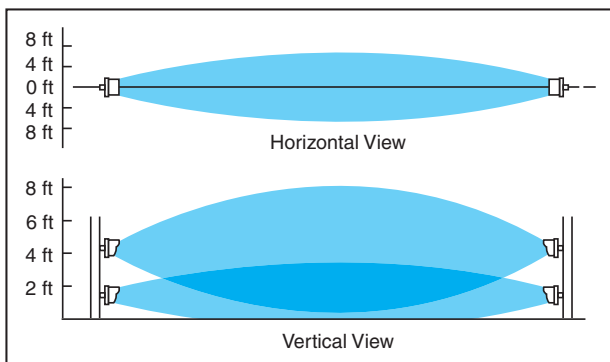
### Dimensions



### Typical Tx or Rx Mounting



### Detection Patterns



### Specifications:

**Equipment Supplied** Model 300BT-33252 Transmitter, Model 300BR-33252 Receiver, Model 310BT-33253 Transmitter, Model 310BR-33253 Receiver, (2) BX15 Weatherproof Enclosures, (2) PS50 Power Supplies, and (4) Universal Mounting Brackets.

**Frequency** Model 300B: 10.525 GHz (Available from 9.4 GHz to 10.8 GHz), F.C.C. Identifier CA68H9300B.  
Model 310B: 24.125 GHz, F.C.C. Identifier CA68H9310B.

**Output Power** 300B: 10 mW peak, 5 mW average.  
310B: 6 mW peak, 3 mW average. (Both square wave modulated).

**Range** 100 to 600 feet (30.5 to 183 m) maximum.

**Target Size** 77 pound (35 kg) human walking, running, hands and knees crawling or jumping. Prone crawling or rolling 77 pound (35 kg) human, or simulated with a 30 cm diameter metal sphere, detected at maximum range of 600 feet (183 m).

**Target Velocity** 0.1 ft/sec to 50 ft/sec (30 mm/sec to 15 m/sec).

**Probability of Detection** 0.99 minimum.

**Automatic Range Adjustment** Link automatically adjusts to slow changes in path loss due to rain, snow, etc. AGC range -54 dB.

**Modulation Channels** Four, field selectable (internal). Two (external) for use with SMC10 syncplexer.

**False Alarm Rate** 1/unit/year based on signal to noise ratio.

**Operating Environment** -40°F to +150°F (-40°C to 66°C).  
0-100% Relative Humidity.

**Supply Voltage** Low voltage plug-in transformer, 110 VAC 60 Hz (220 VAC 50 Hz optional) to 16 VAC. Regulated and filtered to 13.6 VDC at 300 mA.

**Supply Current** 300BT: 20 mA, 300BR: 20 mA  
310BT: 150 mA, 310BR: 20 mA

**Alarm Output** SPDT-Form C, 2 amps at 28 VDC.

**Tamper Switch** SPDT-Form C, 2 amps at 28 VDC.

**Self Supervision** Alarm on failure and remote test.

**Mounting** Locking ball swivel mount. 20° adjustment in any direction.

**Remote Monitor** Alignment, sensitivity and power supply voltage monitored with RM83 Performance Test Set at receiver.

**LED Indicators** Internally located LED's - power on at transmitter. Alarm, jamming signal, wrong channel and receiver sync on at receiver.

**Shipping Weight** 58 lbs (26.3 kg) total system.

### How to Order

Specify Model 320SL and operating frequency. Order optional equipment by model number and description. Specifications subject to change without notice.



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