



Purpose and operation

The PS-Narrow detects motion in a focused area and closes a relay contact to activate a compatible warning controller, gate operator, door opener, or alarm.

It responds to vehicles, bicycles, and pedestrians. It does not distinguish between them or provide stationary vehicle presence detection.

Quick installation

1. Choose the zone. Locate the sensor so the intended path crosses the detection area and adjacent activity stays outside it.
2. Mount and wire. Disconnect power, secure the detector, and connect brown to DC positive and green to DC negative. Connect white/yellow only to a compatible dry-contact input.
3. Aim and test. Apply power, aim the sensor, and test every expected target and direction. Adjust the output hold time as needed using the instructions supplied with your unit.
4. Verify the complete system. Confirm the sensor indication, relay operation, controller timing, and warning or door response before putting the installation into use.

Applications

- Exit and approach warning signs: position the zone early enough for the warning to be useful.
- Door, gate, or barrier activation: use the relay as an activation input to the operator.
- Pedestrian or bicycle warnings: test smaller targets and keep unwanted traffic outside the zone.

For door and gate systems, keep all required safety devices in service. This motion detector is an activation device and cannot be relied on to hold a door or gate open for a stationary person or vehicle.

In this manual

- 1 Product and quick installation
- 2 Detection zone and mounting
- 3 Wiring and PSC-5 connection
- 4 Setup, testing, and troubleshooting

PS-Narrow Manual

Narrow Beam Motion Detector

PS-VMD-NB | Installation and operation

Product information

Item	Specification
Part number	PS-VMD-NB
Detection	Microwave motion; vehicles, bicycles, pedestrians
Power	12–36 VDC
Response / hold	Approx. 0.5 second / adjustable 1–6 seconds
Output	Normally open isolated dry contact
Coverage	Up to 15 ft range × 6 ft wide; installation dependent
Mounting	Wall, ceiling, or post; up to 15 ft high
Housing / cable	ABS, IP54 / 5 ft attached cable
Dimensions	5.5 × 1.75 in. (listed dimensions)



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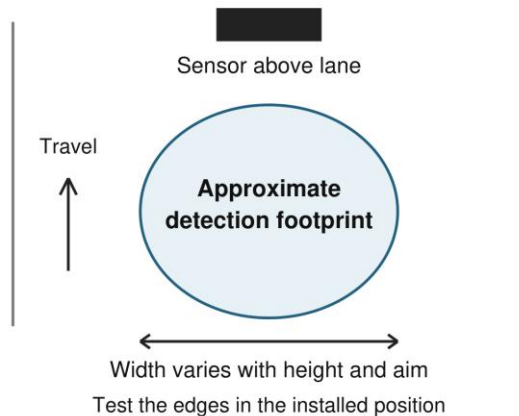
Detection Zone

Narrow Beam Motion Detector

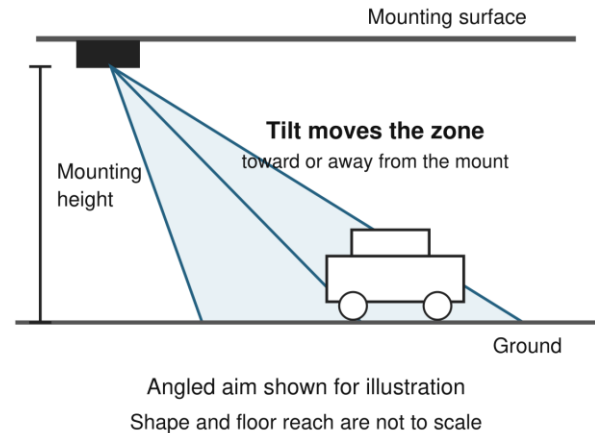
Mounting and aiming

The narrow field helps focus detection on the intended path. The drawings show the coverage concept; they are not measured beam plots or guaranteed detection boundaries.

TOP VIEW — LOOKING DOWN



SIDE VIEW — AIMING INTO THE LANE



Coverage reference

Reference from the PASS datasheet	Planning guidance
About 2 ft wide at a 6 ft mounting height	Useful starting point for a small target area. Verify the actual width with a walk test and the intended vehicles.
About 6 ft wide at a 15 ft mounting height	Higher mounting can produce a wider zone. Check adjacent lanes and sidewalks for unintended detection.
Listed maximum range: 15 ft; width: 6 ft	Treat these as approximate limits, not a rectangular detection area. Height, tilt, target, and surroundings change coverage.

Choose and secure the mounting position

- Use a stable wall, ceiling, or post mount. Keep the sensing face clear and protect the cable from strain, pinch points, and damage.
- Use a covered location suitable for the IP54 enclosure. Avoid direct water jets and locations where water can collect inside the housing.
- Aim toward the intended approach. Avoid moving doors, vegetation, or activity outside the desired zone.
- Adjust the swivel carefully and secure the final position. Retest after any change in tilt, height, or surrounding equipment.

Map the actual zone

Start outside the intended zone and approach from each normal direction. Mark the first reliable detection point and the side boundaries. Repeat with pedestrians, bicycles, and vehicles that the installation must detect, including slow approaches. Test the neighboring lane or walkway to check for unwanted activations.

The top view shows a conceptual footprint. Its front-to-back depth is not specified in the PASS datasheet. The side view illustrates tilt only; the 15 ft range must not be treated as an additional 15 ft of horizontal reach at a 15 ft mounting height.



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Wiring

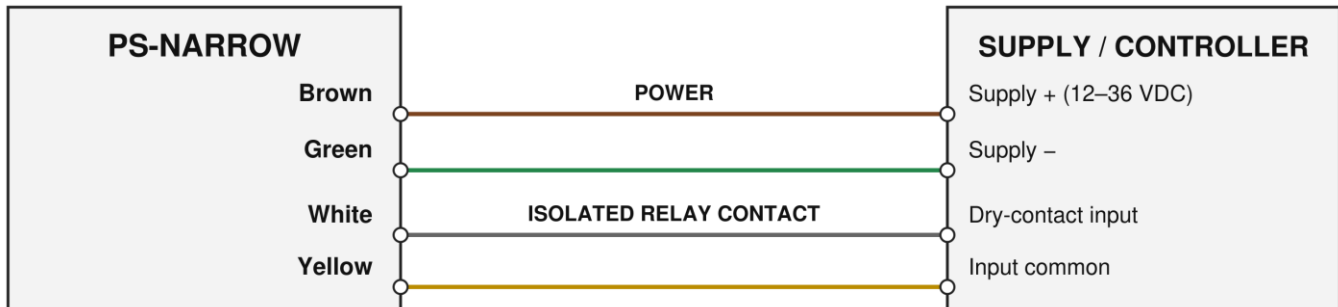
Narrow Beam Motion Detector

General connection and PSC-5 example

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Disconnect power before wiring. The four-wire color assignment below follows the PASS PS-VMD-NB datasheet. Match the supplied unit's wiring information if a cable or product revision differs.

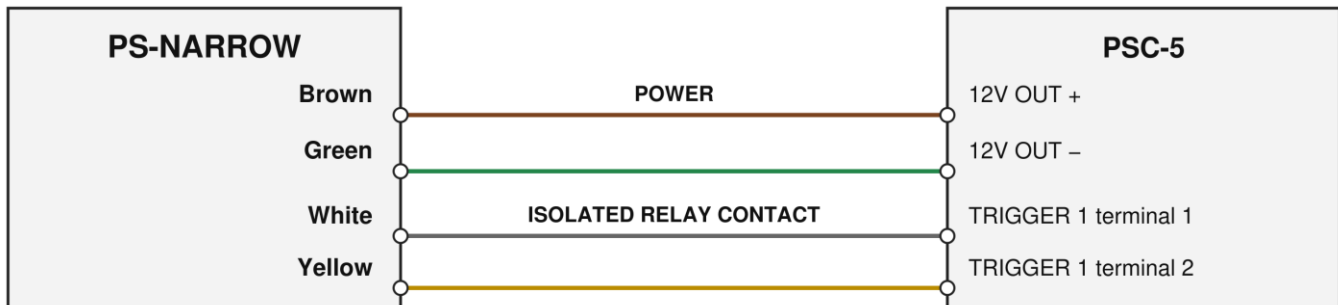
Wire	Function	Connection
Brown	DC positive	12–36 VDC supply +
Green	DC negative	Supply –
White + yellow	Normally open dry contact	Two terminals of a compatible controller input; no polarity



White and yellow close on detection. Never connect them to supply + or –.

The relay closes when motion is detected and reopens after the configured hold period when no further motion is detected. It supplies no voltage. Use a controller input rather than powering a sign, motor, or other load directly from the sensor.

Connecting to the PSC-5



White and yellow close on detection. Never connect them to supply + or –.

Connect brown to PSC-5 12V OUT + and green to 12V OUT –. Connect white and yellow across the two TRIGGER 1 terminals. For Trigger 2, move both contact wires to that trigger pair. Keep all auxiliary detector loads within the PSC-5 12V OUT limit of 1 A.

Mode 1 starting settings: P005 = 1; P006 = 10 seconds; P007 = 0; P008 = OFF; P009 = CLOS. Use P010 = CLOS for Trigger 2. Select FLSH or CnOn for the connected outputs. Press ENTER to save changes, then RESET to exit programming.

The sensor hold time and PSC-5 warning time are separate settings. With P008 = On, repeated or maintained detection can restart and extend the warning. Test the actual approach and adjust the warning time for the site. Audio follows the PSC-5 schedule.



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Setup and Testing

Narrow Beam Motion Detector

Adjustment, troubleshooting, and service

Set the output hold time

The PS-VMD-NB datasheet lists a 1–6 second adjustable output hold time. Use the adjustment labels and instructions supplied with your sensor. Confirm that the instructions match the exact unit before changing a switch or control. If the adjustment is unmarked, contact PASS before changing internal controls.

Choose a hold time that gives the connected controller a reliable input. Verify it by creating a brief motion event, leaving the zone, and observing the contact release. The approximately 0.5-second response specification is separate from the output hold time.

Commissioning checklist

- Verify DC polarity and that the relay wires are isolated from power.
- Test intended targets at normal and slow speeds in every required direction.
- Check the zone edges and neighboring traffic for missed or unwanted activations.
- Confirm that the LED indicates detection and that the connected equipment responds correctly.
- Check release after motion stops. Do not interpret a released contact as proof that the area is empty.
- Refit the cover, secure the cable, and repeat the final test with the sensor fully assembled.

Troubleshooting

Symptom	Check or action
No detection indication	Verify 12–36 VDC between brown (+) and green (–). Check the supply and connections.
Missed motion	Check aim, mounting height, obstructions, and actual travel path. Retest at expected speeds and at the zone edges.
Unwanted activations	Aim away from adjacent traffic and moving doors or objects. Secure the mount and reduce the covered area.
LED responds; equipment does not	Check the white/yellow contact pair and the controller input setting. Keep relay and power circuits separate.
Warning lasts too long	Check sensor hold time, continued motion, controller activation time, and timer restart settings.
Stopped object no longer detected	This is a motion detector. Use a suitable presence detector when stationary occupancy must be monitored.

Installation record

Location: _____ Date: _____ Installer: _____
Supply: _____ Mounting height: _____ Hold time: _____
Controller / input: _____ Test results: _____

Support

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Keep the sensor face clean and the mount secure. Recheck detection after service, impact, or changes to the surrounding area.