



VMD01-Mx0 Series Digital Motion Detector



- ▶ Intelligent digital video motion detector
- ▶ Detects, tracks and stores motion images
- ▶ Automatic self-adaptation to changing environmental conditions
- ▶ Maximizes detection rate and reduces unwanted alarms
- ▶ Stand alone or system integration
- ▶ Intuitive graphical interface for fast effective set up

Whenever you need reliable video motion detection, for indoor or outdoor use, the Bosch VMD01 is the unit of choice. The VMD01 is an intelligent digital motion detector that uses advanced video content analysis to reliably detect moving objects while suppressing unwanted alarms from spurious sources in the image. The unit intelligently adapts to changing lighting and environmental conditions such as rain, snow and leaves blowing in the wind.

The VMD01 can easily be configured to select the sensitive areas of the image, the minimum object size and the motion direction that will trigger an alarm, so that it only detects the important moving objects in a scene. A graphical display allows the sensitive area, size and perspective for objects, and movement direction to be simply drawn on the image. Once movement has been detected, the object causing the alarm is outlined on the screen, the motion tracked on the monitor, and pre and post alarm images are stored. The alarm condition can be signaled by means of a standard relay output and LED on the unit. The stored alarm images can be replayed on the monitor using the front panel rotary switch or by remote control.

Certifications and Approvals

Electromagnetic Compatibility (EMC)	Emission: EN50081-1, EN50130-4, EN50130-5, According FCC, UR
Safety	EN 60950

Parts Included

Quantity	Component
1	VMD01
4	Rubber feet for table top mounting

Technical Specifications

Electrical

Power Supply

Type

VMD-PS90	External plug power adapter	
VMD-RA90/VMD-RA00	Integrated in a 48-cm (19-in.) rack	
	VMD01-M50	VMD01-M60
Operating Voltage	5 VDC, 50 Hz	5 VDC, 60 Hz
Power Consumption	6 W	6 W
Connection	RJ-12 (+5 V to 1.2; GND to 4.6)	

Video

Input	1 x BNC, VMD01-M50: PAL/CCIR, VMD01-M60: NTSC/EIA, 75 Ohm (internal termination), 1 Vp-p (0.5–2.0 Vp-p)	
Output	1 x BNC, VMD01-M50: PAL/CCIR, VMD01-M60: NTSC/EIA, 1 Vp-p; live images, live images with outlined objects, stored alarm images, GUI for setup	

Contacts

Input	Internal pull up to ground; 1: Arm/disarm sensor 2: Toggle parameter set
Output	Open collector, 100 mA, 12 V 1. Object detection; adjustable at peak, periodic peak or as long as object is detected 2. Video signal supervision

Relay

Output	30 V max., 1.0 A; 1: System/common failure (break contact); 2: Object detection, until reset (minimal for 1 second)
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LED

Conditions Indicated	1: (Green) power on, system failure 2: (Red) detector armed, video loss, or object detected
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Serial Port

Type	RS-232, 115 kBaud max. (for back-up purposes, connection of mouse)
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VMD

Type	Digital image analysis; multi-level changes in illumination, texture and motion; primarily outdoor applications (indoor use acceptable)
Results Display	Superimposed in video-out signal, yellow outline = initial position; red outline = present position; green = trajectory (B/W-lines if B/W signal at video-in)

Alarm Image Storage

Alarm Images	Five (5) pre-alarm images, one (1) alarm image, ten (10) post-alarm images
VMD results	Superimposed outlines, fade out after five (5) seconds

Access	Via rotary switch on front panel or remote controlled (toggle) between live image and image storage; forward and backward stepping
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Operation Modes

1 Reset of Alarms	Automatic
Normal Operation	Live image on video-out
Object Detection	Superimposed outlines in live image on video-out (last alarm sequence in storage)
2 Reset of Alarms	Manual
Normal Operation	Live image on video-out
Object Detection	Superimposed outlines in live image on video-out (first, not reset alarm sequence in storage)
3 Reset of Alarms	Manual
Normal Operation	Live image on video-out
Object Detection:	Automatic switchover to the alarm image storage / first alarm image with superimposed outlines on video-out (first, not reset alarm sequence in storage)

Security

Passcode	Five (5) digits
Video Signal	Signal loss, bad signal-to-noise ratio, camera
Supervision	Blinded, insufficient scene illumination

Mounting Possibilities

Desktop (stand alone or as stack), wall or ceiling mounted (use VMD-WM), 48-cm (19-in.) rack mounted (use VMD-RA90 or VMD-RA00)

Mechanical

Dimensions (H x W x D)	110 x 48 x 207 mm (4.3 x 1.88 x 8.1 in.)
Weight	0.5 kg (1.1 lb) (without mouse and power supply unit)

Environmental

Operating Temperature	0°C to 45°C (32°F to 113°F)
Operation Humidity	8% to 80% (relative, non-condensing)

Ordering Information

Model | Description

VMD01-M50 Digital Motion Detector
single-channel, stand alone, indoor and outdoor, 50 Hz, 5 VDC, 6 W

VMD01-M60 Digital Motion Detector
single-channel, stand alone, indoor and outdoor, 60 Hz, 5 VDC, 6 W

Hardware Accessories

VMD-PS90 Power Supply
for VMD01-Mx0, required if using as a single stand alone unit, 100–240 VAC/5 VDC, max. 2.4 A, cord 2.0 m, 4 x 0.6 with RJ-11 plug (+5 V to 1.2 V; GND to 4.6), 4 different adapters included for UK, US, Europe and AUS, approximately 85 x 50 x 32 mm (3.28 x 1.93 x 1.24 in.) (depth without contacts)

Ordering Information

Model | Description

VMD-SM Serial Mouse

required for set-up for VMD01-Mx0

Note: This product has not been listed by UL.

VMD-RA90 Rack Mount

48-cm (19-in.), with power supply for up to eight VMD01-Mx0, 3VU, depth: 378 mm (14.88 in.), including eight bracket sets for VMD01 mounting, power supply: primary 110–230 VAC, Euro and US power cord 1.5 m (4.92 ft), secondary 8x5 VDC, 8 x 2 A (including cable set)

Note: This product has not been listed by UL and is currently not for sale in the United States and Canada.

VMD-RA00 Rack Mount

48-cm (19-in.), without power supply, 3 VU, depth: 378 mm (14.88 in.), including eight bracket sets for VMD01 mounting

VMD-RADC Front Panel Covers

dummy cover for VMD-RA00 and VMD-RA90, set of 4

VMD-WM Wall Mount Bracket

for one (1) VMD01-Mx0, 165 x 205 x 10 mm (6.6 x 8.05 x 0.39 in.), 0.4 kg (0.99 lb)

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