BOSCH

Invented for life

UML-1x1 Series 15-, 17-, 19-inch General Purpose LCD Flat Panel Monitors

▸ **Supports high-resolution 500 TVL, up to 1280 x 1024 resolution–1.3 Megapixels (UML-191-90 and UML-171-90) or 1024 x 768 resolution (UML-151-90)**

▸ **Maximum brightness of 250 to 300 cd/m^2**

▸ **Maximum contrast ratio of 600:1 to 1000:1 for excellent color accuracy and consistency**

▸ **Minimum response time of five to eight ms reduces smearing and ghosting**

▸ **100/240 VAC, 50/60 Hz auto-ranging internal power supply**

▸ **Low power consumption (less than 45 W)**

▸ **Looping composite and Y/C (S-video) inputs**

▸ **VGA input for DVR or PC applications**

▸ **3D comb filter and de-interlace circuitry for high-quality video**

▸ **Front panel control lockout**

Bosch LCD flat panel monitors are high-resolution color monitors ideal for use with analog video, digital video recorder (DVR), and PC applications. The monitors feature a color liquid crystal display (LCD) flat-screen panel and are available with 15-in., 17-in., and 19-in. viewable picture areas. Each monitor also features a wide range of horizontal and vertical viewing angles that provide comfortable, clear viewing – whether you place it on a desktop or mount it to a wall or in a rack.

Functions

Excellent image quality

Bosch LCD monitors automatically adapt to the input resolution of the incoming video signal (up to 1280 x 1024 pixels or 1.3 Megapixels). The monitors' analog VGA input easily accommodates the widespread use of PCs in today's security surveillance systems. Their high contrast ratio (600:1 to 1000:1) and high brightness rating (250 to 300 cd/m2) offer excellent color accuracy and imaging for easier viewing and interpretation of images. The panel refreshes every five to eight milliseconds, so you get crisp, clear images with less smearing - and less image "ghosting" in fast-motion video.

Key benefits of LCD monitors

Long-life fluorescent backlights help avoid luminance degradation on the LCD monitor – so it easily maintains its brightness level over time. This is an advantage over aging CRT-type monitors that become progressively dimmer. The consistent brightness also provides a sharp display image, without the constant flickering that you typically see in CRT monitors. This allows you to use the LCD monitor longer without eyestrain or excessive fatigue.

Additional advantages

The Bosch family of standard-performance LCD monitors also features:

• Low power consumption
• Automatic adaptation to fluctuating electricity loads while protecting your circuitry
• Standard 100 mm (3.9 in.) mounting holes to easily accommodate a range of VESA wall mounts
• User-friendly, on-screen menus and front panel controls for adjusting monitor display parameters to your specific preferences

Certifications and Approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC standards

Technical Specifications

Electrical

	UML-151-90	UML-171-90	UML-191-90
Rated Voltage	120/230 VAC, 50/60 Hz	120/230 VAC, 50/60 Hz	120/230 VAC, 50/60 Hz
Voltage Range	100-240 VAC	100-240 VAC	100-240 VAC
Power at Rated Voltage	25 W operation, 5 W standby	40 W operation, 5 W standby	45 W operation, 5 W standby
Sync Format	PAL/NTSC	PAL/NTSC	PAL/NTSC
LCD Panel	TFT LCD	TFT LCD	TFT LCD
Screen Size (H x V)	304.1 x 228.1 mm (12.0 x 9.0 in.)	338.0 x 270.0 mm (13.3 x 10.6 in.)	376.0 x 301.0 mm (14.8 x 11.9 in.)
Viewable Picture Area	15 in. (381 mm) measured diagonally	17 in. (432 mm) measured diagonally	19 in. (483 mm) measured diagonally
Pixel Pitch: (H x V)	0.297 x 0.297 mm (0.01 x 0.01 in.)	0.264 x 0.264 mm (0.01 x 0.01 in.)	0.294 x 0.294 mm (0.01 x 0.01 in.)
Resolution	1024 x 768 pixels, 500 TV lines typical	1280 x 1024 pixels, 500 TV lines typical	1280 x 1024 pixels, 500 TV lines typical
Aspect Ratio	4:3	5:4	5:4
Display Colors	16.7 million colors	16.7 million colors	8-bit interface; 16.7 million colors
Response Time	< 8 ms	< 5 ms	< 5 ms
Backlight	Two (2) cold cathode fluorescent tubes, rated life 50,000 hours	Two (2) cold cathode fluorescent tubes, rated life 50,000 hours	Four (4) cold cathode fluorescent tubes, rated life 50,000 hours

LCD Panel Optical Characteristics	UML-151-90	UML-171-90	UML-191-90
Luminance	250 cd/m^2, antiglare, hard-coating treatment	300 cd/m^2, antiglare, hard-coating treatment	300 cd/m^2, antiglare, hard-coating treatment
Contrast Ratio	600:1	1000:1	800:1
Viewing Angle	160°/160°	160°/160°	160°/160°

Video Input	UML-151-90	UML-171-90	UML-191-90
Composite Video (CVBS)	1.0 Vp-p (0.5–1.5 Vp-p), automatic switching from 75 Ω unbalanced termination to Hi-Z with passive loop-through operation		
Y/C (S-video)	0.7 Vp-p (Y-signal), 0.3 Vp-p (C-signal), 75 Ω termination		

PC Input	UML-151-90	UML-171-90	UML-191-90
Analog RGB	0.7 Vp-p (0.5–1 Vrms)		
PC Timing Modes			
640 x 480	60/72/75 Hz	60/72/75 Hz	60/72/75 Hz
800 x 600	60/72/75 Hz	60/72/75 Hz	60/72/75 Hz
1024 x 768	60/70/75 Hz	60/70/75 Hz	60/70/75 Hz
1280 x 1024		60/75 Hz	60/75 Hz

Controls

Video Input	UML-151-90	UML-171-90	UML-191-90
Front Panel	Push-buttons		
Input	Selects: Video1, Video2, S-video, VGA		
Menu	Selects on-screen display (OSD), up cursor, down cursor/auto adjust, left cursor, right cursor		
Power	On/Off		
Front Panel Lockout	Multiple push-button combination		

On-screen Display	UML-151-90	UML-171-90	UML-191-90
Video Mode	Input Source, Screen, OSD, Utility		
PC Mode	Input Screen, OSD, Color, Utility		

Indicators	UML-151-90	UML-171-90	UML-191-90
LED	Power On (green) Standby (blinking red) Unsupported Mode (green) Power Off (red)		
On-screen	VGA: Check input signal Video: Flashes "AV1" or "AV2" when there is a black screen		

Connectors	UML-151-90	UML-171-90	UML-191-90
Video 1 (AV1)	Composite video: two (2) BNC (1 in, 1 out)		
Video 2 (AV2)	Composite video: two (2) BNC (1 in, 1 out)		
Y/C (S-video)	Two (2) mini-DIN, 4-pin (1 in, 1 out)		
RGB	One (1) VGA cable included		
Power Input	5.5 mm DC input jack		
Power Adapter (included)	Input: 100–240 VAC, 50/60 Hz Output: 12 VDC, 3.3 A	Input: 100–240 VAC, 50/60 Hz Output: 12 VDC, 4.1 A	

Mechanical

	UML-151-90	UML-171-90	UML-191-90
Cabinet Material		ABS plastic	
Finish		Black	
Mount		Wall mounting compatible with standard bracket, 100 mm (3.9 in.) centers, M4 thread	
Dimensions (W x H x D)			
Monitor with Base	352 x 355 x 200 mm (13.86 x 14.0 x 7.9 in.)	382.4 x 390.5 x 200 mm (15.1 x 15.4 x 7.9 in.)	430 x 428 x 200 mm (16.9 x 16.9 x 7.9 in.)
Monitor Only	352 x 292 x 58 mm (13.9 x 11.5 x 2.2 in.)	382.4 x 330.0 x 58.7 mm (15.1 x 13.0 x 2.3 in.)	420 x 374 x 60 mm (16.9 x 14.7 x 2.4 in.)
Weight			
Monitor with Base	3.7 kg (8.1 lb)	6.6 kg (14.6 lb)	7.6 kg (16.9 lb)
Monitor Only	2.5 kg (5.6 lb)	4.1 kg (9.05 lb)	5.9 kg (13.1 lb)

Environmental

	UML-151-90	UML-171-90	UML-191-90
Operating Temperature		0℃ to 40℃ (32℉ to 104℉)	
Storage Temperature		−20℃ to 60℃ (−4℉ to 140℉)	
Humidity		Maximum 90%, non-condensing	

Parts Included

One (1) Bosch General Purpose Color LCD Flat Panel Monitor
One (1) VGA to VGA cable
Two (2), 3-wire power cords with a grounded plug: one (1) with a European/Continental plug type and one (1) with a U.S. plug type

Ordering Information

UML-151-90 15-inch Color LCD Display Monitor 15-inch (381 mm) color LCD monitor, 3D image, 500 TVL, 1024 X 768 resolution, VGA, CVBS, AUDIO, 120/230 VAC, 50/60 HZ	**UML-151-90**
UML-171-90 17-inch Color LCD Display Monitor 17-inch (432 mm) color LCD monitor, 3D image, 500 TVL, 1280 x 1024 resolution, VGA, CVBS, audio, 120/230 VAC, 50/60 HZ	**UML-171-90**
UML-191-90 19-inch Color LCD Display Monitor 19-inch (483 mm) color LCD monitor, 3D image, 500 TVL, 1280 x 1024 resolution, VGA, CVBS, audio, 120/230 VAC, 50/60 HZ	**UML-191-90**
Accessories	
UMM-LW-20B Fixed Wall Mount Fixed wall mount for flat panel LCD monitors, black	**UMM-LW-20B**
UMM-LW-30B Swivel/Tilt Wall Mount Swivel/Tilt wall mount for flat panel LCD monitors, black	**UMM-LW-30B**
UMM-LCDUB-RM Rack Mount Bracket for LCD Monitors Supports dual 8.4-in. and single 8.4- to 19-in. LCD monitors in a standard VESA rack cabinet	**UMM-LCDUB-RM**