BOSCH

Invented for life

UML Series 8.4- and 10.4-inch General Purpose LCD Monitors

▸ **High-resolution 8.4-in. and 10.4-in. LCD monitors**

▸ **Maximum brightness of 230 to 250 cd/m^2**

▸ **Excellent color accuracy and consistency with 500:1 to 600:1 maximum contrast ratio.**

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

▸ **Two (2) composite BNC inputs and loop-through outputs**

▸ **Y/C (S-video) and loop-through video and audio inputs**

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

▸ **Trigger and auto switch features allow the monitors to change input sources**

▸ **Multi-language On-screen Display (OSD)**

Bosch LCD flat panel monitors are high-resolution color monitors ideal for use with analog video, digital video recorder (DVR), and with PC applications. The monitors feature a color liquid crystal display (LCD) flat-screen panel and are available with 8.4-in or 10.4-in. viewable picture areas. Each monitor 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. The monitors' analog VGA input easily accommodates the widespread use of PCs in today's security surveillance systems. Their high contrast ratio (500:1 to 600:1) and high brightness rating (230 to 250 cd/m^2) offer excellent color accuracy and imaging for easier viewing and interpretation of images. The panel refreshes every 10 to 20 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 75 mm (2.95 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

Region	Certification	
Europe	CE	2004/108/EC, 2006/95/EC

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

Parts Included

Quant.	Component
1	Bosch General Purpose Color LCD Flat Panel Monitor
1	VGA to VGA cable 1.8 m (5.9 ft)
1	Trigger Cable
2	3-wire power cords with a grounded plug 1.8 m (6 ft): one (1) with a European/Continental plug type and one (1) with a U.S. plug type
1	User's Manual

Technical Specifications

Electrical

	UML-080-90	UML-100-90
Rated Voltage	120/230 VAC, 50/60 Hz	120/230 VAC, 50/60 Hz
Voltage Range	100 to 240 V	100 to 240 V
Power at Rated Voltage	< 35 W	< 35 W
Sync Format	PAL/NTSC	PAL/NTSC
LCD Panel	TFT LCD	TFT LCD
Active Display Area (H x V)	170.4 x 127.8 mm (6.7 x 5.0 in.)	211.2 x 158.4 mm (8.3 x 6.2 in.)
Viewable Picture Area	8.4 in. (213.4 mm) measured diagonally	10.4 in. (264.2 mm) measured diagonally
Pixel Pitch: (H x V)	0.213 x 0.213 mm (0.01 x 0.01 in.)	0.264 x 0.264 mm (0.01 x 0.01 in.)
Resolution	800 x 600 pixels	800 x 600 pixels
Frequency	Horizontal: 31–48 KHz Vertical: 56–75 Hz	Horizontal: 31–48 KHz Vertical: 56–75 Hz
Aspect Ratio	4:3	4:3
Display Colors	16.2 million	16.2 million
Response Time	10 ms (typical)	20 ms (typical)
Backlight	Cold cathode fluorescent tube, rated life 50,000 hours	Cold cathode fluorescent tube, rated life 50,000 hours

LCD Panel Optical Characteristics	UML-080-90	UML-100-90
Luminance	250 cd/m^2 (typical)	230 cd/m^2 (typical)
Contrast Ratio	600:1 (typical)	500:1 (typical)
Viewing Angle (H x V)	160° x 140°	160° x 140°

Video Input	All Models
BNC	1.0 Vp-p , 75 Ω termination loop-through output
Y/C (S-video)	0.7 Vp-p (Y-signal), 0.3 Vp-p (C-signal), 75 Ω termination

PC Input	UML-080-90	UML-100-90
VGA	XGA supported	XGA supported
PC Timing Modes		
640 x 480	60/72/75 Hz	60/72/75 Hz
800 x 600	60/72/75 Hz	60/72/75 Hz
1024 x 768	60/70/75 Hz	60/72/75 Hz

Controls

Video Input	All Models
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

Indicators	All Models
LED	Power On (green) Power Off, Standby (red)
On-screen	VGA: Check input signal Video: Flashes "AV1" or "AV2" when there is a black screen

Connectors	All Models
Video 1 (AV1)	Composite video: two (2) BNC (1 in, 1 out)
Video 2 (AV2)	Composite video: two (2) BNC (1 in, 1 out)
VGA	One (1) RGB 15-pin D-sub in
Y/C (S-video)	Mini-DIN, 4-pin one (1) channel input
Audio In	Two (2) RCA (1 left, 1 right)
Trigger Input	One (1) 1/8 in. mini phono plug
RS-232	Port used for firmware updates
Power Input	5.5 mm DC input jack
Power Adapter (included)	Input: 100–240 VAC, 50/60 Hz Output: 12 VDC, 2.5 A

Mechanical

	UML-080-90	UML-100-90
Cabinet Material	Front: Plastic Rear: Metal	
Finish	Textured	
Mount	Wall mounting compatible with standard bracket, 75 mm (2.95 in.) centers, M4 thread	

	UML-080-90	UML-100-90
LCD Dimensions (W x H x D)	219 x 184 x 32.5 mm 8.6 x 7.2 x 1.3 in.	256 x 225 x 32.5 mm 10.1 x 8.9 x 1.3 in.
Weight	1.16 kg (2.56 lb)	1.53kg (3.37 lb)

Environmental

	All Models
Operating Temperature	0℃ to 45℃ (32℉ to 113℉)
Storage Temperature	−20 to 60℃ (−4℉ to 140℉)
Humidity	93%

Ordering Information

UML-080-90 8.4-inch General Purpose LCD Monitor 8.4-inch (213.4 mm) LCD monitor, 500 TVL, 800 X 600 resolution, VGA, CBVS, audio, 120/230 VAC, 50/60 HZ	**UML-080-90**
UML-100-90 10.4-inch General Purpose LCD Monitor 10.4-inch (264.2 mm) LCD monitor, 500 TVL, 800 X 600 resolution, VGA, CBVS, audio, 120/230 VAC, 50/60 HZ	**UML-100-90**

Accessories

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**