

## Product Information

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### Product Features

#### BRILLIANCE 230W5

##### The Best Productivity Solution

- **Outstanding front of screen performance**
  - WUXGA, wide format 1920x1200 resolution for sharper display
  - Fast response time capable of handling fast moving pictures
  - Widest viewing angle up to 176 degree for extra efficiency
- **Maximum comfort for maximum productivity**
  - Large viewing area for seeing more images without scrolling
  - Easy to access connections on a front to improve efficiency
  - Screen tilt and swivel adjustment for ideal viewing angle
- **Multi-function for ultimate convenience**
  - A solid-state 6-in-1 media card reader for easy media access
  - Easy connection via hi-speed USB 2.0 Hub to any USB devices
  - Display from multiple video sources: YPbPr, S-Video and CVBS (230W5VS only)
  - PiP allows watching a second source simultaneously (230W5VS only)
- **Great convenience**
  - Easy plug and play DVI ensures true digital experience
  - Embedded power supply eliminates external power adapters
  - VESA mounting pattern for easy wall mounting of display

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### Technical Specifications\*

| LCD PANEL                |                                                                                   |
|--------------------------|-----------------------------------------------------------------------------------|
| • Type                   | TFT LCD                                                                           |
| • Screen size            | 23 inch / 58.4 cm                                                                 |
| • Pixel Pitch            | 0.258 x 0.258 mm                                                                  |
| • LCD Panel type         | 1920 x 1200 pixels<br>R.G.B. vertical stripe<br>Anti-glare polarizer, hard coated |
| • Effective viewing area | 495.36 x 309.6 mm                                                                 |
| • Display Colors         | 8 bits interface (16.7M colors)                                                   |
| SCANNING                 |                                                                                   |
| • Vertical refresh rate  | 56Hz-85Hz                                                                         |
| • Horizontal Frequency   | 30kHz-94kHz                                                                       |
| VIDEO                    |                                                                                   |
|                          | < 205 MHz (Analog input)                                                          |

|                                |                                                                                                                                                                  |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • Video dot rate               | < 165 MHz (Digital input)                                                                                                                                        |
| • Input impedance              |                                                                                                                                                                  |
| - Video                        | 75 ohm $\pm$ 3%                                                                                                                                                  |
| - Sync                         | 2.2K ohm                                                                                                                                                         |
| • Input signal levels          | 0.7 Vpp                                                                                                                                                          |
| • Sync input signal            | Separate sync<br>Composite sync<br>Sync on green                                                                                                                 |
| • Sync polarities              | Positive and negative                                                                                                                                            |
| • S-Video                      | Y input 1.0Vpp, C input 0.3Vpp, 75ohm input impedance                                                                                                            |
| • CVBS                         | Composite, 1.0Vpp, 75 ohm input impedance                                                                                                                        |
| • Input Frequency              | WUXGA Hsync 75 kHz, Vsync 60 Hz (N.I.)<br>WXGA Hsync 48 kHz, Vsync 60 Hz (N.I.)<br>SVGA Hsync 38 kHz, Vsync 60 Hz (N.I.)<br>VGA Hsync 31 kHz, Vsync 60 Hz (N.I.) |
| • Video interface              | DVI-I, D-Sub, S-Video, composite and components video (YPbPr)                                                                                                    |
| <b>AUDIO</b>                   |                                                                                                                                                                  |
| • Input level for PC/Video     | 500mV nominal                                                                                                                                                    |
| • Loudspeaker                  | 6W Stereo Audio (3W/channel RMSx2, 200 Hz-10 kHz)                                                                                                                |
| <b>Optical characteristics</b> |                                                                                                                                                                  |
| • Contrast ratio:              | 500:1 (typ.)                                                                                                                                                     |
| • Brightness:                  | 250 cd/m <sup>2</sup> (typ.)                                                                                                                                     |
| • White Chromaticity:          | x: 0.283 y: 0.297 (at 9300°K)<br>x: 0.313 y: 0.329 (at 6500°K)                                                                                                   |
| • Viewing Angle (C/R>10)       | Upper $\geq$ 88° (typ.)<br>Lower $\geq$ 88° (typ.)<br>Left $\geq$ 88° (typ.)<br>Right $\geq$ 88° (typ.)                                                          |
| • Response time                | 16 ms (typ.)                                                                                                                                                     |

\* This data is subject to change without notice.

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## Resolution and Preset Modes

- Maximum 1920 x 1200
- Recommended 1920 x 1200 at 60Hz

**20 factory preset modes:**

| H. freq (kHz) | Mode        | Resolution | V. freq (Hz)     |
|---------------|-------------|------------|------------------|
| 31.469        | IBM VGA 10H | 640x350    | 70.086           |
| 31.469        | IBM VGA 3H  | 720x400    | 70.086           |
| 31.469        | IBM VGA 12H | 640x480    | 59.940           |
| 35.000        | MACINTOSH   | 640x480    | 67.000           |
| 37.500        | VESA        | 640x480    | 75.000           |
| 35.156        | VESA        | 800x600    | 56.250           |
| 37.879        | VESA        | 800x600    | 60.317           |
| 46.875        | VESA        | 800x600    | 75.000           |
| 49.700        | MACINTOSH   | 832x624    | 75.000           |
| 48.363        | VESA        | 1024x768   | 60.004           |
| 60.023        | VESA        | 1024x768   | 75.029           |
| 68.700        | MACINTOSH   | 1152x870   | 75.000           |
| 71.810        | SUN WS      | 1152x900   | 76.150           |
| 63.981        | VESA        | 1280x1024  | 60.020           |
| 79.976        | VESA        | 1280x1024  | 75.025           |
| 91.1          | VESA        | 1280x1024  | 85.0             |
| 75.0          | VESA        | 1600x1200  | 60.0             |
| 67.05         | CVT 2.3MA   | 1920x1080  | 60.0 (for D-Sub) |
| 74.56         | CVT 2.3MA   | 1920x1200  | 60.0 (for D-Sub) |
| 74.52         | CVT 2.3MA-R | 1920x1200  | 60.0 (for DVI)   |

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## Automatic Power Saving

If you have VESA DPMS compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. If an input from a keyboard, mouse or other input device is detected, the monitor will 'wake up' automatically. The following table shows the power consumption and signaling of this automatic power saving feature:

| Power Management Definition |            |        |        |            |           |
|-----------------------------|------------|--------|--------|------------|-----------|
| VESA Mode                   | Video      | H-sync | V-sync | Power Used | LED color |
| On                          | Active     | Pulse  | Pulse  | 90W (typ.) | Blue      |
| Off                         | Blanked    | No     | No     | < 2.5W     | Amber     |
| DC Power OFF                | Not Active | No     | No     | 2W         | Off       |

This monitor is ENERGY STAR<sup>®</sup> compliant. As an ENERGY STAR<sup>®</sup> Partner, PHILIPS

has determined that this product meets the ENERGY STAR<sup>®</sup> guidelines for energy efficiency.

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## Physical Specifications

|                     |                                  |
|---------------------|----------------------------------|
| • Dimension (WxHxD) | 548 x 452 x250 mm                |
| • Weight            | 9.0 Kg                           |
| • Power supply      | 90 — 264 VAC, 50/60 Hz           |
| • Power consumption | 90 W (typ.)                      |
| • Temperature       | 0° C to 35° C                    |
| • Relative humidity | 20% to 80%                       |
| • System MTBF       | 50K hrs (excluding CCFL 40K hrs) |

\* This data is subject to change without notice.

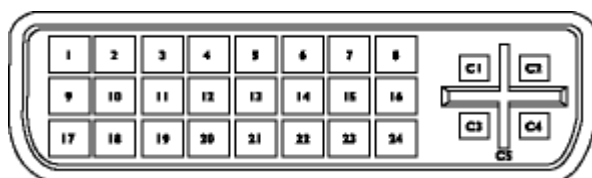
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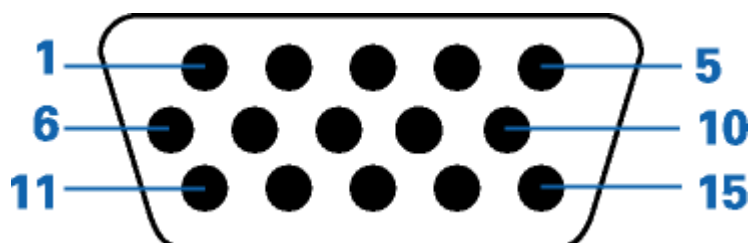
## Pin Assignment

1. The digital only connector contains 24 signal contacts organized in three rows of eight contacts. Signal pin assignments are listed in the following table:

| Pin No. | Signal Assignment       | Pin No. | Signal Assignment       | Pin No. | Signal Assignment       |
|---------|-------------------------|---------|-------------------------|---------|-------------------------|
| 1       | T.M.D.S. Data2-         | 9       | T.M.D.S. Data1-         | 17      | T.M.D.S. Data0-         |
| 2       | T.M.D.S. Data2+         | 10      | T.M.D.S. Data1+         | 18      | T.M.D.S. Data0+         |
| 3       | T.M.D.S. Data2/4 Shield | 11      | T.M.D.S. Data1/3 Shield | 19      | T.M.D.S. Data0/5 Shield |
| 4       | No connect              | 12      | No connect              | 20      | No connect              |
| 5       | No connect              | 13      | No connect              | 21      | No connect              |
| 6       | DDC Clock               | 14      | +5V Power               | 22      | T.M.D.S. Clock Shield   |
| 7       | DDC Data                | 15      | Ground (for +5V)        | 23      | T.M.D.S. Clock+         |
| 8       | No connect              | 16      | Hot Plug Detect         | 24      | T.M.D.S. Clock-         |



2. The 15-pin D-sub connector (male) of the signal cable:



| Pin No. | Assignment            | Pin No. | Assignment                            |
|---------|-----------------------|---------|---------------------------------------|
| 1       | Red video input       | 9       | +5V                                   |
| 2       | Green video input/SOG | 10      | Cable detect                          |
| 3       | Blue video input      | 11      | Identical output, connected to pin 10 |
| 4       | Ground                | 12      | Serial data line (SDA)                |
| 5       | No connect            | 13      | H. Sync / H+V                         |
| 6       | Red video ground      | 14      | V. Sync                               |
| 7       | Green video ground    | 15      | Data clock line (SCL)                 |
| 8       | Blue video ground     |         |                                       |

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## Product Views

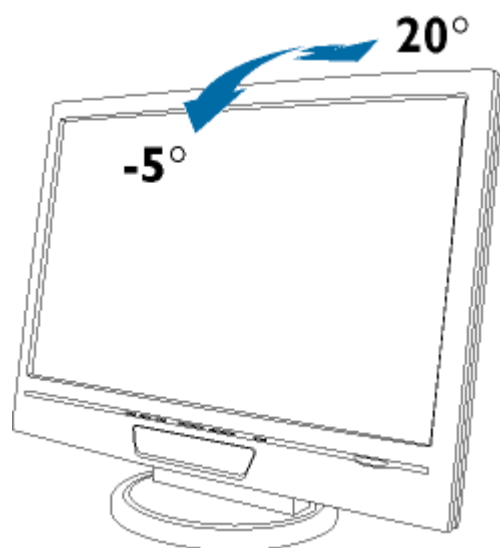
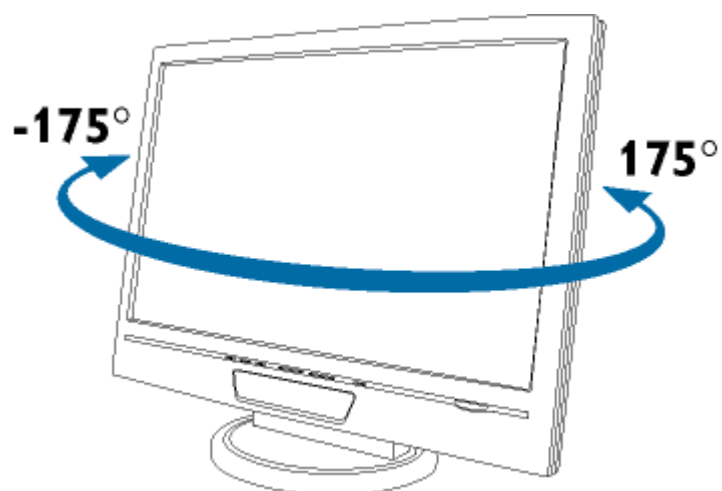
Follow the links to see various views of the monitor and its components.

[Front View Product Description](#)

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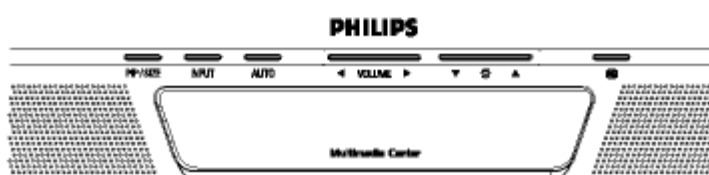
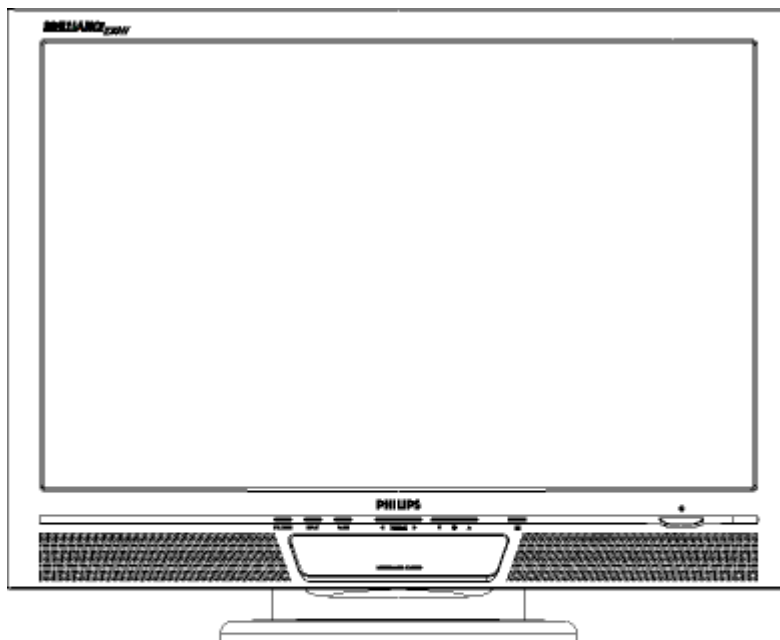
## Physical Function

**1) Tilt****2) Swivel**[RETURN TO TOP OF THE PAGE](#)

# Installing Your LCD Monitor

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## Front View Product Description



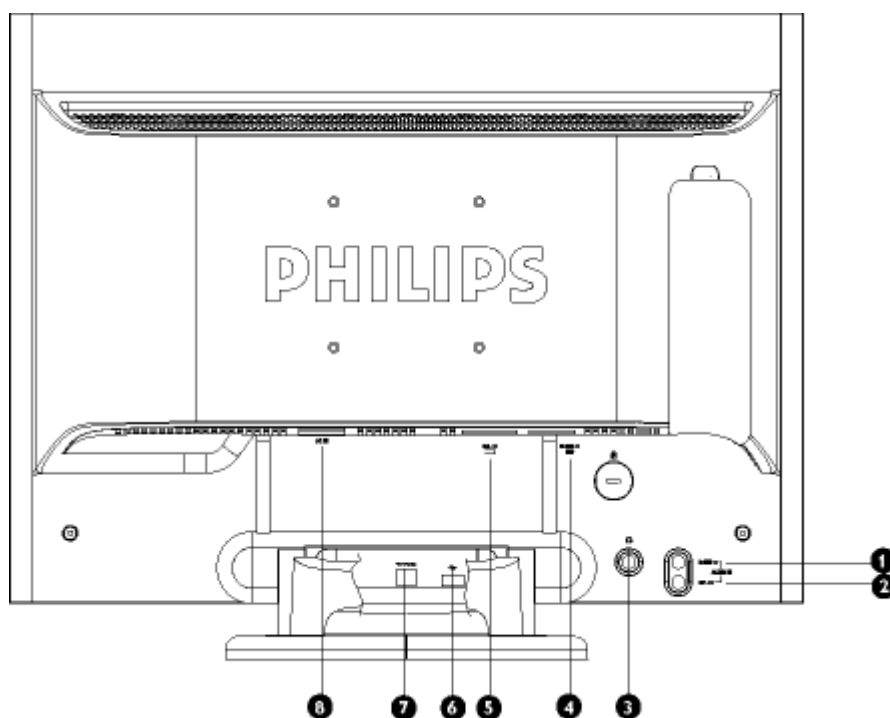
- |    |                                                                                     |                                                                                          |
|----|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1  |  | To switch monitor's power On and Off                                                     |
| 2  |  | Power LED                                                                                |
| 3  |  | To access OSD menu                                                                       |
| 4  |  | To adjust the OSD                                                                        |
| 5  |  | To adjust brightness of the display                                                      |
| 6  |  | To adjust the OSD                                                                        |
| 7  | <b>VOLUME</b>                                                                       | To adjust speaker volume                                                                 |
| 8  | <b>AUTO</b>                                                                         | Automatically adjust the horizontal position, vertical position, phase and clock setting |
| 9  | <b>INPUT</b>                                                                        | Signal input selection                                                                   |
| 10 | <b>PIP/SIZE</b>                                                                     | Activate PIP (Picture in Picture) window (230W5VS)<br>or<br>adjust screen size (230W5BS) |

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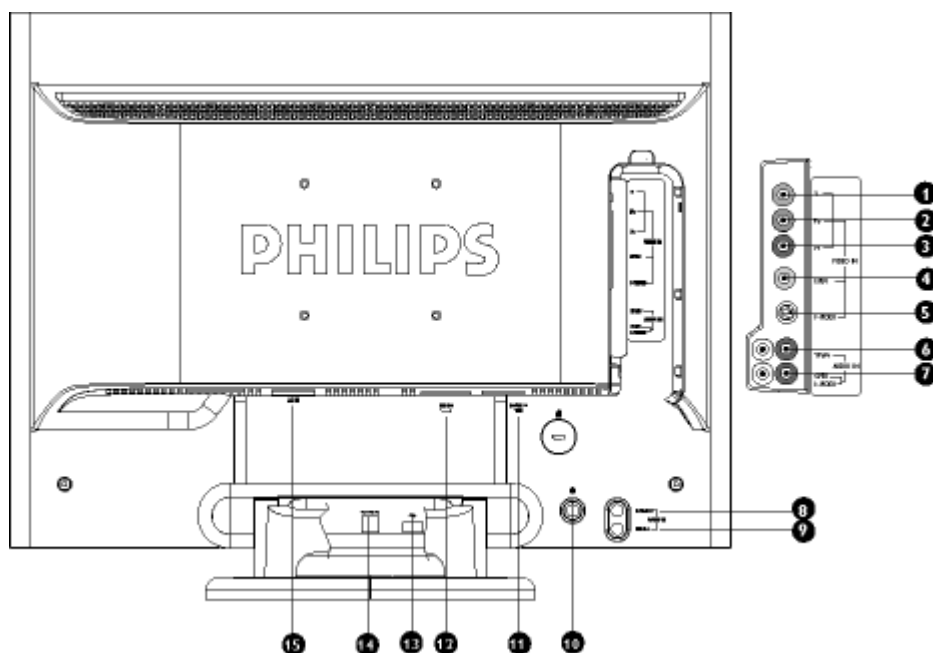
## Rear View

### Monitor model (230W5BS)



- 1 PC audio input for D-Sub
  - 2 PC audio input for DVI-I
  - 3 Earphone jack
  - 4 VGA input
  - 5 DVI-I input
  - 6 USB to USB devices
  - 7 USB to PC host
  - 8 AC power input
- 

## Video model



- 1 Component Video (YPbPr) input
- 2 Component Video (YPbPr) input
- 3 Component Video (YPbPr) input
- 4 CVBS video input
- 5 S-Video input
- 6 Audio input for YPbPr video
- 7 Audio input for CVBS/S-Video
- 8 PC audio for D-Sub
- 9 PC audio for DVI-I
- 10 Earphone jack
- 11 VGA input
- 12 DVI-I input
- 13 USB to USB devices
- 14 USB to PC host
- 15 AC power input

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## Optimizing Performance

- For best performance, ensure that your display settings are set at 1920x1200@60Hz



**Note:** You can check the current display settings by pressing the 'OK' button once. Go into the Product Information. The current display mode is shown on the item called RESOLUTION.

## Federal Communications Commission (FCC) Notice (U.S. Only)



This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Use only RF shielded cable that was supplied with the monitor when connecting this monitor to a computer device.

To prevent damage which may result in fire or shock hazard, do not expose this appliance to rain or excessive moisture.

THIS CLASS B DIGITAL APPARATUS MEETS ALL REQUIREMENTS OF THE CANADIAN INTERFERENCE-CAUSING EQUIPMENT REGULATIONS.

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## Commission Federale de la Communication (FCC Declaration)



Cet équipement a été testé et déclaré conforme aux limites des appareils numériques de class B, aux termes de l'article 15 Des règles de la FCC. Ces limites sont conçues de façon à fournir une protection raisonnable contre les interférences nuisibles dans le cadre d'une installation résidentielle. CET appareil produit, utilise et peut émettre des hyperfréquences qui, si l'appareil n'est pas installé et utilisé selon les consignes données, peuvent causer des interférences nuisibles aux communications radio. Cependant, rien ne peut garantir l'absence d'interférences dans le cadre d'une installation particulière. Si cet appareil est la cause d'interférences nuisibles pour la réception des signaux de radio ou de télévision, ce qui peut être décelé en fermant l'équipement, puis en le remettant en fonction, l'utilisateur pourrait essayer de corriger la situation en prenant les mesures suivantes:

- Réorienter ou déplacer l'antenne de réception.
- Augmenter la distance entre l'équipement et le récepteur.
- Brancher l'équipement sur un autre circuit que celui utilisé par le récepteur.
- Demander l'aide du marchand ou d'un technicien chevronné en radio/télévision.



Toutes modifications n'ayant pas reçu l'approbation des services compétents en matière de conformité est susceptible d'interdire à l'utilisateur l'usage du présent équipement.

N'utiliser que des câbles RF armés pour les connections avec des ordinateurs ou périphériques.

CET APPAREIL NUMERIQUE DE LA CLASSE B RESPECTE TOUTES LES EXIGENCES DU REGLEMENT SUR LE MATERIEL BROUILLEUR DU CANADA.

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