



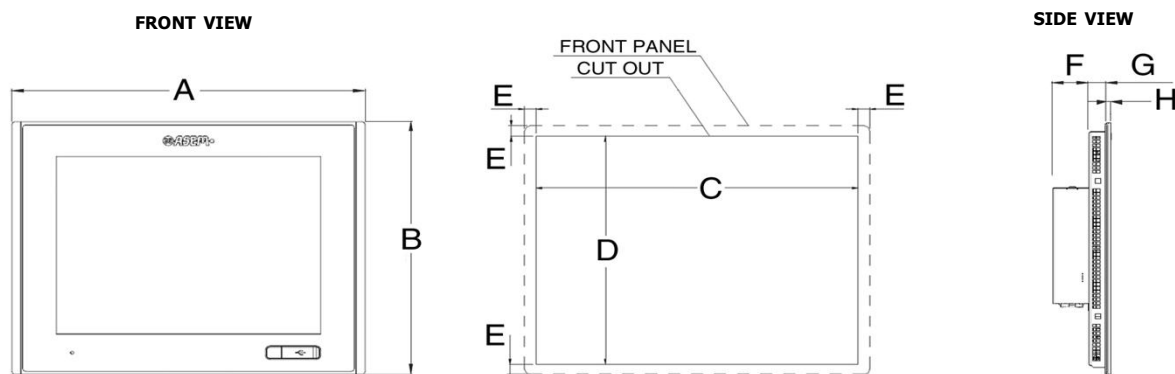
## Industrial Automation - Products & Configurations

| MH084-TF MONITOR                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Basic configuration                                                                                                                                                                                                                                                                                                                                                              | LCD TFT 8,4" • touch-screen with USB interface • aluminum TrueFlat front panel • 24V DC power supply not isolated • Video input VGA and DVI-D • 12 months warranty                                 |  |
| DISPLAY & TOUCH-SCREEN                                                                                                                                                                                                                                                                                                                                                           | MH084-TF • 8,4" LCD TFT 4:3 • SVGA, 800x600, 16M colors • backlight LED, 450 cd/m2 • Viewing angle L:R/U:L (typ): 80°:80°/60°:80°<br>8,4" Touch-Screen • 5 wires resistive technology • USB I/F    |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH104-TF • 10,4" LCD TFT 4:3 • SVGA, 800x600, 16M colors • backlight LED, 400 cd/m2 • Viewing angle L:R/U:L (typ): 80°:80°/60°:80°<br>10,4" Touch-Screen • 5 wires resistive technology • USB I/F  |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH121-TF • 12,1" LCD TFT 4:3 • SVGA, 800x600, 16M colors • backlight LED, 500 cd/m2 • Viewing angle L:R/U:L (typ): 80°:80°/60°:80°<br>12,1" Touch-Screen • 5 wires resistive technology • USB I/F  |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH121X-TF • 12,1" LCD TFT 4:3 • XGA, 1024x768, 16M colors • backlight LED, 600 cd/m2 • Viewing angle L:R/U:L (typ): 80°:80°/70°:70°<br>12,1" Touch-Screen • 5 wires resistive technology • USB I/F |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH150-TF • 15" LCD TFT 4:3 • XGA, 1024x768, 16M colors • backlight LED, 400 cd/m2 • Viewing angle L:R/U:L (typ): 80°:80°/65°:80°<br>15" Touch-Screen • 5 wires resistive technology • USB I/F      |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH156-TF • 15,6" LCD TFT 16:9 • 1366x768 (HD), 16M colors • backlight LED, 300 cd/m2 • Viewing angle L:R/U:L (typ): 85°:85°/80°:80°<br>15,6" Touch-Screen • 5 wires resistive technology • USB I/F |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH170-TF • 17" LCD TFT 5:4 • SXGA, 1280x1024, 16M colors • backlight LED, 350 cd/m2 • Viewing angle L:R/U:L (typ): 85°:85°/80°:80°<br>17" Touch-Screen • 5 wires resistive technology • USB I/F    |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH185-TF • 18,5" LCD TFT 16:9 • 1366x768 (HD), 16M colors • backlight LED, 300 cd/m2 • Viewing angle L+R/U+L (typ): 170°/160°<br>18,5" Touch-Screen • 5 wires resistive technology • USB I/F       |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH190-TF • 19" LCD TFT 5:4 • SXGA 1280x1024, 16M colors • backlight LED, 350 cd/m2 • Viewing angle L:R/U:L (typ): 85°:85°/80°:80°<br>19" Touch-Screen • 5 wires resistive technology • USB I/F     |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | MH215-TF • 21,5" LCD TFT 16:9 • 1920x1080 (FHD), 16M colors • backlight LED, 300 cd/m2 • Viewing angle L+R/U+L (typ): 178°/178°<br>21,5" Touch-Screen • 5 wires resistive technology • USB I/F     |  |
|                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                    |  |
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|                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                    |  |
| POWER SUPPLY                                                                                                                                                                                                                                                                                                                                                                     | Input voltage 24V DC • not isolated                                                                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Input voltage 24V DC • isolated                                                                                                                                                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Input voltage 110/230V AC • autoranging                                                                                                                                                            |  |
| OPTIONS                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                    |  |
| SERIAL T/S                                                                                                                                                                                                                                                                                                                                                                       | RS232 serial interface for touch-screen • inside monitor installation • without external cable > <b>note 1</b>                                                                                     |  |
| DIRECT CONNECTION CABLES                                                                                                                                                                                                                                                                                                                                                         | Calbes kit 1,8mt VGA (VGA 1,8mt / USB 1,8mt)                                                                                                                                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Calbes kit 1,8mt DVI (DVI 1,8mt / USB 1,8mt)                                                                                                                                                       |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Calbes kit 7,5mt VGA (VGA 10mt / USB 7,5mt) > <b>note 2</b>                                                                                                                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Calbes kit 7,5mt DVI (DVI 10mt / USB 7,5mt) > <b>note 2</b>                                                                                                                                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Calbes kit 10mt VGA (VGA 10mt / USB 11mt amplified) > <b>note 2</b>                                                                                                                                |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Calbes kit 10mt DVI (DVI 10mt / USB 11mt amplified) > <b>note 2</b>                                                                                                                                |  |
| WARRANTY EXTENSION                                                                                                                                                                                                                                                                                                                                                               | Extension cable for RS232 touch-screen interface (DB9M/DB9F) 1,8mt                                                                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Warranty extension to 18 months on basic system and its variants                                                                                                                                   |  |
|                                                                                                                                                                                                                                                                                                                                                                                  | Warranty extension to 24 months on basic system and its variants                                                                                                                                   |  |
| WARRANTY EXTENSION                                                                                                                                                                                                                                                                                                                                                               | Warranty extension to 36 months on basic system and its variants                                                                                                                                   |  |
|                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                    |  |
|                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                    |  |
| NOTES                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                    |  |
| <b>1:</b> Usage of the serial interface exclude the USB interface operation for touch-screen<br><b>2:</b> With kit cables 7,5mt, USB 1.1 standard is ensured<br>With kit cables 11mt, USB 2.0 standard is ensured; USB cable has an amplified signal repeater in the middle;<br>Repeater has dimensions of (mm) 32x17x90; distance of the repeater from the edges is 5mt and 6mt |                                                                                                                                                                                                    |  |



| TECHNICAL SPECIFICATIONS     |                                                                                                                                                 |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Case                         | Panel mount                                                                                                                                     |
| Front panel                  | Aluminum TrueFlat • Polycarbonate Pantone Cool Grey 4C color • ASEM logo serigraph printed                                                      |
| Touchscreen                  | 5 wires resistive technology • overlaminated with OCA (Optical Clear Adhesive) • on board controller • USB I/F (RS232 optional)                 |
| Overall dimensions & weight  | See details on the related section below                                                                                                        |
| Frontal protection           | IP65                                                                                                                                            |
| Power supply                 | DC Input voltage 18÷32V DC • not isolated                                                                                                       |
|                              | Input voltage 18÷36V DC • isolated                                                                                                              |
| AC                           | Input voltage 90÷264 V AC • isolated • Autoranging                                                                                              |
|                              | 1 x USB 2.0 (Type-A)                                                                                                                            |
| Frontal access interfaces    | 1 x VGA (DB15F) • 1 x DVI-D Single Link • 2 x USB 2.0 (Type A) • 1 x USB 2.0 (HUB input, Type B) • 1 x RS232 (DB9F) for T/S, optional           |
| Rear access interfaces       | 1 x VGA (DB15F) • 1 x DVI-D Single Link • 2 x USB 2.0 (Type A) • 1 x USB 2.0 (HUB input, Type B) • 1 x RS232 (DB9F) for T/S, optional           |
| Environmental specifications | Operating temperature: 0° ÷ +50°C for LCD ≤ 15,6", 0° ÷ +45°C for LCD ≥ 17" • Storage temperature: -5° ÷ +60°C • Humidity: 80% (non-condensing) |
| Approvals                    | CE (EN 55022, EN 61000-3-2/3, EN 55024, EN 60950-1)                                                                                             |
| Standard warranty            | 12 months • Warranty management by ASEM headquarters                                                                                            |

## DIMENSIONS (mm)



| LCD TFT | A   | B   | C   | D   | E  | F  | G  | H | Weight (kg) |
|---------|-----|-----|-----|-----|----|----|----|---|-------------|
| 8,4"    | 250 | 210 | 230 | 190 | 10 | 45 | 19 | 5 | 3,1         |
| 10,4"   | 300 | 245 | 280 | 225 | 10 | 45 | 19 | 5 | 3,9         |
| 12,1"   | 335 | 270 | 315 | 250 | 10 | 45 | 19 | 5 | 4,6         |
| 15"     | 390 | 315 | 370 | 295 | 10 | 45 | 19 | 6 | 5,3         |
| 15,6"   | 430 | 275 | 410 | 255 | 10 | 45 | 19 | 6 | 6,0         |
| 17"     | 455 | 355 | 435 | 335 | 10 | 45 | 21 | 6 | 6,7         |
| 18,5"   | 500 | 320 | 480 | 300 | 10 | 45 | 19 | 6 | 7,3         |
| 19"     | 490 | 388 | 470 | 368 | 10 | 45 | 21 | 6 | 7,3         |
| 21,5"   | 579 | 367 | 559 | 347 | 10 | 45 | 23 | 6 | 8,4         |

