

# Product datasheet

Specifications



## graphic display unit - 240 x 160 pixels

TMH2GDB

### Main

|                           |                                    |
|---------------------------|------------------------------------|
| Range of product          | Modicon M221                       |
| Product or component type | Graphic display                    |
| Range compatibility       | Modicon M221                       |
| Current consumption       | 40 mA at 5 V DC via RJ45 connector |
| Power consumption in W    | 1 W                                |
| Display type              | Backlit colour STN LCD             |
| Display colour            | Monochrome                         |
| Display resolution        | 240 x 160 pixels                   |
| Number of key             | 4 configurable<br>6 for navigation |

### Complementary

|                        |                                                                                                                 |
|------------------------|-----------------------------------------------------------------------------------------------------------------|
| Standards              | EN/IEC 61131-2<br>EN/IEC 61010-2-201                                                                            |
| Product certifications | cULus                                                                                                           |
| Marking                | CE                                                                                                              |
| Mounting location      | Front cabinet diameter: 22 mm hole<br>Bottom of cabinet diameter: 22 mm hole, connection via mounting accessory |
| Connector type         | RJ45 for communication and power supply                                                                         |
| Height                 | 126 mm                                                                                                          |
| Width                  | 80 mm                                                                                                           |
| Depth                  | 63 mm                                                                                                           |
| Net weight             | 0.17 kg                                                                                                         |

### Environment

|                                       |                                                                                                        |
|---------------------------------------|--------------------------------------------------------------------------------------------------------|
| Ambient air temperature for operation | -15...50 °C                                                                                            |
| Operating altitude                    | 0...2000 m                                                                                             |
| Storage altitude                      | 0...2000 m                                                                                             |
| Environmental characteristic          | Corrosive gas free                                                                                     |
| Relative humidity                     | 95 %, non-condensing (transport)<br>95 %, non-condensing (storage)<br>95 %, non-condensing (operation) |

|                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ambient air temperature for storage | -40...70 °C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| IP degree of protection             | IP65 front face:<br>IP20 back part:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Pollution degree                    | 2 conforming to EN/IEC 60664-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Vibration resistance                | 1.5 mm (f= 3...150 Hz)<br>2 gn                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Shock resistance                    | 15 gn for 11 ms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Electromagnetic compatibility       | Electrostatic discharge - test level: 8 kV (air discharge) conforming to EN/IEC 61000-4-2<br>Electrostatic discharge - test level: 4 kV (contact discharge) conforming to EN/IEC 61000-4-2<br>Radiated radio-frequency electromagnetic field immunity test - test level: 10 V/m (80 MHz...1 GHz) conforming to EN/IEC 61000-4-3<br>Radiated radio-frequency electromagnetic field immunity test - test level: 3 V/m (1.4...2 GHz) conforming to EN/IEC 61000-4-3<br>Radiated radio-frequency electromagnetic field immunity test - test level: 1 V/m (2...3 GHz) conforming to EN/IEC 61000-4-3<br>Magnetic field at power frequency - test level: 30 A/m (50/60 Hz) conforming to EN/IEC 61000-4-8<br>Electrical fast transient/burst immunity test - test level: 1 kV conforming to EN/IEC 61000-4-4<br>Surge immunity test - test level: 0.5 kV (common mode) conforming to EN/IEC 61000-4-5<br>Surge immunity test - test level: 0.5 kV (differential mode) conforming to EN/IEC 61000-4-5<br>Conducted RF disturbances - test level: 10 Vrms (0.15...80 MHz) conforming to EN/IEC 61000-4-6<br>Disturbing field emission - test level: 10...150 kHz (power lines (DC)) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 120...69 dBµV/m QP (power lines (DC)) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 150...1500 kHz (power lines (DC)) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 1.5...30 kHz (power lines (DC)) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 30...230 MHz class A (10 m) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 230 MHz...1 GHz class A (10 m) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 79...63 dBµV/m QP (power lines (DC)) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 63 dBµV/m QP (power lines (DC)) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 40 dBµV/m QP class A (10 m) conforming to EN/IEC 55011<br>Disturbing field emission - test level: 47 dBµV/m QP class A (10 m) conforming to EN/IEC 55011 |

Packing Units

|                              |           |
|------------------------------|-----------|
| Unit Type of Package 1       | PCE       |
| Number of Units in Package 1 | 1         |
| Package 1 Weight             | 164 g     |
| Package 1 Height             | 6.3 cm    |
| Package 1 width              | 8 cm      |
| Package 1 Length             | 12.6 cm   |
| Unit Type of Package 2       | S03       |
| Number of Units in Package 2 | 12        |
| Package 2 Weight             | 4.375 kg  |
| Package 2 Height             | 30 cm     |
| Package 2 width              | 30 cm     |
| Package 2 Length             | 40 cm     |
| Unit Type of Package 3       | P06       |
| Number of Units in Package 3 | 96        |
| Package 3 Weight             | 15.744 kg |
| Package 3 Height             | 70 cm     |
| Package 3 width              | 60 cm     |
| Package 3 Length             | 80 cm     |

Offer Sustainability

|                          |                                                                                                   |
|--------------------------|---------------------------------------------------------------------------------------------------|
| Sustainable offer status | Green Premium product                                                                             |
| REACH Regulation         | <a href="#">REACH Declaration</a>                                                                 |
| EU RoHS Directive        | Pro-active compliance (Product out of EU RoHS legal scope)<br><a href="#">EU RoHS Declaration</a> |

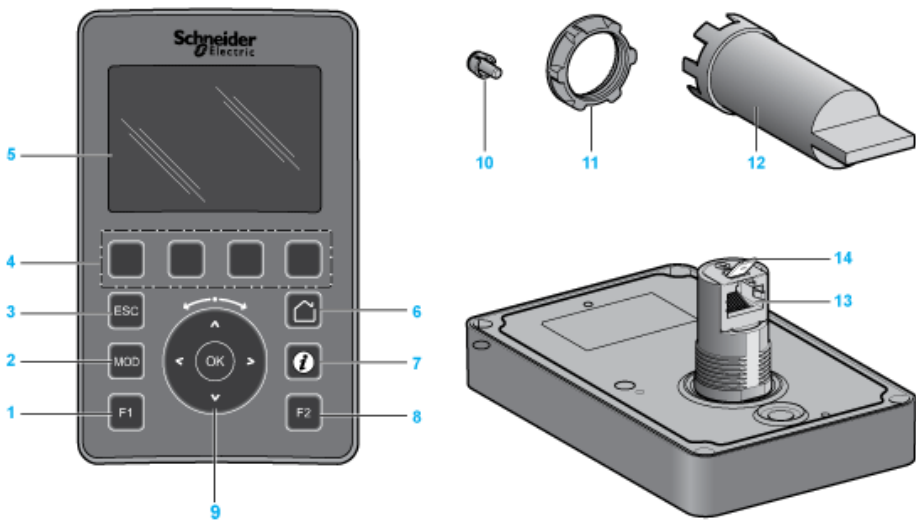
|                            |                                               |
|----------------------------|-----------------------------------------------|
| Mercury free               | Yes                                           |
| RoHS exemption information | <a href="#">Yes</a>                           |
| China RoHS Regulation      | <a href="#">China RoHS declaration</a>        |
| Environmental Disclosure   | <a href="#">Product Environmental Profile</a> |
| Circularity Profile        | <a href="#">End of Life Information</a>       |
| PVC free                   | Yes                                           |

**Contractual warranty**

|          |           |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

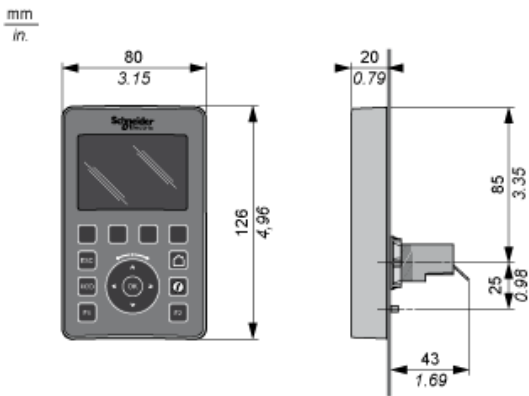
Remote Graphic Display

Overview



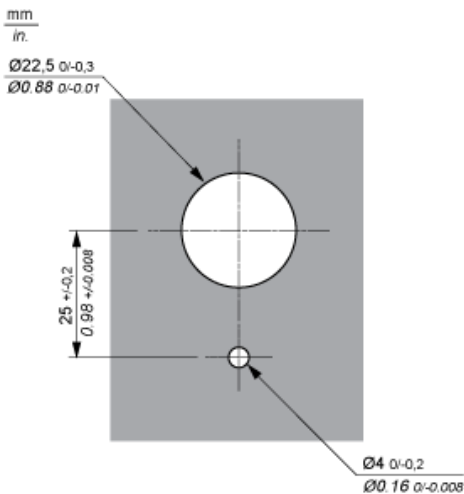
- 1 : F1 key
- 2 : MOD key
- 3 : ESC key
- 4 : R1 to R4 keys
- 5 : Graphic screen
- 6 : Home key
- 7 : Information key
- 8 : F2 key
- 9 : Touch wheel/OK/Arrows
- 10 : Anti-rotation tee
- 11 : Installation nut
- 12 : Socket wrench (ZB5AZ905)
- 13 : RJ45 serial line (RS-485)
- 14 : Connector for functional ground (earth)

Dimensions



Mounting and Clearances

Mounting Hole Layout



Minimum Clearances

