



Display, 80mm, 132x64pixels, monochrome, IP65\_x, with Eaton logotype



**Part no.** MFD-80  
**Catalog No.** 265250  
**EL-Nummer (Norway)** 4519700

### Delivery program

|                      |  |  |  |
|----------------------|--|--|--|
| Product range        |  |  | Multi-function-display MFD-Titan   |
| Accessories          |  |  | Remote text display  |
|                      |  |  | monochrome display 132 x 64 pixels with switchable backlight<br>removable Titan front frame<br>Custom laser inscriptions possible with MFD-COMBINATION (article no. 2010801) product |
| Display              |  |  | with display, without keypad   |
| Eaton logotype       |  |  | with Eaton company logotype  |
| Degree of Protection |  |  | IP65   |

### Technical data

#### General

|                        |   |    |   |
|------------------------|---|----|---|
| Standards              |   |    | EN 61000-6-1/-2/-3/-4, IEC 60068-2-6, IEC 60068-2-27  |
| Dimensions (W x H x D) |   | mm | 86.5 x 86.5 x 21.5 (with actuators) 86.5 x 86.5 x 20 (without actuators)  |
| Weight                 |   | kg | 0.13  |
| Mounting               |   |    | 2 x 22.5 mm, display fixed with 2 fixing rings.<br>Wall thickness:<br>without top-hat rail (CPU) 1 - 6 mm<br>with top-hat rail 1 - 4 mm |
| Power loss             | P | W  | 0   |

#### Climatic environmental conditions

|   |  |     |   |
|---|--|-----|---|
| Operating ambient temperature                         |  | °C  | -25 to 55, cold as per IEC 60068-2-1, heat as per IEC 60068-2-2                     |
| Condensation  |  |     | Take appropriate measures to prevent condensation                                   |
| LCD display (clearly legible)                         |  | °C  | -5 - 50 - (-10 to 0 when background lighting is switched on (continuous operation)) |
| Storage   |  | °C  | - 40 - 70   |
| Relative humidity, non-condensing (IEC/EN 60068-2-30) |  | %   | 5 - 95  |
| Air pressure (operation)                              |  | hPa | 795 - 1080  |

#### Ambient conditions, mechanical

|  |             |         |                        |
|--|-------------|---------|------------------------|
| Protection type (IEC/EN 60529, EN50178, VBG 4)                             |             |         | IP65                   |
| Vibrations (IEC/EN 60068-2-6)  |             | Hz      |                        |
| Constant amplitude 0.15 mm   |             | Hz      | 10 - 57                |
| Constant acceleration 2 g  |             | Hz      | 57 - 150               |
| Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms |             | Impacts | 18                     |
| Drop to IEC/EN 60068-2-31  | Drop height | mm      | 50                     |
| Free fall, packaged (IEC/EN 60068-2-32)                                    |             | m       | 1                      |
| Mounting position  |             |         | Vertical or horizontal |

#### Electromagnetic compatibility (EMC)

|   |  |     |                                    |
|---|--|-----|------------------------------------|
| Electrostatic discharge (IEC/EN 61000-4-2, Level 3, ESD)      |  | kV  |                                    |
| Air discharge   |  | kV  | 8                                  |
| Contact discharge   |  | kV  | 6                                  |
| Electromagnetic fields (RFI) to IEC EN 61000-4-3              |  | V/m | 10                                 |
| Radio interference suppression                                |  |     | EN 55011 Class B, EN 55022 Class B |
| Burst Impulse (IEC/EN 61000-4-4, Level 3)                     |  |     |                                    |
| Supply cable  |  | kV  | 2                                  |
| Signal lines  |  | kV  | 2                                  |
| Immunity to line-conducted interference to (IEC/EN 61000-4-6) |  | V   | 10                                 |

#### Insulation resistance

|   |  |  |                                      |
|---|--|--|--------------------------------------|
| Clearance in air and creepage distances |  |  | EN 50178, UL 508, CSA C22.2, No. 142 |
| Insulation resistance                   |  |  | EN 50178                             |

## Design verification as per IEC/EN 61439

| Technical data for design verification   |                 |    |  |
|--|-----------------|----|--|
| Static heat dissipation, non-current-dependent   | P <sub>vs</sub> | W  | 0  |
| Operating ambient temperature min.   |                 | °C | -25  |
| Operating ambient temperature max.   |                 | °C | 55   |
| IEC/EN 61439 design verification   |                 |    |  |
| 10.2 Strength of materials and parts   |                 |    |  |
| 10.2.2 Corrosion resistance  |                 |    | Meets the product standard's requirements.   |
| 10.2.3.1 Verification of thermal stability of enclosures   |                 |    | Meets the product standard's requirements.   |
| 10.2.3.2 Verification of resistance of insulating materials to normal heat   |                 |    | Meets the product standard's requirements.   |
| 10.2.3.3 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects |                 |    | Meets the product standard's requirements.   |
| 10.2.4 Resistance to ultra-violet (UV) radiation   |                 |    | Please enquire   |
| 10.2.5 Lifting   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.6 Mechanical impact   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.2.7 Inscriptions  |                 |    | Meets the product standard's requirements.   |
| 10.3 Degree of protection of ASSEMBLIES  |                 |    | Meets the product standard's requirements.   |
| 10.4 Clearances and creepage distances   |                 |    | Meets the product standard's requirements.   |
| 10.5 Protection against electric shock   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.6 Incorporation of switching devices and components   |                 |    | Does not apply, since the entire switchgear needs to be evaluated.   |
| 10.7 Internal electrical circuits and connections  |                 |    | Is the panel builder's responsibility.   |
| 10.8 Connections for external conductors   |                 |    | Is the panel builder's responsibility.   |
| 10.9 Insulation properties   |                 |    |  |
| 10.9.2 Power-frequency electric strength   |                 |    | Is the panel builder's responsibility.   |
| 10.9.3 Impulse withstand voltage   |                 |    | Is the panel builder's responsibility.   |
| 10.9.4 Testing of enclosures made of insulating material   |                 |    | Is the panel builder's responsibility.   |
| 10.10 Temperature rise   |                 |    | The panel builder is responsible for the temperature rise calculation. Eaton will provide heat dissipation data for the devices. |
| 10.11 Short-circuit rating   |                 |    | Is the panel builder's responsibility.   |
| 10.12 Electromagnetic compatibility  |                 |    | Is the panel builder's responsibility.   |
| 10.13 Mechanical function  |                 |    | The device meets the requirements, provided the information in the instruction leaflet (IL) is observed.                         |

## Technical data ETIM 7.0

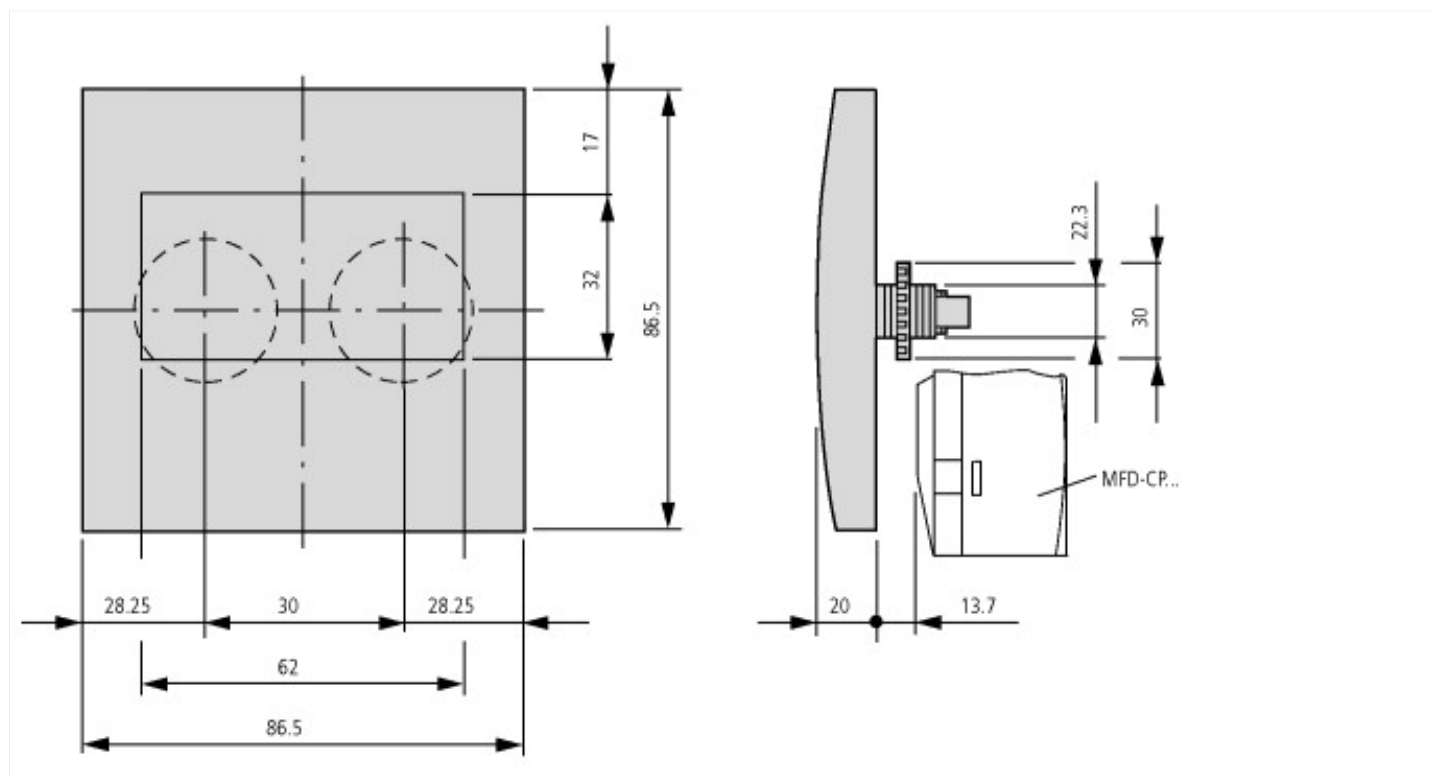
| PLC's (EG000024) / Graphic panel (EC001412)  |  |   |             |
|--|--|---|-------------|
| Electric engineering, automation, process control engineering / Display and control component / Panel (HMI) / Graphic panel (HMI) (ecl@ss10.0.1-27-33-02-01 [AFX016003]) |  |   |             |
| Supply voltage AC 50 Hz  |  | V | 0 - 0       |
| Supply voltage AC 60 Hz  |  | V | 0 - 0       |
| Supply voltage DC  |  | V | 20.4 - 28.8 |
| Voltage type of supply voltage   |  |   | DC          |
| Number of HW-interfaces industrial Ethernet  |  |   | 0           |
| Number of interfaces PROFINET  |  |   | 0           |
| Number of HW-interfaces RS-232   |  |   | 0           |
| Number of HW-interfaces RS-422   |  |   | 0           |
| Number of HW-interfaces RS-485   |  |   | 0           |
| Number of HW-interfaces serial TTY   |  |   | 0           |
| Number of HW-interfaces USB  |  |   | 0           |
| Number of HW-interfaces parallel   |  |   | 0           |
| Number of HW-interfaces Wireless   |  |   | 0           |
| Number of HW-interfaces other  |  |   | 1           |
| With SW interfaces   |  |   | No          |
| Supporting protocol for TCP/IP   |  |   | No          |
| Supporting protocol for PROFIBUS   |  |   | No          |
| Supporting protocol for CAN  |  |   | No          |
| Supporting protocol for INTERBUS   |  |   | No          |
| Supporting protocol for ASI  |  |   | No          |

|   |       |        |
|---|-------|--------|
| Supporting protocol for KNX                         |       | No     |
| Supporting protocol for MODBUS                      |       | No     |
| Supporting protocol for Data-Highway                |       | No     |
| Supporting protocol for DeviceNet                   |       | No     |
| Supporting protocol for SUCONET                     |       | No     |
| Supporting protocol for LON                         |       | No     |
| Supporting protocol for PROFINET IO                 |       | No     |
| Supporting protocol for PROFINET CBA                |       | No     |
| Supporting protocol for SERCOS                      |       | No     |
| Supporting protocol for Foundation Fieldbus         |       | No     |
| Supporting protocol for EtherNet/IP                 |       | No     |
| Supporting protocol for AS-Interface Safety at Work |       | No     |
| Supporting protocol for DeviceNet Safety            |       | No     |
| Supporting protocol for INTERBUS-Safety             |       | No     |
| Supporting protocol for PROFIsafe                   |       | No     |
| Supporting protocol for SafetyBUS p                 |       | No     |
| Supporting protocol for other bus systems           |       | Yes    |
| Radio standard Bluetooth                            |       | No     |
| Radio standard WLAN 802.11                          |       | No     |
| Radio standard GPRS                                 |       | No     |
| Radio standard GSM                                  |       | No     |
| Radio standard UMTS                                 |       | No     |
| IO link master                                      |       | No     |
| Type of display                                     |       | LCD    |
| With colour display                                 |       | No     |
| Number of colours of the display                    |       | 2      |
| Number of grey-scales/blue-scales of display        |       | 2      |
| Screen diagonal                                     | inch  | 2.75   |
| Number of pixels, horizontal                        |       | 132    |
| Number of pixels, vertical                          |       | 64     |
| Useful project memory/user memory                   | kByte | 0      |
| With numeric keyboard                               |       | No     |
| With alpha numeric keyboard                         |       | No     |
| Number of function buttons, programmable            |       | 9      |
| Number of buttons with LED                          |       | 0      |
| Number of system buttons                            |       | 0      |
| Touch technology                                    |       | None   |
| With message indication                             |       | Yes    |
| With message system (incl. buffer and confirmation) |       | No     |
| Process value representation (output) possible      |       | Yes    |
| Process default value (input) possible              |       | Yes    |
| With recipes  |       | No     |
| Number of password levels                           |       | 0      |
| With printer output                                 |       | No     |
| Number of online languages                          |       | 256    |
| Additional software components, loadable            |       | Yes    |
| Degree of protection (IP), front side               |       | IP65   |
| Degree of protection (NEMA), front side             |       | 4X     |
| Operation temperature                               | °C    | 5 - 55 |
| Rail mounting possible                              |       | Yes    |
| Wall mounting/direct mounting                       |       | No     |
| Suitable for safety functions                       |       | No     |
| Width of the front                                  | mm    | 86.5   |
| Height of the front                                 | mm    | 86.5   |
| Built-in depth                                      | mm    | 43     |

## Approvals

|                             |  |   |
|-----------------------------|--|---|
| Product Standards           |  | IEC/EN see Technical Data; UL 508; CSA C22.2 No. 142-M1987; CSA C22.2 No. 213-M1987; CE marking |
| UL File No.                 |  | E135462   |
| UL Category Control No.     |  | NRAQ  |
| CSA File No.                |  | 012528  |
| CSA Class No.               |  | 2252-01 + 2258-02   |
| North America Certification |  | UL listed, CSA certified  |
| Degree of Protection        |  | IEC: IP65, UL/CSA Type 4X   |

## Dimensions



## Assets (links)

### Declaration of CE Conformity

00002594

### Instruction Leaflets

IL05013014Z2018\_02

### Manuals

MN05002001Z\_EN (English)

MN05013011Z\_EN (English)

## Additional product information (links)

### Instruction leaflet "Multi-function display, easy control relays" IL05013014Z (AWA2528-2019)

Instruction leaflet "Multi-function display, easy control relays" IL05013014Z (AWA2528-2019) [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05013014Z2018\\_02.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013014Z2018_02.pdf)

### Instruction leaflet "protective diaphragm for multi-function display" IL05013017Z (AWA2528-2174)

Instruction leaflet "protective diaphragm for multi-function display" IL05013017Z (AWA2528-2174) [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05013017Z2010\\_11.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013017Z2010_11.pdf)

### Instruction leaflet "power supply unit, communication"

Instruction leaflet "power supply unit, communication" [ftp://ftp.moeller.net/DOCUMENTATION/AWA\\_INSTRUCTIONS/IL05013018Z2018\\_02.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013018Z2018_02.pdf)

### Manual "MFD-Titan multi-function display" MN05002001Z (AWB2528-1480)

Handbuch „Multifunktions-Display MFD-Titan“ MN05002001Z (AWB2528-1480) - Deutsch [ftp://ftp.moeller.net/DOCUMENTATION/AWB\\_MANUALS/MN05002001Z\\_DE.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002001Z_DE.pdf)

Manual "MFD-Titan multi-function display" MN05002001Z (AWB2528-1480) - English [ftp://ftp.moeller.net/DOCUMENTATION/AWB\\_MANUALS/MN05002001Z\\_EN.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05002001Z_EN.pdf)

### Manual "MFD-CP4, power supply unit/communication module" MN05013011Z (AWB2528-1548)

Handbuch „MFD-CP4, Stromversorgungseinheit/ [ftp://ftp.moeller.net/DOCUMENTATION/AWB\\_MANUALS/MN05013011Z\\_DE.pdf](ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05013011Z_DE.pdf)

|  |   |
|--|---|
| Kommunikationsmodul" MN05013011Z<br>(AWB2528-1548) - Deutsch   |   |
| Manual "MFD-CP4, power supply unit/<br>communication module" MN05013011Z<br>(AWB2528-1548) - English | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05013011Z_EN.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05013011Z_EN.pdf</a>                   |
| f1=1454&f2=1179;Labeleditor  | <a href="http://applications.eaton.eu/sdlc?LX=11&amp;f1=1454&amp;f2=1179;Labeleditor">http://applications.eaton.eu/sdlc?LX=11&amp;f1=1454&amp;f2=1179;Labeleditor</a> |
| Product overview (WEB)   | <a href="http://www.eaton.eu/mfd">http://www.eaton.eu/mfd</a>   |