



**Starter kit, EASY822-DC-TC, EASY400-POW, EASY800-USB-CAB and easySoft-Pro**

**Part no. EASY-BOX-822-DC-USB**  
**Catalog No. 116561**

## Delivery program

|                             |  |   |                         |
|-----------------------------|--|---|-------------------------|
| Product range               |  |   | Control relay easyRelay |
| Basic function              |  |   | Starter kit             |
| Heat dissipation at 24 V DC |  | W | 3.5                     |

## Technical data

### General

|           |  |  |  |
|-----------|--|--|--|
| Standards |  |  | EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27                                |
| Approvals |  |  | CSA<br>UL<br>EAC   |
| Mounting  |  |  | Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories) |

### Terminal capacities

|                       |  |                 |                       |
|-----------------------|--|-----------------|-----------------------|
| Solid                 |  | mm <sup>2</sup> | 0.2/4 (AWG 22 - 12)   |
| Flexible with ferrule |  | mm <sup>2</sup> | 0.2/2.5 (AWG 22 - 12) |

### Climatic environmental conditions

|                               |  |     |   |
|-------------------------------|--|-----|---|
| Operating ambient temperature |  | °C  | In accordance with IEC 60068-2-1, -25 - +55                 |
| Condensation                  |  |     | Take appropriate measures to prevent condensation           |
| relative humidity             |  | %   | in accordance with IEC 60068-2-30, IEC 60068-2-78<br>5 - 95 |
| Air pressure (operation)      |  | hPa | 795 - 1080  |

### Ambient conditions, mechanical

|  |             |         |  |
|--|-------------|---------|--|
| Protection type (IEC/EN 60529, EN50178, VBG 4)                             |             |         | IP20   |
| Vibrations   |             | Hz      | In accordance with IEC 60068-2-6<br>constant amplitude 0.15 mm: 10 - 57<br>constant acceleration 2 g: 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)

|   |  |    |                               |
|---|--|----|-------------------------------|
| Overvoltage category/pollution degree                         |  |    | III/2                         |
| Electrostatic discharge (ESD)                                 |  |    |                               |
| applied standard  |  |    | according to IEC EN 61000-4-2 |
| Air discharge   |  | kV | 8                             |
| Contact discharge   |  | kV | 6                             |
| 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                             |

### Power supply

|                             |  |   |     |
|-----------------------------|--|---|-----|
| Heat dissipation at 24 V DC |  | W | 3.5 |
|-----------------------------|--|---|-----|

## Design verification as per IEC/EN 61439

|  |                  |   |     |
|--|------------------|---|-----|
| Technical data for design verification                   |                  |   |     |
| Rated operational current for specified heat dissipation | I <sub>n</sub>   | A | 0   |
| Heat dissipation per pole, current-dependent             | P <sub>vid</sub> | W | 0   |
| Equipment heat dissipation, current-dependent            | P <sub>vid</sub> | W | 0   |
| Static heat dissipation, non-current-dependent           | P <sub>vs</sub>  | W | 3.5 |

|  |                   |    |  |
|--|-------------------|----|--|
| Heat dissipation capacity  | P <sub>diss</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   |                   |    | Meets the product standard's requirements.   |
| 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) / Logic module (EC001417)

Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / Logic module (ecl@ss10.0.1-27-24-22-16 [AKE539014])

|   |   |             |
|---|---|-------------|
| 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          |
| Switching current                           | A | 0.5         |
| Number of analogue inputs                   |   | 4           |
| Number of analogue outputs                  |   | 1           |
| Number of digital inputs                    |   | 12          |
| Number of digital outputs                   |   | 8           |
| With relay output                           |   | No          |
| 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               |   | 3           |
| With optical interface                      |   | 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    |
| Redundancy  |    | No    |
| With display  |    | Yes   |
| Degree of protection (IP)                           |    | IP20  |
| Basic device  |    | Yes   |
| Expandable  |    | Yes   |
| Expansion device                                    |    | No    |
| With timer  |    | Yes   |
| Rail mounting possible                              |    | Yes   |
| Wall mounting/direct mounting                       |    | Yes   |
| Front build in possible                             |    | No    |
| Rack-assembly possible                              |    | No    |
| Suitable for safety functions                       |    | No    |
| Category according to EN 954-1                      |    | None  |
| SIL according to IEC 61508                          |    | None  |
| Performance level acc. EN ISO 13849-1               |    | None  |
| Appendant operation agent (Ex ia)                   |    | No    |
| Appendant operation agent (Ex ib)                   |    | No    |
| Explosion safety category for gas                   |    | None  |
| Explosion safety category for dust                  |    | None  |
| Width   | mm | 107.5 |
| Height  | mm | 90    |
| Depth   | mm | 72    |

## Additional product information (links)

### Instruction leaflet "easy control relays" IL05013012Z (AWA2528-1979)

|  |   |
|--|---|
| Instruction leaflet "easy control relays" IL05013012Z (AWA2528-1979) | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2010_11.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2010_11.pdf</a> |
| Instruction leaflet "easy control relays" IL05013012Z (AWA2528-1979) | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2018_02.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013012Z2018_02.pdf</a> |

**Manual "easy800 control relays" MN04902001Z (AWB2528-1423)**

|   |   |
|---|---|
| Handbuch „Steuerrelais easy800“<br>MN04902001Z (AWB2528-1423) - Deutsch | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf</a> |
| Manual "easy800 control relays" MN04902001Z<br>(AWB2528-1423) - English | <a href="ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf">ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf</a> |
| Product overview (WEB)  | <a href="http://www.eaton.eu/easy">http://www.eaton.eu/easy</a>   |