



Control relay, 24 V DC, SmartWire-DT

Part no. **EASY802-DC-SWD**
 Article no. **152901**
 Catalog No. **EASY802-DC-SWD**



Delivery program

| | | | |
|---|--|--|--|
| Product range | | | Control relays easyRelay |
| Product range | | | SmartWire-DT coordinators |
| Basic function | | | easy800 with SmartWire-DT |
| Description | | | Combines the functionality of an easy800 with direct connection to SmartWire-DT communication system Up to 99 SmartWire-DT modules with a total of up to 166 digital inputs/outputs and/or up to 128 analog inputs/outputs can be connected via a SmartWire-DT line |
| Inputs | | | |
| SmartWire-DT | | | 83 |
| Outputs | | | |
| SmartWire-DT | | | 83 |
| Additional features | | | |
| Display | | | without display, without keypad |
| Real time clock | | | ✓ |
| Expansions | | | SmartWire-DT |
| Supply voltage | | | 24 V DC |
| Software | | | EASY-SOFT-PRO |
| Notes | | | |
| Depending on the hardware, such as high-speed counter, PWM output, integrated analog input/output are not supported | | | |

Technical data

| | | | |
|------------------------|--|----|--|
| General | | | |
| Standards | | | EN 55011, EN 55022, IEC/EN 61000-4, IEC 60068-2-6, IEC 60068-2-27 |
| Dimensions (W x H x D) | | mm | 35 x 110 x 125.5 (2 PE) |
| Weight | | kg | 0.16 |
| Mounting | | | Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories) |

Terminal capacities

| | | | |
|-----------------------|--|-----------------|-----------------------|
| Solid | | mm ² | 0.2/1.5 (AWG 24 - 16) |
| Flexible with ferrule | | mm ² | 0.2/1.5 (AWG 24 - 16) |

Climatic environmental conditions

| | | | |
|-------------------------------|---|-----|---|
| Operating ambient temperature | | °C | In accordance with IEC 60068-2-1, -25 - +55 |
| Condensation | | | Take appropriate measures to prevent condensation |
| Storage | 9 | °C | In accordance with IEC 60068-2-1, -2, -14 -40 - +70 |
| relative humidity | | % | in accordance with IEC 60068-2-30, IEC 60068-2-78 5 - 95 |
| Air pressure (operation) | | hPa | 795 - 1080 |

Ambient conditions, mechanical

| | | | |
|--|--------------|---------|--|
| Protection type (IEC/EN 60529, EN50178, VBG 4) | | | IP20 |
| Vibrations | 3,5 mm / 1 g | Hz | In accordance with IEC 60068-2-6 constant amplitude 0.15 mm: 10 - 57 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 | 0.3 |
| Mounting position | | | Vertical or horizontal |

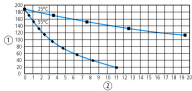
Electromagnetic compatibility (EMC)

| | | | |
|---|--|-----|---|
| 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 |
| Electromagnetic fields (RFI) to IEC EN 61000-4-3 | | V/m | 0.8 - 1.0 GHz: 10 1.4 - 2 GHz: 3 2.0 - 2.7 GHz: 1 |
| Radio interference suppression | | | EN 55011 Class B |
| Burst | | kV | according to IEC/EN 61000-4-4 Supply cables: 2 Signal cables: 2 SWD lines: 2 |
| power pulses (Surge) | | | according to IEC/EN 61000-4-5 1 kV (supply cables, symmetrical) |
| 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 |

Back-up of real-time clock

| | | | |
|---------------------------------------|--|-------|--|
| Back-up of real-time clock | | |  <p>① Backup time (hours) with fully charged double layer capacitor ② Service life (years)</p> |
| Accuracy of real-time clock to inputs | | s/day | typ. ± 2 (± 0.2 h/Year) depending on ambient air temperature fluctuations of up to ± 5 s/day (± 0.5 h/year) are possible |

Repetition accuracy of timing relays

| | | | |
|---------------------------------------|--|-----|------------|
| Accuracy of timing relays (of values) | | % | ± 0.02 |
| Resolution | | | |
| Range "S" | | ms | 5 |
| Range "M:S" | | s | 1 |
| Range "H:M" | | min | 1 |

Retentive memory

| | | | |
|--------------------------------------|--|--|-------------------------------|
| Write cycles of the retentive memory | | | 10^{14} (read/write cycles) |
|--------------------------------------|--|--|-------------------------------|

Power supply

| | | | |
|---------------------------|-------|----|--|
| Rated operational voltage | U_e | V | 24 DC (-15/+20%) |
| Permissible range | U_e | | 20.4 - 28.8 V DC |
| Residual ripple | | % | ≤ 5 |
| Siemens MPI, (optional) | | | yes |
| Input current | | | normally 500 mA at U_e |
| Inrush current and length | | A | 12.5 for 6 ms |
| Voltage dips | | ms | \leq In accordance with IEC 61131-2 ≤ 10 |
| Fuse | | A | ≤ 3 A (T) (e.g FAZ C3) |
| Power loss | P | W | Normally 1 |
| Note on heat dissipation | | | Current consumption at 24 V DC |

Supply voltage U_{Aux}

| | | | |
|--------------------------------------|-----------|---|--------------------|
| Rated operational voltage | U_{Aux} | V | 24 V DC (-15/+20%) |
| Permissible range | | | 20.4 - 28.8 V DC |
| Output voltage SWD-OUT | | | $U_e - 0.3$ V |
| Siemens MPI, (optional) | | | yes |
| Residual ripple on the input voltage | | % | ≤ 5 |
| Max. current | I_{max} | A | 3 (IEC) 2 (UL) |
| Short-circuit rating | | | no |

| | | | |
|---------------------|---|---|---|
| Heat dissipation | | W | Normally 1 W at 24 V DC |
| Potential isolation | | | from power supply POW: yes to COM interface: yes to SmartWire-DT: yes |
| Power loss | P | W | 1 |

SmartWire-DT supply voltage

| | | | |
|-------------------------|-----------|---|---|
| Rated operating voltage | U_e | V | 14.5 ± 3 % |
| max. current | I_{max} | A | 0.4 |
| Short-circuit rating | | | Yes |
| Potential isolation | | | from power supply POW: no to COM interface: yes to AUX: yes |

SmartWire-DT network

| | | | |
|-------------------------------|--|-----|--|
| Station type | | | Master |
| Number of SmartWire-DT slaves | | | Max. 99 |
| Baud Rates | | kBd | 125/250 |
| Address allocation | | | Automatically (via Configuration button) |
| Status indication | | LED | SWD-LED: orange/green/red Config. LED: green/red |
| Connections | | | Plug, 8-pole |
| Plug connectors | | | Blade terminal SWD4-8MF2 |
| Bus termination | | | Integrated in the device SmartWire-DT line end with SWD4-RC8-10 |

Design verification as per IEC/EN 61439

| | | | |
|--|------------|----|--|
| Technical data for design verification | | | |
| Rated operational current for specified heat dissipation | I_n | A | 0 |
| Heat dissipation per pole, current-dependent | P_{vid} | W | 0 |
| Equipment heat dissipation, current-dependent | P_{vid} | W | 0 |
| Static heat dissipation, non-current-dependent | P_{vs} | W | 5 |
| Heat dissipation capacity | P_{diss} | 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 | | | |
| 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. |

Technical data ETIM 6.0

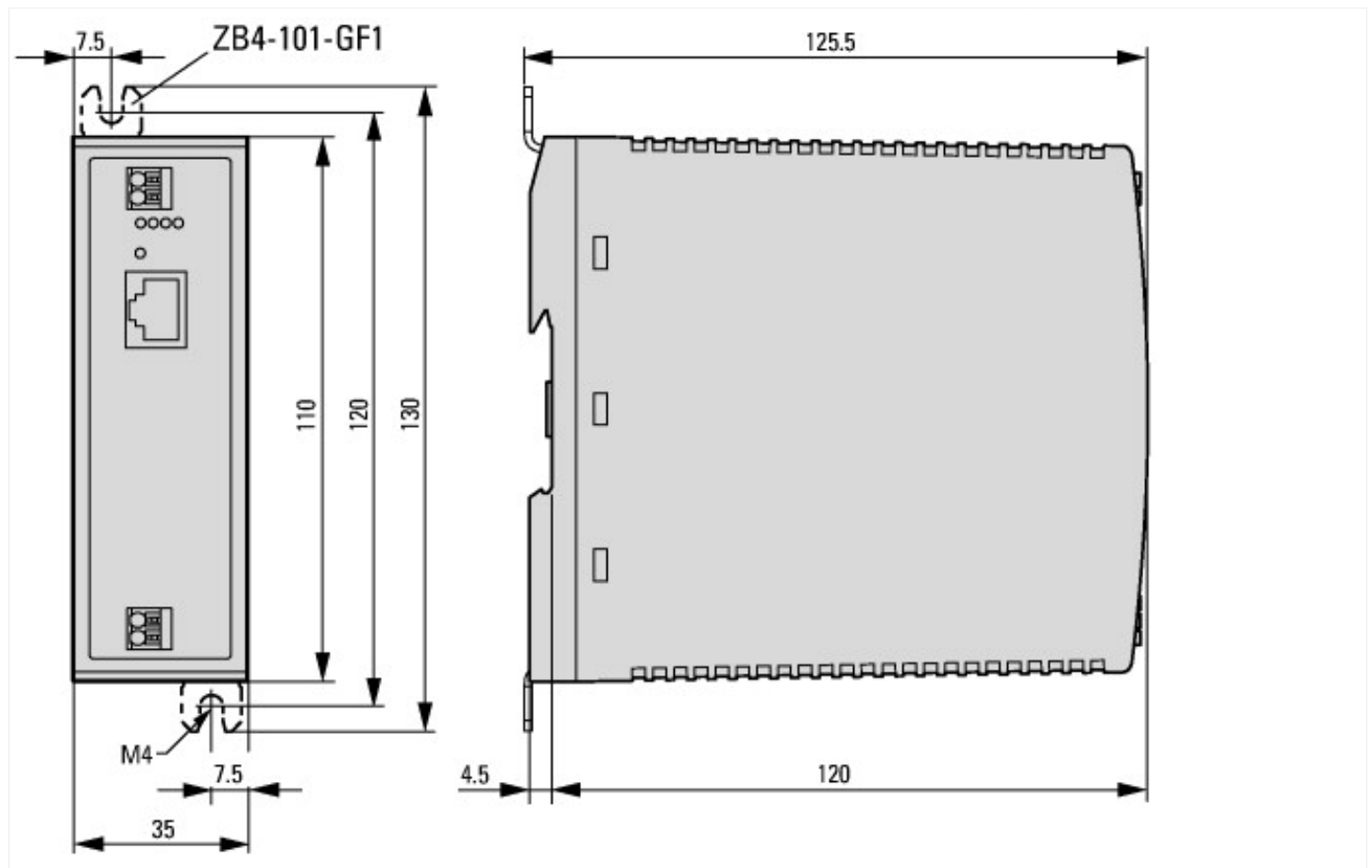
| | | |
|---|---|-------------|
| PLC's (EG000024) / Logic module (EC001417) | | |
| Electric engineering, automation, process control engineering / Control / Programmable logic control (SPS) / Logic module (ecl@ss8.1-27-24-22-16 [AKE539011]) | | |
| Supply voltage AC 50 Hz | V | 0 - 0 |
| Supply voltage AC 60 Hz | V | 0 - 0 |
| Supply voltage DC | V | 20.4 - 28.8 |
| Voltage type of supply voltage | | DC |
| Switching current | A | 0 |
| Number of analogue inputs | | 0 |
| Number of analogue outputs | | 0 |
| Number of digital inputs | | 0 |
| Number of digital outputs | | 0 |
| With relay output | | No |
| Number of HW-interfaces industrial Ethernet | | 0 |
| Number of HW-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 | | | No |
| 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 | | | |
| SIL according to IEC 61508 | | | None |
| Performance level acc. to 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 | 35 |
| Height | | mm | 110 |
| Depth | | mm | 125.5 |

Approvals

| | | | |
|-----------------------------|--|--|---|
| Product Standards | | | IEC/EN see Technical Data; UL508; CSA C22.2 No. 142-M1987 |
| UL File No. | | | E135462 |
| UL Category Control No. | | | NRAQ, NRAQ7 |
| CSA File No. | | | UL report applies to both US and Canada |
| CSA Class No. | | | 2252-01 + 2258-02 |
| North America Certification | | | UL listed, certified by UL for use in Canada |
| Degree of Protection | | | IEC: IP20, UL/CSA Type: - |

Dimensions



Additional product information (links)

IL05013041Z Instruction leaflet easy800-SWD

IL05013041Z Instruction leaflet easy800-SWD ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05013041Z2011_08.pdf

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

MN04902001Z (AWB2528-1423) Steuerrelais easy800 - Deutsch ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_DE.pdf

MN04902001Z (AWB2528-1423) easy800 control relay - English ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN04902001Z_EN.pdf

BR05013001Z-EN, easy Family http://www.moeller.net/binary/w_brochures/br05013001Z-en.pdf