



Gateway, SmartWire-DT, 58 SWD modules at PROFIBUS-DP



Part no. EU5C-SWD-DP
 Catalog No. 116308



EL-Nummer (Norway) 4519723

Delivery program

| | | |
|-------------------|--|---|
| Product range | | SmartWire-DT coordinators |
| Function | | For connection to PROFIBUS-DP field bus |
| Short Description | | Used to connect the SmartWire-DT communication system to industrial field bus systems. Powers SmartWire-DT modules and switchgear |
| Description | | SmartWire-DT gateway for connecting up to 58 SmartWire-DT modules to the field bus and for powering the SmartWire-DT modules and switchgear. The connection to a PROFIBUS-DP is carried out via the 9 pole SUB-D socket as slave. Automatic baud rate detection for rates ranging from 9.6 Kbit/s to 12 Mbit/s. The available address range extends from 1 to 126. The gateway is equipped with a separate serial diagnostics interface (RJ45). |
| Accessories | | Connection of up to 58 SWD slaves |

Technical data

General

| | | |
|-------------------------|----|--|
| Standards | | IEC/EN 61131-2 EN 50178 |
| Approvals | | |
| Approvals | | UL CSA |
| shipping classification | | BV LRS |
| | |   |
| Dimensions (W x H x D) | mm | 35 x 90 x 127 |
| Weight | kg | 0.16 |
| Mounting | | Top-hat rail IEC/EN 60715, 35 mm or screw fixing using fixing brackets ZB4-101-GF1 (accessories) |
| Mounting position | | As required |

Ambient conditions, mechanical

| | | |
|--|----------------|-----------|
| Protection type (IEC/EN 60529, EN50178, VBG 4) | | IP20 |
| Vibrations (IEC/EN 61131-2:2008) | | |
| Constant amplitude 3,5 mm | Hz | 5 - 8.4 |
| Constant acceleration 1 g | Hz | 8.4 - 150 |
| Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms | Impacts | 9 |
| Drop to IEC/EN 60068-2-31 | Drop height mm | 50 |
| Free fall, packaged (IEC/EN 60068-2-32) | m | 0.3 |

Electromagnetic compatibility (EMC)

| | | |
|---|-----|----|
| Overvoltage category | | II |
| Pollution degree | | 2 |
| Electrostatic discharge (IEC/EN 61131-2:2008) | | |
| Air discharge (Level 3) | kV | 8 |
| Contact discharge (Level 2) | kV | 4 |
| Electromagnetic fields (IEC/EN 61131-2:2008) | | |
| 80 - 1000 MHz | V/m | 10 |
| 1.4 - 2 GHz | V/m | 3 |

| | | | |
|---|--|-----|------------------|
| 2 - 2.7 GHz | | V/m | 1 |
| Radio interference suppression | | | EN 55011 Class A |
| Burst (IEC/EN 61131-2:2008, Level 3) | | | |
| Supply cable | | kV | 2 |
| Fieldbus cable | | kV | 1 |
| SmartWire-DT cable | | kV | 1 |
| Surge (IEC/EN 61131-2:2008, Level 1) | | | |
| Supply cable | | | 0.5 kV |
| Radiated RFI (IEC/EN 61131-2:2008, Level 3) | | V | 10 |

Operating conditions

| | | | |
|---|---|-----|--------------------------------|
| Climatic environmental conditions | | | |
| Climatic proofing | | | In accordance with IEC 60068-2 |
| Ambient temperature | | | |
| Operation | θ | °C | -25 - +55 |
| Storage | θ | °C | -40 - +70 |
| Atmospheric conditions | | | |
| Relative humidity, non-condensing (IEC/EN 60068-2-30) | | % | 5 - 95 |
| Air pressure (operation) | | hPa | 795 - 1080 |

Supply voltage U_{Aux}

| | | | |
|---|------------------|---|-----------------------------|
| Rated operational voltage | U _{Aux} | V | 24 V DC (-15/+20%) |
| Residual ripple on the input voltage | | % | ≤ 5 |
| Protection against polarity reversal | | | Yes |
| Max. current | I _{max} | A | 3 |
| Short-circuit rating | | | no, external fuse FAZ Z3 |
| Power loss | P | W | Normally 1 |
| Potential isolation | | | No |
| Rated operating voltage of 24-V-DC slaves | | V | typ. U _{Aux} - 0.2 |

Supply voltage U_{Pow}

| | | | |
|---|------------------|-----|--------------------|
| Supply voltage | U _{Pow} | V | 24 V DC (-15/+20%) |
| Input voltage ripple | | % | ≤ 5 |
| Protection against polarity reversal | | | yes |
| Rated current | I | A | 0.7 |
| Overload proof | | | yes |
| Inrush current and duration | | A | 12.5 A/6 ms |
| Heat dissipation at 24 V DC | | W | 3.8 |
| Potential isolation between U _{Pow} and 15 V SmartWire-DT supply voltage | | | No |
| Bridging voltage dips | | ms | 10 |
| Repetition rate | | s | 1 |
| Status indication | | LED | yes |

SmartWire-DT supply voltage

| | | | |
|-------------------------|------------------|---|------------|
| Rated operating voltage | U _e | V | 14,5 ± 3 % |
| max. current | I _{max} | A | 0.7 |
| Short-circuit rating | | | Yes |

Connection supply voltages

| | | | |
|--------------------------|--|-----------------|-------------------|
| Connection type | | | Push in terminals |
| Solid | | mm ² | 0.2 - 1.5 |
| Flexible with ferrule | | mm ² | 0.25 - 1.5 |
| UL/CSA solid or stranded | | AWG | 24 - 16 |

SmartWire-DT network

| | | | |
|-------------------------------|--|-----|---|
| Station type | | | SmartWire-DT master |
| Number of SmartWire-DT slaves | | | 58 |
| Baud Rates | | kBd | 125 250 |
| Status indication | | | SmartWire-DT master LED: red/green Configurations LED: red/green |
| Connections | | | Plug, 8-pole |

| | | | |
|---------------------------------|--------------|------|-------------------------------------|
| Plug connector | | | Blade terminal SWD4-8MF2 |
| Fieldbus interface | | | |
| Module type | | | PROFIBUS DP slave |
| Protocol | | | PROFIBUS-DP |
| Input data, max. | | Byte | 240 |
| Output data, max. | | Byte | 240 |
| Baud Rate | | | |
| Baud Rates | | | up to 12 MBit/s |
| Baud rate setting | | | automatic |
| Station address | | | 2 ... 125 |
| Address allocation | | | via DIP switch |
| Status display interface | Multi colour | LED | DP |
| Terminating resistor | | | Switchable via field bus connectors |
| Connection design for field bus | | | 1 x D-SUB socket, 9-pin |
| Potential isolation | | | Yes |

Technical data in sheet catalogue

| | | | |
|--|--|--|---|
| Other technical data (sheet catalogue) | | | Technical data |
| Notes | | | If contactors with a total current consumption > 3 A are connected, a power feeder module EU5C-SWD-PF1/2 has to be used. If SWD modules with a total current consumption > 0.7 A are connected, a power feeder module EU5C-SWD-PF2 has to be used. |

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 | 1 |
| Heat dissipation capacity | P_{diss} | W | 0 |
| Operating ambient temperature min. | | °C | -25 |
| Operating ambient temperature max. | | °C | 55 |
| Degree of Protection | | | IP20 |
| 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 8.0

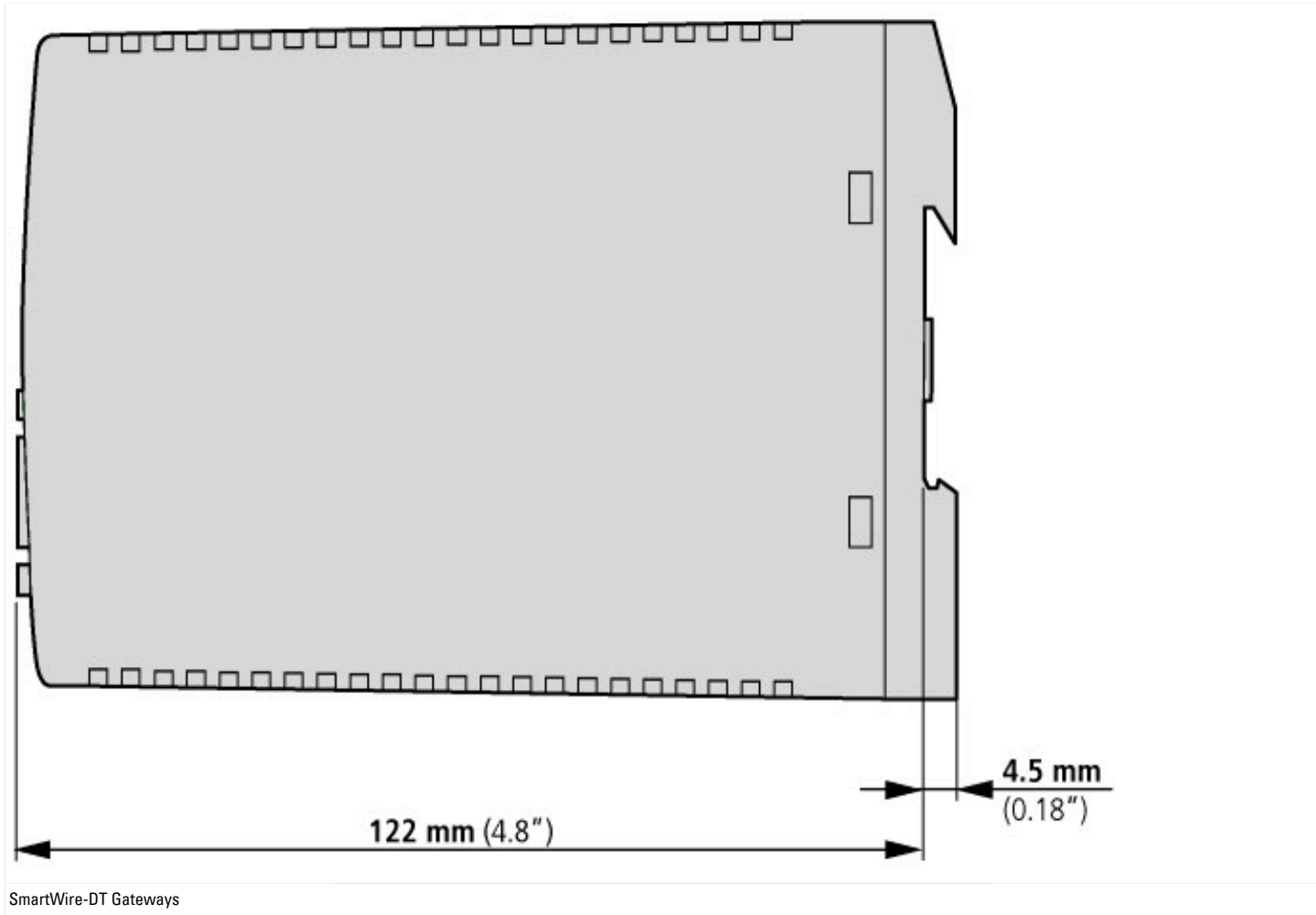
| Programmable logic controllers PLC (EG000024) / Fieldbus, decentr. periphery - communication module (EC001604) | | |
|--|---|-------------|
| Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - communications module (ecl@ss10.0.1-27-24-26-08 [BAA073013]) | | |
| 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 |
| 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 | | Yes |
| Supporting protocol for SUCONET | | No |
| Supporting protocol for LON | | No |
| Supporting protocol for SERCOS | | No |
| Supporting protocol for PROFINET IO | | No |
| Supporting protocol for PROFINET CBA | | 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 | | No |
| Radio standard Bluetooth | | No |
| Radio standard Wi-Fi 802.11 | | No |
| Radio standard GPRS | | No |
| Radio standard eGPRS | | No |
| Radio standard GSM | | No |
| Radio standard LTE | | No |
| Radio standard UMTS | | No |
| IO link master | | No |
| System accessory | | Yes |
| Degree of protection (IP) | | IP20 |
| With potential separation | | No |
| Fieldbus connection over separate bus coupler possible | | No |
| Rail mounting possible | | Yes |
| Wall mounting/direct mounting | | Yes |
| Front built-in possible | | No |
| Rack-assembly possible | | No |
| Suitable for safety functions | | Yes |
| SIL according to IEC 61508 | | None |
| Performance level according 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 |

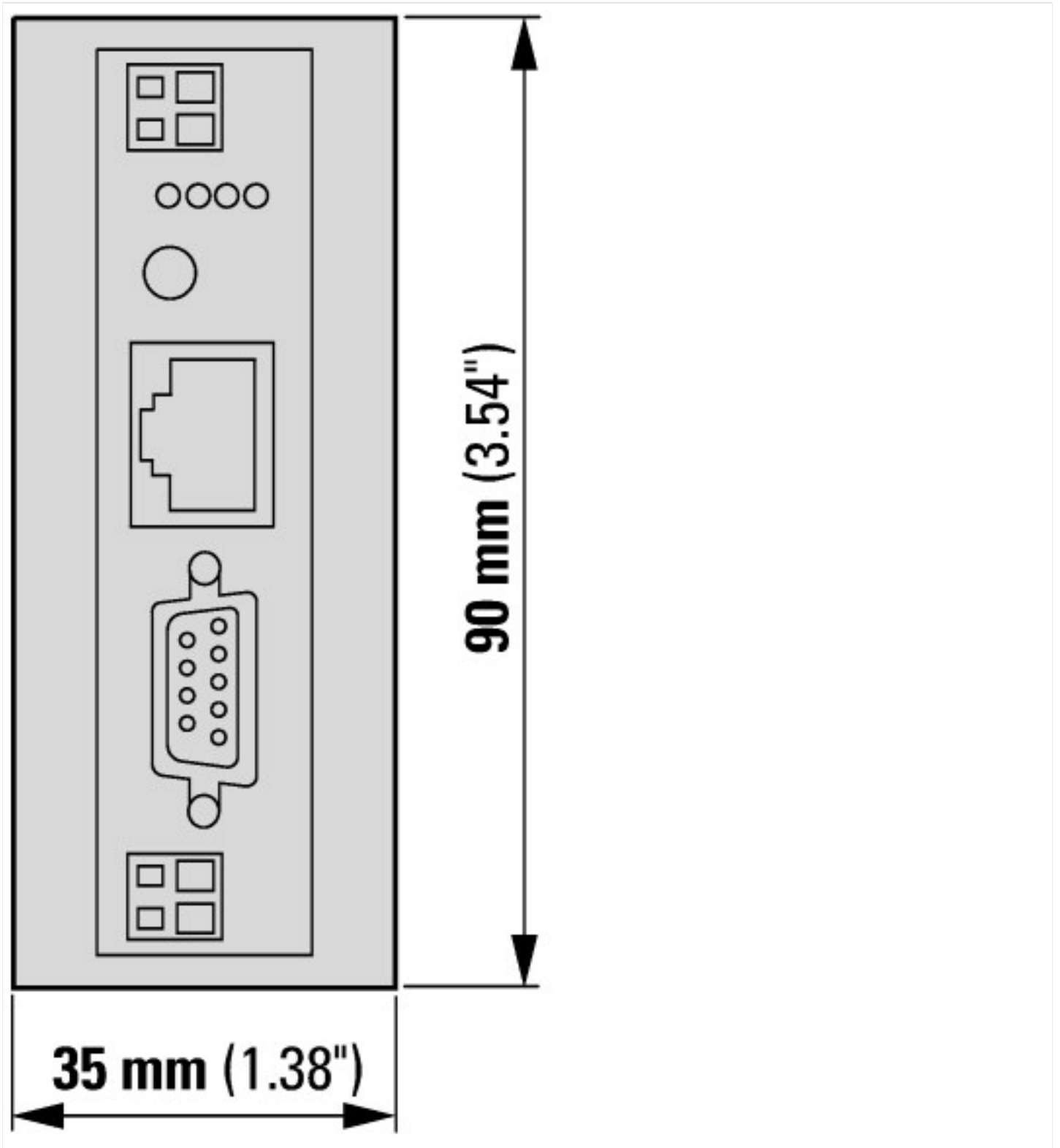
| | | |
|--------|----|-----|
| Width | mm | 35 |
| Height | mm | 90 |
| Depth | mm | 127 |

Approvals

| | | |
|--------------------------------------|--|--------------------------|
| UL File No. | | E29184 |
| UL Category Control No. | | NKCR |
| CSA File No. | | 2324643 |
| CSA Class No. | | 3211-07 |
| North America Certification | | UL listed, CSA certified |
| Specially designed for North America | | No |

Dimensions





Additional product information (links)

| | |
|--|---|
| SmartWire-DT product range catalog | http://ecat.moeller.net/flip-cat/?edition=SWKAT&startpage=13 |
| Technical data | http://ecat.moeller.net/flip-cat/?edition=SWKAT&startpage=40 |
| f1=1457&f2=1181&f3=1530;Download Wizard SWD-ASSIST | http://applications.eaton.eu/sdlc?LX=11&amp |
| Product overview WEB) | http://www.eaton.eu/swd |