

Specifications



Eaton 116307

Eaton EU5C Gateway, SmartWire-DT, 99 SWD modules at CANopen

General specifications

PRODUCT NAME	Eaton EU5C Communication module
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CATALOG NUMBER	116307
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MODEL CODE	EU5C-SWD-CAN
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EAN	4015081160471
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PRODUCT LENGTH/DEPTH	127 mm
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PRODUCT HEIGHT	90 mm
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PRODUCT WIDTH	35 mm
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PRODUCT WEIGHT	0.159 kg
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CERTIFICATIONS	UL EN 50178 IEC/EN 61131-2 CSA File No.: 2324643 UL File No.: E29184 UL Category Control No.: NKCR CSA CSA Class No.: 3211-07
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Powering Business Worldwide

Ambient conditions, mechanical

CONSTANT ACCELERATION	1 g, 8.4 - 150 Hz, according to IEC/EN 61131-2, Vibrations
CONSTANT AMPLITUDE	3,5 mm, 5 - 8.4 Hz, according to IEC/EN 61131-2, Vibrations
DROP AND TOPPLE	50 mm Drop height, Drop to IEC/EN 60068-2-31
HEIGHT OF FALL (IEC/EN 60068-2-32) - MAX	0.3 m
MOUNTING POSITION	As required
SHOCK RESISTANCE	15 g, Mechanical, according to IEC/EN 60068-2-27, Half-sinusoidal shock 11 ms, 9 Impacts

Climatic environmental conditions

AIR PRESSURE	795 - 1080 hPa (operation)
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
CLIMATIC PROOFING	In accordance with IEC 60068-2
OPERATING TEMPERATURE - MAX	55 °C
OPERATING TEMPERATURE - MIN	-25 °C
RELATIVE HUMIDITY	5 - 95 % (non-condensing, IEC/EN 60068-2-30)

Communication

ADDRESSING	Address set automatically Address range: 1 - 32
CONNECTION	SmartWire-DT blade terminal SWD4-8MF2 The connection to CANopen® is carried out via the 9 pole SUB-D plug as slave. Used to connect the SmartWire-DT communication system to industrial field bus systems. Powers SmartWire-DT modules and switchgear SmartWire-DT gateway for connecting up to 99 SmartWire-DT modules to the field bus and for powering the SmartWire-DT modules and switchgear.
CONNECTION TYPE	1 x SUB-D plug, 9-pole, Field bus interface Push in terminals, Supply voltage SWD: Plug, 8-pole
DATA TRANSFER RATE	125 kBit/s, SmartWire-DT 250 kBit/s, SmartWire-DT Up to 1 MBit/s, Fieldbus interface 128 Byte, Fieldbus interface, Output data, max. 128 Byte, Fieldbus interface, Input data, max. Automatic baud rate detection for rates ranging from 10 kBit/s to 1 Mbit/s.
INTERFACES	Module type: CANopen® slave Status display fieldbus interface for CAN with Multi color LED Terminating resistor switchable via DIP switches
LED INDICATOR	Status indication of SmartWire-DT network: Configurable green or red LED Status indication of SmartWire-DT master: Green and red LEDs Status indication of Supply voltage: LED

Design verification

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.
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 RESIST. OF INSUL. MAT. TO ABNORMAL HEAT/FIRE BY INTERNAL ELECT. 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.

NUMBER OF MODULES	99 (SmartWire-DT)
PROTOCOL	CANopen®
STATION	2 - 32, Station address, Fieldbus interface SmartWire-DT master, SmartWire-DT network

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.
10.9.2 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.
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	3.8 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0 A
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1 W

Electrical rating

INRUSH CURRENT	12.5 A (for 6 ms)
POWER LOSS	Normally 1 W
RATED CONTROL SUPPLY VOLTAGE	24 V DC (UAUX, -15 %/+20 %) 24 V DC (UPOW, -15 %/+20 %)
RATED OPERATIONAL CURRENT (IE)	0.6 A
RATED OPERATIONAL VOLTAGE	Typically UAUX -0.2 V (for 24 V DC slaves) 14.5 V ($\pm 3\%$ - SmartWire-DT)
SHORT-CIRCUIT PROTECTION	Yes, Short-circuit rating, SmartWire-DT supply voltage No, external fuse FAZ Z3, Supply voltage UAux
SUPPLY CURRENT - MAX	0.7 mA
SUPPLY VOLTAGE AT DC - MAX	28.8 V
SUPPLY VOLTAGE AT DC - MIN	20.4 V

Features & functions

FEATURES	Potential isolation (Fieldbus Interface) Overload proof
FUNCTIONS	For connection to CANopen® field bus
OPERATING MODE	Address allocation via DIP switch

Electro magnetic compatibility

AIR DISCHARGE	8 kV, according to IEC 61131-2, level 3, ESD
BURST IMPULSE	1 kV, SmartWire-DT cable, according to IEC/EN 61131-2, Level 3 2 kV, Supply cable, according to IEC/EN 61131-2, Level 3 1 kV
CONTACT DISCHARGE	4 kV, according to IEC/EN 61131-2, Level 2, ESD
ELECTROMAGNETIC FIELDS	1 V/m at 2.0 - 2.7 GHz (according to IEC/EN 61131-2:2008) 10 V/m at 80 - 1000 MHz (according to IEC/EN 61131-2:2008) 3 V/m at 1.4 - 2 GHz (according to IEC/EN 61131-2:2008)
RADIATED RFI	10 V (IEC/EN 61131-2:2008, Level 3)
RADIO INTERFERENCE CLASS	Class A (EN 55011)
SURGE RATING	0.5 kV, Supply cable, Surge (IEC/EN 61131-2:2008, Level 1), EMC
VOLTAGE DIPS	≤ 10 ms, Bridging voltage dips

General information

DEGREE OF PROTECTION	IP20
MOUNTING METHOD	Rail mounting possible Screw fixing using fixing brackets ZB4-101-GF1 (accessories) Wall mounting/direct mounting Top-hat rail fixing (according to IEC/EN 60715, 35 mm)
OVERVOLTAGE CATEGORY	II
POLLUTION DEGREE	2
PRODUCT CATEGORY	SmartWire-DT coordinators
REPETITION RATE	1 s
RESIDUAL RIPPLE	$\leq 5\%$ (input voltage)
SUITABLE FOR	Safety functions

Safety

EXPLOSION SAFETY CATEGORY FOR DUST

None

EXPLOSION SAFETY CATEGORY FOR GAS

None

POTENTIAL ISOLATION

Between UPow and 15 V
SmartWire-DT supply
voltage: no
Supply voltage UAUX: no

PROTECTION AGAINST POLARITY REVERSAL

Yes
Yes, for supply voltage
(Siemens MPI optional)

TERMINAL CAPACITY

0.25 - 1.5 mm², flexible
with ferrule
0.2 - 1.5 mm², solid
24 - 16 AWG, solid or
stranded

VOLTAGE TYPE

DC

Resources

BROCHURES

[eaton-smartwire-dt-
intelligent-wiring-
brochure-br120001en-en-
us.pdf](#)

CATALOGUES

[eaton-drives-soft-starter-
catalog-ca04020001zen-
us.pdf](#)

[eaton-product-overview-
for-machinery-catalogue-
ca08103003zen-en-us.pdf](#)

DECLARATIONS OF CONFORMITY

[eaton-communication-
module-declaration-of-
conformity-
uk250996en.pdf](#)

[eaton-communication-
module-declaration-of-
conformity-
eu250513en.pdf](#)

DRAWINGS

[eaton-modular-plc-eu5c-
communication-module-
dimensions.eps](#)

[eaton-modular-plc-
gateway-eu5c-
communication-module-
dimensions.eps](#)

[eaton-modular-plc-
samrtwire-eu5c-
communication-module-
dimensions-002.eps](#)

[eaton-general-easy-
control-relays-symbol-
002.tif](#)

[eaton-general-eu5e-i-o-
module-symbol.eps](#)

[eaton-general-approval-
easy-control-relays-
standards.jpg](#)

[eaton-modular-plc-
gateway-eu5c-
communication-module-
3d-drawing.eps](#)

ECAD MODEL	DA-CE-ETN.EU5C-SWD-CAN
INSTALLATION INSTRUCTIONS	eaton-smartwire-dt-module-instruction-leaflet-il05006001Z.pdf
INSTALLATION VIDEOS	SmartWire-DT in Application
MANUALS AND USER GUIDES	MN05006002Z_EN MN120002_EN
MCAD MODEL	eaton-eu5c_swd_can-3d-model.stp eaton-communication-modules-mcad-drawings-eu5c-swd-can.dwg
MULTIMEDIA	SmartWire-DT Overview and how to use in easySoft Z How to process SmartWire-DT modules using the EASY-COM-SWD-C1 module connected to an easyE4? easyE4 SmartWire-DT module with Remote Touch Display and RMQ multi color indicator
SALES NOTES	eaton-electro-hydraulic-module-eu1h-flyer-fl120003en-en-us.pdf eaton-rmq-chemical-resistance-flyer-fl047011en-en-us.pdf

PROJECT NAME:

PROJECT NUMBER:

PREPARED BY:

DATE:



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