



Eaton 170124

Eaton EU5C Gateway, SWD, 99 SWD cards
on PROFINET

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PRODUCT NAME	Eaton EU5C Communication module
CATALOG NUMBER	170124
PRODUCT LENGTH/DEPTH	127 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	35 mm
PRODUCT WEIGHT	0.16 kg
CERTIFICATIONS	CSA UL Category Control No.: NRQA UL File No.: E221530 UL IEC/EN 61131-2 UL report applies to both US and Canada

FEATURES	Potential isolation (Fieldbus Interface) Overload proof
AIR DISCHARGE	8 kV, according to IEC 61131-2, level 3, ESD
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	Does not apply, since the

□□□□	eaton-smartwire-dt-intelligent-wiring-brochure-br120001en-en-us.pdf
□□□□□□□□□□	EU5C-SWD-PROFINET_FW_V0146 EU5C-SWD-PROFINET_XML-V0110
□□□	eaton-electro-hydraulic-module-eu1h-flyer-fl120003en-en-us.pdf
□□	eaton-modular-plc-eu5c-communication-module-dimensions.eps eaton-modular-plc-smartwire-eu5c-communication-module-dimensions.eps eaton-modular-plc-eu5c-communication-module-3d-drawing-002.eps

AGAINST ELECTRIC SHOCK	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.
10.9.2 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.
POLLUTION DEGREE	2
CONNECTION	SmartWire-DT gateway for connecting up to 99 SmartWire-DT modules to an Industrial Ethernet network and for powering the SmartWire-DT modules and switchgear. Used to connect the SmartWire-DT communication system to industrial field bus systems. Powers SmartWire-DT modules and switchgear SmartWire-DT blade terminal SWD4-8MF2 A connection to PROFINET as a PROFINET I/O device can be established using the integrated 100 Mbit/s Ethernet switch and a slave configuration.
BURST IMPULSE	2 kV, Supply cable, according to IEC/EN 61131-2, Level 3 1 kV 1 kV, SmartWire-DT cable, according to IEC/EN 61131-2, Level 3
CLIMATIC PROOFING	In accordance with IEC 60068-2
OPERATING MODE	Address allocation via PROFINET
AIR PRESSURE	795 - 1080 hPa (operation)
EXPLOSION SAFETY	None

CATEGORY FOR DUST	
EXPLOSION SAFETY CATEGORY FOR GAS	None
MOUNTING METHOD	Top-hat rail fixing (according to IEC/EN 60715, 35 mm) Rail mounting possible Screw fixing using fixing brackets ZB4-101-GF1 (accessories) Wall mounting/direct mounting
VOLTAGE TYPE	DC
MOUNTING POSITION	As required
CONTACT DISCHARGE	4 kV, according to IEC/EN 61131-2, Level 2, ESD
OVERVOLTAGE CATEGORY	II
CONSTANT ACCELERATION	1 g, 9 - 150 Hz, according to IEC/EN 61131-2, Vibrations
CONSTANT AMPLITUDE	3,5 mm, 5 - 9 Hz, according to IEC/EN 61131-2, Vibrations
SURGE RATING	0.5 kV, Supply cable, Surge (IEC/EN 61131-2:2008, Level 1), EMC
SAFETY PERFORMANCE LEVEL (EN ISO 13849-1)	None
SIL (IEC 61508)	None
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °C
EQUIPMENT HEAT DISSIPATION, CURRENT-DEPENDENT PVID	4.4 W
HEAT DISSIPATION CAPACITY PDISS	0 W
HEAT DISSIPATION PER POLE, CURRENT-DEPENDENT PVID	0 W
HEIGHT OF FALL (IEC/EN 60068-2-32) - MAX	1 m
ELECTROMAGNETIC FIELDS	3 V/m at 1.4 - 2 GHz (according to IEC/EN 61131-2:2008)

	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)
PRODUCT CATEGORY	SmartWire-DT coordinators
NUMBER OF HW-INTERFACES CAN	0
PROTECTION AGAINST POLARITY REVERSAL	Yes Yes, for supply voltage (Siemens MPI optional)
CONNECTION TYPE	SWD: Plug, 8-pole Push in terminals, Supply voltage 2 x RJ45 (2-channel switch), Field bus interface
RADIATED RFI	10 V (IEC/EN 61131-2:2008, Level 3)
NUMBER OF MODULES	99 (SmartWire-DT)
DROP AND TOPPLE	50 mm Drop height, Drop to IEC/EN 60068-2-31
RADIO INTERFERENCE CLASS	Class A (EN 55011)
DATA TRANSFER RATE	542 Byte, Fieldbus interface, Output data, max. 125 kBit/s, SmartWire-DT 250 kBit/s, SmartWire-DT 800 Byte, Fieldbus interface, Input data, max. 100 MBit/s, Fieldbus interface
RELATIVE HUMIDITY	5 - 95 % (non-condensing, IEC/EN 60068-2-30)
DEGREE OF PROTECTION	IP20
PROTOCOL	PROFINET IO PROFINET
RESIDUAL RIPPLE	≤ 5 % (input voltage)
RATED CONTROL SUPPLY VOLTAGE	24 V DC (UPOW, -15 %/+20 %) 24 V DC (UAUX, -15 %/+20 %)
RATED OPERATIONAL CURRENT (IE)	0.7 A
INRUSH CURRENT	44 A (for 2 ms)
SUITABLE FOR	Safety functions
FUNCTIONS	For connection to field bus PROFINET as PROFINET IO-Device
STATION	IP, Station address,

	Fieldbus interface SmartWire-DT master, SmartWire-DT network
SHOCK RESISTANCE	15 g, Mechanical, according to IEC/EN 60068-2-27, Half- sinusoidal shock 11 ms, 9 Impacts
LED INDICATOR	Status indication of SmartWire-DT master: Green and red LEDs Status indication of Supply voltage: LED Status indication of SmartWire-DT network: Configurable green or red LED
INTERFACES	Module type: PROFINET IO Device Status display fieldbus interface for APL, SF, BF, LINK, RX/TX with Multi colour LED
SYSTEM ACCESSORY	Yes
POTENTIAL ISOLATION	Supply voltage UAUX: no Between U _{Pow} and 15 V SmartWire-DT supply voltage: no
POWER LOSS	Normally 1 W
VOLTAGE DIPS	≤ 10 ms, Bridging voltage dips
NUMBER OF HW- INTERFACES (INDUSTRIAL ETHERNET)	0
NUMBER OF HW- INTERFACES (OTHER)	0
NUMBER OF HW- INTERFACES (PARALLEL)	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)	1
NUMBER OF HW- INTERFACES (WIRELESS)	0
NUMBER OF INTERFACES (PROFINET)	2

OPERATING TEMPERATURE - MAX	55 °C
OPERATING TEMPERATURE - MIN	-25 °C
RATED OPERATIONAL VOLTAGE	14.5 V ($\pm 3\%$ - SmartWire-DT) Typically UAUX -0.2 V (for 24 V DC slaves)
SHORT-CIRCUIT PROTECTION	Yes, Short-circuit rating, SmartWire-DT supply voltage No, external fuse FAZ Z3, Supply voltage UAux
TERMINAL CAPACITY	0.2 - 1.5 mm ² , solid 0.25 - 1.5 mm ² , flexible with ferrule 24 - 16 AWG, solid or stranded
RATED OPERATIONAL CURRENT FOR SPECIFIED HEAT DISSIPATION (IN)	0 A
REPETITION RATE	1 s
STATIC HEAT DISSIPATION, NON-CURRENT-DEPENDENT PVS	1 W
SUPPLY CURRENT - MAX	0.7 mA
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	0 V
SUPPLY VOLTAGE AT AC, 50 HZ - MIN	0 V
SUPPLY VOLTAGE AT AC, 60 HZ - MAX	0 V
SUPPLY VOLTAGE AT AC, 60 HZ - MIN	0 V
SUPPLY VOLTAGE AT DC - MAX	28.8 V
SUPPLY VOLTAGE AT DC - MIN	20.4 V

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:



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