

Gateway, SmartWire-DT, 99 SWD cards at EthernetIP/MODBUS



**Part no.** EU5C-SWD-EIP-MODTCP  
**153163**  
**EL Number** 4519609  
**(Norway)**

Product name	Eaton EU5C Communication module
Part no.	EU5C-SWD-EIP-MODTCP
EAN	4015081498901
Product Length/Depth	127 millimetre
Product height	90 millimetre
Product width	35 millimetre
Product weight	0.162 kilogram
Certifications	EN 50178 CSA File No.: 2324643 CSA Class No.: 3211-07 IEC/EN 61131-2 UL UL Category Control No.: NKCR CSA UL File No.: E29184
Product Tradename	EU5C
Product Type	Communication module
Product Sub Type	None
Catalog 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. Setting of the IP address is carried out using a DIP switch or DHCP. The gateway is equipped with a separate serial diagnostics interface (RJ45).
Features	Overload proof Potential isolation (Fieldbus Interface)
Functions	For connection to the Ethernet-IP/MODBUS-TCP field bus
Operating mode	Address allocation via DIP switch/DHCP/BOOTP
Degree of protection	IP20
Overvoltage category	II
Pollution degree	2
Product category	SmartWire-DT coordinators
Repetition rate	1 s
Residual ripple	≤ 5 % (input voltage)
Suitable for	Safety functions
Terminal capacity	0.2 - 1.5 mm <sup>2</sup> , solid 24 - 16 AWG, solid or stranded 0.25 - 1.5 mm <sup>2</sup> , flexible with ferrule
Voltage type	DC
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
Air pressure	795 - 1080 hPa (operation)
Ambient operating temperature - min	-25 °C
Ambient operating temperature - max	55 °C
Ambient storage temperature - min	-40 °C

Ambient storage temperature - max		70 °C
Climatic proofing		In accordance with IEC 60068-2
Operating temperature - min		-25 °C
Operating temperature - max		55 °C
Relative humidity		5 - 95 % (non-condensing, IEC/EN 60068-2-30)
Air discharge		8 kV, according to IEC 61131-2, level 3, ESD
Burst impulse		1 kV 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
Contact discharge		4 kV, according to IEC/EN 61131-2, Level 2, ESD
Electromagnetic fields		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) 1 V/m at 2.0 - 2.7 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
Inrush current		12.5 A (for 6 ms)
Power loss		Normally 1 W
Rated control supply voltage		24 V DC (UPOW, -15 %/+20 %) 24 V DC (UAUX, -15 %/+20 %)
Rated operational current (Ie)		0.7 A
Rated operational voltage		Typically UAUX -0.2 V (for 24 V DC slaves) 14.5 V (± 3 % - SmartWire-DT)
Short-circuit protection		No, external fuse FAZ Z3, Supply voltage UAux Yes, Short-circuit rating, SmartWire-DT supply voltage
Supply current - max		0.7 mA
Supply voltage at AC, 50 Hz - min		0 V
Supply voltage at AC, 50 Hz - max		0 V
Supply voltage at DC - min		20.4 V
Supply voltage at DC - max		28.8 V
Addressing		Address set automatically
Connection		The connection to an Ethernet IP or MODBUS-TCP is carried out via the integrated Ethernet switch (10/100 Mbit) as slave. SmartWire-DT blade terminal SWD4-8MF2 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 an Industrial Ethernet network and for powering the SmartWire-DT modules and switchgear.
Connection type		2 x RJ45 (2-channel switch), Field bus interface Push in terminals, Supply voltage SWD: Plug, 8-pole
Data transfer rate		125 kBit/s, SmartWire-DT 546 Byte, Fieldbus interface, Input data, max., Ethernet-IP 800 Byte, Fieldbus interface, Input data, max., MODBUS-TCP 250 kBit/s, SmartWire-DT 10/100 MBit/s, Fieldbus interface 496 Byte, Fieldbus interface, Output data, max., Ethernet-IP 800 Byte, Fieldbus interface, Output data, max., MODBUS-TCP
Interfaces		Module type: Ethernet IP/MODBUS-TCP Slave Status display fieldbus interface for MS, Link status with Multi color LED
LED indicator		Status indication of Supply voltage: LED Status indication of SmartWire-DT network: Configurable green or red LED Status indication of SmartWire-DT master: Green and red LEDs
Number of modules		99 (SmartWire-DT)
Protocol		Ethernet IP/MODBUS-TCP MODBUS
Station		IP, Station address, Fieldbus interface SmartWire-DT master, SmartWire-DT network
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, for supply voltage (Siemens MPI optional) Yes
Equipment heat dissipation, current-dependent Pvid		3.8 W
Heat dissipation capacity Pdis		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
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.
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.
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 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		Yes
Supporting protocol for Data-Highway		No
Supporting protocol for DeviceNet		No
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