

SWD I/O module, 24 V DC, 4 digital inputs, 2 digital relay outputs 3 A

Part no. EU5E-SWD-4D2R
116383
EL Number 4519780
(Norway)

General specifications	
Product name	Eaton EU5E I/O module
Part no.	EU5E-SWD-4D2R
EAN	4015081161133
Product Length/Depth	102 millimetre
Product height	90 millimetre
Product width	35 millimetre
Product weight	0.1 kilogram
Certifications	CSA File No.: 2324643 UL Category Control No.: NKCR CSA IEC/EN 61131-2 UL File No.: E29184 CSA Class No.: 3211-07 UL
Product Tradename	EU5E
Product Type	I/O module
Product Sub Type	None
Catalog Notes	uts 250 Vac
Features & Functions	
Electric connection type	Flat plug-in connection
Features	Fieldbus connection over separate bus coupler possible
Functions	For connection of digital I/O signals
General information	
Current consumption	45 mA, SmartWire-DT network
Degree of protection	IP20
Lifespan, electrical	50,000 Operations (at 250 V, AC-1, 4 A) 50,000 Operations (at 250 V, AC-15, 3 A) 200,000 Operations (at 24 V, DC-13, 1 A)
Overvoltage category	II
Pollution degree	2
Product category	SmartWire-DT slave
Terminal capacity	0.25 - 1.5 mm ² (24 - 16 AWG), flexible with ferrule, Terminal for I/O sensor 0.2 - 1.5 mm ² (AWG 24 - 16), solid, Terminal for I/O sensor
Type	Digital modules
Voltage type	AC
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 - min	-25 °C
Ambient operating temperature - max	55 °C
Ambient storage temperature - min	-40 °C
Ambient storage temperature - max	70 °C
Climatic proofing	Damp heat, constant, to IEC 60068-2-3 Dry heat to IEC 60068-2-2

Environmental conditions		Condensation: prevent with appropriate measures
Operating temperature - min		-25 °C
Operating temperature - max		55 °C
Relative humidity		5 - 95 % (non-condensing, IEC/EN 60068-2-30)
Electro magnetic compatibility		
Air discharge		8 kV, according to IEC 61131-2, level 3, ESD
Burst impulse		1 kV, Signal cable, according to IEC/EN 61131-2, Level 3 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		3 V/m at 1.4 - 2 GHz (according to IEC/EN 61131-2:2008) 10 V/m at 80 - 1000 MHz (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		1 kV, Surge I/O cables, Surge (IEC/EN 61131-2:2008, Level 1), EMC
Electrical rating		
Input current		4 mA (at 24 V DC, Digital inputs)
Input current at signal 1		4 mA
Output current		3 A
Power loss		1 W
Short-circuit protection		4 A gL/gG, Relay outputs, External
Supply voltage at AC, 50 Hz - min		0 V AC
Supply voltage at AC, 50 Hz - max		0 V AC
Supply voltage at DC - min		0 V DC
Supply voltage at DC - max		28.8 V DC
Communication		
Connection to SmartWire-DT		Yes
Connection type		Connection plug: external device plug SWD4-8SF2-5, SmartWire-DT Plug, 8-pole, SmartWire-DT Push in terminals, Supply and I/O sensor
Data transfer rate		250 kBit/s, SmartWire-DT Setting automatically
LED indicator		Status indication of Relay outputs: Yellow LED Status indication of SmartWire-DT network: Green LED Status indication of input: Yellow LED
Protocol		Other bus systems
Station		SmartWire-DT slave, SmartWire-DT network
Input/Output		
Contact type		N/O contact, Relay output
Drop-out time		2.5 ms
Input delay		< 0.2 ms
Limit value type 1		Low: < 5 V DC High: > 15 V DC
Load current		Min. 100 mA (at 12 V DC)
Number of inputs (digital)		4
Number of outputs (digital)		2
Output		2 Relay Outputs
Pick-up time		5 ms
Safety		
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Outputs to SmartWire-DT: yes Inputs for SmartWire-DT: yes Output to output: no
Safe isolation		230 V AC, According to EN 50178
Design verification		
Equipment heat dissipation, current-dependent Pvid		0 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
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 9.0

Programmable logic controllers PLC (EG000024) / Fieldbus, decentr. periphery - digital I/O module (EC001599)		
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ec1@ss13-27-24-26-04 [BAA055019])		
Supply voltage AC 50 Hz	V	0 - 0
Supply voltage AC 60 Hz	V	0 - 0
Supply voltage DC	V	0 - 28.8
Voltage type (supply voltage)		AC
Number of digital inputs		4
Number of digital outputs		2
Digital inputs configurable		No
Digital outputs configurable		No
Input current at signal 1	mA	4
Permitted voltage at input	V	20.4 - 28.8
Type of voltage (input voltage)		AC
Type of digital output		Relay
Output current	A	3
Permitted voltage at output	V	0 - 250
Type of output voltage		AC
Short-circuit protection, outputs available		No
Number of HW-interfaces industrial Ethernet		0
Number of 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 parallel		0
Number of HW-interfaces wireless		0
Number of HW-interfaces USB		0

Number of HW-interfaces other		0
With optical interface		No
Supporting protocol for EtherCAT		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
System accessory		Yes
Degree of protection (IP)		IP20
Type of electric connection		Flat plug-in connection
Time delay at signal change	ms	0 - 0
Fieldbus connection over separate bus coupler possible		Yes
Rail mounting possible		Yes
Wall mounting/direct mounting		Yes
Front built-in possible		No
Rack-assembly possible		No
Suitable for safety functions		No
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
Certified for UL hazardous location class I		No
Certified for UL hazardous location class II		No
Certified for UL hazardous location class III		No
Certified for UL hazardous location division 1		No
Certified for UL hazardous location division 2		No
Certified for UL hazardous location group A (acetylene)		No
Certified for UL hazardous location group B (hydrogen)		No
Certified for UL hazardous location group C (ethylene)		No

Certified for UL hazardous location group D (propane)			No
Certified for UL hazardous location group E (metal dusts)			No
Certified for UL hazardous location group F (carbonaceous dusts)			No
Certified for UL hazardous location group G (non-conductive dusts)			No
Width		mm	35
Height		mm	90
Depth		mm	102