DATASHEET - EU5E-SWD-4D2R

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

Powering Business Worldwide™

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

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 (ecl@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