

I/O module, SmartWire-DT, 24 V DC, 8DI

**Part no.** EU5E-SWD-8DX  
**116381**

**EL Number**  
**(Norway)** 4519768

General specifications		
Product name		Eaton EU5E Accessory Input module
Part no.		EU5E-SWD-8DX
EAN		4015081161119
Product Length/Depth		102 millimetre
Product height		90 millimetre
Product width		35 millimetre
Product weight		0.09 kilogram
Certifications		CSA File No.: 2324643 UL File No.: E29184 IEC/EN 61131-2 CSA UL Category Control No.: NKCR CSA Class No.: 3211-07 UL
Product Tradename		EU5E
Product Type		Accessory
Product Sub Type		Input module
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		16 mA, SmartWire-DT network
Degree of protection		IP20
Overvoltage category		II
Pollution degree		2
Product category		SmartWire-DT slave
Terminal capacity		0.25 - 1.5 mm <sup>2</sup> (24 - 16 AWG), flexible with ferrule, Terminal for I/O sensor 0.2 - 1.5 mm <sup>2</sup> (AWG 24 - 16), solid, Terminal for I/O sensor
Type		Digital modules
Voltage type		DC
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		Dry heat to IEC 60068-2-2 Damp heat, constant, to IEC 60068-2-3
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)
<b>Electro magnetic compatibility</b>		
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 2 kV, Supply cable, according to IEC/EN 61131-2, Level 3 1 kV, SmartWire-DT 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) 1 V/m at 2.0 - 2.7 GHz (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		1 kV, Surge I/O cables, Surge (IEC/EN 61131-2:2008, Level 1), EMC
<b>Electrical rating</b>		
Input current		4 mA (at 24 V DC, Digital inputs)
Input current at signal 1		4 mA
Output current		0 A
Power loss		1 W
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		20.4 V DC
Supply voltage at DC - max		28.8 V DC
<b>Communication</b>		
Connection to SmartWire-DT		Yes
Connection type		Push in terminals, Supply and I/O sensor Connection plug: external device plug SWD4-8SF2-5, SmartWire-DT Plug, 8-pole, SmartWire-DT
Data transfer rate		250 kBit/s, SmartWire-DT Setting automatically
LED indicator		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
<b>Input/Output</b>		
Input delay		< 0.2 ms
Limit value type 1		High: > 15 V DC Low: < 5 V DC
Number of inputs (digital)		8
Number of outputs (digital)		0
<b>Safety</b>		
Explosion safety category for dust		None
Explosion safety category for gas		None
Potential isolation		Inputs for SmartWire-DT: yes
<b>Design verification</b>		
Equipment heat dissipation, current-dependent P <sub>vid</sub>		0 W
Heat dissipation capacity P <sub>diss</sub>		0 W
Heat dissipation per pole, current-dependent P <sub>vid</sub>		0 W
Rated operational current for specified heat dissipation (I <sub>n</sub> )		0 A
Static heat dissipation, non-current-dependent P <sub>vs</sub>		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	20.4 - 28.8
Voltage type (supply voltage)		DC
Number of digital inputs		8
Number of digital outputs		0
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)		DC
Type of digital output		None
Output current	A	0
Permitted voltage at output	V	0 - 0
Type of output voltage		DC
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