

## DATASHEET - EU5E-SWD-4DX



**SWD input card, 24 V DC, 4 digital inputs with 24 V power supply, 0.5A, 3 conductor connection**

**EATON**

Powering Business Worldwide™



**Part no. EU5E-SWD-4DX**

**Catalog No. 144060**

**EL-Nummer (Norway) 4519610**

## Delivery program

Product range			SmartWire-DT slave
Basic function			Digital modules
Function			For connection of digital I/O signals
Short Description			Inputs with supply for sensor system.
<b>Inputs</b>			
Digital			4
Connection to SmartWire-DT			yes

## Technical data

### General

Standards			IEC/EN 61131-2
Approvals			
Approvals			UL CSA
shipping classification			DNV GL BV LRS
Dimensions (W x H x D)		mm	35 x 90 x 101
Weight		kg	0.1
Mounting			Top-hat rail IEC/EN 60715, 35 mm
Mounting position			As required

### 24 V DC supply for output supply

Power supply			
Rated operational voltage	$U_e$	V	24 DC -15 % / +20 %
Residual ripple on the input voltage		%	≤ 5
Protection against polarity reversal			Yes
Power loss	P	W	1.1

### Climatic environmental conditions

Climatic proofing			Dry heat to IEC 60068-2-2 Damp heat as per EN 60068-2-3
Air pressure (operation)		hPa	795 - 1080
Ambient temperature			
Operation	$\theta$	°C	-25 - +55
Storage / Transport	$\theta$	°C	-40 - +70
Relative humidity			
Condensation			Take appropriate measures to prevent condensation
Relative humidity, non-condensing (IEC/EN 60068-2-30)		%	5 - 95

### Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)			IP20
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Vibrations (IEC/EN 61131-2:2008)			
Constant amplitude 3,5 mm		Hz	5 - 8.4
Constant acceleration 1 g		Hz	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms			
		Impacts	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3

### Electromagnetic compatibility (EMC)

Overvoltage category			
			II
Pollution degree			
			2
Electrostatic discharge (IEC/EN 61131-2:2008)			
Air discharge (Level 3)		kV	8
Contact discharge (Level 2)		kV	4
Electromagnetic fields (IEC/EN 61131-2:2008)			
80 - 1000 MHz		V/m	10
1.4 - 2 GHz		V/m	3
2 - 2.7 GHz		V/m	1
Radio interference suppression (SmartWire-DT)			
			EN 55011 Class A
Burst (IEC/EN 61131-2:2008, Level 3)			
Supply cable		kV	2
Signal lines		kV	1
SmartWire-DT cables		kV	1
Surge (IEC/EN 61131-2:2008, Level 1)			
Surge power cables		kV	0.5
Surge I/O cables		kV	1
Radiated RFI (IEC/EN 61131-2:2008, Level 3)			
		V	10

### SmartWire-DT network

Station type			SmartWire-DT slave
Setting the baud rate			automatic
Baud rate (data transfer speed)		kbps	maximum 250
Status SmartWire-DT		LED	Green
Connection			Plug, 8-pole Connection plug: external device plug SWD4-8SF2-5
Current consumption	$I_e$	mA	33

### Connection supply and I/O

Terminal for I/O sensor			
Connection type			Push in terminals
Solid		mm <sup>2</sup>	0.2 - 1.5 (AWG 24 - 16)
Flexible with ferrule		mm <sup>2</sup>	0.25 - 1.5 (AWG 24 - 16)
			Minimum length 8 mm

### Supply voltage $U_{Aux}$

Siemens MPI, (optional)			yes
Residual ripple on the input voltage		%	≤ 5

### Potential isolation

Inputs for SmartWire-DT			Yes
Outputs to SmartWire-DT			Yes

## Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	$I_n$	A	0
Heat dissipation per pole, current-dependent	$P_{vid}$	W	0
Equipment heat dissipation, current-dependent	$P_{vid}$	W	0
Static heat dissipation, non-current-dependent	$P_{vs}$	W	1.1
Heat dissipation capacity	$P_{diss}$	W	0
Operating ambient temperature min.		°C	-25
Operating ambient temperature max.		°C	55
Degree of Protection			IP20

IEC/EN 61439 design verification		
10.2 Strength of materials and parts		
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties		
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 7.0

PLC's (EG000024) / Fieldbus, decentr. periphery - digital I/O module (EC001599)		
Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ecl@ss10.0.1-27-24-26-04 [BAA055014])		
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 of supply voltage		DC
Number of digital inputs		4
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

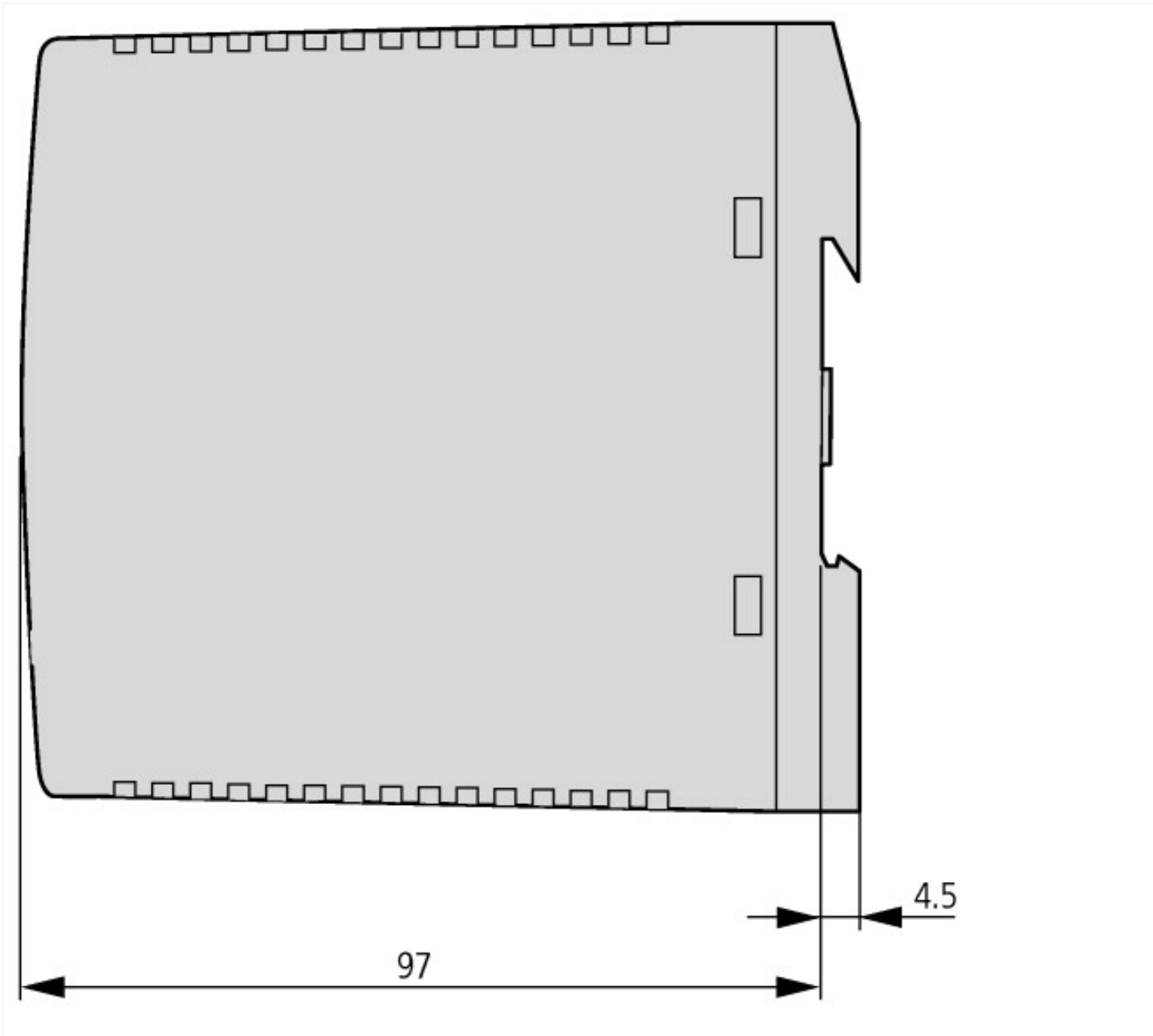
Number of HW-interfaces other			0
With optical interface			No
Supporting protocol for TCP/IP			No
Supporting protocol for PROFIBUS			No
Supporting protocol for CAN			No
Supporting protocol for INTERBUS			No
Supporting protocol for ASI			No
Supporting protocol for KNX			No
Supporting protocol for MODBUS			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			Other
Time delay at signal exchange		ms	0 - 0
Fieldbus connection over separate bus coupler possible			Yes
Rail mounting possible			Yes
Wall mounting/direct mounting			Yes
Front build in possible			No
Rack-assembly possible			No
Suitable for safety functions			No
Category according to EN 954-1			None
SIL according to IEC 61508			None
Performance level acc. 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	97

## Approvals

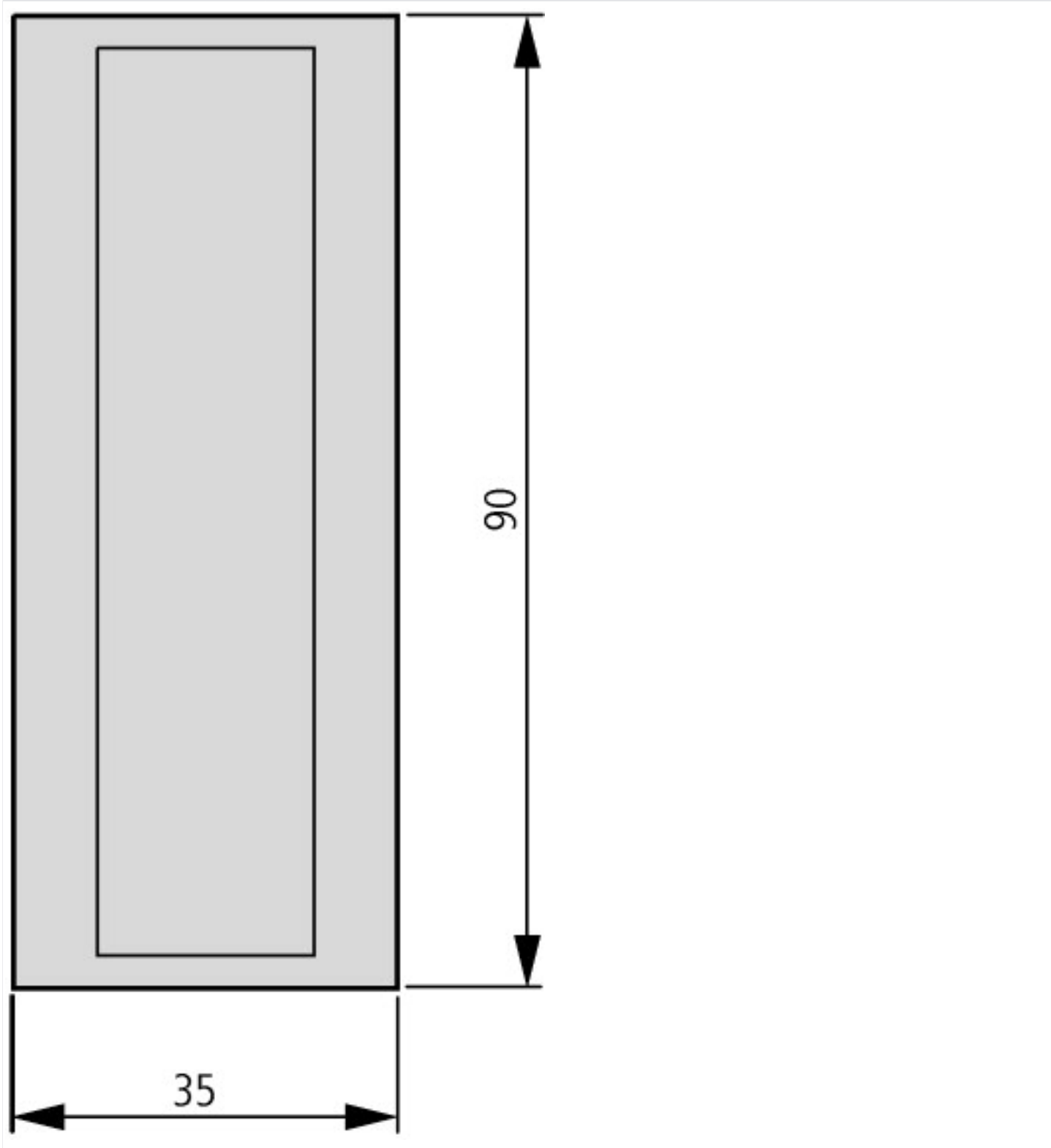
UL File No.			E29184
UL Category Control No.			NKCR
CSA File No.			2324643

CSA Class No.	3211-07
North America Certification	UL listed, CSA certified
Specially designed for North America	No

## Dimensions



SmartWire-DT I/O modules (IP20)





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