

**DATASHEET - EU5E-SWD-4D4D**

**SWD I/O module, 24 V DC, 4 digital inputs, 4 digital transistor -outputs 0, 0.5A**

**Part no. EU5E-SWD-4D4D**  
**Catalog No. 116382**

**EL-Nummer 4519769**  
**(Norway)**




**EATON**

Powering Business Worldwide™

**Delivery program**

Product range			SmartWire-DT slave
Basic function			Digital modules
Function			For connection of digital I/O signals
Short Description			The outputs are short-circuit proof.
<b>Inputs</b>			
Digital			4
<b>Outputs</b>			
Transistor			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	θ	°C	-25 - +55
Storage / Transport	θ	°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
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

**Digital inputs**

Quantity			4
Input current		mA	Normally 4 at 24 V DC
Limit value type 1			Low < 5V DC; High > 15V DC
Input delay			High->Low < 0.2 ms Low->High < 0.2 ms
Status display inputs		LED	yellow

**Digital semi-conductor outputs**

Quantity			4
Output current		A	0.5
Short-circuit tripping current		A	max. 1.2 over 3 ms
Lamp load	$R_{LL}$	W	≅ 3
Overload proof			yes, with diagnostics
Switching capacity			EN 60947-5-1 utilization category DC-13
Status display outputs		LED	yellow

**Supply voltage U<sub>Aux</sub>**

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

**Potential isolation**

Inputs for SmartWire-DT			Yes
Outputs to SmartWire-DT			Yes
Input to input			No
Output to input			no

**Design verification as per IEC/EN 61439**

Technical data for design verification			
Rated operational current for specified heat dissipation	I <sub>n</sub>	A	0
Heat dissipation per pole, current-dependent	P <sub>vid</sub>	W	0
Equipment heat dissipation, current-dependent	P <sub>vid</sub>	W	0
Static heat dissipation, non-current-dependent	P <sub>vs</sub>	W	1.1
Heat dissipation capacity	P <sub>diss</sub>	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			
10.2.2.1 Verification of thermal stability of enclosures			Meets the product standard's requirements.
10.2.2.2 Verification of resistance of insulating materials to normal heat			Meets the product standard's requirements.
10.2.2.3 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	20.4 - 28.8
Voltage type of supply voltage			DC
Number of digital inputs			4
Number of digital outputs			4

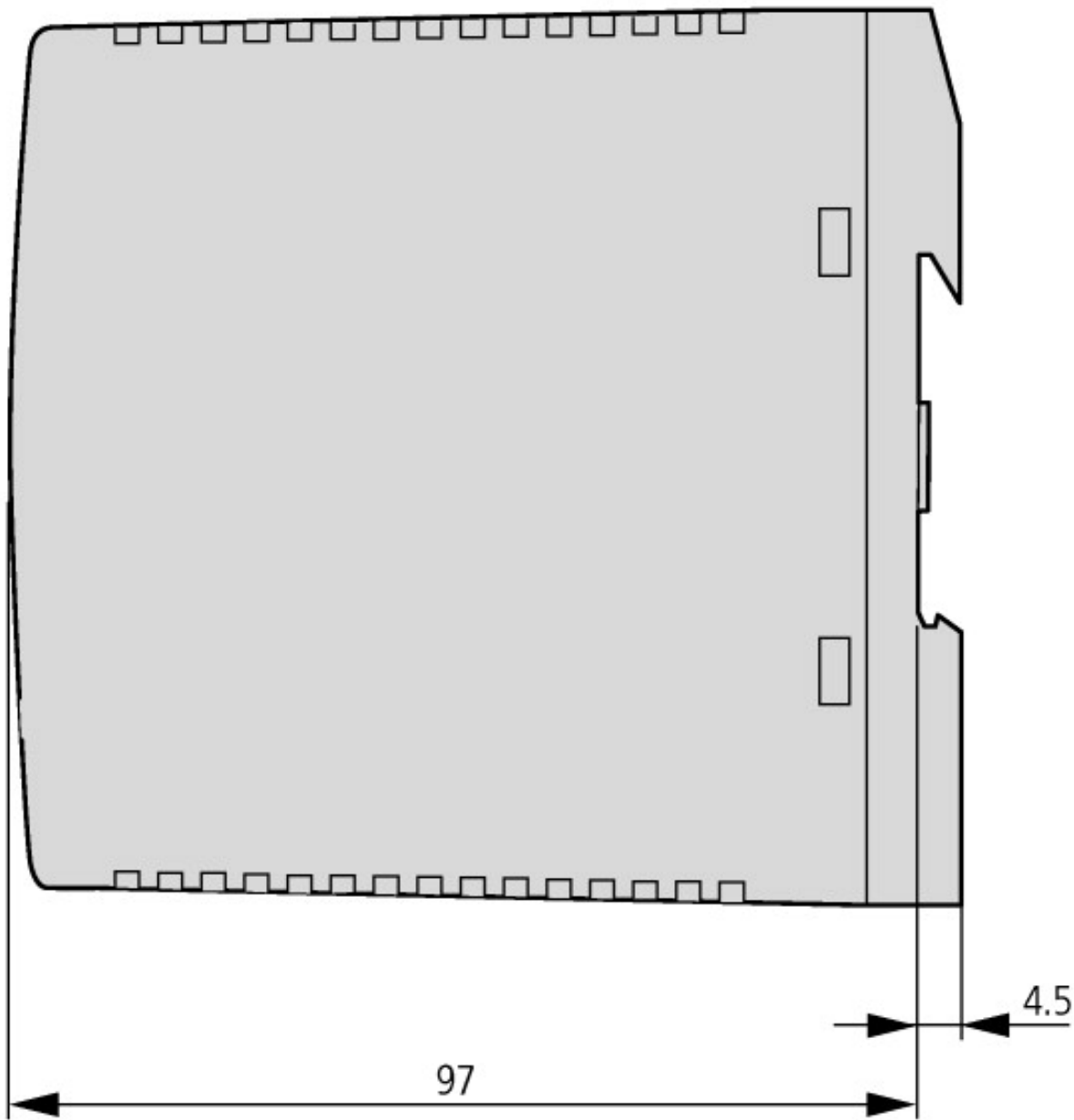
Digital inputs configurable		No
Digital outputs configurable		No
Input current at signal 1	mA	4
Permitted voltage at input	V	20.4 - 28.8
Type of voltage (input voltage)		DC
Type of digital output		Other
Output current	A	0.5
Permitted voltage at output	V	20.4 - 28.8
Type of output voltage		DC
Short-circuit 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

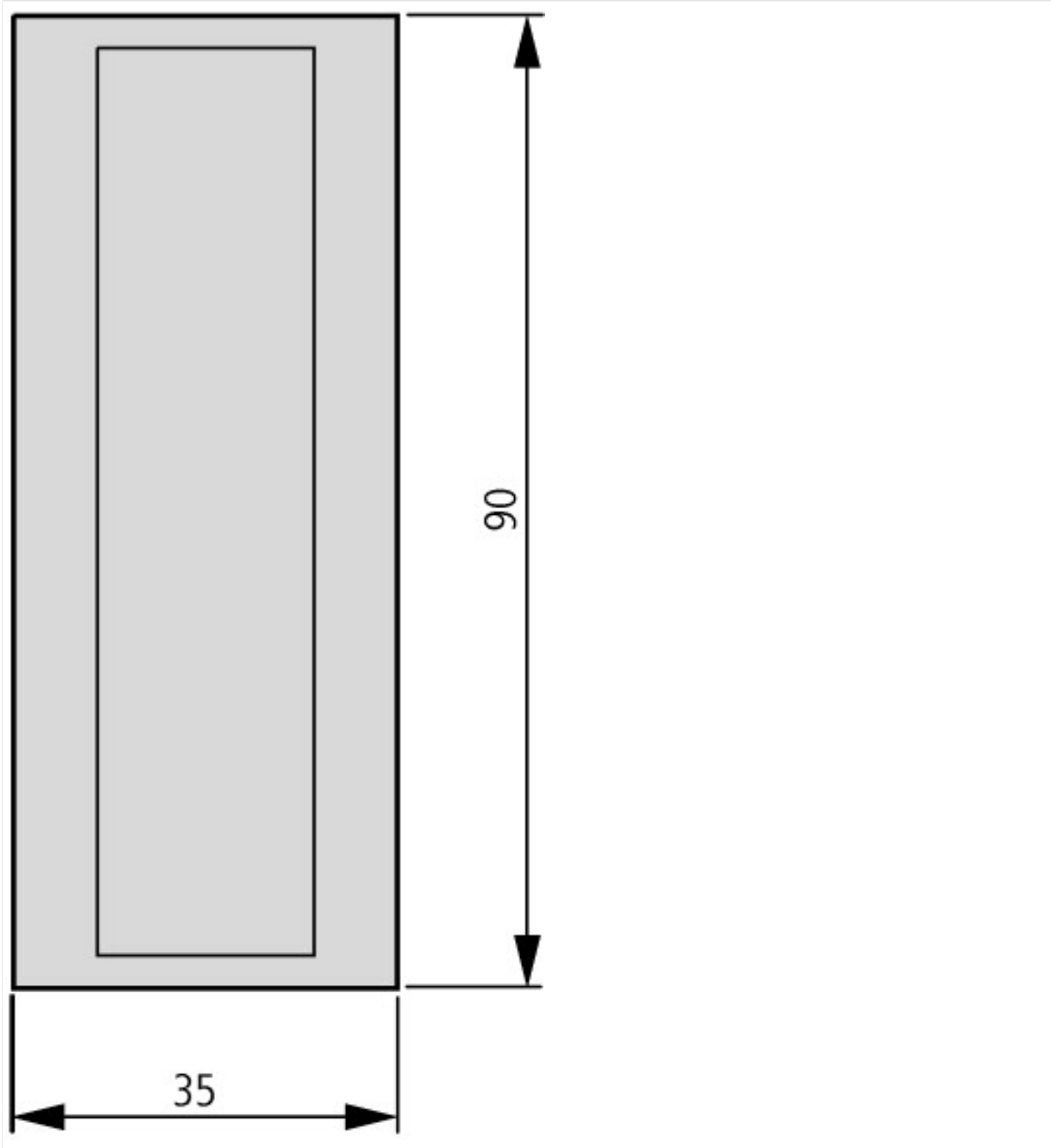
## Approvals

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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