

I/O module, SmartWire-DT, 24 V DC, 2AI, 2AO, AI/AO configurable 0-10V/0-20mA

Part no. EU5E-SWD-2A2A
Article no. 144063

Powering Business Worldwide

Delivery programme

Product range			SmartWire-DT slave
Basic function			Analog modules
Function			For connection of analog I/O signals
Description			Inputs/outputs, configurable: 0 - 10 V, 0 - 20 mA
Inputs			
Analog			2
Outputs			
Analog			2
Connection to SmartWire-DT			yes

Technical data

General

Standards			IEC/EN 61131-2 EN 50178
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

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		°C	
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)			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 B

Burst (IEC/EN 61131-2:2008, Level 3)			
Supply cable		kV	2
Signal lines		kV	2
SmartWire-DT cables		kV	2
Surge (IEC/EN 61131-2:2008, Level 1)			
Surge power cables		kV	1
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	22

Connection supply and I/O

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

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	1.5

Analog inputs

Quantity			2 (2-wire connection, screened, length < 10 m)
Parameter setting			
Part no.			Voltage, current
Averaging			einstellbar
Voltage		V	
Input voltage		V	0 - 10
Max. current			
Input current		mA	0 - 20
Input impedance		Ω	< 250
Resolution		Bit	11
Conversion time		ms	20
Total error		%	± 1
Repetition accuracy		%	± 0.5
Dielectric strength		V	± 30

Analog outputs

Number			2 (2-wire connection, screened)
Parameter setting			
Part no.			Voltage, current
Voltage		V	
Output voltage		V	0 -10
Max. output current		mA	10
Max. current			
Output current		mA	0 - 20
Load resistance		Ω	< 500
- - Overload and short-circuit proof			yes
Resolution		Bit	11

Conversion time		ms	20
Total error		%	± 1
Repetition accuracy		%	± 0.5

Potential isolation

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

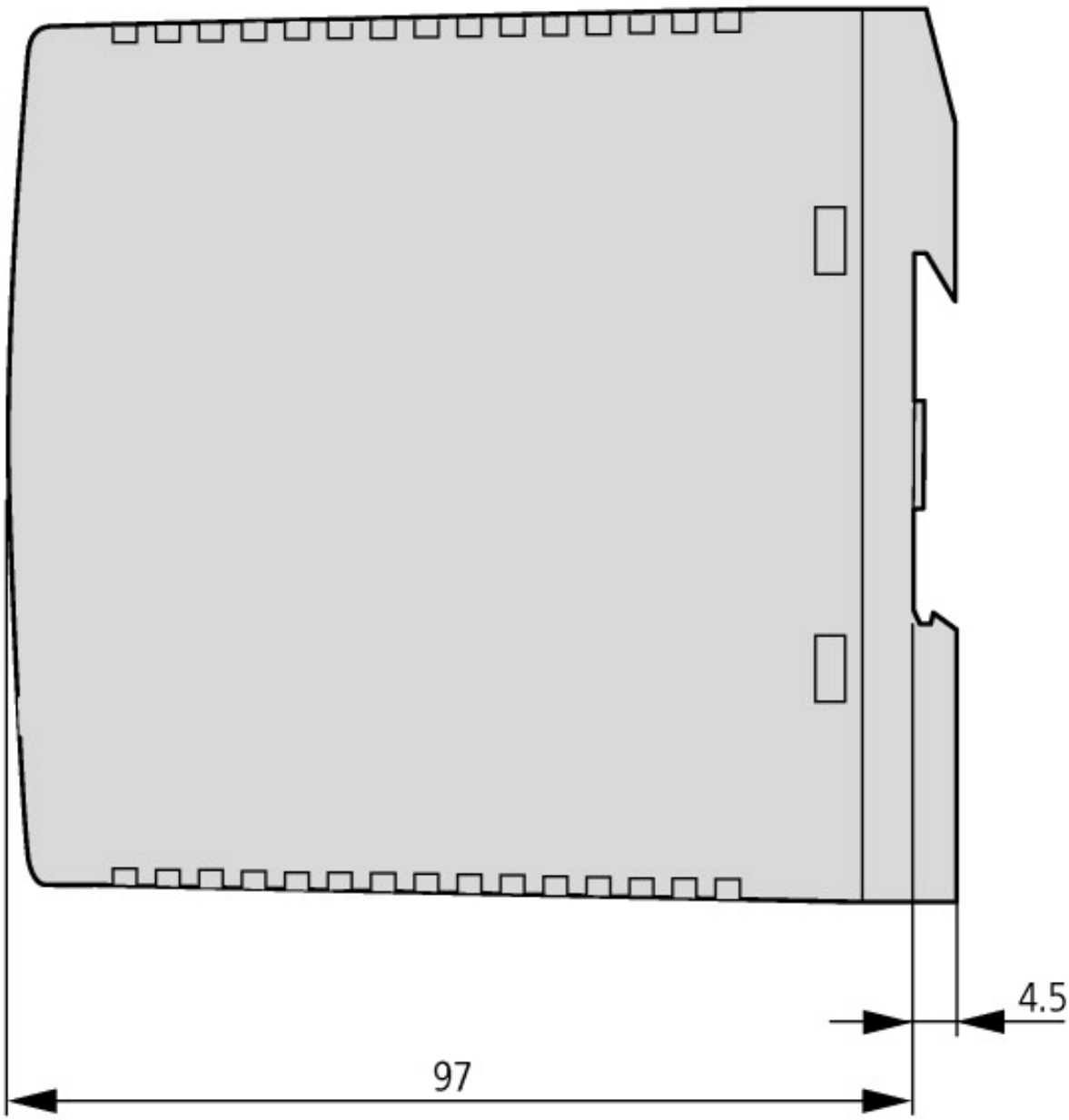
Data for design verification according to IEC/EN 61439

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	1.5
Heat dissipation capacity	P_{diss}	W	0
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.

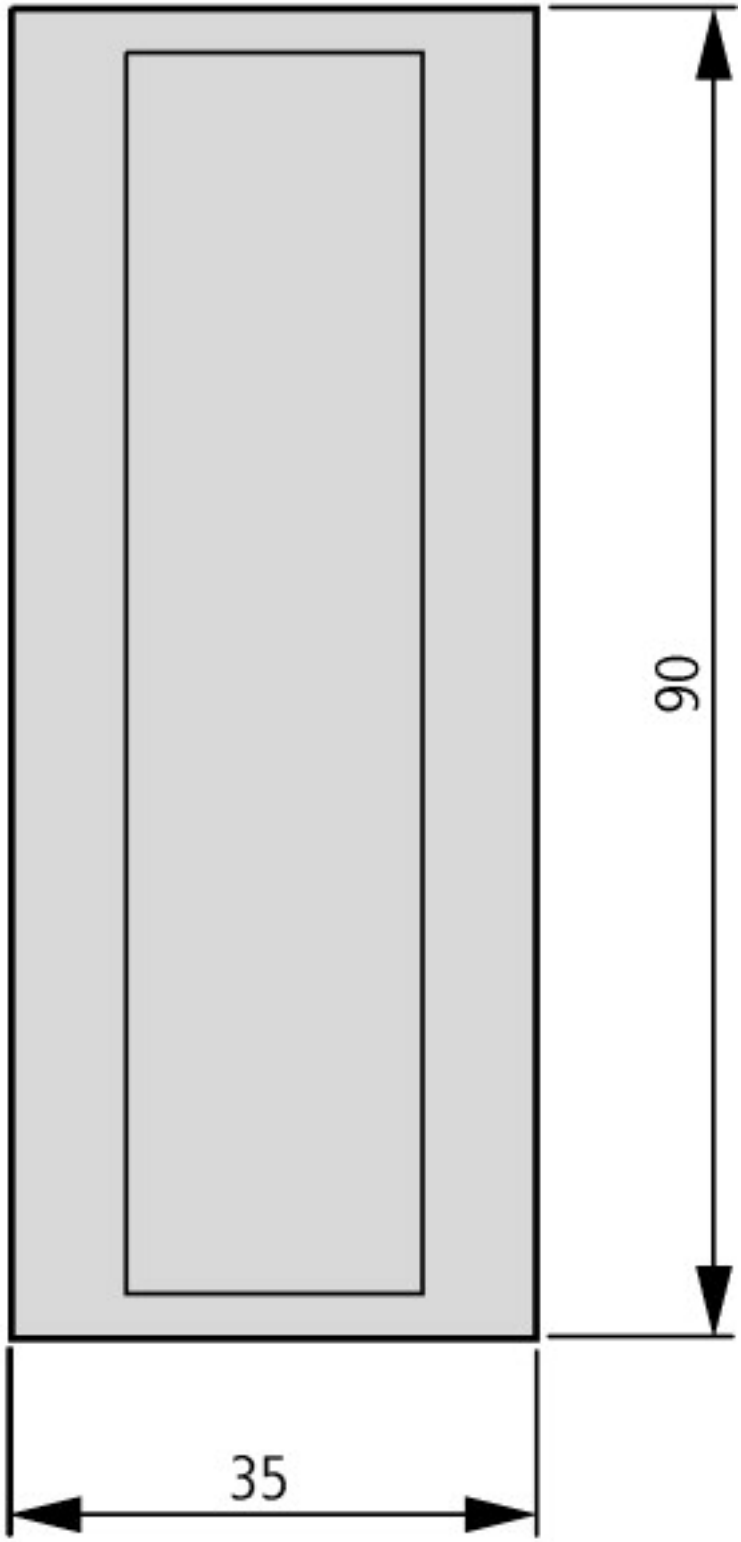
Approvals

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)



Additional product information (links)

IL05006002Z (AWA2723-2479) SmartWire-DT: I/O modules	
IL05006002Z (AWA2723-2479) SmartWire-DT: I/O modules	ftp://ftp.moeller.net/DOCUMENTATION/AWA_INSTRUCTIONS/IL05006002Z2014_10.pdf
MN05006001Z (AWB2723-1613) SWD modules	
MN05006001Z (AWB2723-1613) SWD-Teilnehmer - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05006001Z_DE.pdf
MN05006001Z (AWB2723-1613) SWD modules - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05006001Z_EN.pdf
MN05006001Z (AWB2723-1613) SWD modules - italiano	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05006001Z_IT.pdf
MN05006002Z (AWB2723-1617) SmartWire-DT, The system	
MN05006002Z (AWB2723-1617) SmartWire-DT, Das System - Deutsch	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05006002Z_DE.pdf
MN05006002Z (AWB2723-1617) SmartWire-DT, The system - English	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05006002Z_EN.pdf

MN050060002Z (AWB2723-1617) SmartWire-DT, The system - italiano	ftp://ftp.moeller.net/DOCUMENTATION/AWB_MANUALS/MN05006002Z_IT.pdf
System overview	http://de.ecat.moeller.net/flip-cat/?edition=HPLTE&startpage=1.4
SWD-ASSIST	http://downloadcenter.moeller.net/en/software.a487d8b7-da91-486f-b3ba-a7ca2035db99

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