DATASHEET - EU5E-SWD-4PT-2

SmartWire-DT I/O module, 24 V DC, 4 AI configurable Pt100 / Pt1000: -100 - +400°C, Ni1000: -50 - +200 °C

Part no.	**EU5E-SWD-4PT-2**
	172560
EL Number (Norway)	**4560879**

General specifications

Product name	Eaton EU5E Accessory Input module
Part no.	EU5E-SWD-4PT-2
EAN	4015081691050
Product Length/Depth	102 millimetre
Product height	90 millimetre
Product width	35 millimetre
Product weight	0.16 kilogram
Certifications	CSA File No.: 2324643 UL File No.: E29184 IEC/EN 61131-2 CSA UL Category Control No.: NKCR UL CSA Class No.: 3211-07
Product Tradename	EU5E
Product Type	Accessory
Product Sub Type	Input module

Features & Functions

Electric connection type	Flat plug-in connection
Features	Analog inputs configurable Input, resistance thermometer Analog outputs configurable Fieldbus connection over separate bus coupler possible
Fitted with:	Display mode for temperatures (°C, °F, raw value) Temperature sensors PT100, PT1000 and Ni1000
Functions	For connection of analog I/O signals Adjustable parameter settings

General information

Current consumption	22 mA, SmartWire-DT network
Degree of protection	NEMA 1 IP20
Overvoltage category	II
Pollution degree	2
Product category	SmartWire-DT slave
Repetition accuracy	0.5 % (Temperature inputs)
Residual ripple	≤ 5 % (input voltage)
Terminal capacity	0.2 - 1.5 mm^2 (AWG 24 - 16), solid, Terminal for I/O sensor 0.25 - 1.5 mm^2 (24 - 16 AWG), flexible with ferrule, Terminal for I/O sensor
Type	Analog 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	-100 °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	2 kV, Supply cable, according to IEC/EN 61131-2, Level 3 2 kV, SmartWire-DT cable, according to IEC/EN 61131-2, Level 3 2 kV, Signal 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) 1 V/m at 2.0 - 2.7 GHz (according to IEC/EN 61131-2:2008) 10 V/m at 80 - 1000 MHz (according to IEC/EN 61131-2:2008)
Radiated RFI	10 V (IEC/EN 61131-2:2008, Level 3)
Radio interference class	Class B (EN 55011)
Surge rating	1 kV, Surge power cables, Surge (IEC/EN 61131-2:2008, Level 1), EMC 1 kV, Surge I/O cables, Surge (IEC/EN 61131-2:2008, Level 1), EMC

Electrical rating

Power loss	0.6 W
Rated operational voltage	24 V DC (-15 %/+ 20 % - power supply)
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	0 V DC

Communication

Connection to SmartWire-DT	Yes
Connection type	Connector: external device plug SWD4-8SF2-5, SmartWire-DT Push in terminals, Supply and I/O sensor Pin contact, 8 pole
Data transfer rate	250 kBit/s, SmartWire-DT Setting automatically
LED indicator	Status indication of SmartWire-DT network: Green LED
Protocol	Other bus systems
Station	SmartWire-DT slave, SmartWire-DT network

Input/Output

Conversions	250 ms, Temperature inputs
Input	Inputs, configurable (PT100, PT1000, Ni1000)
Number of inputs (analog)	4
Number of outputs (analog)	0
Resolution	0.1 °C, Temperature inputs
Total error	± 1 %, Temperature Inputs

Safety

Explosion safety category for dust	None
Explosion safety category for gas	None
Potential isolation	Inputs for SmartWire-DT: yes
Protection against polarity reversal	Yes

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	0.6 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 - analogue I/O module (EC001596)			
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - analogue I/O module (ecl@ss13-27-24-26-01 [BAA061019])			
Supply voltage AC 50 Hz		V	0 - 0
Supply voltage AC 60 Hz		V	0 - 0
Supply voltage DC		V	0 - 0
Voltage type (supply voltage)			DC
Power consumption		W	0.6
Input, current			No
Input, voltage			No
Input, resistor			No
Input, resistance thermometer			Yes
Input, thermocouple			No
Input signal, configurable			No
Resolution of the analogue inputs		Bit	12
Output, current			No
Output, voltage			No
Output signal configurable			No
Resolution of the analogue outputs		Bit	0
Number of analogue inputs			4
Number of analogue outputs			0
Analogue inputs configurable			Yes
Analogue outputs configurable			Yes
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
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
Degree of protection (NEMA)	1
Type of electric connection	Flat plug-in connection
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

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