DATASHEET - EU5E-SWD-4PT

I/O module, SmartWire-DT, 24 V DC, 4AI configurable Pt100 / Pt1000: -50 - +200°C, Ni1000: -50 - +150 °C

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Part no.	EU5E-SWD-4PT
	144064
EL Number (Norway)	4519608

General specifications

Product name		Eaton EU5E Accessory Input module
Part no.		EU5E-SWD-4PT
EAN		4015081405947
Product Length/Depth		102 millimetre
Product height		90 millimetre
Product width		35 millimetre
Product weight		0.092 kilogram
Certifications		UL Category Control No.: NKCR CSA CSA File No.: 2324643 UL IEC/EN 61131-2 CSA Class No.: 3211-07 UL File No.: E29184
Product Tradename		EU5E
Product Type		Accessory
Product Sub Type		Input module

Features & Functions

Electric connection type		Flat plug-in connection
Features		Input, resistance thermometer Analog outputs configurable Fieldbus connection over separate bus coupler possible Analog inputs configurable
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		IP20 NEMA 1
Overvoltage category		II
Pollution degree		2
Product category		SmartWire-DT slave
Repetition accuracy		0.5 % (Temperature inputs)
Residual ripple		≤ 5 % (input voltage)
Terminal capacity		0.25 - 1.5 mm² (24 - 16 AWG), flexible with ferrule, Terminal for I/O sensor 0.2 - 1.5 mm² (AWG 24 - 16), solid, 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		Damp heat, constant, to IEC 60068-2-3 Dry heat to IEC 60068-2-2
Environmental conditions		Condensation: prevent with appropriate measures
Operating temperature - min		-50 °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, Signal cable, according to IEC/EN 61131-2, Level 3 2 kV, SmartWire-DT cable, according to IEC/EN 61131-2, Level 3 2 kV, Supply cable, according to IEC/EN 61131-2, Level 3
Contact discharge		4 kV, according to IEC/EN 61131-2, Level 2, ESD
Electromagnetic fields		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) 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 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		Plug, 8-pole, SmartWire-DT Push in terminals, Supply and I/O sensor Connection plug: external device plug SWD4-8SF2-5, SmartWire-DT
Data transfer rate		Setting automatically 250 kBit/s, SmartWire-DT
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, for supply voltage (Siemens MPI optional) 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