

Specifications



Eaton 144064

Eaton EU5E I/O module, SmartWire-DT, 24 V DC, 4AI configurable Pt100 / Pt1000: -50 - +200°C, Ni1000: -50 - +150 °C

General specifications

PRODUCT NAME	Eaton EU5E Accessory Input module
CATALOG NUMBER	144064
EAN	4015081405947
PRODUCT LENGTH/DEPTH	102 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	35 mm
PRODUCT WEIGHT	0.092 kg
CERTIFICATIONS	UL File No.: E29184 UL Category Control No.: NKCR IEC/EN 61131-2 CSA Class No.: 3211-07 UL CSA CSA File No.: 2324643
MODEL CODE	EU5E-SWD-4PT

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

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

General

CURRENT CONSUMPTION	22 mA, SmartWire-DT network
DEGREE OF PROTECTION	IP20 NEMA 1
MOUNTING METHOD	Top-hat rail fixing (according to IEC/EN 60715, 35 mm) Rail mounting possible Wall mounting/direct mounting
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 mm ² (24 - 16 AWG), flexible with ferrule, Terminal for I/O sensor 0.2 - 1.5 mm ² (AWG 24 - 16), solid, Terminal for I/O sensor
TYPE	Analog modules
VOLTAGE TYPE	DC

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,

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 VAC
SUPPLY VOLTAGE AT AC, 50 HZ - MAX	0 VAC
SUPPLY VOLTAGE AT DC - MIN	0 VDC
SUPPLY VOLTAGE AT DC - MAX	0 VDC

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

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

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

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)	Meets the product standard's requirements.

RADIATION	
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.

Resources

BROCHURES	eaton-smartwire-dt-intelligent-wiring-brochure-br120001en-en-us.pdf
CATALOGUES	Product Range Catalog Drives Engineering eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-us.pdf SmartWire-DT Catalog
DECLARATIONS OF CONFORMITY	eaton-accessory-declaration-of-conformity-eu250508en.pdf eaton-accessory-declaration-of-conformity-uk250991en.pdf
DRAWINGS	eaton-modular-plc-eu5e-i-o-module-dimensions.eps eaton-modular-plc-eu5e-i-o-module-dimensions-002.eps eaton-general-approval-easy-control-relays-standards.jpg eaton-general-eu5e-i-o-module-symbol.eps eaton-modular-plc-swd-eu5e-i-o-module-3d-drawing.eps eaton-general-easy-control-relays-symbol-002.tif
ECAD MODEL	DA-CE-ETN.EU5E-SWD-4PT
INSTALLATION INSTRUCTIONS	IL05006002Z
INSTALLATION VIDEOS	SmartWire-DT in Application
MANUALS AND USER GUIDES	MN05006001Z_EN MN05006002Z_EN
MCAD MODEL	eaton-eu5e-swd-4pt-drawing.dwg eaton-eu5e-swd-4pt-3d-model.stp

MULTIMEDIA	How to process SmartWire-DT modules using the EASY-COM-SWD-C1 module connected to an easyE4? SmartWire-DT Overview and how to use in easySoft Z easyE4 SmartWire-DT module with Remote Touch Display and RMQ multi color indicator
SALES NOTES	eaton-rmq-chemical-resistance-flyer-fl047011en-en-us.pdf eaton-electro-hydraulic-module-eu1h-flyer-fl120003en-en-us.pdf
WIRING DIAGRAMS	eaton-modular-plc-module-eu5e-input-module-wiring-diagram.eps

PROJECT NAME:	
PROJECT NUMBER:	
PREPARED BY:	
DATE:	



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