

Specifications



Eaton 116381

Eaton EU5E I/O module, SmartWire-DT, 24 V DC, 8DI

General specifications

PRODUCT NAME	Eaton EU5E Accessory Input module
CATALOG NUMBER	116381
MODEL CODE	EU5E-SWD-8DX
EAN	4015081161119
PRODUCT LENGTH/DEPTH	102 mm
PRODUCT HEIGHT	90 mm
PRODUCT WIDTH	35 mm
PRODUCT WEIGHT	0.09 kg
CERTIFICATIONS	CSA Class No.: 3211-07 UL CSA CSA File No.: 2324643 IEC/EN 61131-2 UL Category Control No.: NKCR UL File No.: E29184

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

Communication

CONNECTION TO SMARTWIRE-DT	Yes
CONNECTION TYPE	Push in terminals, Supply and I/O sensor Connection plug: external device plug SWD4-8SF2-5, SmartWire-DT Plug, 8-pole, SmartWire-DT
DATA TRANSFER RATE	250 kBit/s, SmartWire-DT Setting automatically
LED INDICATOR	Status indication of SmartWire-DT network: Green LED Status indication of input: Yellow LED
PROTOCOL	Other bus systems
STATION	SmartWire-DT slave, SmartWire-DT network

Climatic environmental conditions

AIR PRESSURE	795 - 1080 hPa (operation)
AMBIENT OPERATING TEMPERATURE - MAX	55 °C
AMBIENT STORAGE TEMPERATURE - MAX	70 °C
AMBIENT OPERATING TEMPERATURE - MIN	-25 °C
AMBIENT STORAGE TEMPERATURE - MIN	-40 °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 - MAX	55 °C
OPERATING TEMPERATURE - MIN	-25 °C
RELATIVE HUMIDITY	5 - 95 % (non-condensing, IEC/EN 60068-2-30)

Design verification

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.
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	Meets the product standard's requirements.

ABNORMAL HEAT/FIRE BY INTERNAL ELECT. EFFECTS	
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.
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	1 W

Electrical rating

INPUT CURRENT	4 mA (at 24 V DC, Digital inputs)
INPUT CURRENT AT SIGNAL 1	4 mA
POWER LOSS	1 W
SUPPLY VOLTAGE AT DC - MAX	28.8 VDC
SUPPLY VOLTAGE AT DC - MIN	20.4 VDC

Features & functions

ELECTRIC CONNECTION TYPE	Flat plug-in connection
FEATURES	Fieldbus connection over separate bus coupler possible Fieldbus connection over separate bus coupler possible
FUNCTIONS	For connection of digital I/O signals

Electro magnetic compatibility

AIR DISCHARGE	8 kV, according to IEC 61131-2, level 3, ESD
BURST IMPULSE	1 kV, Signal cable, according to IEC/EN 61131-2, Level 3 2 kV, Supply cable, according to IEC/EN 61131-2, Level 3 1 kV, SmartWire-DT cable, according to IEC/EN 61131-2, Level 3
CONTACT DISCHARGE	4 kV, according to IEC/EN 61131-2, Level 2, ESD
ELECTROMAGNETIC FIELDS	10 V/m at 80 - 1000 MHz (according to IEC/EN 61131-2:2008) 1 V/m at 2.0 - 2.7 GHz (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 A (EN 55011)
SURGE RATING	1 kV, Surge I/O cables, Surge (IEC/EN 61131-2:2008, Level 1), EMC

General information

CURRENT CONSUMPTION	16 mA, SmartWire-DT network
DEGREE OF PROTECTION	IP20
MOUNTING METHOD	Top-hat rail fixing (according to IEC/EN 60715, 35 mm) Wall mounting/direct mounting Rail mounting possible
OVERVOLTAGE CATEGORY	II
POLLUTION DEGREE	2
PRODUCT CATEGORY	SmartWire-DT slave
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	Digital modules
VOLTAGE TYPE	DC

Input/Output	
INPUT DELAY	< 0.2 ms
LIMIT VALUE TYPE 1	High: > 15 V DC Low: < 5 V DC
NUMBER OF INPUTS (DIGITAL)	8
NUMBER OF OUTPUTS (DIGITAL)	0

Safety	
EXPLOSION SAFETY CATEGORY FOR DUST	None
EXPLOSION SAFETY CATEGORY FOR GAS	None
POTENTIAL ISOLATION	Inputs for SmartWire-DT: yes

Resources

BROCHURES	eaton-smartwire-dt-intelligent-wiring-brochure-br120001en-en-us.pdf
CATALOGUES	eaton-drives-soft-starter-catalog-ca04020001zen-us.pdf eaton-product-overview-for-machinery-catalogue-ca08103003zen-en-en-us.pdf
DECLARATIONS OF CONFORMITY	eaton-i-o-module-declaration-of-conformity-uk250998en.pdf eaton-i-o-module-declaration-of-conformity-eu250515en.pdf
DRAWINGS	eaton-modular-plc-eu5e-input-module-dimensions.eps eaton-modular-plc-eu5e-i-o-module-dimensions.eps eaton-general-easy-control-relays-symbol-002.tif eaton-modular-plc-swd-eu5e-i-o-module-3d-drawing.eps eaton-general-approval-easy-control-relays-standards.jpg eaton-general-eu5e-i-o-module-symbol.eps
ECAD MODEL	ETN.EU5E-SWD-8DX
INSTALLATION INSTRUCTIONS	IL05006002Z
INSTALLATION VIDEOS	SmartWire-DT in Application
MANUALS AND USER GUIDES	MN05006001Z_EN MN05006002Z_EN
MCAD MODEL	eaton-eu5e-swd_digital_3d-model.stp eaton-module-mcad-drawings-eu5e-swd-digital.dwg
MULTIMEDIA	easyE4 SmartWire-DT module with Remote Touch Display and RMQ multi color indicator

	SmartWire-DT Overview and how to use in easySoft Z
	How to process SmartWire-DT modules using the EASY-COM-SWD-C1 module connected to an easyE4?
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-002.eps

PROJECT NAME:
PROJECT NUMBER:
PREPARED BY:
DATE:



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