DATASHEET - EU2E-SWD-4DD-1

SmartWire-DT T-Connector for IP69K I/O modules, 24 V DC, four parameterizable inputs/outputs with power supply, two M12 I/O sockets

Part no. **EU2E-SWD-4DD-1**
180406

General specifications	
Product name	Eaton EU2E Digital module
Part no.	EU2E-SWD-4DD-1
EAN	4015081755592
Product Length/Depth	110 millimetre
Product height	40 millimetre
Product width	80 millimetre
Product weight	0.08 kilogram
Certifications	UL File No.: E170645 IEC/EN 61131-2 CSA UL
Product Tradename	EU2E
Product Type	Digital module
Product Sub Type	None
Catalog Notes	Plug configuration (X1: 1 I/O, X2: 3 I/O)
Features & Functions	
Electric connection type	Screw connection
Features	Digital outputs configurable Overload protection (sensor supply) Short-circuit protection (sensor supply) Fieldbus connection over separate bus coupler possible Digital inputs configurable Overload proof (with diagnostics)
Functions	For connection of digital I/O signals Short-circuit protection, outputs available
General information	
Current consumption	75 mA, SmartWire-DT network, 24 V, without sensor and without I/O supply 70 mA, Max. current consumption per M12 I/O plug, Sensor supply, SmartWire-DT network
Degree of protection	IP69K
Overvoltage category	II
Pollution degree	3
Product category	SmartWire-DT slave
Type	Digital 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	30 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	70 °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: permissible

Operating temperature - min	-25 °C
Operating temperature - max	70 °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	1 kV, Signal cable, according to IEC/EN 61131-2, Level 3 1 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	3 V/m at 1.4 - 2 GHz (according to IEC/EN 61131-2:2008) 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)
Radiated RFI	10 V (IEC/EN 61131-2:2008, Level 3)
Radio interference class	Class A (EN 55011)
Surge rating	0.5 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

Input current	4 mA (at 24 V DC, Digital inputs)
Input current at signal 1	4 mA
Output current	0.5 A
Power loss	1.8 W
Short-circuit protection	Outputs are short-circuit proof
Short-circuit tripping current	Max. 1.2 A over 3 ms, Digital semi-conductor outputs
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	28.8 V DC

Communication

Connection to SmartWire-DT	Yes
Connection type	SWD-OUT: M12 socket (A-keyed), 5 pole 5-pin M12 socket (A-keyed), Supply and I/O sensor SWD-IN : M12 plug (A-keyed), 5 pole
Data transfer rate	Setting automatically 2 MBit/s, SmartWire-DT
LED indicator	Status indication of input: Yellow LED Status indication of SmartWire-DT network: Green LED Status indication of display outputs: Yellow LED
Protocol	Other bus systems
Station	SmartWire-DT slave, SmartWire-DT network

Input/Output

Input	Max. 4 Freely configurable inputs/outputs
Input delay	< 0.2 ms
Lamp load	≤ 3 W (at RLL)
Limit value type 1	Low: < 5 V DC High: > 15 V DC
Number of inputs (digital)	4
Number of outputs (digital)	4
Output	Max. 4 Freely configurable inputs/outputs Max. 4 Transistor Outputs
Switching capacity	IEC/EN 60947-5-1, utilization category DC-13, Digital outputs

Safety

Explosion safety category for dust	None
Explosion safety category for gas	None
Potential isolation	Inputs for SmartWire-DT: no Between Outputs to SmartWire-DT: no Output to input: no Output to output: no Input to input: no

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			1.8 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 - digital I/O module (EC001599)			
Electric engineering, automation, process control engineering / Control, Process Control System (PCS) / Field bus, decentralized peripheral / Field bus, decentralized peripheral - digital I/O module (ecl@ss13-27-24-26-04 [BAA055019])			
Supply voltage AC 50 Hz		V	0 - 0
Supply voltage AC 60 Hz		V	0 - 0
Supply voltage DC		V	0 - 28.8
Voltage type (supply voltage)			DC
Number of digital inputs			4
Number of digital outputs			4
Digital inputs configurable			Yes
Digital outputs configurable			Yes
Input current at signal 1		mA	4
Permitted voltage at input		V	20.4 - 28.8
Type of voltage (input voltage)			DC
Type of digital output			Other
Output current		A	0.5
Permitted voltage at output		V	20.4 - 28.8
Type of output voltage			DC
Short-circuit protection, outputs available			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
With optical interface			No
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)			IP69K
Type of electric connection			Screw connection
Time delay at signal change		ms	0 - 0.2
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	80
Height		mm	40
Depth		mm	110

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