DATASHEET - EU6E-SWD-4D4D-1

SWD Block module I/O module IP69K, 24 V DC, 4 inputs with power supply, 4 outputs with separate power supply, 4 M12 I/O sockets

Part no. **EU6E-SWD-4D4D-1**
183266

General specifications	
Product name	Eaton EU6E I/O module
Part no.	EU6E-SWD-4D4D-1
EAN	4015081781997
Product Length/Depth	34 millimetre
Product height	156.8 millimetre
Product width	60.8 millimetre
Product weight	0.25 kilogram
Certifications	IEC/EN 61131-2 CSA UL
Product Tradename	EU6E
Product Type	I/O module
Product Sub Type	None
Catalog Notes	with supply
Features & Functions	
Electric connection type	Screw connection
Features	Short-circuit protection (sensor supply) Overload protection (sensor supply) Overload proof (with diagnostics) Fieldbus connection over separate bus coupler possible
Functions	Short-circuit protection, outputs available For connection of digital I/O signals
General information	
Current consumption	70 mA, Max. current consumption per M12 I/O plug, Sensor supply, SmartWire-DT network 66 mA, SmartWire-DT network, 24 V, without sensor and without I/O supply
Degree of protection	IP69K
Overvoltage category	II
Pollution degree	3
Product category	SmartWire-DT slave
Residual ripple	≤ 5 % (input voltage)
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	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: permissible

Operating temperature - min	-25 °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	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	1 kV, Surge I/O cables, Surge (IEC/EN 61131-2:2008, Level 1), EMC 0.5 kV, Surge power 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	1.9 W
Rated operational voltage	24 V DC (-15 %/+ 20 % - power supply)
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	20.4 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
Protocol	Other bus systems
Station	SmartWire-DT slave, SmartWire-DT network

Input/Output

Input delay	< 0.2 ms
Lamp load	≤ 3 W (at RLL)
Limit value type 1	High: > 15 V DC Low: < 5 V DC
Number of inputs (digital)	4
Number of outputs (digital)	4
Output	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
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	1.9 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	20.4 - 28.8
Voltage type (supply voltage)		DC
Number of digital inputs		4
Number of digital outputs		4
Digital inputs configurable		No
Digital outputs configurable		No
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	0.2 - 0.2
Fieldbus connection over separate bus coupler possible		Yes
Rail mounting possible		No
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	60.8
Height		mm	156.8
Depth		mm	34

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