DATASHEET - EU1S-SWD-PF1-2

SWD power supply IP67 for 24VDC feeding 4 A in the SWD network

Part no.	**EU1S-SWD-PF1-2**
Catalog No.	**174724**
Eaton Catalog No.	**EU1S-SWD-PF1-2**

Powering Business Worldwide™

Delivery program

Product range			SmartWire-DT accessories
Basic function			SmartWire-DT power supply
Function			For feeding supply voltage in order to connect additional SmartWire-DT modules (IP 67) and connected sensors/actuators
Description			SmartWire-DT power supply with IP67 degree of protection for feeding the 24 VDC (4 A) supply voltage for the SmartWire-DT network to the next segment For powering SmartWire-DT modules and connected sensors/actuators
Connection to SmartWire-DT			yes
Information relevant for export to North America			
UL File No. E29184			
UL Category Control No. NKCR			
CSA File No. 2324643			
CSA Class No. 3211-07			
North America Certification UL listed, CSA certified			

Technical data

General

Standards			IEC/EN 61131-2, EN50178, IEC/EN 60529
Dimensions (W x H x D)		mm	85.6 x 20.1 x 56.9
Weight		kg	0.1
Mounting			DIN-rail, screw fixing (M4), mounting section (Clip M20)
Mounting position			As required

Ambient conditions, mechanical

Protection type (IEC/EN 60529, EN50178, VBG 4)			IP69K
Vibrations (IEC/EN 61131-2:2008)			
Constant amplitude 3,5 mm		Hz	5 - 8.4
Constant acceleration 1 g		Hz	8.4 - 150
Mechanical shock resistance (IEC/EN 60068-2-27) semi-sinusoidal 15 g/11 ms		Impacts	9
Drop to IEC/EN 60068-2-31	Drop height	mm	50
Free fall, packaged (IEC/EN 60068-2-32)		m	0.3

Electromagnetic compatibility (EMC)

Overvoltage category			II
Pollution degree			3
Electrostatic discharge (IEC/EN 61131-2:2008)			
Air discharge (Level 3)		kV	8
Contact discharge (Level 2)		kV	4
Electromagnetic fields (IEC/EN 61131-2:2008)			
80 - 1000 MHz		V/m	10
1.4 - 2 GHz		V/m	3
2 - 2.7 GHz		V/m	1
Radio interference suppression (SmartWire-DT)			Class A
Burst (IEC/EN 61131-2:2008, Level 3)			
Supply cable		kV	2
CAN/DP bus cable		kV	1
SmartWire-DT cable		kV	1
Surge (IEC/EN 61131-2:2008, Level 1)			
Supply cables/CAN/DP bus cable			
Surge power cables		kV	0.5
Surge			Supply cables 0.5 kV

Radiated RFI (IEC/EN 61131-2:2008, Level 3)		V	10

Climatic environmental conditions

Climatic proofing			Dry heat to IEC 60068-2-2 Damp heat as per EN 60068-2-3
Air pressure (operation)		hPa	795 - 1080
Ambient temperature			
Operation	ϑ	°C	-25 - +70
Storage / Transport	ϑ	°C	-40 - +70
Relative humidity			
Condensation			permissible

Supply voltage U_{Aux}

Rated operational voltage	U_{Aux}	V	24 V DC (-15/+20%)
Residual ripple on the input voltage		%	≦ 5
Protection against polarity reversal			Yes
Max. current	I_{max}	A	4
Short-circuit rating			no, external fuse FAZ Z3
Power loss	P	W	Normally 1
Potential isolation			No
Rated operating voltage of 24-V-DC slaves		V	typ. U_{Aux} - 0.2

Connection supply voltages

Connection type			5-pin M12 socket (A-keyed)

SmartWire-DT network

Connections			Socket, plug M12 (A-keyed), 5 pole
Plug connectors			SWD4-SM5-67 SWD4-SF5-67

Technical data in sheet catalogue

Other technical data (sheet catalogue)			Technical data

Design verification as per IEC/EN 61439

Technical data for design verification			
Rated operational current for specified heat dissipation	I_n	A	0
Heat dissipation per pole, current-dependent	P_{vid}	W	0
Equipment heat dissipation, current-dependent	P_{vid}	W	0
Static heat dissipation, non-current-dependent	P_{vs}	W	1
Heat dissipation capacity	P_{diss}	W	0
Operating ambient temperature max.		°C	-25
Operating ambient temperature max.		°C	70
Degree of Protection			IP69K
IEC/EN 61439 design verification			
10.2 Strength of materials and parts			
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 Verification of resistance of insulating materials to abnormal heat and fire due to internal electric 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 Insulation properties			
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 6.0

PLC's (EG000024) / Fieldbus, decentr. periphery - power supply/segment module (EC001600)

Electric engineering, automation, process control engineering / Control / Field bus, decentralized peripheral / Field bus, decentralized peripheral - feed and segment module (ecl@ss8.1-27-24-26-10 [BAA071010])

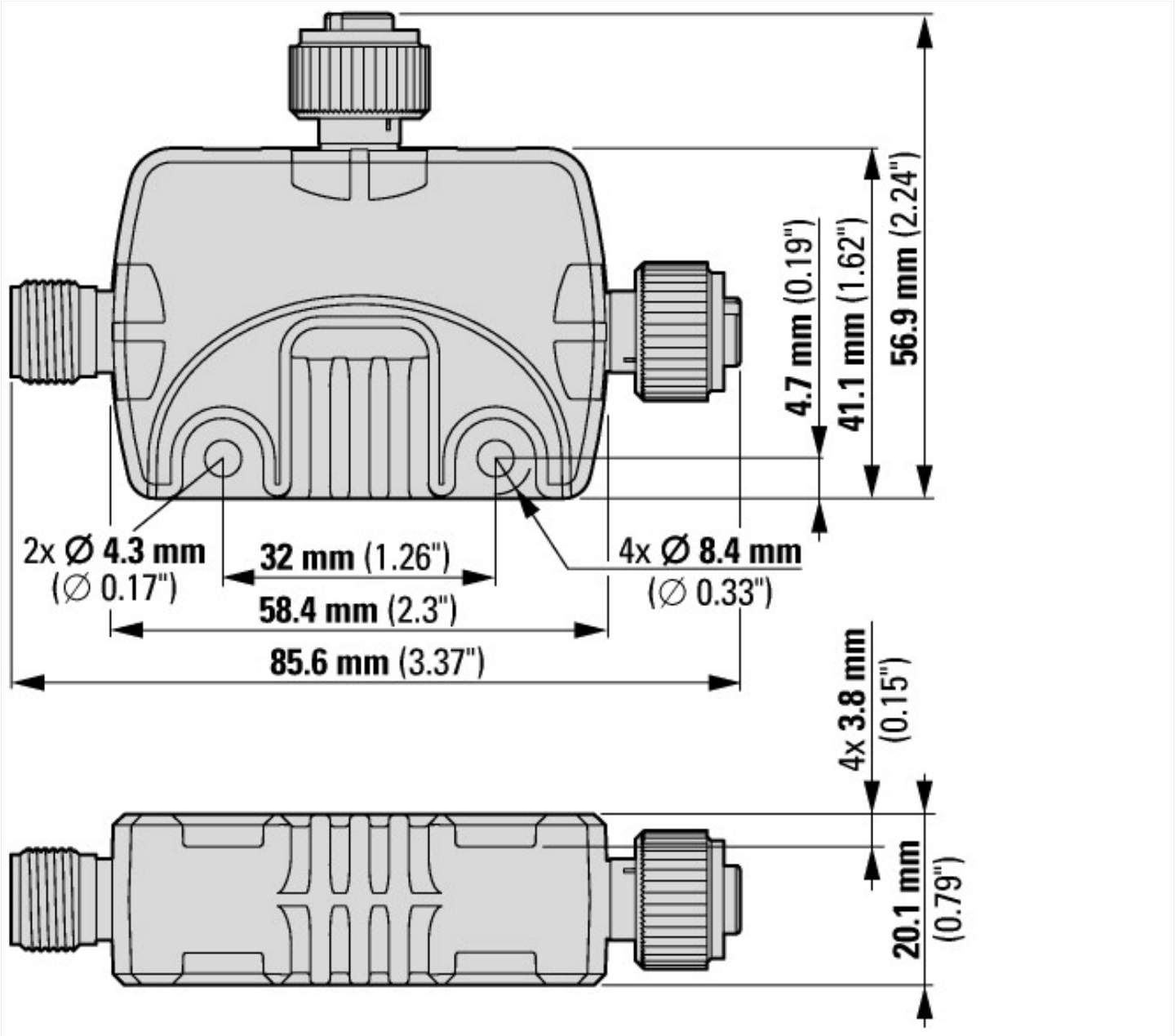
Supply voltage AC 50 Hz		V	0 - 0
Supply voltage AC 60 Hz		V	0 - 0
Supply voltage DC		V	20.4 - 28.8
Voltage type of supply voltage			DC
Number of HW-interfaces industrial Ethernet			0
Number of HW-interfaces PROFINET			0
Number of HW-interfaces RS-232			0
Number of HW-interfaces RS-422			0
Number of HW-interfaces 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 other			1
With optical interface			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
System accessory			Yes
Degree of protection (IP)			IP67

Type of electric connection		Plug-in connection
With potential separation		Yes
With power supply module		Yes
Suitable as segment module		Yes
Remote module		No
Fieldbus connection over separate bus coupler possible		Yes
Bus diagnosis possible		No
Rail mounting possible		Yes
Wall mounting/direct mounting		Yes
Front build in possible		No
Rack-assembly possible		No
Suitable for safety functions		No
Category according to EN 954-1		
SIL according to IEC 61508		None
Performance level acc. 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
Width	mm	85.6
Height	mm	56.9
Depth	mm	20.1

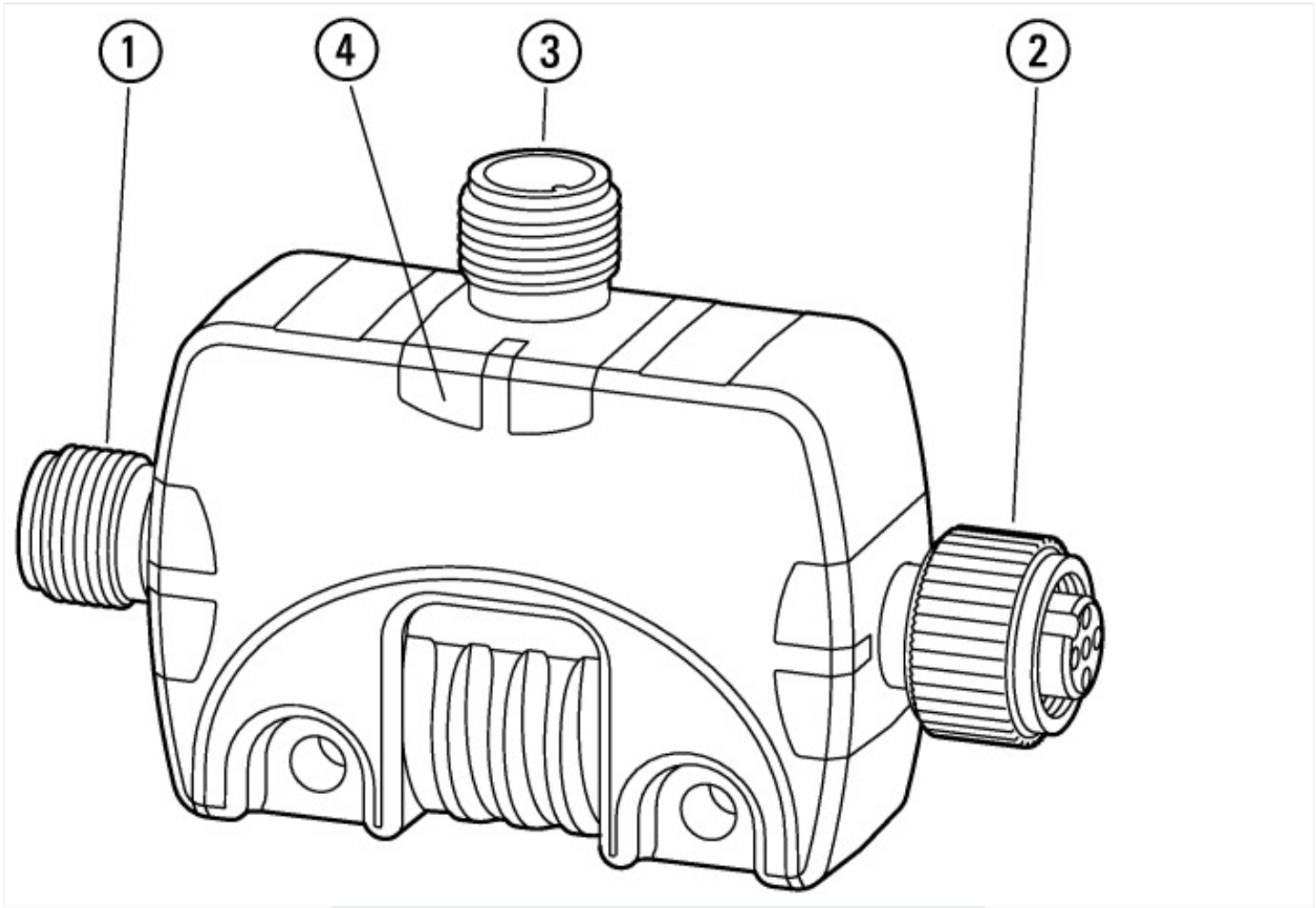
Approvals

UL File No.		E29184
UL Category Control No.		NKCR
CSA File No.		2324643
CSA Class No.		3211-07
North America Certification		UL listed, CSA certified
Specially designed for North America		No

Dimensions



SmartWire-DT I/O modules (IP67) EU1E-SWD-…



① SmartWire-DT connection SWD IN
② SmartWire-DT connection SWD OUT
③ 24-V-DC connection POW IN
④ 24 V status display