

IE-SW-SPE05-4T1LMPODL-1TX**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

The unmanaged SPE switch from Weidmüller offers the solution for reliable and efficient networking. It enables the bridging of large distances of up to 1,000 m using the SPE standard 10Base-T1L (10 Mbit/s). Using this switch eliminates the need for subsystems or gateways, simplifying the network infrastructure and reducing complexity.

- Simple and space-saving installation, as both data transmission and power supply are provided via only one pair of wires (PoDL classes 10 - 14, up to 50 W, SCCP support)
- The unmanaged SPE switch from Weidmüller is compatible with all Ethernet and IP-based protocols and can be used universally
- Provides a reliable and efficient way to optimize network connectivity and increase system efficiency

General ordering data

Version	Network switch, unmanaged, Fast Ethernet, 10BaseT1L, Number of ports: 1x RJ45, 4x SPE port acc. to IEC 63171-2, IP30, -40 °C...70 °C
Order No.	3012120000
Type	IE-SW-SPE05-4T1LMPODL-1TX
GTIN (EAN)	4099986918344
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	108.3 mm	Depth (inches)	4.264 inch
Height	145.1 mm	Height (inches)	5.713 inch
Width	28 mm	Width (inches)	1.102 inch
Net weight	530 g		

Temperatures

Storage temperature	40 °C...85 °C	Operating temperature	-40 °C...70 °C
Humidity	5 to 98% (non-condensing)		

EMC conformity and approvals

EMC standards	EN 61000-6-2, EN 61000-6-4	Free fall	According to IEC 60068-2-32
Shock	according to IEC 60068-2-27	Vibration	according to IEC 60068-2-6

Environmental conditions

Humidity	5 to 98% (non-condensing)		
Operating altitude	Altitude, max.	2,000 m	
Operating temperature, max.	70 °C		
Operating temperature, min.	-40 °C		
Storage temperature, max.	85 °C		
Storage temperature, min.	40 °C		

Guarantee

Time interval	5 years
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Interfaces

Function DIP switch	MAC frame filtering (on/off), QoS (on/off), SPE-T1L (on/off), SPE-T1L (master/slave), PoDL (on/off), PoDL SCCP (on/off), PoDL (24V/50V)	LED indicator	Power LED: PWR, Port LED: LNK/ACT, 10/100M (RJ45 port), Port LED: LNK/ACT, 10M (SPE port), PoDL indicator
Number of ports	1x RJ45, 4x SPE port acc. to IEC 63171-2	RJ45 ports	10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port

MTBF

MTBF	According to Standard	Telcordia SR-332
	Operating time (hours), min.	692,776 h
	Input voltage	24 V

Management features

Network traffic filter	Quality of Service (QoS)	Industrial protocol support	PROFINET device acc. to conformance class A
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Power supply

Connection type	1 removable 2-pin terminal block		
Current consumption	Voltage	24 V	
	Voltage type	DC	
	Current consumption with Powered Device (PD)	3.47 A	
	Current consumption without Powered Device (PD)	0.09 A	
Overload current protection	Yes		
Reverse polarity protection	Yes		
Voltage supply	1 single input		
Voltage supply range	Voltage type	DC	
	Voltage, min.	20 V	
	Voltage, max.	30 V	

Switch characteristics

Bandwidth backplane	280 Mbit/s	MAC table size	1 K
Packet buffer size	128 Kbit		

Technical data

Housing main material	Metal		
PoDL output power	Standard	IEEE 802.3cg	
	Voltage according to PoDL class	24 V	
	PoDL class	10	
	Output power	1.85 W	
	Standard	IEEE 802.3cg	
	Voltage according to PoDL class	24 V	
	PoDL class	11	
	Output power	4.8 W	
	Standard	IEEE 802.3cg	
	Voltage according to PoDL class	24 V	
	PoDL class	12	
	Output power	12.63 W	
	Standard	IEEE 802.3cg	
	Voltage according to PoDL class	50 V	
	PoDL class	13	
	Output power	11.54 W	
	Standard	IEEE 802.3cg	
	Voltage according to PoDL class	50 V	
	PoDL class	14	
	Output power	30 W	
PoDL power budget	Voltage type	DC	
	Voltage, min.	24 V	
	Voltage, max.	30 V	
	Power budget	80 W	
Protection degree	IP30		
Speed	Fast Ethernet, 10BaseT1L		
Switch	unmanaged		
Type of mounting	DIN rail		

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Technology

Data switching	Store and Forward	Flow control	IEEE 802.3x flow control
Standard	IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3cg for 10Base-T1L		

Classifications

ETIM 6.0	EC000734	ETIM 7.0	EC000734
ETIM 8.0	EC000734	ETIM 9.0	EC000734
ETIM 10.0	EC000734	ECLASS 9.0	19-17-01-06
ECLASS 9.1	19-17-01-06	ECLASS 10.0	19-17-04-02
ECLASS 11.0	19-17-04-02	ECLASS 12.0	19-17-04-02
ECLASS 13.0	19-17-04-02	ECLASS 14.0	19-17-04-02
ECLASS 15.0	19-17-04-02		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1 Lead monoxide 1317-36-8
SCIP	9229992a-00b9-4096-8962-200a7f33e289

Important note

Product information	Only powered devices with the same voltage can be operated at the same time.
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Approvals

Approvals



ROHS	Conform
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Downloads

Approval/Certificate/Document of Conformity	EU Declaration of Conformity UK Declaration of Conformity
Engineering Data	CAD data – STEP
User Documentation	Quick start guide – Hardware Installation Guide Application notes – Industrial Product Security Guideline
Catalogues	Catalogues in PDF-format

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Accessories

IP20 Patch Cable



Single pair Ethernet is a technology that only requires one pair of wires to transmit data and power. The resulting benefits will make SPE the preferred network at the field level and beyond.

Advantages of Single Pair Ethernet

- Consistent: Single Pair Ethernet enables uniform Ethernet-based communication from the sensor to the cloud
- Future-proof: key technology for Industry 4.0 and IIoT
- Flexible: ranges of up to 1000 m and transmission properties of up to 1 Gbps enable use across applications
- Innovative: lighter, less space required, and reduced installation effort

General ordering data

Type	IE-S1DS2VE0020T01T01-E	Version
Order No.	2725850020	Patch cable, SPE plug (IEC 63171-2) - IP20 socket contact straight,
GTIN (EAN)	4050118825312	SPE plug (IEC 63171-2) - IP20 socket contact straight, T1-B, PVC, 2 m
Qty.	1 pc(s).	
Type	IE-S1DS2VE0010T01T01-E	Version
Order No.	2725850010	Patch cable, SPE plug (IEC 63171-2) - IP20 socket contact straight,
GTIN (EAN)	4050118824544	SPE plug (IEC 63171-2) - IP20 socket contact straight, T1-B, PVC, 1 m
Qty.	1 pc(s).	
Type	IE-S1DS2VE0400T01T01-E	Version
Order No.	2725850400	Patch cable, SPE plug (IEC 63171-2) - IP20 socket contact straight,
GTIN (EAN)	4064675364412	SPE plug (IEC 63171-2) - IP20 socket contact straight, T1-B, PVC, 40
Qty.	1 pc(s).	m
Type	IE-S1DS2VE0030T01T01-E	Version
Order No.	2725850030	Patch cable, SPE plug (IEC 63171-2) - IP20 socket contact straight,
GTIN (EAN)	4050118825329	SPE plug (IEC 63171-2) - IP20 socket contact straight, T1-B, PVC, 3 m
Qty.	1 pc(s).	
Type	IE-S1DS2VE0150T01T01-E	Version
Order No.	2725850150	Patch cable, SPE plug (IEC 63171-2) - IP20 socket contact straight,
GTIN (EAN)	4064675364658	SPE plug (IEC 63171-2) - IP20 socket contact straight, T1-B, PVC, 15
Qty.	1 pc(s).	m

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Accessories

Single Pair Ethernet tool-free



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General ordering data

Type	IE-PS-SP0-S-FH-180	Version
Order No.	2726040000	SPE fieldattachable plug, SPE-Plug acc. to IEC 63171-2, IDC, 2-core,
GTIN (EAN)	4050118810790	IP20
Qty.	1 pc(s).	

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General ordering data

Type	IE-S1ES2LE-500	Version
Order No.	2924370000	System cable, Single Pair Ethernet (SPE), T1-B, LSZH, 500
GTIN (EAN)	4099986624818	
Qty.	1 pc(s).	

Type	IE-S1ES2UE-500	Version
Order No.	2924360000	System cable, Single Pair Ethernet (SPE), T1-B, PUR, 500
GTIN (EAN)	4099986624801	
Qty.	1 pc(s).	

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Accessories

Type	IE-S1ES2LE-100	Version
Order No.	2926140000	System cable, Single Pair Ethernet (SPE), T1-B, LSZH, 100
GTIN (EAN)	4099986643277	
Qty.	1 pc(s).	
Type	IE-S1ES2UE-100	Version
Order No.	2926130000	System cable, Single Pair Ethernet (SPE), T1-B, PUR, 100
GTIN (EAN)	4099986643260	
Qty.	1 pc(s).	

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General ordering data

Type	IE-S1DS2LE-100	Version
Order No.	2926120000	System cable, Single Pair Ethernet (SPE), T1-B, LSZH, 100
GTIN (EAN)	4099986643253	
Qty.	1 pc(s).	
Type	IE-S1DS2UE-100	Version
Order No.	2926110000	System cable, Single Pair Ethernet (SPE), T1-B, PUR, 100
GTIN (EAN)	4099986643246	
Qty.	1 pc(s).	
Type	IE-S1DS2UE-500	Version
Order No.	2924340000	System cable, Single Pair Ethernet (SPE), T1-B, PUR, 500
GTIN (EAN)	4099986624573	
Qty.	1 pc(s).	