

IE-SW-AL06M-4GTPOE-2GESFP**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com**Features of AdvancedLine Power-over-Ethernet managed switches**

- Variants with 4 or 8 IEEE 802.3af/at compliant PoE ports (up to 30 watt power output per PoE port)
- Integrated DC/DC converter for providing PoE voltage to PDs over the entire PSE input voltage range from 12 to 57 V DC
- Advanced PoE management functions, including PD alive check with auto reboot function and PoE time scheduling
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Model with fiber optic ports for communication links over long distances
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C

General ordering data

Version	Network switch, managed PoE, Gigabit Ethernet, Number of ports: 4 * RJ45 10/100/1000BaseT(X) PoE+, 2x 100/1000BaseSFP Slot, IP30, -40 °C...75 °C
Order No.	2682430000
Type	IE-SW-AL06M-4GTPOE-2GESFP
GTIN (EAN)	4050118692280
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Depth	108.5 mm	Depth (inches)	4.272 inch
Height	145.1 mm	Height (inches)	5.713 inch
Width	54.3 mm	Width (inches)	2.138 inch
Net weight	910 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...75 °C
Humidity	5 to 95 % (non-condensing)		

EMC conformity and approvals

EMC standards	EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V	Free fall	
Safety standard	UL 61010-1, UL 61010-2-201	Shock	According to IEC 60068-2-31 according to IEC 60068-2-27
Vibration	according to IEC 60068-2-6		

Environmental conditions

Humidity	5 to 95 % (non-condensing)		
Operating altitude	Altitude, max.	2,000 m	
	Note	in acc. with UL	
	Altitude, max.	6,000 m	
	Note	for restrictions, see the manufacturer's declaration for operating altitude in section downloads	
Operating temperature, max.	75 °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

Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC	Console port interface	RS-232 (RJ45 connector)
Fibre-optic ports		Function reset button	<5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface
Number of ports	100/1000Base SFP Slot 4 * RJ45 10/100/1000BaseT(X) PoE+, 2x 100/1000BaseSFP Slot	RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port

MTBF

MTBF	According to Standard	Telcordia SR-332
	Operating time (hours), min.	495,624 h

Management features

Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module	Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client)	Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay	Security functions	VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles
Time synchronization management	SNTP server, SNTP client	Industrial protocol support	PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave

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Power over Ethernet (PoE)

PoE output current	Standard	IEEE 802.3af
	Output current	350 mA
	Standard	IEEE 802.3at
	Output current	600 mA
PoE output power	Standard	IEEE 802.3af
	Output power	15.4 W
	Standard	IEEE 802.3at
	Output power	30 W
PoE pin assignment	Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI	
Total PoE power budget	Voltage type	DC
	Voltage, min.	12 V
	Voltage, max.	23.9 V
	Power budget	60 W
	Voltage type	DC
	Voltage, min.	24 V
	Voltage, max.	57 V
	Power budget	120 W

Power supply

Connection type	1 removable 6-pin terminal block	
Current consumption	Voltage	12 V
	Current	6.6 A
	Voltage	24 V
	Current	5.68 A
	Voltage	48 V
	Current	2.68 A
Overload current protection	Yes	
Reverse polarity protection	Yes	
Voltage supply	12/24/48 V DC, 2 redundant inputs	
Voltage supply range	Voltage type	DC
	Voltage, min.	12 V
	Voltage, max.	57 V

Switch characteristics

Bandwidth backplane	12 Gbit/s	Jumbo frame support	up to 9.6 KB
MAC table size	8 K	Max. number of available VLANs	4,096
Number of IGMP-Groups per VLAN	256	Packet buffer size	4 Mbit
Priority queues	8	VLAN-ID max	4,095
VLAN-ID min	1		

Technical data

Housing main material	Metal	Protection degree	IP30
Speed	Gigabit Ethernet	Switch	managed PoE
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 and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.3at/af for Power-over-Ethernet, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP)		

Classifications

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	9229992a-00b9-4096-8962-200a7f33e289

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E141197

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www.weidmueller.com**Technical data****Downloads**

Approval/Certificate/Document of Conformity	PNO Certificate
	RCM Declaration of Conformity
	EU Declaration of Conformity
	UK Declaration of Conformity
	Manufacturer's declaration for operating altitude
Engineering Data	CAD data – STEP
Product Change Notification	Firmware Release Notes
Software	Device description – SNMP private MIB
	Firmware – Current Firmware
	Device description – GSDML file
	Device description – EDS file
User Documentation	Hardware Installation Guide
	User manual
Catalogues	Catalogues in PDF-format

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Accessories**Configuration backup and restore module (for use with switches of Advanced- and SubstationLine)****Module for saving and loading a device configuration**

- Reduce system downtime by simple reconfiguration in case of replacing devices
- 2 storage spaces selectable via DIP switch
- Compact, rugged, reliable design
- For use with switches of Advanced- and SubstationLine

General ordering data

Type	IE-EBR-MODULE-RS232-ALM	Version	
Order No.	2682610000	Configuration backup and restore module, IP40, -10 °C...60 °C	
GTIN (EAN)	4050118692105		
Qty.	1 pc(s).		

Mounting kit for 19" rack assembly

- For assembling DIN rail-based devices on 19" racks

**General ordering data**

Type	RM-KIT	Version	
Order No.	1241440000	Kit for 19"-rack mounting	
GTIN (EAN)	4050118029154		
Qty.	1 pc(s).		

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Accessories

SFP transceiver (for use with switches of Eco- Advanced- and SubstationLine)



Features of SFP-Transceiver series

- Huge variety of transceiver types for several transmission speeds (up to 10 Gigabit Ethernet) and distances (up to 60 km)
- BiDi SFP models for communication via single fiber
- Easy control of transceiver status due to support of Digital Diagnostic Monitoring (DDM)
- Hot pluggable (during operation)
- Class 1 laser product, EN60825-1 compliant
- Applicable for switches of the Eco-, Advanced- and SubstationLine

General ordering data

Type	IE-SFP-1GE-MM-2	Version
Order No.	2682490000	SFP Transceiver, 1000 Mbps, Multimode, LC-Duplex, 2 km, -40 °C...85 °C
GTIN (EAN)	4050118692228	
Qty.	1 pc(s).	
Type	IE-SFP-1FE-SM-60	Version
Order No.	2682470000	SFP Transceiver, 100 Mbps, Singlemode, LC-Duplex, 60 km, -40 °C...85 °C
GTIN (EAN)	4050118692242	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-SM-20-BIDI-T ...	Version
Order No.	2682550000	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 20 km, -40 °C...85 °C
GTIN (EAN)	4050118692167	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-SM-40	Version
Order No.	2682510000	SFP Transceiver, 1000 Mbps, Singlemode, LC-Duplex, 40 km, -40 °C...85 °C
GTIN (EAN)	4050118692204	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-SM-10-BIDI-T ...	Version
Order No.	2682520000	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 10 km, -40 °C...85 °C
GTIN (EAN)	4050118692198	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-SM-20-BIDI-T ...	Version
Order No.	2682540000	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 20 km, -40 °C...85 °C
GTIN (EAN)	4050118692174	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-SM-10	Version
Order No.	2682500000	SFP Transceiver, 1000 Mbps, Singlemode, LC-Duplex, 10 km, -40 °C...85 °C
GTIN (EAN)	4050118692211	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-SM-10-BIDI-T ...	Version
Order No.	2682530000	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 10 km, -40 °C...85 °C
GTIN (EAN)	4050118692181	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-MM-05	Version
Order No.	2682480000	SFP Transceiver, 1000 Mbps, Multimode, LC-Duplex, 0.5 km, -40 °C...85 °C
GTIN (EAN)	4050118692235	
Qty.	1 pc(s).	

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Type	IE-SFP-1FE-MM-2	Version
Order No.	2682450000	SFP Transceiver, 100 Mbps, Multimode, LC-Duplex, 4 km, -40 °C...85 °C
GTIN (EAN)	4050118692266	
Qty.	1 pc(s).	
Type	IE-SFP-1GE-RJ45	Version
Order No.	2766120000	SFP Transceiver, 10/100/1000 MBit/s, RJ45, 100 m, -40 °C...85 °C
GTIN (EAN)	4064675023791	
Qty.	1 pc(s).	
Type	IE-SFP-1FE-SM-30	Version
Order No.	2682460000	SFP Transceiver, 100 Mbps, Singlemode, LC-Duplex, 30 km, -40 °C...85 °C
GTIN (EAN)	4050118692259	
Qty.	1 pc(s).	