

## IE-SW-AL06M-4GTPOE-2GESFP

**Weidmüller Interface GmbH & Co. KG**  
 Klingenbergstraße 26  
 D-32758 Detmold  
 Germany

[www.weidmueller.com](http://www.weidmueller.com)



### Features of AdvancedLine Power-over-Ethernet managed switches

- Variants with 4,8 or 24 IEEE 802.3af/at compliant PoE ports (up to 30 W power output per PoE port)
- Variants with integrated DC/DC converter for providing PoE voltage to PDs over the entire PSE input voltage range from 12 to 57 V DC
- Model for 19" rack mounting with 24 PoE ports and 720 W total power budget
- 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
- Models with SFP ports for communication links over long distances with fiber optic transceivers
- 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.	<a href="#">2682430000</a>
Type	IE-SW-AL06M-4GTPOE-2GESFP
GTIN (EAN)	4050118692280
Qty.	1 items

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**Technical data**

**Approvals**

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
Certificate no. (cULus)	E141197

**Dimensions and weights**

Depth	120 mm	Depth (inches)	4.7244 inch
Height	145.1 mm	Height (inches)	5.7126 inch
Width	54.3 mm	Width (inches)	2.1378 inch
Net weight	910 g		

**Temperatures**

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

**Environmental Product Compliance**

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	6c, 7a, 7cl
REACH SVHC	Lead 7439-92-1, Lead monoxide 1317-36-8
SCIP	9229992a-00b9-4096-8962-200a7f33e289

**EMC conformity and approvals**

Free fall	According to IEC 60068-2-31	EMC standards	EN 55032, EN 55035, 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 - 5 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, IEC 61000-4-8
Vibration	according to IEC 60068-2-6	Shock	according to IEC 60068-2-27
Safety standard	UL 61010-1, UL 61010-2-201		

**Environmental conditions**

Operating temperature, max.	75 °C	
Operating temperature, min.	-40 °C	
Humidity	5 to 95 % (non-condensing)	
Storage temperature, max.	85 °C	
Storage temperature, min.	-40 °C	
Operating altitude	Altitude, max.	2000 m
	Note	in acc. with UL
	Altitude, max.	6000 m

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Note

for restrictions, see the manufacturer's declaration for operating altitude in section downloads

**Guarantee**

Time interval 5 years

**Interfaces**

Fibre-optic ports	100/1000Base SFP Slot	RJ45 ports	10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port
Console port interface	RS-232 (RJ45 connector)	Alarm contact	1 relay output with a current capacity of 1 A at 24 V DC
Number of ports	4 * RJ45 10/100/1000BaseT(X) PoE+, 2x 100/1000BaseSFP Slot	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

**MTBF**

MTBF	According to Standard	Telcordia SR-332
	Operating time (hours), min.	495624 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-manager/client)	Network traffic filter	Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), IGMP Snooping, MLD Snooping, MLD v1/v2
IP-address management	Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay, IPv4/IPv6	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

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Time synchronization management	SNTP server, SNTP client	Industrial protocol support	security via privilege level configuration for different user roles
			PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave

**Power over Ethernet (PoE)**

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

**Power supply**

Reverse polarity protection	Yes	
Supply voltage	12/24/48 V DC, 2 redundant inputs	
Overload current protection	Yes	
Connection type	1 removable 6-pin terminal block	
Voltage supply range	Voltage type	DC
	Voltage, min.	12 V
	Voltage, max.	57 V
Current consumption	Voltage	12 V
	Current consumption with Powered Device (PD)	6.6 A
	Current consumption without Powered Device (PD)	0.71 A
	Voltage	24 V
	Current consumption with Powered Device (PD)	5.68 A
	Current consumption without Powered Device (PD)	0.37 A
	Voltage	48 V
	Current consumption with Powered Device (PD)	2.76 A
	Current consumption without Powered Device (PD)	0.2 A

**Switch characteristics**

Priority queues	8	Max. number of available VLANs	4096
VLAN-ID min	1	VLAN-ID max	4095
MAC table size	8 K	Packet buffer size	4 Mbit
Bandwidth backplane	12 Gbit/s	Number of IGMP-Groups per VLAN	256
Jumbo frame support	up to 9.6 KB		

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Housing main material	Metal	Type of mounting	DIN rail
Protection degree	IP30	Speed	Gigabit Ethernet
Switch	managed PoE		

**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 8.0	EC000734	ETIM 9.0	EC000734
ETIM 10.0	EC000734	ECLASS 14.0	19-17-04-01
ECLASS 15.0	19-17-04-01		

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## Accessories

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**SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B)**


## 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-1FE-MM-2	Version
Order No.	<a href="#">2682450000</a>	SFP Transceiver, 100 Mbps, Multimode, LC-Duplex, 4 km, -40 °C...85
GTIN (EAN)	4050118692266	°C
Qty.	1 ST	
Type	IE-SFP-1FE-SM-30	Version
Order No.	<a href="#">2682460000</a>	SFP Transceiver, 100 Mbps, Singlemode, LC-Duplex, 30 km, -40
GTIN (EAN)	4050118692259	°C...85 °C
Qty.	1 ST	
Type	IE-SFP-1FE-SM-60	Version
Order No.	<a href="#">2682470000</a>	SFP Transceiver, 100 Mbps, Singlemode, LC-Duplex, 60 km, -40
GTIN (EAN)	4050118692242	°C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-MM-05	Version
Order No.	<a href="#">2682480000</a>	SFP Transceiver, 1000 Mbps, Multimode, LC-Duplex, 0.5 km, -40
GTIN (EAN)	4050118692235	°C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-MM-2	Version
Order No.	<a href="#">2682490000</a>	SFP Transceiver, 1000 Mbps, Multimode, LC-Duplex, 2 km, -40
GTIN (EAN)	4050118692228	°C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-SM-10	Version
Order No.	<a href="#">2682500000</a>	SFP Transceiver, 1000 Mbps, Singlemode, LC-Duplex, 10 km, -40
GTIN (EAN)	4050118692211	°C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-SM-40	Version
Order No.	<a href="#">2682510000</a>	SFP Transceiver, 1000 Mbps, Singlemode, LC-Duplex, 40 km, -40
GTIN (EAN)	4050118692204	°C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-SM-10-BIDI-T...	Version
Order No.	<a href="#">2682520000</a>	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 10 km,
GTIN (EAN)	4050118692198	-40 °C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-SM-10-BIDI-T...	Version
Order No.	<a href="#">2682530000</a>	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 10 km,
GTIN (EAN)	4050118692181	-40 °C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-SM-20-BIDI-T...	Version
Order No.	<a href="#">2682540000</a>	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 20 km,
GTIN (EAN)	4050118692174	-40 °C...85 °C
Qty.	1 ST	

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Type	IE-SFP-1GE-SM-20-BIDI-T...	Version
Order No.	<a href="#">2682550000</a>	SFP Transceiver, 1000 Mbps, Singlemode BiDi, LC-Simplex, 20 km,
GTIN (EAN)	4050118692167	-40 °C...85 °C
Qty.	1 ST	
Type	IE-SFP-1GE-RJ45	Version
Order No.	<a href="#">2766120000</a>	SFP Transceiver, 10/100/1000 MBit/s, RJ45, 0.1 km, -40 °C...85 °C
GTIN (EAN)	4064675023791	
Qty.	1 ST	

## Mounting kit for 19" rack assembly

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



## General ordering data

Type	RM-KIT	Version
Order No.	<a href="#">1241440000</a>	Kit for 19"-rack mounting
GTIN (EAN)	4050118029154	
Qty.	1 ST	

## 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.	<a href="#">2682610000</a>	Configuration backup and restore module, IP40, -10 °C...60 °C
GTIN (EAN)	4050118692105	
Qty.	1 ST	