

## IE-SW-AL16M-16TX

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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



### Features of AdvancedLine managed Switch series

Industrial networks require a future-proof infrastructure with high availability, reliability, and transparency. Managed switches increase network availability utilizing redundancies and control mechanisms as well as network diagnostics in demanding automation networks.

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Huge variety of port count and media type enable a wide range of applications (5 to 24 ports)
- Models supporting Gigabit Ethernet including Jumbo Frame support for applications with high demand on bandwidth and latency
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- Layer 3 model for hardware supported routing between up to 20 IP-subnets

### General ordering data

Version	Network switch, managed, Fast Ethernet, Number of ports: 16x RJ45, IP30, -40 °C...75 °C
Order No.	<a href="#">2682310000</a>
Type	IE-SW-AL16M-16TX
GTIN (EAN)	4050118692402
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	107.5 mm	Depth (inches)	4.2323 inch
Height	153.6 mm	Height (inches)	6.0472 inch
Width	74.3 mm	Width (inches)	2.9252 inch
Net weight	1188 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 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 Vrms
Vibration	according to IEC 60068-2-6	Shock	according to IEC 60068-2-27
Safety standard	SELV according to EN 62368-1, 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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## Technical data

Note

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

### Guarantee

Time interval 5 years

### Interfaces

RJ45 ports	10/100BaseT(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	16x RJ45
Function reset button	<5 sec: System reboot, >5 sec: Factory default		

### MTBF

MTBF	According to Standard	Telcordia SR-332
	Operating time (hours), min.	886987 h

### Management features

Device configuration	Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH)	Monitoring function	SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, 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
Network redundancy	Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery	Network traffic filter	Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting
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, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods

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Time synchronization management	NTP server, SNTP client	Industrial protocol support	(web-interface, telnet, SSH), Loop protection Modbus/TCP slave, PROFINET device acc. to conformance class A
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**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.	10.8 V	
	Voltage, max.	52.8 V	
Current consumption	Voltage	12 V	
	Current	1.2 A	
	Voltage	24 V	
	Current	0.6 A	
	Voltage	48 V	
	Current	0.3 A	

**Switch characteristics**

Priority queues	4	Max. number of available VLANs	4095
VLAN-ID min	1	VLAN-ID max	4094
MAC table size	8 K	Packet buffer size	1 Mbit
Bandwidth backplane	3.2 Gbit/s	Number of IGMP-Groups per VLAN	256

**Technical data**

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

**Technology**

Data switching	Store and Forward	Flow control	IEEE 802.3x flow control
Standard	IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, 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, 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

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ETIM 10.0	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	ECLASS 14.0	19-17-04-01
ECLASS 15.0	19-17-04-01		