

# EKI-9226G-20FMI

# EKI-9226G-20FOI

**IEC-61850-3 Industrial Rackmount L2 Managed Switch with 48 V<sub>DC</sub>**

**IEC-61850-3 Industrial Rackmount L2 Managed Switch with AC/DC**



## Features

- IEC-61850-3 and IEEE1613 certified for Power Energy.
- 20 x Gigabit SFP ports + 6 x Gigabit x RJ-45 ports
- SFP socket for easy and flexible fiber expansion
- Management: SNMP v1/v2c/v3, WEB, Telnet, standard MIB
- Security: 802.1x (port-based, MD5/TLS/TTLS/PEAP encryption), HTTPS, SSH, and SNMPv3
- Redundancy: Gigabit X-Ring Pro (ultra-high-speed recovery time, <20 ms), RSTP/STP (802.1w/1D), MSTP
- Dual Power input and 2 relay output
- Wide operating temperature range of -40 ~ 85° C

## Introduction

The EKI-9226G series are designed for power substation automation applications requiring IEC 61850-3 certification. Thanks to its -40 ~ 85° C wide operating temperature, it can operate well in extremely harsh environments. Designed with 20 Gigabit SFP ports and 6 Gigabit RJ-45 ports, these series of switches provide abundant and flexible connection options. Finally, the EKI-9226G series feature dual power inputs to ensure system stability and 2 relay outputs for greater user flexibility.

## Specifications

### Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3z, 802.1D, 802.1w, 802.1p, 802.1Q, 802.1X, 802.3ad, 802.3ae
- **LAN** 10/100/1000BASE-TX, optional 100BASE-FX, 1000BASE-SX/LX/LHX/XD/ZX/EZX
- **Transmission Distance** Ethernet: Up to 100 m (4-wire Cat.5e, Cat.6 RJ45 cable suggested for Gigabit port)  
SFP: Up to 110 km (depends on SFP)
- **Transmission Speed** Gigabit copper: 10/100/1000 Mbps, Auto-Negotiation  
Gigabit fiber: Up to 1000 Mbps

### Interface

- **Connectors** 6 x RJ45 (Ethernet)  
20 x SFP ports  
3-pin removable screw terminal (power)  
4-pin removable screw terminal (relay)
- **LED Indicators** 10/100TX: Link/activity, duplex/collision  
Gigabit copper: Link/activity, speed (1000 Mbps)  
SFP: Link/activity
- **Console** RS-232 (RJ45)

### Mechanism

- **Enclosure** IP30, metal shell with solid mounting kit
- **Dimensions (W x H x D)** 438 x 44 x 315.2 mm
- **Mounting** 1U 19" rack mount

### Power

- **Power Consumption** 35W
- **Power Input** EKI-9226G-20FMI: 48V<sub>DC</sub>  
EKI-9226G-20FOI: 90 ~ 264V<sub>AC</sub>/88 ~ 370V<sub>DC</sub>
- **Fault Output** 2 relay outputs

### Protection

- **Overload Current** Present

### Environment

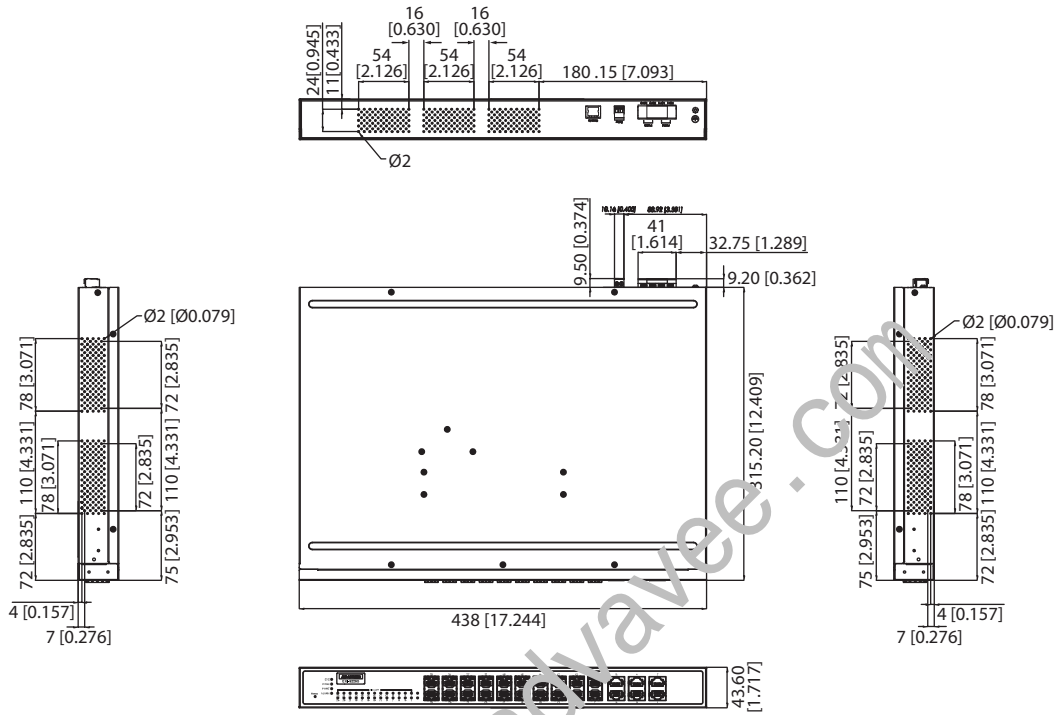
- **Operating Temperature** -40 ~ 85° C (-40 ~ 185° F)
- **Storage Temperature** -40 ~ 85° C (-40 ~ 185° F)
- **Operating Humidity** 5 ~ 95% (non-condensing)
- **Storage Humidity** 5 ~ 95% (non-condensing)

### Certification

- **Safety** UL 60950
- **EMI** CE FCC Class A
- **EMS** EN 61000-4-2  
EN 61000-4-3  
EN 61000-4-4  
EN 61000-4-5  
EN 61000-4-6  
EN 61000-4-8  
EN61000-6-2  
EN61000-6-4
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Power Automation** IEC 61850-3, IEEE1613
- **Railway Application** EN50121-4

## Dimensions

Unit: mm [in.]



### L2 Features

- **L2 MAC Address** 8K
- **Jumbo Frame** 9 KB
- **VLAN Group** 4093 (VLAN ID 1-4093)
- **VLAN** Mac-based VLAN, protocol-based VLAN, IP subnet-based VLAN, port-based VLAN, GVRP
- **Port Mirroring** Per port, multi-source port
- **IP Multicast** IGMP snooping v1/v2/v3, MLD snooping, IGMP immediate leave
- **Storm Control** Broadcast, multicast, unknown unicast
- **Spanning Tree** IEEE 802.1D-STP, IEEE 802.1s-MSTP, IEEE 802.1w-RSTP, X-Ring Pro

### QoS

- **Priority Queue Scheduling** WRR, SP
- **Class of Service** IEEE 802.1p-based CoS, IP TOS, DSCP-based CoS
- **Rate Limiting** Egress rate limit, ingress rate limit
- **Link Aggregation** IEEE 802.3ad dynamic port trunking, static port trunking

### Security

- **Port Security** Static, dynamic
- **Authentication** 802.1x (port-based), RADIUS, TACACS+
- **ACL** 550 rules
- **Advanced Security** IP Source Guard

### Management

- **DHCP** Client, server, relay, option 66/67
- **Access** SNMP v1/v2c/v3, WEB, Telnet, RMON, standard MIB, private MIB
- **Security Access** SSH 2.0, SSL
- **Software Upgrade** TFTP, HTTP, dual image
- **NTP** NTP client

## Ordering Information

- **EKI-9226G-20FMI-AE** Industrial Rackmount L2 Managed Switch with 48 V<sub>DC</sub>
- **EKI-9226G-20FOI-AE** Industrial Rackmount L2 Managed Switch with 90 ~ 264V<sub>AC</sub>/88 ~ 370V<sub>DC</sub>

Note: For SFP copper type, only 1000Mbps supported.