

# EKI-9512D-WV

## EN 50155 12-port Managed Ethernet Switch



### Features

- Complies with EN50155
- All 10/100 Mbps connections support dual ring protection and non-blocking traffic forwarding
- X-Ring Pro supports rapid and predictable convergence
- Provides M12 connector with IP67 protection
- Supports wide operating temperatures from -40 ~ 70°C
- Wide Range Power Input (24/36/48/72/96/110 V<sub>DC</sub>)

### Introduction

EKI-9512D M12 Managed Ethernet Switch is designed for railway applications, including rolling stock. EKI-9512D switch uses M12 connectors to ensure tight, robust connections, and to guarantee reliable operation against environmental disturbances, such as vibration and shock. EKI-9512D provides 12 Fast Ethernet M12 ports. In addition, EKI-9512D provides a wide power input range of 24/36/48/72/96/110 V<sub>DC</sub>; the dual, isolated power input increases the reliability of your communications system. The -40 to 70° C operating temperature and IP67-rated waterproof enclosure allow deployment in harsh environments. EKI-9512D is compliant with the essential sections of the European railway standard EN 50155, EN50121-3-2 covering operating temperature, power input voltage, surge, ESD, and vibration, making the switches suitable for a variety of industrial applications.

### Specifications

#### Interface

- I/O Port** 12 x 10/100BaseT M12 D-Code
- Console Port** M12 A-Code
- F/W Backup Port** USB (M12 A-Code)
- Power Connector** M23 6 pin

#### Physical

- Enclosure** Aluminum Shell
- Protection Class** IP 67
- Installation** Wall Mount, DIN Rail (Optional)
- Dimensions (W x D x H)** 254 x 174 x 64.5 (mm)
- Weight** 3.5 kg

#### LED Display

- System LEDs** PWR1, PWR2, SYS, CFG, ALM
- Port LED** Data

#### Environment

- Operating Temperature** -40 ~ 70°C (-40 ~ 158°F)
- Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- Ambient Relative Humidity** 5 ~ 95% (non-condensing)

#### Power

- Power Consumption** ~ 26.4 Watts (System)
- Power Input** 24/36/48/72/96/110 V<sub>DC</sub> dual inputs  
Supports Overload Current Protection  
Supports Reverse Polarity Protection

#### Certification

- EMI** FCC Part 15 Subpart B Class A  
CE EN55022 (CISPR)  
EN55024 Class A
- EMS** EN61000-4-2 (ESD); EN61000-4-3 (RS); EN61000-4-4 (EFT); EN61000-4-5 (Surge); EN61000-4-6 (CS)
- Shock** IEC 61373
- Freefall** IEC 60068-2-32
- Vibration** IEC 61373
- Rail Traffic** EN 50155; EN50121-3-2

#### L2 Features

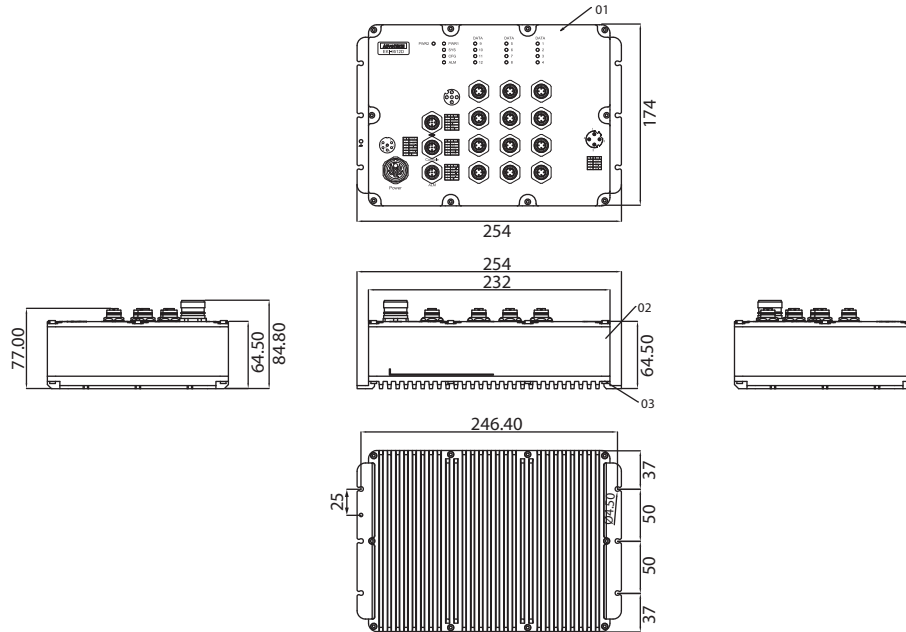
- L2 MAC Address** 16K
- Jumbo Frame** 9KB
- VLAN Group** 4093 (VLAN ID 1-4093)
- VLAN** Mac based VLAN, Protocol based VLAN, IP subnet based VLAN, Port based VLAN, GVRP
- Port Mirroring** Per port, Multi-source port
- IP Multicast** IGMP Snooping v1/v2/v3, MLD Snooping, IGMP Immediate leave
- Storm 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 (Weighted Round Robin), SP (Strict Priority)
- 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

## Dimensions

Unit: mm



### 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-9512-CFIDW10E**   12 x M12 managed Ethernet Switch, including 24/36/48/72/96/110 V<sub>DC</sub> dual power inputs

### EKI-9516/9512 Series Selection Table

| Products      |                   | Ports Combination                 |                              |                              |                         | Power Input Range                 |                                  |  | Others            |
|---------------|-------------------|-----------------------------------|------------------------------|------------------------------|-------------------------|-----------------------------------|----------------------------------|--|-------------------|
| Model Name    | Ordering P/N      | PoE, 10/100/1000 Mbps M12 X-Coded | 10/100/1000 Mbps M12 X-Coded | PoE, 10/100 Mbps M12 D-Coded | 10/100 Mbps M12 D-Coded | HV (72V/96V/110 V <sub>DC</sub> ) | LV (24V/36V/48 V <sub>DC</sub> ) | WV (24/36/48/72V/96V/110 V <sub>DC</sub> ) | Conformal Coating |
| EKI-9516P-HV  | EKI-9516-POIDH10E | 12                                | 4                            |                              |                         | ✓                                 |                                  |  | ✓                 |
| EKI-9516P-LV  | EKI-9516-POIDL10E | 12                                | 4                            |                              |                         |                                   | ✓                                |  | ✓                 |
| EKI-9516-WV   | EKI-9516-COIDW10E |                                   | 16                           |                              |                         |                                   |                                  | ✓  | ✓                 |
| EKI-9512P-HV  | EKI-9512-POIDH10E | 8                                 | 4                            |                              |                         | ✓                                 |                                  |  | ✓                 |
| EKI-9512P-LV  | EKI-9512-POIDL10E | 8                                 | 4                            |                              |                         |                                   | ✓                                |  | ✓                 |
| EKI-9512-WV   | EKI-9512-COIDW10E |                                   | 12                           |                              |                         |                                   |                                  | ✓  | ✓                 |
| EKI-9516DP-HV | EKI-9516-PFIDH10E |                                   |                              | 12                           | 4                       | ✓                                 |                                  |  | ✓                 |
| EKI-9516DP-LV | EKI-9516-PFIDL10E |                                   |                              | 12                           | 4                       |                                   | ✓                                |  | ✓                 |
| EKI-9516D-WV  | EKI-9516-CFIDW10E |                                   |                              |                              | 16                      |                                   |                                  | ✓  | ✓                 |
| EKI-9512DP-HV | EKI-9512-PFIDH10E |                                   |                              | 8                            | 4                       | ✓                                 |                                  |  | ✓                 |
| EKI-9512DP-LV | EKI-9512-PFIDL10E |                                   |                              | 8                            | 4                       |                                   | ✓                                |  | ✓                 |
| EKI-9512D-WV  | EKI-9512-CFIDW10E |                                   |                              |                              | 12                      |                                   |                                  | ✓  | ✓                 |