



## Product Description

The KBC ESML6-P3 Ethernet series is a managed industrial switch designed for use in a wide range of operating temperatures in non-environmentally conditioned, industrial applications. The switch provides connectivity for up to six 10/100 Mbps twisted pair copper ports and three SFP ports. The SFP ports can be configured as 10/100/1000BASE-T(X) or 1000BASE-SX/LX/LH/ZX LC in any permutation. Redundancy is offered through DT-Ring technology that recovers cable or port failures automatically in less than 50ms. Units can be fully managed through a number of different interfaces and provide a vast range of hardware and software features ensuring ease of installation and enhancement of network performance.

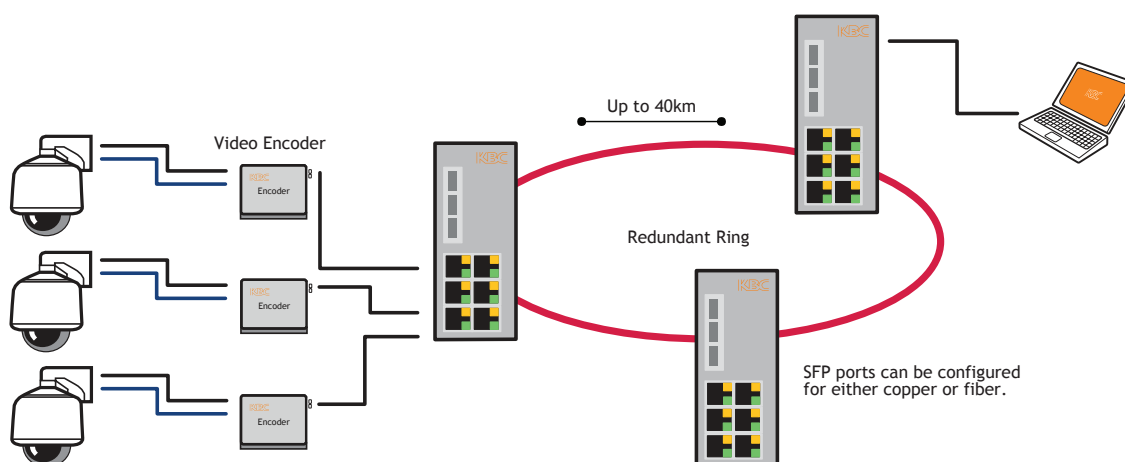
The series is available in either DIN rail or wall-mount configurations.



## Product Features

- Supports DT-Ring recovery, <50ms
- Supports Ring, Link, and Star Topologies
- Redundant power input
- Alarm output for power supply
- Port status indicators
- Supports QoS, VLAN, SNMP, MIB V1/V2/V3, IGMP snooping, port mirroring, port trunking, static MAC address binding
- Broadcast storm control
- IP40 protection class

## Typical System Configuration



# Specifications

## Standards

IEEE Standard

IEEE 802.3 10BASE-T  
IEEE 802.3u 100BASE-TX &  
100BASE-FX  
IEEE 802.3x Full Duplex  
IEEE 802.3z Gigabit Fiber  
IEEE 802.1AB  
IEEE 802.1d Spanning Tree  
IEEE 802.1w Rapid spanning  
tree  
IEEE 802.1p Class of Service  
IEEE 802.1q VLAN Tagging

## Mechanical

Casing  
Dimensions (W x H x D)  
  
Weight  
Installation

IP40 Protection  
75mm x 140mm x 123mm  
(2.95" x 5.51" x 4.84")  
1200g  
Wall-mount or DIN Rail

## Environmental

Operating Temperature  
Storage Temperature  
Operating Humidity  
Mean Time Between Failure (MTBF)

-40° ~ +85° C / -40° ~ +185° F  
-40° ~ +85° C / -40° ~ +185° F  
0 to 95% non-condensing  
>300,000 Hours

## Switch Performance

Switching Method  
Transfer Rate

Store & Forward  
148,810 pps Fast Ethernet  
Port  
1488100 pps Gigabit Ethernet  
Port  
7.2 Gbps  
8k  
4094  
8

Backplane Switch Capacity  
Mac Address Table  
No. of VLAN  
No. of Priority Queues

## Connectors

10/100 Electrical  
Contact Closure Alarm  
Console  
Power<sup>(2)</sup>

6 x RJ45  
2-way Screw block terminal  
1 x RJ45  
3-way Screw block terminal  
(dual redundant)

## Approvals

IEC61000-4-2(ESD)

IEC61000-4-3(RS)  
IEC61000-4-4(EFT)

IEC61000-4-5(Surge)

IEC61000-4-6(CS)

IEC61000-4-8 100A/m cont.  
(Power Frequency Magnetic Field)  
IEC61000-4-12/18  
(Damped Oscillatory Wave)  
IEC61000-4-10 (Damped Oscillatory)  
IEC61000-4-16  
(Common Mode Conduct)  
FCC CFR47 Part 15/EN55022  
IEC61000-6-2 (Industrial Standards)  
IEC61850-3 (Substations)  
IEEE1613 (Electric Power Substations)  
EN50121-4 (Railway Applications)  
Mine Safety CertificationEN50121-4 (Railway Applications)

±8kV Contact discharge,  
±15kV Air discharge  
10V/m (80-1000 MHz)  
Power line ±4kV,  
Data line ±2kV  
Power line ±4kV CM/±4kV DM  
Data line ±2kV  
3V (10 kHz-150 kHz)  
10V (150 kHz-80 MHz)

1000A/m, 1s to 3s  
2.5kV CM, 1kV DM

30A/m  
30V cont. 300V, 1s

Class A

## Contact Closure Alarm Output

Output  
Switch Rating

SPST Relay, Normally Open  
120mA @ 350 Vdc

## Power

Power Input  
  
Power Supply<sup>(1)</sup>  
  
Power Consumption

18 - 36 Vdc  
Dual Redundant  
Input: 100-240 Vac  
Output: +24 Vdc  
<5.6W

# Part Number Configurator

ESML6-P3-DA

D: DIN Rail  
W: Wall-Mount

A: US Power Plug  
B: UK Power Plug  
C: Euro Power Plug  
E: Australian Power Plug

1. Please select the power plug from US Standard, Euro 2 Circular, UK 3 Pin square or Australian when placing order.  
2. Power lines are crimped and fitted to screw block connector in factory.

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