

# Opal20

## 18+2G Port Entry-level Unmanaged DIN-Rail Switches



### » Overview

Opal20 series is a well-designed entry level unmanaged switches with compact structure, flexible port combinations and reliable performance, fulfilling different demands in automation control applications. Opal20 supports 2 optional 10/100/1000Base-TX ports, 2 optional 100Base-FX ports and up to 16 10/100Base-TX RJ45 ports. Opal20 support SC/ST/SFP type fiber ports, redundant power inputs, metal housing with IP30 protection class, thus ensuring fast and reliable data transmission in harsh industrial environments. Opal20 provide both standard (-10°C to 60°C) operating temperature range model and wide (-40°C to 75°C) operating temperature range models to meet different applications.

### » Key Features

Flexible port combinations, supporting max 2 10/100/1000 Base-TX ports, 2 100Base-FX ports, 16 10/100Base-TX ports

Both standard and wide operating temperature models are available

IP30 protection class

UL508, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC

## **» Product Specifications**

### **>Technical Specification**

#### **-Standard**

IEEE 802.3i (10Base-T)

IEEE 802.3u (100Base-TX and 100Base-FX)

IEEE 802.3ab(1000Base-T)

#### **-Switch Properties**

MAC Table: 8K

Packet Buffer: 2Mbit

Packet Forwarding Rate: 5.7Mpps

Switching Delay:<10 $\mu$ s

#### **-Interface**

Gigabit Port: 10/100/1000Base-T(X), RJ45 port

Fast Ethernet Port:

100Base-FX, SM/MM, SC/ST connector

100Base-X, SFP slot

10/100Base-T(X), RJ45 port

#### **-LED**

LED on Front Panel:

Power LED: PWR1, PWR2

Interface LED: Link/ACT, Speed (RJ45 port); Link/ACT, Speed (Fiber port)

#### **-DIP-Switch**

Enable/Disable broadcast storm protection

#### **-Power Requirements**

Power Input: 12-48VDC/18-30VAC

Power terminal:

4-pin 5.08mm-spacing plug-in terminal block

Power Consumption:<8W

Overload protection: Support

Reverse protection: Support

Redundancy protection: Support

### **-Physical Characteristics**

Housing: Metal

Cooling: Natural convection, fanless

Protection Class: IP30

Dimension: 80mm×134mm×106mm (W×H×D)

Weight: 0.7Kg

Mounting: DIN-Rail or Panel mounting

### **-Environmental Limits**

Operating Temperature:

-10°C to +60°C(Opal20-E)

-40°C to +75°C

Storage Temperature: -40°C to +85°C

Ambient Relative Humidity: 5-95% (non-condensing)

### **-Quality Assurance**

MTBF: 2,486,573 hrs

Warranty: 5 years

### **-Approvals**

UL508, Class I Div 2, ATEX Zone 2, IECEx, CE, FCC

### **-Industry Standard**

EMI:

FCC CFR47 Part 15, EN55022/CISPR22, Class A

EMS:

IEC61000-4-2(ESD): ±6kV (contact), ±8kV (air)

IEC61000-4-3(RS): 10V/m (80MHz–2GHz)

IEC61000-4-4(EFT): Power Port: ±2kV; Data Port: ±1kV

IEC61000-4-5(Surge): Power Port: ±1kV/DM, ±2kV/CM; Data Port: ±2kV

IEC61000-4-6(CS): 10V (150kHz–80MHz)

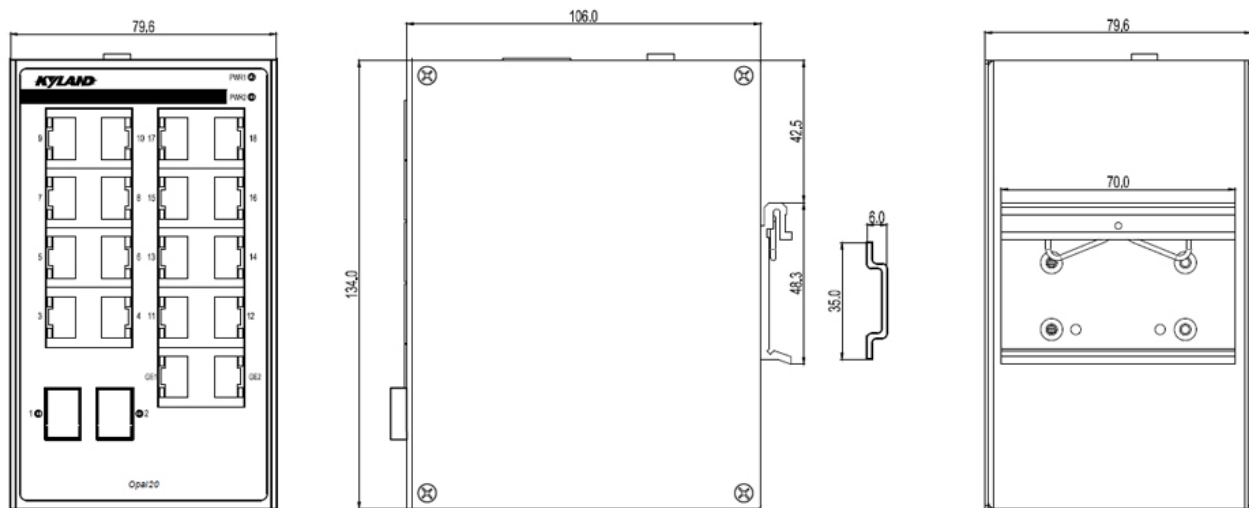
Machinery:

IEC60068-2-6(Vibration)

IEC60068-2-27(Shock)

IEC60068-2-32(Free Fall)

## » Mechanical Drawing



## » Ordering Information

### Opal20-Ports-Connector-PS1-PS2

### Opal20-E-Ports-Connector-PS1-PS2

|      |                                |
|------|--------------------------------|
| E    | -10 -+60 operating temperature |
| None | -40 -+75 operating temperature |

### Ports

|            |   |
|------------|---|
| 2GE2S16T   | 2x10/100/1000Base-T(X) RJ45 ports; 2x100Base-FX, single mode fiber ports; 16x10/100Base-T(X) RJ45 ports |
| 2GE2M16T   | 2x10/100/1000Base-T(X) RJ45 ports; 2x100Base-FX, multi mode fiber ports; 16x10/100Base-T(X) RJ45 ports  |
| 2GE2SFP16T | 2X10/100/1000Base-T(X) RJ45 ports; 2X100Base-X, SFP slots; 16X10/100Base-T(X) RJ45 ports                |
| 2GE16T     | 2X10/100/1000Base-T(X) RJ45 ports; 16X10/100Base-T(X) RJ45 ports  |
| 2S16T      | 2x100Base-FX, single mode fiber ports; 16x10/100Base-T(X) RJ45 ports                                    |
| 2M16T      | 2x100Base-FX, multi mode fiber ports; 16x10/100Base-T(X) RJ45 ports                                     |
| 2SFP16T    | 2X100Base-X, SFP slots; 16X10/100Base-T(X) RJ45 ports   |
| 16T        | 16X10/100Base-T(X) RJ45 ports   |

### Connector

|      |   |
|------|---|
| SC05 | SC connector, multi-mode, 1310nm, 5km   |
| ST05 | ST connector, multi-mode, 1310nm, 5km   |
| SC40 | SC connector, single-mode, 1310nm, 40km |
| ST40 | ST connector, single-mode, 1310nm, 40km |
| SC60 | SC connector, single-mode, 1310nm, 60km |
| SC80 | SC connector, single-mode, 1550nm, 80km |
| None | No 100M fiber port                      |

### PS

|       |   |
|-------|---|
| LV-LV | 12-48VDC/18-30VAC, redundant power inputs |
|-------|---|

### Accessories

|                    |  |
|--------------------|--|
| 100Base SFP module | Please refer to the 100Base SFP module ordering list |
| DT-BGAZ-12         | Panel for Panel mounting                             |
| DT-FCZ-RJ45-01     | Dustproof cover for RJ45 port                        |

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