

DVS-016 Series

Unmanaged Industrial 16-Port FE Ethernet Switches



- ▶ Supports IEEE 802.1p based QoS for packet forwarding precedence
- ▶ Built-in Broadcast Storm Protection
- ▶ Transparent transmission of VLAN tagged packets
- ▶ 12 to 48 V_{DC} redundant terminal block power input
- ▶ Auto warning by relay output for link-down and power failure
- ▶ Compatible with various industrial protocols, including EtherNet/IP, Profinet, CC-LINK IE and DNP 3.0

Specifications

TECHNOLOGY

Standard Compliance

- IEEE 802.3 10Base-T
- IEEE 802.3u 100Base-T(X) and 100Base-FX
- IEEE 802.3x Flow Control
- IEEE 802.1p Class of Service, Priority Protocols

Processing Type

- Store and Forward
- IEEE 802.3x flow control in full duplex, back-pressure flow control in half duplex

INTERFACE

Fast Ethernet

RJ45 Ports:

- 10/100Base-T(X), auto MDI/MDI-X, auto negotiation

Fiber Optic Ports:

- 100Base-FX (SC connector), MultiMode or SingleMode

LEDs

Per Device:

- ALARM, PWR1, PWR2

Per Port:

- 100M (RJ45 port), 100M (fiber port), LINK/ACT

DIP Switches

- Port link-down alarm configuration

Alarm Contacts (DO)

- 1 relay output
- Carry current 2A@24V_{DC}

PERFORMANCE AND SCALABILITY

Switching Capacity

- 3.2Gbps, wire-speed, non-blocking switching fabric

Forwarding Rate

- 4.8Mpps

MAC Address Table

- 8K

Packet Buffer Memory

- 1M bits

Broadcast Storm Protection

- Default enabled

Transparent Forwarding VLAN Tagged Packets

- Default enabled

IEEE 802.1p based QoS

- Default enabled

POWER REQUIREMENTS

Input Voltage

- 2 sets, 12 to 48 V_{DC} redundant terminal block input

Input Current

- Max. 0.6A

Overload Current Protection

- Present, max. input current 3A

Reverse Polarity Protection

- Present

Buffer Time

- Min. 13ms at 24V_{DC}

PHYSICAL

Housing

- IP40 metal case

Dimensions

- 145.3mm (H) x 75mm (W) x 108.7mm (D)

Weight

- 490g

Installation

- Industrial DIN-Rail and wall mounting

ENVIRONMENTAL LIMITS

Operating Temperature

- -40°C to 75°C (-40°F to 167°F)

Storage Temperature

- 40°C to 85°C (-40°F to 185°F)

Ambient Relative Humidity

- 5% to 95% (non-condensing)

APPROVALS

Safety

- UL 508, EN 60950-1, IEC 61131-2

EMI

- FCC 47 CFR Part 15 Subpart B Class B, IEC 61000-6-4, EN 55022(CISPR22)

EMS [IEC 61000-6-2, EN 55024(CISPR24)]

- IEC 61000-4-2 level 3, IEC 61000-4-3 level 3, IEC 61000-4-4 level 4, IEC 61000-4-5 level 3, IEC 61000-4-6 level 3, IEC 61000-4-8 level 4, IEC 61000-4-29

Environmental Type Tests

Cold Temperature:

- IEC 60068-2-1

Dry Heat:

- IEC 60068-2-2

Humidity:

- IEC 60068-2-30

Shock:

- IEC 60255-21-2

Freefall:

- IEC 60068-2-32

Vibration:

- IEC 60068-2-6

Hi-Pot:

- 1.5KV

Fiber Optics

| | 100Base-FX | |
|--------------------|--------------------------|------------|
| | MultiMode | SingleMode |
| Cable | 62.5/125µm, 50/125µm | 9/125µm |
| Wavelength | 1310nm | 1310nm |
| Max. TX Power | -14dBm | -8dBm |
| Min. TX Power | -20dBm(1) -22.5dBm(2) | -15dBm |
| RX Sensitivity | -31dBm | -31dBm |
| Optical Budget | 11dBm(1) 8.5dBm(2) | 16dBm |
| Max. Link Distance | 5km | 30km |

(1) 62.5/125µm fiber optic cable (2) 50/125µm fiber optic cable

Note: The actual link distance of a particular fiber optic link depends on the optical budget, the number of connectors and splices, and cabling quantity. Please measure and verify the actual link loss values once the link is established to identify any potential performance issues.

Ordering Information

| Product | | Port Combination | | | Interface | | |
|-----------------|-----------------------|------------------|------------------------------|--------------------------------|-----------|------------|-------------|
| Model Name | Operating Temperature | 10/100 Base-T(X) | 100Base-FX | | DI | DO (Relay) | Power Input |
| | | | SC Connector, MultiMode, 5km | SC Connector, SingleMode, 30km | | | |
| DVS-016W01 | -40°C to 75°C | 16 | --- | --- | --- | 1 | 2 |
| DVS-016W01-MC01 | -40°C to 75°C | 15 | 1 | --- | --- | 1 | 2 |
| DVS-016W01-SC01 | -40°C to 75°C | 15 | --- | 1 | --- | 1 | 2 |

Optional Products

DVP/CiQ/PMC Series: 12/24 V_{DC} Industrial Power Supply