

# DVS-016 Series

## Unmanaged Industrial 16-Port FE Ethernet Switches



UL508



-40~75°C

EMC  
LEVEL 4

FANLESS



- ▶ 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<sub>DC</sub> 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<sub>DC</sub>

### 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<sub>DC</sub> redundant terminal block input

#### Input Current

- Max. 0.6A

#### Overload Current Protection

- Present, max. input current 3A

#### Reverse Polarity Protection

- Present

#### Voltage Dips Protection Time

- Min. 13ms at 24V<sub>DC</sub>

### 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)<br>-22.5dBm(2) | -15dBm     |
| RX Sensitivity     | -31dBm                   | -31dBm     |
| Optical Budget     | 11dBm(1)<br>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/CliQ/PMC Series: 12/24 V<sub>DC</sub> Industrial Power Supply

CliQII/PMC Series: 48V<sub>DC</sub> Industrial Power Supply