# Managed Fast Ethernet Switches Value Line

**IE-SW-VL05M Series** (from product Rev. 2.0.0)
**IE-SW-VL08MT-8TX/6TX** (from product Rev. 2.0.0)
**IE-SW-VL08MT-5TX** (from product Rev. 1.5.0)

## Hardware Installation Guide

**Seventh Edition, February 2019**
**1243340000/06/02.19**

**Important note:**
This document, the detailed user manual, additional product information, configuration tool and latest firmware can be downloaded using following link:

**http://www.weidmueller.com**

► Select **Product Catalogue**
⇨ Select „Active Industrial Ethernet“
⇨ Select „ValueLine managed switches“
⇨ Select Product model
⇨ Click and expand section „Downloads“
⇨ Download needed software and documentation



Weidmüller

## Overview

The IE-SW-VL05/08M series are managed Fast Ethernet switches with 5-port or 8-ports in various copper and fiber variants. In addition, the built-in smart alarm function helps system maintainers monitor the health of your Ethernet network.

## Package Checklist

Your Ethernet switch is shipped with the following items. If any of these items is missing or damaged, please contact your Weidmüller customer service for assistance.

- 1 Ethernet Switch of IE-SW-VL05/08M series
- Hardware Installation Guide (printed)
- RJ45 to DB9 console port cable
- Protective caps for unused ports

Regarding further documentation like the manual please download it from the Weidmüller Internet server as described on page 1.

### Brief Information for quick access to the Web interface

The Web interface of the managed Switch can be accessed via IP address 192.168.1.110 and subnet mask 255.255.255.0 (Factory default value).

Connect the PC to any port of the managed Switch and set the PC's IP address to a free one of range 192.168.1.0 / 255.255.255.0

Start a web browser and enter the IP address of the connected Switch into the browser's address line.

**http://192.168.1.110**

After the appearance of the login prompt, please enter following login data (factory settings):

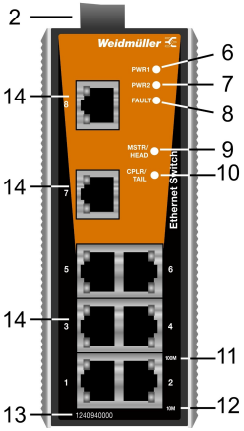
User name: **admin**
Password: **Detmold**

Note: The Web interface uses Java Runtime applets for displaying some Switch parameters. For this reason, your PC must have installed the Java Runtime Engine to be able to configure the Switch without any limitations.

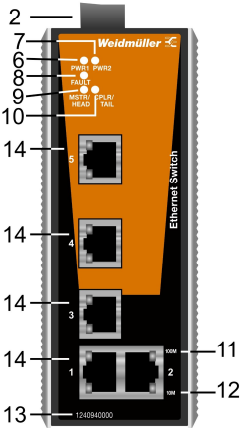
**For general settings of the Switch parameters please refer to the manual.**

# Panel Layouts of IE-SW-VL08MT-8TX and IE-SW-VL05M(T)-5TX

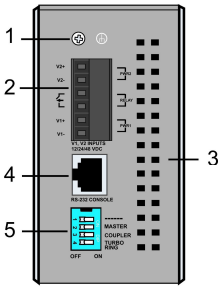
IE-SW-VL08MT-8TX
Front Panel View



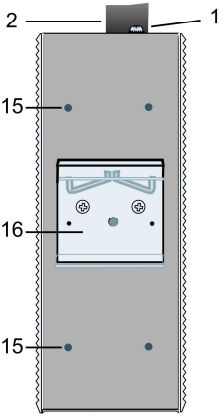

IE-SW-VL05M(T)-5TX
Front Panel View




Top Panel View




Rear Panel View

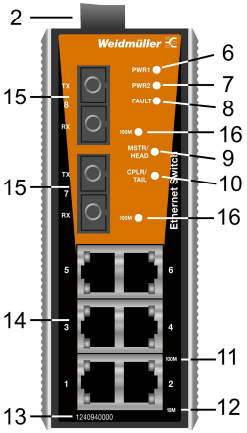



Device description:

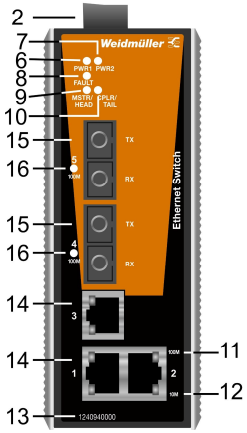
1. Grounding screw
2. Terminal block for power input PWR1/PWR2 and relay output
3. Heat dissipation orifices
4. Console port
5. DIP switches
6. Power input PWR1 LED
7. Power input PWR2 LED
8. Fault LED
9. MSTR/HEAD: LED indicator
10. CPLR/TAIL: LED indicator
11. TP port's 100 Mbps LED
12. TP port's 10 Mbps LED
13. Article Number
14. 10/100BaseT(X) ports
15. Screw hole for wall mounting kit
16. DIN-Rail kit

# Panel Layouts of
# IE-SW-VL08MT-6TX-2SCS and IE-SW-VL05M(T)-3TX-2SC

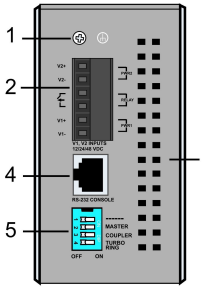
IE-SW-VL08MT-6TX-2SC(S)
Front Panel View



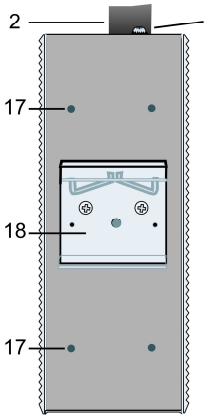

IE-SW-VL05M(T)-3TX-2SC
Front Panel View




Top Panel View




Rear Panel View



Note:
The appearance of the IE-SW-VL08MT-6TX-2SC is identical to that of the IE-SW-VL08MT-6TX-2SCS.

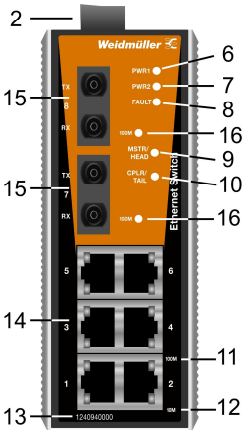
Device description:

Grounding screw

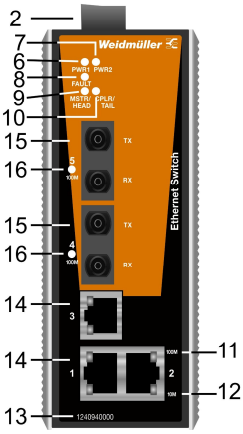
2. Terminal block for power input PWR1/PWR2 and relay output
3. Heat dissipation orifices
4. Console port
5. DIP switches
6. Power input PWR1 LED
7. Power input PWR2 LED
8. Fault LED
9. MSTR/HEAD: LED indicator
10. CPLR/TAIL: LED indicator
11. TP port's 100 Mbps LED
12. TP port's 10 Mbps LED
13. Article number
14. 10/100BaseT(X) ports
15. 100BaseFX ports
16. FX port's 100 Mbps LEDs
17. Screw hole for wall mounting kit
18. DIN-Rail kit

# Panel Layouts of IE-SW-VL08MT-6TX-2ST and IE-SW-VL05M(T)-3TX-2ST

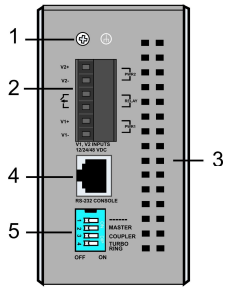
IE-SW-VL08MT-6TX-2ST
Front Panel View



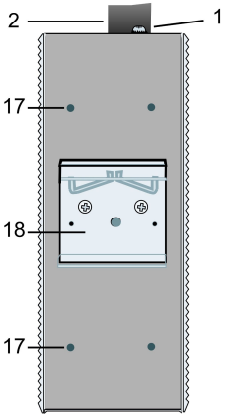

IE-SW-VL05M(T)-3TX-2ST
Front Panel View




Top Panel View



Rear Panel View



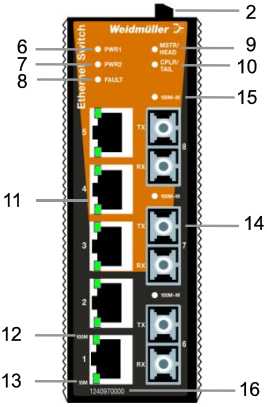
Device description:

Grounding screw

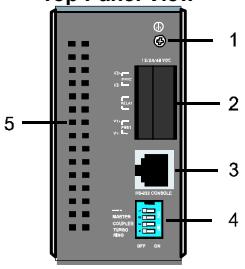
2. Terminal block for power input PWR1/PWR2 and relay output
3. Heat dissipation orifices
4. Console port
5. DIP switches
6. Power input PWR1 LED
7. Power input PWR2 LED
8. Fault LED
9. MSTR/HEAD: LED indicator
10. CPLR/TAIL: LED indicator
11. TP port's 100 Mbps LED
12. TP port's 10 Mbps LED
13. Article number
14. 10/100BaseT(X) ports
15. 100BaseFX ports
16. FX port's 100 Mbps LEDs
17. Screw hole for wall mounting kit
18. DIN-Rail kit

# Panel Layout of IE-SW-VL08MT-5TX-3SC

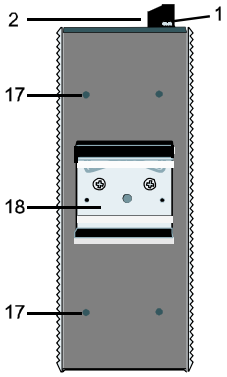
**IE-SW-VL08MT-5TX-3SC**
**Front Panel View**




**Top Panel View**




**Rear Panel View**



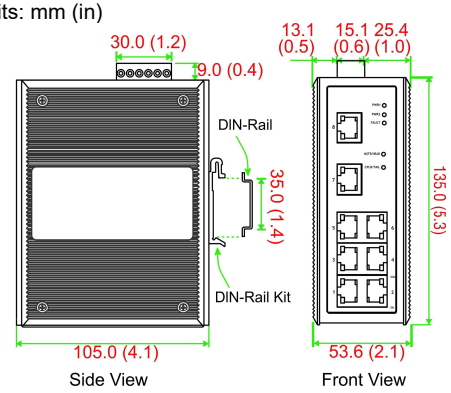

**Note:**
**The appearance of the IE-SW-VL08MT-5TX-1SC-2SCS is identical to that of the IE-SW-VL08MT-5TX-3SC**

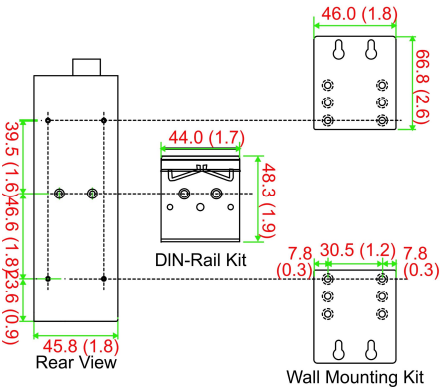
Device description:

1. Grounding screw
2. Terminal block for power input PWR1/PWR2 and relay output
3. Console port
4. DIP switches
5. Heat dissipation orifices
6. Power input PWR1 LED
7. Power input PWR2 LED
8. Fault LED
9. MSTR/HEAD: LED indicator
10. CPLR/TAIL: LED indicator
11. 10/100BaseT(X) ports
12. TP port's 100 Mbps LED
13. TP port's 10 Mbps LED
14. 100BaseFX ports
15. 1 FX port's 100Mbps LEDs
16. Article Number
17. Screw hole for wall mounting kit
18. DIN-Rail kit

## Mounting Dimensions

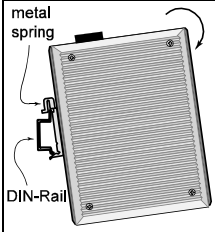
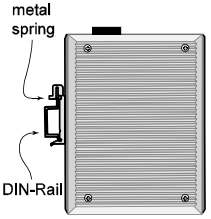
Units: mm (in)




## DIN-Rail Mounting

The aluminum DIN-Rail attachment plate should already be fixed to the back panel of the IE-SW-VL05/08M switch when you take it out of the box. If you need to reattach the DIN-Rail attachment plate, make sure the stiff metal spring is situated towards the top, as shown in the following figures.

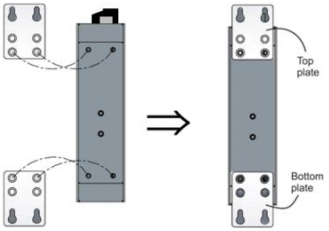
| **STEP 1:**<br>Insert the top of the DIN-Rail into the slot just below the stiff metal spring. | **STEP 2:**<br>The DIN-Rail attachment unit will snap into place as shown below. |
|---|---|
|  |  |

To remove the device from DIN-Rail, simply reverse Steps 1 and 2.

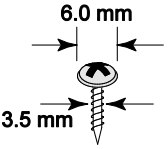
# Wall Mounting (optional)

For some applications, you will find it convenient to mount the Ethernet switch on the wall, as shown in the following figures.

**STEP 1:** Remove the aluminum DIN-Rail attachment plate from the switch rear panel, and then attach the wall mount plates as shown in the diagram at the right.

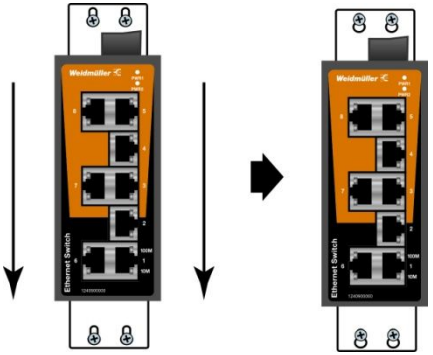



**STEP 2:**
Mounting the switch on the wall requires 4 screws. Use the switch, with wall mount plates attached, as a guide to mark the correct locations of the 4 screws. The heads of the screws should be less than 6.0 mm in diameter, and the shafts should be less than 3.5 mm in diameter, as shown in the figure at the right.




**NOTE** Before tightening the screws into the wall, make sure the screw head and shank size are suitable by inserting the screw into one of the keyhole-shaped apertures of the wall mounting plates. Do not screw the screws in completely—leave about 2 mm to allow room for sliding the wall mount panel between the wall and the screws

**STEP 3:**
Once the screws are fixed on the wall, insert the four screw heads through the large parts of the keyhole-shaped apertures, and then slide the switch downwards, as indicated. Tighten the four screws for added stability



## ATEX Information


1. Certificate number DEMKO 18 ATEX 2137X
2. Ambient range: -40°C ≤ Tamb ≤ 75°C
3. Certification string:
   IE-SW-VL08MT-8TX: Ex nA nC IIC T4 Gc
   IE-SW-VL08MT-6TX-2SC/2ST/2SCS: Ex nA nC op is IIC T4 Gc
4. Standards covered:
   EN 60079-0:2012+A11:2013,
   EN 60079-15:2010,
   EN 60079-28:2015
5. The conditions of safe usage:
   - Provisions shall be made to provide the transient protection to be set at a level not exceeding 140% of the peak rated voltage.
   - These devices shall be mounted in a suitable tool-accessible ATEX-Certified enclosure rated to at least IP54 as defined in EN 60529 and Pollution Degree 2 as defined in EN60664-1, and used within their rated electrical and environmental ratings.

## Wiring Requirements

**WARNING**

**Safety First!**

Be sure to disconnect the power cord before installing and/or wiring your Ethernet Switch.

Calculate the maximum possible current in each power wire and common wire. Observe all electrical codes dictating the maximum current allowable for each wire size.

If the current goes above the maximum ratings, the wiring could overheat, causing serious damage to your equipment.

Be sure to read and follow these important guidelines:

- Use separate paths to route wiring for power and devices. If power wiring and device wiring paths must cross, make sure the wires are perpendicular at the intersection point.

  **NOTE:** Do not run signal or communications wiring and power wiring through the same wire conduit. To avoid interference, wires with different signal characteristics should be routed separately.
- Use the type of signal transmitted through a wire to determine which wires should be kept separate. The rule of thumb is that wiring that shares similar electrical characteristics can be bundled together.
- Keep input wiring and output wiring separate.
- It is strongly advised that you label wiring to all devices in the system.

## Grounding the Ethernet Switch

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection from the ground screw to the grounding surface prior to connecting devices. A 4 $mm^2$ conductor must be used when connection to the external grounding screw is utilized.

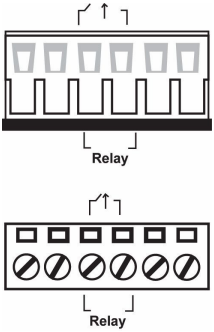
**ATTENTION**

This product is intended to be mounted to a well-grounded mounting surface, such as a metal panel.

## Wiring the Relay Contact

The Relay Contact consists of the two middle contacts of the terminal block on the IE-SW-VL05/08M series top panel. Refer to the next section for detailed instructions on how to connect the wires to the terminal block connector, and how to attach the terminal block connector to the terminal block receptor.

In this section, we explain the meaning of the two contacts used to connect the Alarm Contact.

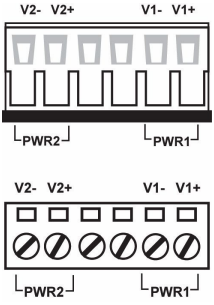



**FAULT:** The two middle contacts of the 6-contact terminal block connector are used to detect both power faults and port faults. The two wires attached to the fault contacts form an open circuit when:
A relay warning event is triggered.
OR
The IE-SW-VL05/08M is the Master of a Turbo Ring, and the Turbo Ring is broken.
OR
There is a start-up failure.

If none of these three conditions is satisfied, the fault circuit will remain closed.

## Wiring the Redundant Power Inputs

The top two contacts and the bottom two contacts of the 6-contact terminal block connector on the IE-SW-VL05/08M series top panel are used for the two DC inputs. Top and front views of one of the terminal block connectors are shown in the following figures:




**STEP 1:** Insert the negative/positive DC wires into the V-/V+ terminals, respectively.

**STEP 2:** To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

**STEP 3:** Insert the plastic terminal block connector prongs into the terminal block receptor, which is located on the Switch´s top panel.

**ATTENTION**

Before connecting the Ethernet Switch to the DC power inputs, make sure the DC power source voltage is stable.

## Communication Connections

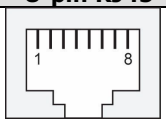
IE-SW-VL05/08M models have 8, 6, 5 or 3 10/100BaseT(X) Ethernet ports, and 0 (zero), 2, or 3 100BaseFX (SC/ST-type connector) fiber ports.

## 10/100BaseT(X) Ethernet Port Connection

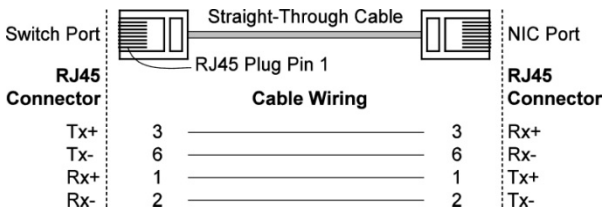
The 10/100BaseT(X) ports located on the Ethernet Switches front panel are used to connect to Ethernet-enabled devices.

Next, we show pinouts for both MDI (NIC-type) ports and MDI-X (HUB/Switch-type) ports, and also show cable wiring diagrams for straight-through and cross-over Ethernet cables.

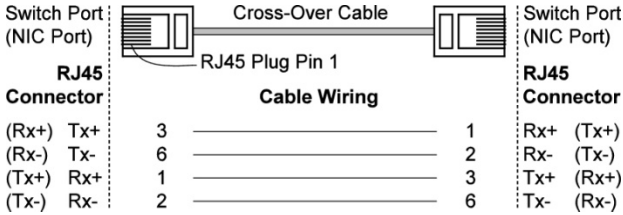
| MDI Port Pinouts | | MDI-X Port Pinouts | | 8-pin RJ45 |
|---|---|---|---|---|
| Pin | Signal | Pin | Signal | |
| 1 | Tx+ | 1 | Rx+ | |
| 2 | Tx- | 2 | Rx- | |
| 3 | Rx+ | 3 | Tx+ | |
| 6 | Rx- | 6 | Tx- | |




**RJ45 (8-pin) to RJ45 (8-pin) Straight-Through Cable Wiring**



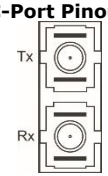
**RJ45 (8-pin) to RJ45 (8-pin) Cross-Over Cable Wiring**



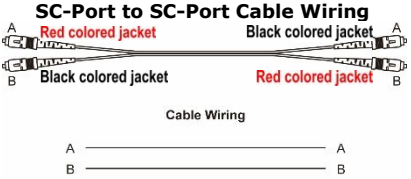

## 100BaseFX Ethernet Port Connection (Fiber)

Remember to connect the Tx (transmit) port of device 1 to the Rx (receive) port of device 2, and the Rx (receive) port of device 1 to the Tx (transmit) port of device 2. Fiber optic connections generally are using the full-duplex transmission mode.

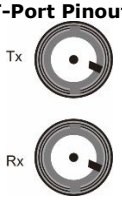
**SC-Port Pinouts**



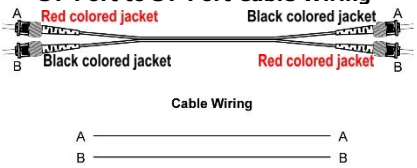

**SC-Port to SC-Port Cable Wiring**




**ST-Port Pinouts**




**ST-Port to ST-Port Cable Wiring**




**ATTENTION**

This is a Class 1 Laser/LED product. To avoid causing serious damage to your eyes, do not stare directly into the Laser Beam.

# Redundant Power Inputs

Both power inputs can be connected simultaneously to live DC power sources. If one power source fails, the other live source acts as a backup, and automatically supplies the Ethernet Switch with power.

## Relay Contact

The Ethernet switch has one Relay Contact located on the top panel. For detailed instructions on how to connect the Relay Contact power wires to the two middle contacts of the 6-contact terminal block connector, see the ***Wiring the Relay Contact*** section. A typical scenario would be to connect the fault circuit to a warning light located in the control room. The light can be set up to switch on when a fault is detected.

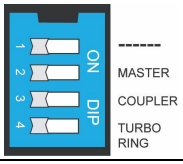
The Relay Contact has two terminals that form a fault circuit for connecting to an alarm system. The two wires attached to the fault contacts form an open circuit when (1) a relay warning event is triggered, (2) the switch is the Master of this Turbo Ring, and the Turbo Ring is broken, or (3) start-up failure. If none of these three conditions occur, the fault circuit will be closed.

## Turbo Ring DIP Switch Settings

IE-SW-VL05/08M models are managed Ethernet switches that offer redundancy. The proprietary Turbo Ring protocol provides better network reliability and faster recovery time. Turbo Ring's recovery time is less than 300 ms (**Turbo Ring**) or 20 ms (**Turbo Ring V2**) - compared to a 3- to 5-minute recovery time for commercial switches - decreasing the possible loss caused by network failures in an industrial setting.

There are 4 Hardware DIP Switches for Turbo Ring on the top panel of IE-SW-VL05/08M series that can help setup the Turbo Ring easily within seconds. If you do not want to use a hardware DIP switch to setup the Turbo Ring, you can use a web browser, telnet, or console to disable this function.

NOTE Please refer to the ***Turbo Ring DIP Switch*** section and ***Using Communication Redundancy*** section in User's Manual for more detailed information about the settings and usage of ***Turbo Ring*** and ***Turbo Ring V2***.

| IE-SW-VL05/08M Series DIP Switches | |
|---|---|
|  | The default setting for each DIP Switch is OFF. The following table explains the effect of setting the DIP Switch to the ON position. |

| "Turbo Ring" DIP Switch Settings | | | |
|---|---|---|---|
| **DIP 1** | **DIP 2** | **DIP 3** | **DIP 4** |
| Reserved for future use. | ON: Enables this Ethernet Switch as the Ring Master. | ON: Enables the default "Ring Coupling" ports. | ON: Activates DIP switches 1, 2, 3 to configure "Turbo Ring" settings. |
| | OFF: This Ethernet Switch will not be the Ring Master. | OFF: Do not use this Ethernet Switch as the ring coupler. | OFF: DIP switches 1, 2, 3 will be disabled. |
| **"Turbo Ring V2" DIP Switch Settings** | | | |
| **DIP 1** | **DIP 2** | **DIP 3** | **DIP 4** |
| ON: Enables the default "Ring Coupling (backup)" port. | ON: Enables this Ethernet Switch as the Ring Master. | ON: Enables the default "Ring Coupling" port. | ON: Activates DIP switches 1, 2, 3 to configure "Turbo Ring V2" settings. |
| OFF: Enables the default "Ring Coupling (primary)" port. | OFF: This Ethernet Switch will not be the Ring Master. | OFF: Do not use this Ethernet Switch as a ring coupler. | OFF: DIP switches 1, 2, 3 will be disabled. |

**NOTE** If you do not enable any of the IE-SW-VL05/08M switches to be the Ring Master, the Turbo Ring protocol will automatically choose the switch with the smallest MAC address range to be the Ring Master. If you accidentally enable more than one IE-SW-VL05/08M switch to be the Ring Master, these switches will auto-negotiate to determine which one will be the Ring Master.

**NOTE** To switch on the Master or Coupler functions of the DIP switch, you have to enable the Turbo Ring Pole first.

## LED Indicators

There are several LEDs on the Ethernet Switches front panel. The function of each LED is described in the following table.

| LED | Color | State | Description |
|---|---|---|---|
| **PWR1** | AMBER | On | Power is being supplied to power input PWR1. |
| | | Off | Power is not being supplied to power input PWR1. |
| **PWR2** | AMBER | On | Power is being supplied to power input PWR2. |

| | | | |
|---|---|---|---|
| | | Off | Power is not being supplied to power input PWR2. |
| **FAULT** | RED | On | When (1) a relay warning event is triggered, (2) the switch is the Master of this Turbo Ring, and the Turbo Ring is broken, or (3) start-up failure. |
| | | Off | When a relay warning event is not triggered. |
| **MSTR/ HEAD** | GREEN | On | When the switch is set as the Master of the Turbo Ring, or as the Head of the Turbo Chain. |
| | | Blinking | The switch has become the Ring Master of the Turbo Ring, or the Head of the Turbo Chain, after the Turbo Ring or the Turbo Chain is down. |
| | | Off | When the switch is not the Master of this Turbo Ring or is set as the Member of the Turbo Chain. |
| **CPLR/ TAIL** | GREEN | On | When the switch coupling function is enabled to form a back-up path, or when it's set as the Tail of the Turbo Chain. |
| | | Blinking | When the Turbo Chain is down. |
| | | Off | When the switch disables the coupling function, or is set as the Member of the Turbo Chain. |
| **10M (TP)** | GREEN | On | TP port's 10 Mbps link is active. |
| | | Blinking | Data is being transmitted at 10 Mbps. |
| | | Off | TP Port's 10 Mbps link is inactive. |
| **100M (TP)** | GREEN | On | TP port's 100 Mbps link is active. |
| | | Blinking | Data is being transmitted at 100 Mbps. |
| | | Off | TP Port's 100 Mbps link is inactive. |
| **100M (FX)** | GREEN | On | FX port's 100 Mbps is active. |
| | | Blinking | Data is being transmitted at 100 Mbps. |
| | | Off | FX port's 100 Mbps is inactive. |

## Auto MDI/MDI-X Connection

The Auto MDI/MDI-X function allows users to connect the 10/100BaseTX ports to any kind of Ethernet device, without needing to pay attention to the type of Ethernet cable being used for the connection. This means that you can use either a **straight-through cable or cross-over cable** to connect the IE-SW-VL05/08M switches to Ethernet devices.

# Specifications

| **Technology** | |
|---|---|
| Standards | IEEE802.3, 802.3u, 802.3x, 802.1D-2004, 802.1Q, 802.1w, 802.1p |
| Protocols | IGMP V1/V2 device, GMRP, GVRP, SNMPv1/v2c/v3, DHCP Server/Client, TFTP, SNTP, SMTP, RARP, RMON, HTTP, Telnet, Syslog, DHCP Option 66/67/82, BootP, LLDP, Modbus TCP, Ethernet/IP, PROFINET RT (PN-I/O device according to CC-B), IPv6 |
| MIB | MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, RMON MIB Group 1, 2, 3, 9, Bridge MIB, RSTP MIB |
| Forwarding and Filtering Rate | 148.810 pps |
| Processing Type | Store and Forward |
| Flow Control | IEEE802.3x flow control, back pressure flow control |
| **Interface** | |
| RJ45 Ports | 10/100BaseT(X) auto negotiation speed, F/H duplex mode, and auto MDI/MDI-X connection |
| Fiber Ports | 100BaseFX ports (SC/ST-Duplex connector, multi/single-mode) |
| Console | RS-232 (RJ45) |
| LED Indicators | PWR1, PWR2, FAULT, 10/100M (TP port), 100M (Fiber Port), CPLR/TAIL and MSTR/HEAD |
| Relay Contact | One relay output with current carrying capacity of 1A @ 24 VDC |
| DIP Switches | Master, Coupler, Turbo Ring, Reserve |

**Optical Fiber**

| | | 100Base FX | | |
|---|---|---|---|---|
| | | Multi-mode | | Single-mode |
| Fiber Cable Type | | OM1 | 50/125 μm 800 MHz*Km | G.652 |
| Typical Distance | | 4 km | 5 km | 40 km |
| Wavelength | Typical (nm) | 1300 | | 1310 |
| | TX Range (nm) | 1260 to 1360 | | 1280 to 1340 |
| | RX Range (nm) | 1100 to 1600 | | 1100 to 1600 |
| Optical Power | TX Range (dBm) | -10 to -20 | | 0 to -5 |
| | RX Range (dBm) | -3 to -32 | | -3 to -34 |
| | Link Budget (dB) | 12 | | 29 |
| | Dispersion Penalty (dB) | 3 | | 1 |

**Note:** When connecting single-mode fiber over a short distance, we recommend putting an attenuator to prevent the transceiver from being damaged by excessive optical power.

Typical Distance: To reach the typical distance of a specified fiber transceiver, please refer to the following formula: Link budget(dB) > dispersion penalty(dB) + total link loss(dB).

| | |
|---|---|
| **Power** | |
| Input Voltage | 12/24/48 V DC (9.6 to 60 V DC), 2 redundant inputs |
| Input Current | **IE-SW-VL05M series:**<br>0.594 A/0.286 A/0.154 A @ 12/24/48 V<br>**IE-SW-VL08MT series:**<br>0.61 A/0.3 A/0.16 A @ 12/24/48 V<br>**IE-SW-VL08MT-5TX-3SC/2SCS-1SC:**<br>0.73 A/0.35 A/0.18 A @ 12/24/48 V |
| Connection | One removable 6-pin terminal block |
| Overload Current Protection | Present |
| Reverse Polarity Protection | Present |
| **Mechanical** | |
| Housing | Metal, IP30 protected |
| Dimensions | 53.6 × 135 × 105 mm (W × H × D) |
| Weight | 0.65 kg (IE-SW-VL05M series)<br>0.89 kg (IE-SW-VL08MT series) |
| Installation | DIN-Rail, Wall Mounting (optional kit) |
| **Environment** | |
| Operating Temperature | Standard models: -10 to 60°C (14 to 140°F)<br>Wide temp. models: -40 to 75°C (-40 to 167°F) |
| Storage Temperature | -40 to 85°C (-40 to 185°F) |
| Ambient Relative Humidity | 5% to 95% (non-condensing) |
| **Regulatory Approvals** | |
| Safety | UL60950-1, UL 508, EN60950-1 |
| Hazardous Location | UL/cUL Class I, Division 2, Groups A, B, C, and D<br>ATEX Zone 2: only IE-SW-VL08MT series (copper and 2 fiber models):<br>EN 60079-0:2012+A11:2013<br>EN 60079-15:2010<br>EN 60079-28:2015 (for IE-SW-VL08MT-2SC/2ST/2SCS only) |
| EMC | EN 55032/24; CISPR 32, FCC Part 15B Class A |
| | IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV<br>IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m<br>IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV<br>IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV<br>IEC 61000-4-6 CS: 10 V<br>IEC 61000-4-8 |
| Shock | IEC60068-2-27 |
| Freefall | IEC60068-2-31 |
| Vibration | IEC60068-2-6 |
| **MTBF** (meantime between failures) | |
| Time | 1,547,941 hrs (IE-SW-VL05M(T)-5TX models)<br>1,429,327 hrs (IE-SW-VL05M(T)-3TX models)<br>1,339,439 hrs (IE-SW-VL08MT-8TX/6TX models)<br>1,253,072 hrs (IE-SW-VL08MT-5TX models) |

| | |
|---|---|
| Database | Telcordia (Bellcore), GB |
| **WARRANTY** | |
| Time Period | 5 years |

**WARNING** This equipment is intended to be used in a restricted access location.

HOT SURFACE!! Before touching it, special attention or protection is required.

Weidmüller gives a 5 year warranty on this product in accordance with the warranty terms as described in the general conditions of sale of the Weidmüller company which has sold the products to you. Weidmüller warrants to you that such products the defects of which have already existed at the time when the risk passed will be repaired by Weidmüller free of charge or that Weidmüller will provide a new, functionally equivalent product to replace the defective one. Safe where expressly described otherwise in writing in this catalogue/product description, Weidmüller gives no warranty or guarantee as to the interoperability in specific systems or as to the fitness for any particular purpose. To the extent permitted by law, any claims for damages and reimbursement of expenses, based on whatever legal reason, including contract or tort, shall be excluded. Where not expressly stated otherwise in this warranty, the general conditions of purchase and the expressive liability commitments therein of the respective Weidmüller company which has sold the products to you shall be applicable.

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