



## Main Features

- 4 x Form C relay with 10A @12VDC/5A @24VDC
- 4 x Digital inputs and 4 x digital outputs
- 1 x Analog input and 1 x frequency input
- Various communication interface of RS-232 and USB 2.0
- Wide range DC input from 9~36V
- Wide operating temperature -40°C~70°C
- Compatible with CE, FCC class A

## Product Overview

VTK-RELAY is a super slim, ruggedized RELAY module. It is remotely controlled through an on board MCU and transmitted via RS-232 or USB 2.0 communication. With 4 x relay output, 4 x DI, 4 x DO, 1 x analog input, and 1 x frequency input for customer easily to setup vehicle system. It allows to comply with stringent MIL-STD-810G military standard in rugged, compact mechanism. Because of the super slim design, it is especially for the vehicles with limited space to control the system, but without compromising with its space to scarify its features. VTK-RELAY contains no DIP switches, by merely issuing a command from the vehicle computer, you can change RELAY/DI/DO setting to reach your application.

## Specifications

### Relay Output

- Channel: 4 channels
- Type: Form C
- Connector: 3 x plug-in terminal blocks
- Contact current rating: 10A @12VDC/5A @24VDC

### Digital Input

- Channel: 4 channels
- Sensor type: wet contact (default)/dry contact
- I/O mode: DI
- Wet contact: 12V @2.6mA/24V @5.3mA
- Dry contact: external 0 to 36V

### Digital Output

- Channel: 4 channels
- Sensor type: wet contact (default)/dry contact
- I/O mode: DO
- Wet contact: 9 to 36V, 9V @13.2mA/12V @17.6mA/24V @25.29 mA/36V @52.7mA
- Dry contact: external 0 to 36V

### Analog Input

- Channel: 1 channel
- Resolution: 10 bits
- I/O mode: voltage/current input
- Input range: 0 to 36V, 0 to 2A

### Frequency Input

- Channel: 1 channel
- I/O mode: frequency (PWM) input
- Input frequency range: 2Hz to 18KHz

### Power Requirements

- Input voltage: 9 to 36 VDC
- Input current: 70mA @12 VDC

### I/O Interface-Relay Side

- 4 x Relay's 3 plug-in terminal blocks for N.O./COM/N.C.
- 4 x LED indicator for activated relays 1 to 4

### I/O Interface-IO Side

- 1 x DB9 for RS-232
- 1 x Type A USB 2.0
- 1 x DC input 9~36V (2 plug-in terminal block for Vin/GND)

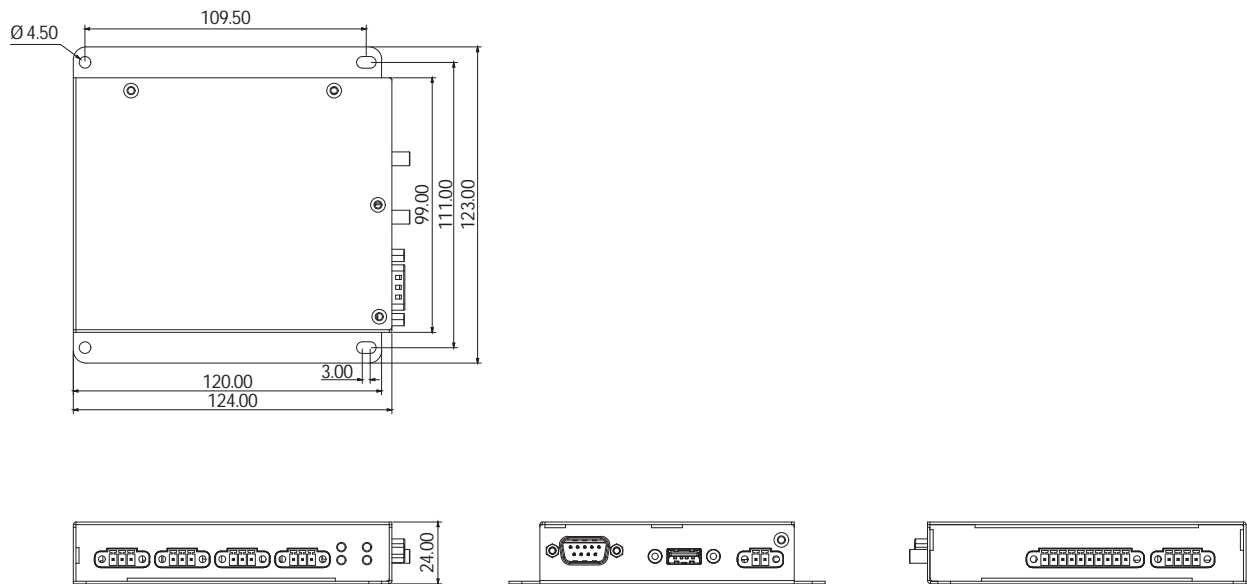
### I/O Interface-COM/USB Side

- 1 x 10 plug-in terminal blocks for 4 x DI/4 x DO/EXT. PWR V+, GND
- 1 x 4 plug-in terminal blocks for analog input/frequency input/EXT. PWR GND

### Operating System

- Windows driver
- Linux (by request)

## Dimension Drawing



### Dimensions

- 124mm (W) x 123mm (D) x 24mm (H) (4.88" x 4.84" x 0.94")
- Weight: 0.42kg (0.9lbs)

### Environment

- Temperature
  - Operating temperatures: -40°C to 70°C
  - Storage temperatures: -45°C to 85°C
  - Damp heat test per EN60068-2-30
- Humidity
  - IEC60068-2-3, damp heat steady state test, 40C, 95%, 48hrs
- Vibration
  - IEC 60068-2-64, 2G
  - Operating: MIL-STD-810G, 514.6C Procedure 1, Category 4
  - Storage: MIL-STD-810G, 514.6E Procedure 1, Category 24
- Shock
  - MIL-STD-810G, 516.6 Procedure I, trucks and semi-trailers=40g
  - Crash hazard: Procedure V, ground equipment=75g

### Certifications (compatible)

- CE
- FCC Class A

## Ordering Information

- VTK-RELAY-01 (P/N: TBD)