**FEATURES**

- Four High-Speed Counters
- Multiple Pulse Train Outputs
- Transistor Outputs
- 26 Modes and Inputs of High-Speed Counters
- Multiple Communication Ports
- Rated Input voltage DC 24V
- 8 Discrete Input and 6 Discrete Output
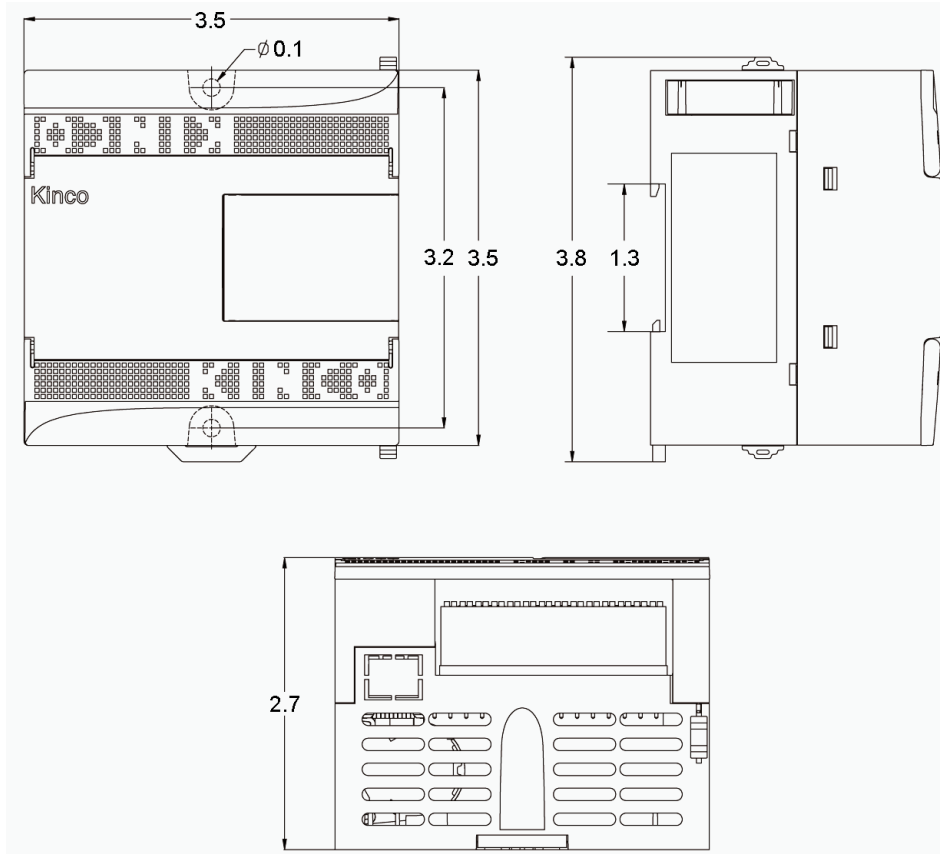- Ethernet Connected

**DESCRIPTION**

The Programmable Logic Controller (PLC) is an industrial computer control system that will monitor the current state of input devices and make important decisions based upon a custom-tailored program to fully control the state of output devices. Practically every production line, machine function, or process can be improved vastly by using this control system. But, the largest benefit of using a PLC is the ability to change and replicate the operation or process while continuing to collect and communicate vitally important information. The K204 series provides special I/O functions, a Micro USB (USB 2.0) programming port, 4 high-speed counters, 3 high-speed pulse outputs, two RS485 communication ports, one Ethernet port, integrated digital input and output channels, and more. The high speed counters come in 10 different operation modes, support a single-phase frequency up to 200 KHz, and a dual-phase (A/B phase) frequency up to 200 KHz. In the 10 different modes, each counter has its own inputs for clock, direction control, start and reset, and has a 32-bit preset value. The built-in high-speed pulse outputs can reach a maximum frequency of 200 KHz, and support PWM. The free KincoBuilder software provides absolute and relative positioning, homing, jogging, and quick stop instructions. The K204 series is an ideal solution for monitoring inputs and triggering outputs based on the pre-programmed parameters for industrial automation systems.

**SPECIFICATIONS**

| Parameter | K204ET-16DT |
|---|---|
| Input Points | 8 |
| Input Type | Sinking or Sourcing |
| Input Voltage | Rated: 24 Vdc; Maximum: 30 Vdc |
| Rated Input Current | 3.5 mA @ 24 Vdc |
| Max Input Voltage of Logic "0" | 5V @ 7mA |
| Minimum Input Voltage of Logic "1" | Common Channel: 11 Vdc @ 2.0 mA |
| Input Delay<br>• Off-to-On<br>• On-to-Off | Normal Input: 15 µs; High-Speed Input: 10 µs<br>Normal Input: 60 µs; High-Speed Input: 6 µs |
| Isolation | Mode: Opto-Isolated Between Input and Internal Circuit<br>Voltage: 500 Vac / 1 Min |
| Signal Identification | Separate LED Indicators for Each Channel |
| Module Width | 70mm |

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SPECIFICATIONS

| Parameter | K204ET-16DT |
|---|---|
| Digital Channel | 8 DI / 6 DO |
| Output Type | Sourcing |
| Analog Channel | 1 AI / 1 AO |
| Expansion Modules | n/a |
| Programming Port | Micro USB 2.0 |
| Communication Port | 2 RS485, PORT1 and PORT2, Max. Baudrate 115.2kbps.  Port1 & Port2 supports Modbus RTU protocol (as a slave or master), free-protocol communication mode, also can work as programming port. |
| High Speed Counters Single Phase Two Phase | 4 Max.200KHz. Max.200KHz. |
| High-Speed Pulse Output | 3 Q0.0 and Q0.1: Max.50KHz (The resistor of load must be less than 1.5KΩ). Q0.4: Max.10KHz |
| I/O Interrupts | 4 Rising / Falling Edge Interrupts, I0.0-I0.3 |
| **Memory Area** | |
| Max. User Porgram | 4K Instructions |
| User Data | M area: 1K bytes; V area: 4K bytes |
| DI Image Area | 2 Bytes |
| DO Image Area | 2 Bytes |
| AI Image Area | n/a |
| AO Image Area | n/a |
| Data Backup | E2PROM , 448 Bytes |
| Retentive Ranges | 4K Bytes, Lithium Cell as backup power, 3 years at normal temperature |
| **Others** | |
| Timers | 256 1ms time-base: 4 10ms time-base: 16 100ms time-base: 236 |
| Time Interrupts | 2 with 0.1ms time-base |
| Counters | 256 |
| Real-Time Clock | Yes, deviation less than 3 min/month at 25°C |
| **Power Supply** | |
| Rated Power Supply | DC24V. Note : USB port can be used as power supply. |

# Kinco

**DIMENSIONS**

3.5
∅ 0.1
Kinco
3.2  3.5
3.8  1.3
2.7

**WIRING DIAGRAMS**



| A | B | L− | L+ | Q 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | M. | V. | I. | ⏚ | 0V | 24V |

PORT1
AO

K204ET−16DT

PORT2
AI

| A | B | 1M | I 0.0 | 0.1 | 0.2 | 0.3 | 0.4 | 0.5 | 0.6 | 0.7 | RA | A+ | A− |

Ethernet

DC24V

DI wiring:
Real line means source input, Broken line means sink input.