

K209 Series

Kinco

FEATURES

- Four High-Speed Counters
- Multiple Pulse Train Outputs
- Transistor and/or Relay Outputs
- 26 Modes and Inputs of High-Speed Counters
- Multiple Communication Ports
- Rated Input voltage DC 24V
- Multiple Inputs and Outputs
 - 32 Discrete Inputs and 24 Discrete Outputs (K209M-56DT)
 - 22 Discrete Inputs, 6 Analog Inputs, 2 Analog Outputs and 8 Transistor + 12 Relay Outputs (K209EA-50DX)



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 K209 series provides special I/O functions, a Micro USB (USB 2.0) programming port, 4 high-speed counters, 4 high-speed pulse outputs, two RS485 communication ports, one RS232 communication port, 2 CAN ports, 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 K209 series is an ideal solution for monitoring inputs and triggering outputs based on the pre-programmed parameters for industrial automation systems.

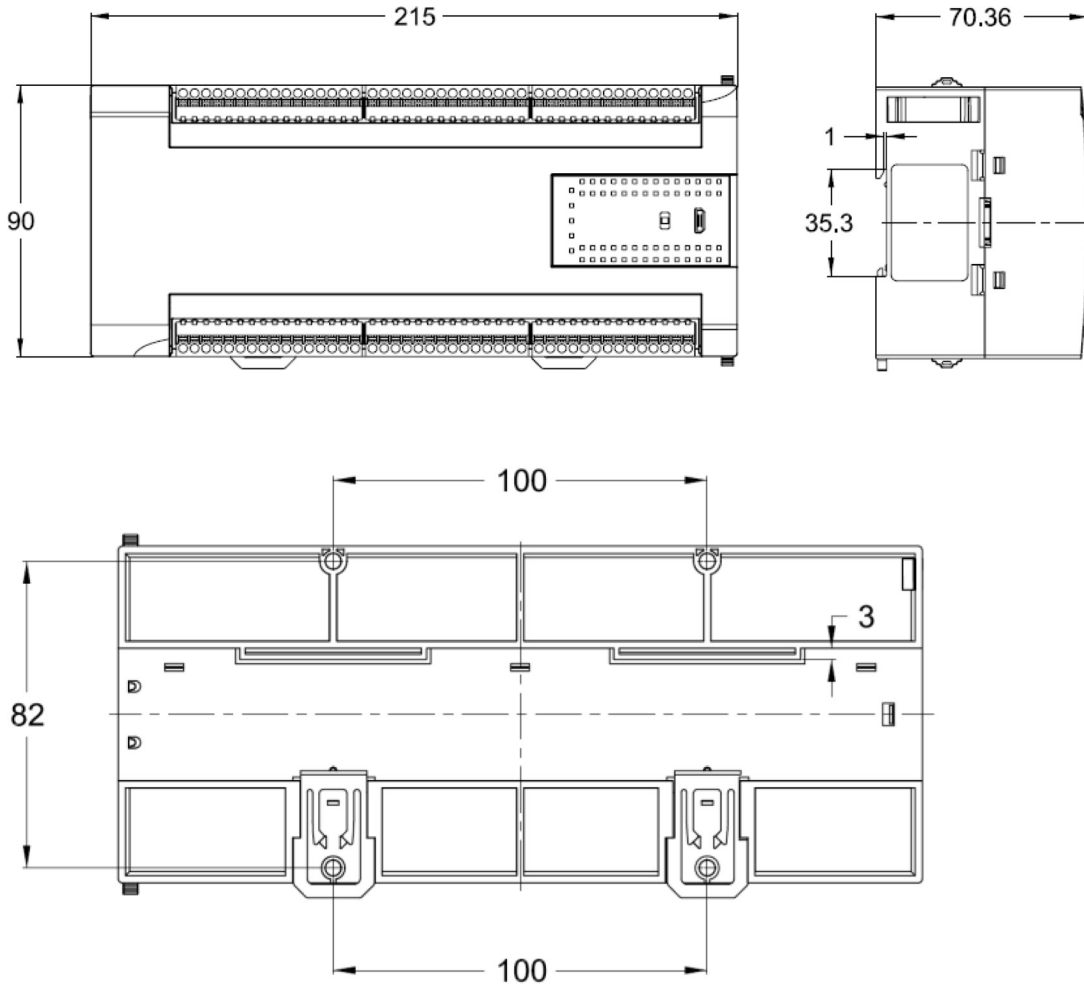
SPECIFICATIONS

Parameter	K209EA-50DX	K209M-56DT
Input Points	22	32
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 @ 0.7mA	
Minimum Input Voltage of Logic "1"	Common Channel: 11 Vdc @ 2.0 mA	
Input Delay <ul style="list-style-type: none"> • Off-to-On • On-to-Off 	Normal Input: 15 μ s; High-Speed Input: 10 μ s(50k) Normal Input: 60 μ s; High-Speed Input: 6 μ s(50k), 0.5 μ s (200K)	
Isolation	Mode: Opto-Isolated Between Input and Internal Circuit Voltage: 500 Vac / 1 Min	
Signal Identification	Separate LED Indicators for Each Channel	

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Parameter	K209EA-50DX	K209M-56DT
Digital Channel	22 DI / 20 DO	32 DI / 24 DO
Analog Channel	6 AI / 2 AO	n/a
Expansion Modules	n/a	Up to 14
Programming Port	Micro USB 2.0	
Communication Port	1 RS232, PORT0, Max. baudrate 115.2kbps, 2 RS485, PORT1, PORT2, Max. baudrate 115.2kbps, PORT0 and PORT1 support programming, Modbus RTU (as a slave), free protocol: PORT2 support Modbus RTU (as slave or master), free protocol	
High Speed Counters Single Phase Two Phase	4 HSC0, HSC1 Max: 200KHz HSC2, HSC3 Max: 20KHz HSC0, HSC1 Max: 100KHz HSC2, HSC3 Max: 10KHz	
High-Speed Pulse Output	3 2: Max.200KHz (The resistor of load must be less than 3K Ω). 1: Max.10KHz	4 3: Max. 200KHz 1: Max. 10KHz
I/O Interrupts	4 Rising / Falling Edge Interrupts, I0.0-I0.3	
Memory Area		
Max. User Program	Max 4K Instructions	Max 8k
User Data	M area: 1K bytes; V area: 4K bytes	M area: 4K bytes; V area: 16K 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 Battery, 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 5 min/month at 25°C	
Power Supply		
Rated Power Supply	DC24V. Note : USB port can be used as power supply.	

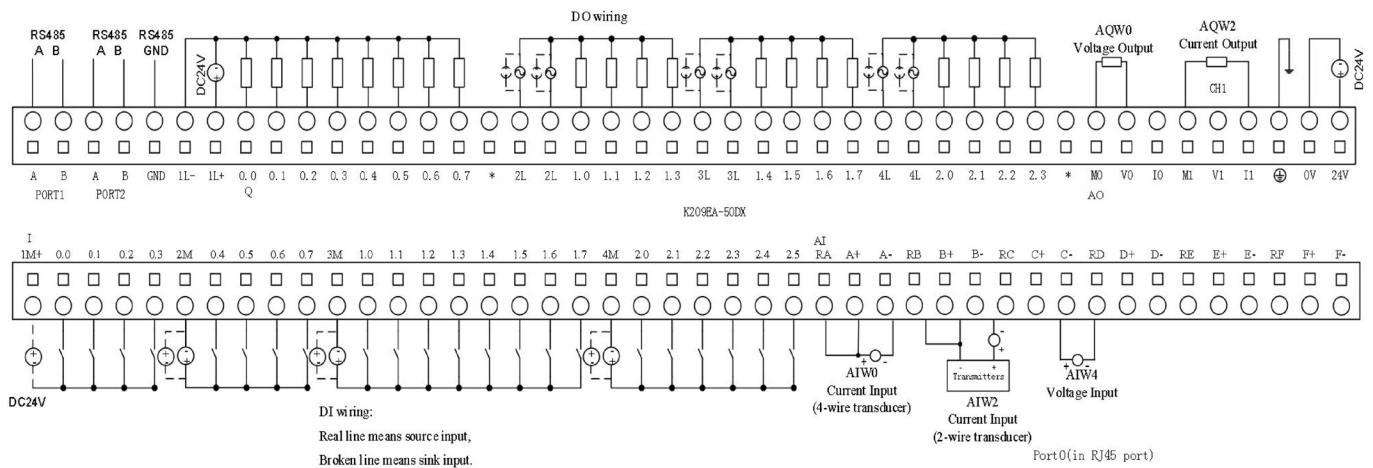
DIMENSIONS



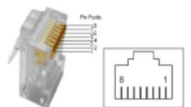
Units are in mm

WIRING DIAGRAMS

K209EA-50DX



	Pin	Description
PORT0	4	GND
	3	TxD
	6	RxD



K209M-56DT

