

KNC-PLC-KS - Expansion Modules



FEATURES

- **Sinking or Sourcing Configuration**
- **Relay or Transistor Outputs**
- **Analog Inputs and Outputs**
- **I/O is Isolated**



DESCRIPTION

The KNC-PLC-KS series Expansion Modules are attached to the KNC-PLC-KS CPUs or the KNC-HMI-MK HMI/PLC combo units to expand the I/O beyond the onboard inputs and outputs. The KNC-PLC-KS series can handle a maximum of 14 expansion modules while the KNC-HMI-MK can handle 8 modules. Available modules include Digital Inputs Only, Digital Outputs Only (both relay and transistor type), combination of both Digital Inputs and Outputs, Analog RD Thermal Inputs and combined Analog Inputs and Outputs. Each expansion module allows for a distributed installation using a standard Ethernet cable from unit to unit.

SPECIFICATIONS

Item	Specification							
	Supply Voltage	DI	DO	AI	AO	COM port	Dimension (LxWxH) (Unit:mm)	
KNC-PLC-KS121-16DX	24VDC	16	None		1*RS485, able be a slave station		100x84.5x25.4	
KNC-PLC-KS122-14DT		None	14*Transistor	None				
KNC-PLC-KS122-12XR		None	12*Relay	None				
KNC-PLC-KS123-14DR		8	6*Relay	None				
KNC-PLC-KS133-06IV		None		4				2
KNC-PLC-KS131-04RD		4-channel thermal resistance input, two or three wire system, PT100, PT1000, Cu50, R.						

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SPECIFICATIONS

Parameter	KNC-PLC-KS121-16DX
Power Supply	24VDC
Input Point	16, divided into 2 groups, each group with 8 channels
Input Type	Source / Sink
Input Voltage	Rated 24VDC, voltage range of logic "1" is 11-30VDC
Rated Input Current	3.5 mA @ 24 Vdc
Discrete Input Voltage of Logic "1"	Normal Input: 11 Vdc @ 2.0 mA High-Speed Input: 18 Vdc @ 2.5 mA
Discrete Input Voltage of Logic "0"	5 Vdc @ 0.7 mA
Input Delay <ul style="list-style-type: none"> • Off-to-On • On-to-Off 	Normal Input: 12 μ s; High-Speed Input: 8 μ s Normal Input: 40 μ s; High-Speed Input: 12 μ s
Isolation Method	Photoelectric isolation between the signal and internal circuit. Isolation voltage 500VAC / 1 minute
Installation Size	100 x 84.5 x 25.4 mm (L x W x H)

Parameter	KNC-PLC-KS122-12XR
Power Supply	24VDC
Output Points	12, divided into 3 groups, each group with 4 channels
Output Type	Relay
Load Voltage	Max. 30VDC / AC250V, max. load current of each channel is 2A
Isolation Method	Relay, isolation voltage of coil and contacts 1500VAC / 1 min
Installation Size	100 x 84.5 x 25.4 mm (L x W x H)

Parameter	KNC-PLC-KS122-14DT
Power Supply	24VDC
Output Point	14, divided into 2 groups
Output Type	Source
Output Voltage	Rated 24VDC, max. output current of each channel is 500mA
Circuit Protection	Power supply access polarity protection, Output short circuit protection, Inductive load output protection
Isolation Method	Photoelectric isolation between the signal and internal circuit. Isolation voltage 500VAC / 1 minute
Installation Size	100 x 84.5 x 25.4 mm (L x W x H)

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Parameter	KNC-PLC-KS123-14DR
Power Supply	24VDC
Input Point	8, totally classified into 1 group
Input Type	Source / Sink
Input Voltage	Rated 24VDC, voltage range of logic "1" is 11-30VDC
Rated Input Current	3.5 mA @ 24 Vdc
Discrete Input Voltage of Logic "1"	Normal Input: 11 Vdc @ 2.0 mA High-Speed Input: 18 Vdc @ 2.5 mA
Discrete Input Voltage of Logic "0"	5 Vdc @ 0.7 mA
Input Delay	Normal Input: 12 μ s; High-Speed Input: 8 μ s
<ul style="list-style-type: none"> • Off-to-On • On-to-Off 	Normal Input: 40 μ s; High-Speed Input: 12 μ s
Output Point	6, divided into 2 groups
Output Type	Relay
Load Voltage	Max. 30VDC / 250VAC, max. load current of each channel is 2A
Isolation Method	DI channel adopts opto-coupler isolation DO channels adopt relay isolation
Installation Size	100 x 84.5 x 25.4 mm (L x W x H)

Parameter	KNC-PLC-KS131-04RD
Power Supply	24VDC
Input Channel	4
Input Signal	Pt100, Pt1000, Cu50, Resistor are selectable, 2-wire or 3-wire
Measurement Range	Pt100 -200~850°C, Cu50 -50~150°C, Pt1000 - 50~300°C, Resistorce 0~2000 Ω
Measurement Accuracy	Temperature $\pm 0.5^{\circ}\text{C}$; Resistance $\pm 1\Omega$
Parameter Configuration	Each channel is individually parameterized through KincoBuilder software
Installation Size	100 x 84.5 x 25.4 mm (L x W x H)

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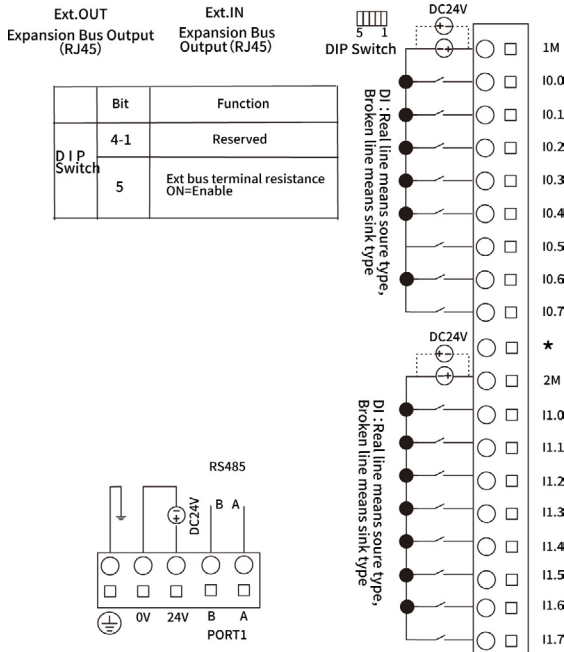


SPECIFICATIONS

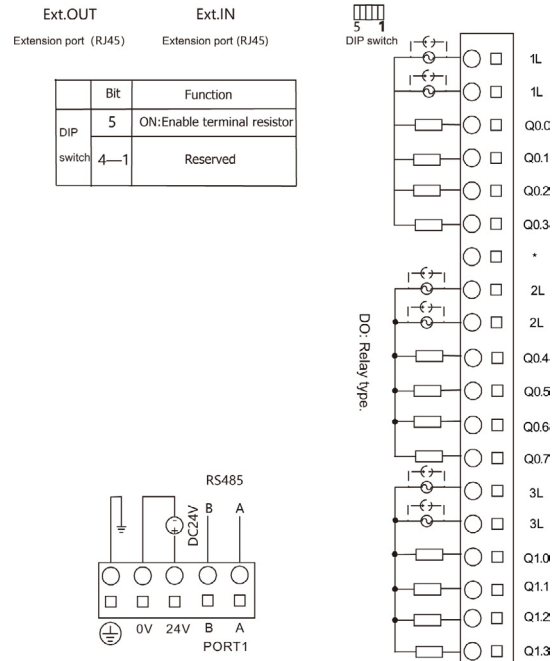
Parameter	KNC-PLC-KS133-06IV
Power Supply	24VDC
Input Channel	4 (4-20mA, 1-5V, 0-20mA, 0-10V signals are optional)
Measurement Accuracy	0.3% F.S
Output Channel	2 (4-20mA, 1-5V, 0-20mA, 0-10V signals are optional)
Output Accuracy	0.5% F.S
Parameter Configuration	Each channel is individually parameterized through KincoBuilder software
Signal Limitation	Current input is not allowed to exceed 24mA, voltage input is not allowed to exceed 12V
Installation Size	100 x 84.5 x 25.4 mm (L x W x H)

WIRING DIAGRAMS

KNC-PLC-KS121-16DX

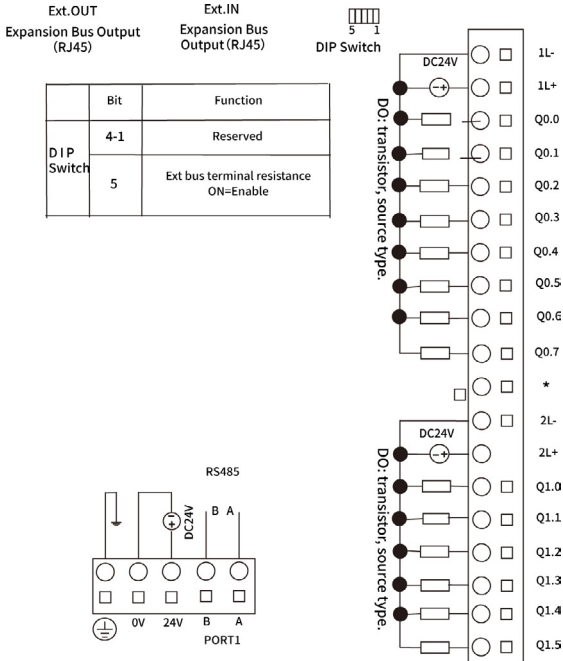


KNC-PLC-KS122-12XR

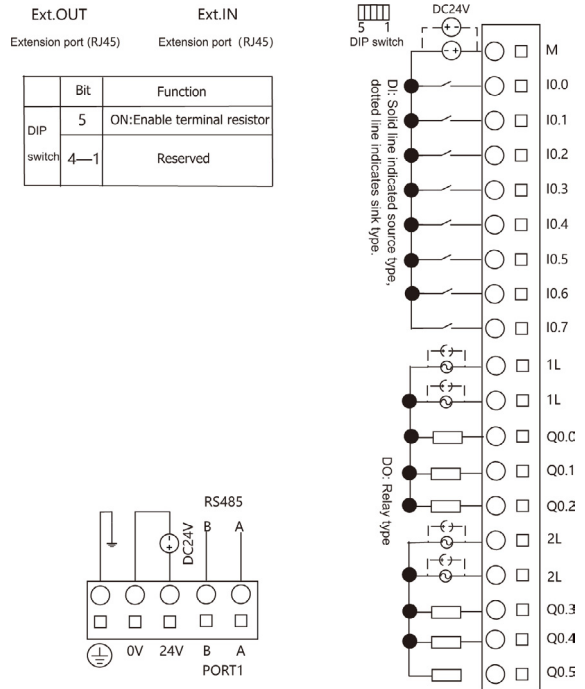


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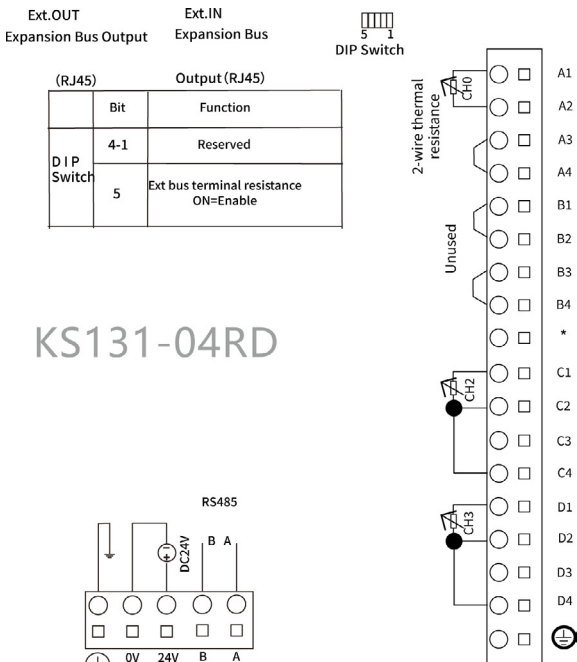
KNC-PLC-KS122-14DT



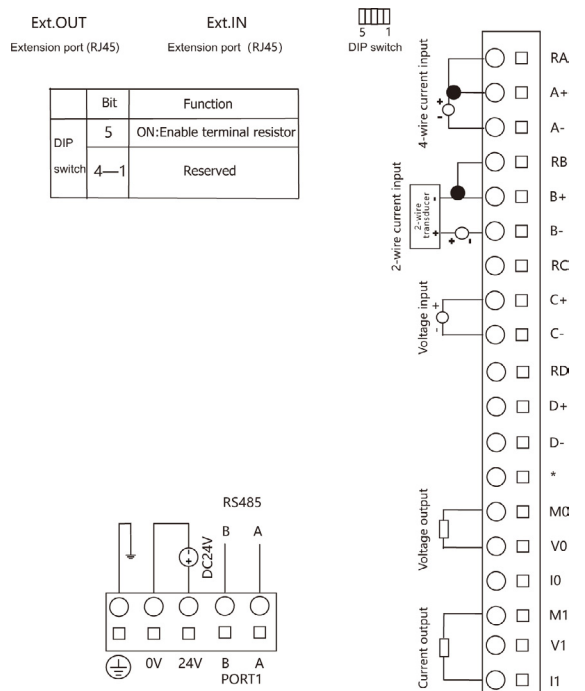
KNC-PLC-KS123-14DR



KNC-PLC-KS131-04RD



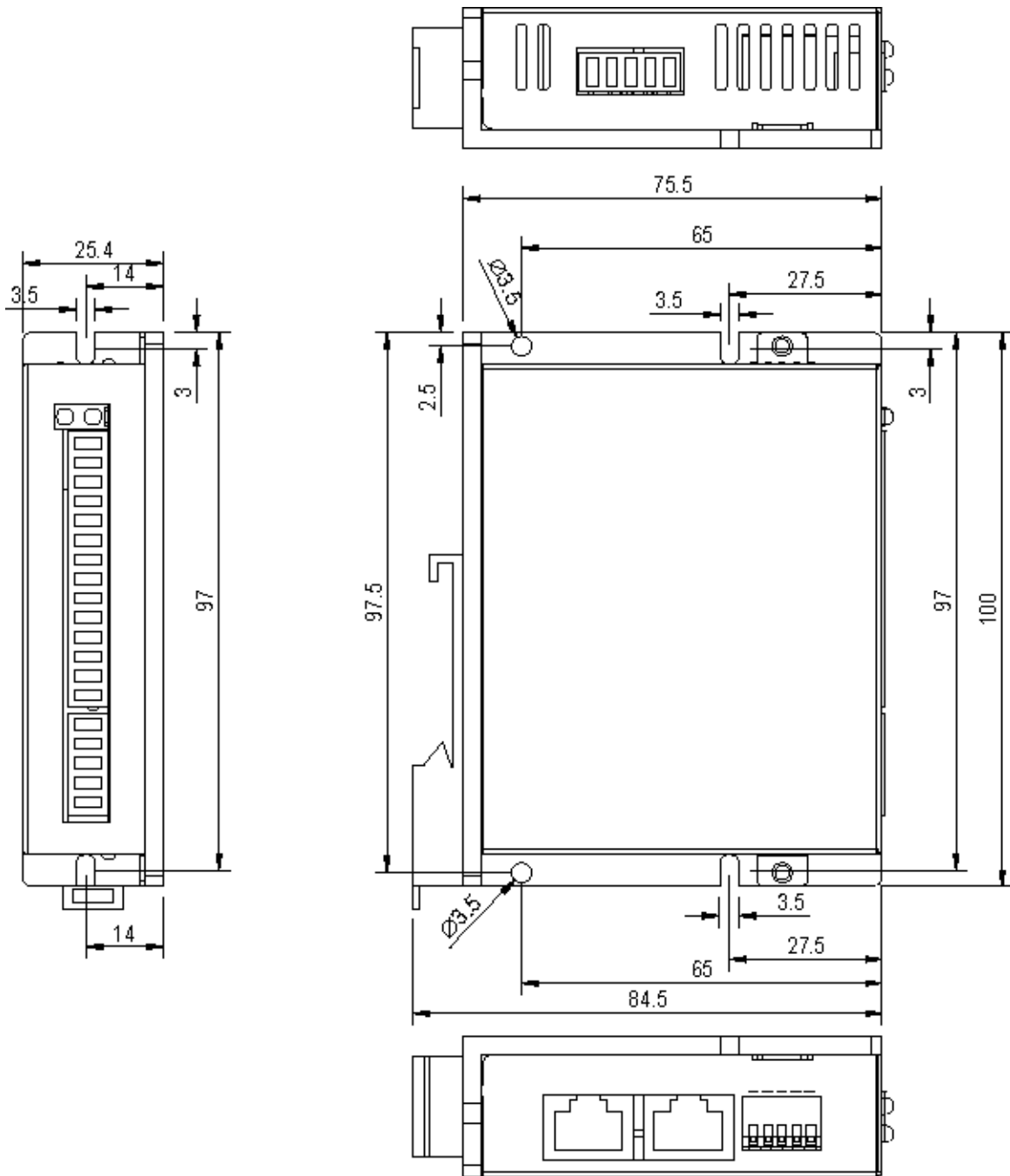
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KS131-04RD

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DIMENSIONS



Units are in mm

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