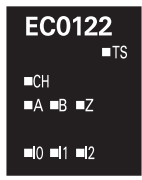
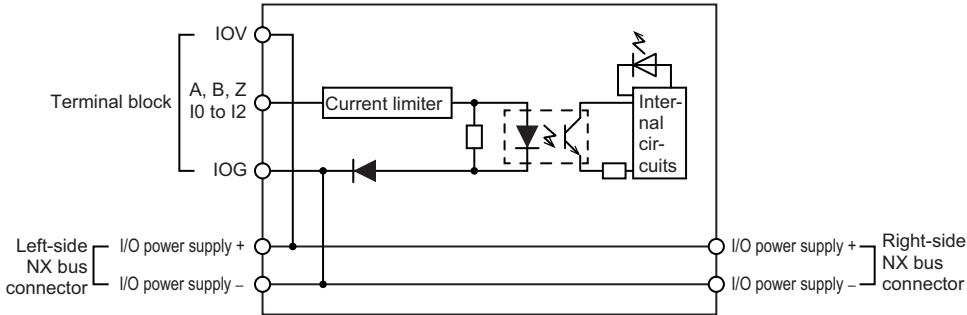
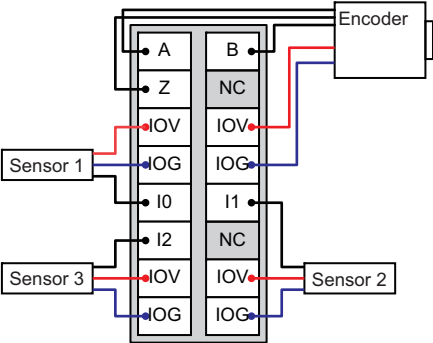


# Specification

## Incremental Encoder Input Units 1 channel NX-EC0122

<b>Unit name</b>	Incremental Encoder Input Units		<b>Model</b>	NX-EC0122
<b>Number of channels</b>	1 channel	<b>Type of external connections</b>	Screwless clamping terminal block (16 terminals)	
<b>I/O refreshing method</b>	Free-Run refreshing or synchronous I/O refreshing *1			
<b>Indicators</b>		<b>Input signals</b>	Counter: Phases A, B, and Z External Inputs: 3	
<b>Input form</b>	Voltage input (24 V)			
<b>Counting unit</b>	Pulses			
<b>Pulse input method</b>	Phase difference pulse (multiplication x1/2/4), pulse + direction inputs, or up and down pulse inputs			
<b>Counter range</b>	-2,147,483,648 to 2,147,483,647 pulses			
<b>Counter functions</b>				
<b>Counter type</b>	Ring counter or linear counter			
<b>Counter controls</b>	Gate control, counter reset, and counter preset			
<b>Latch function</b>	Two external input latches and one internal latch			
<b>Measurements</b>	Pulse rate measurement and pulse period measurement			
<b>Voltage input specifications</b>				
<b>Input voltage</b>	20.4 to 28.8 VDC (24 VDC +20%/–15%)	<b>ON voltage</b>	19.6 VDC min./3 mA min.	
<b>Input current</b>	4.2 mA typical (24 VDC)	<b>OFF voltage</b>	4.0 VDC max./1 mA max.	
<b>Maximum response frequency</b>	Phases A and B: Single-phase 500 kHz (phase difference pulse input x4: 125 kHz), Phase Z: 125 kHz			
<b>Internal I/O common processing</b>	PNP			
<b>External input specifications</b>				
<b>Input voltage</b>	20.4 to 28.8 VDC (24 VDC +20%/–15%)	<b>ON voltage/ON current</b>	15 VDC min./3 mA min.	
<b>Input current</b>	4.6 mA typical (24 VDC)	<b>OFF voltage/OFF current</b>	4.0 VDC max./1 mA max.	
<b>ON/OFF response time</b>	1 μs max./2 μs max.			
<b>Internal I/O common processing</b>	PNP			
<b>Dimensions</b>	12 × 100 × 71 mm (W×H×D)		<b>Isolation method</b>	Photocoupler isolation
<b>Insulation resistance</b>	20 MΩ min. between isolated circuits (at 100 VDC)		<b>Dielectric strength</b>	510 VAC between isolated circuits for 1 minute with leakage current of 5 mA max.
<b>I/O power supply source</b>	Supplied from the NX bus. 20.4 to 28.8 VDC (24 VDC +20%/–15%)		<b>Current capacity of I/O power supply terminals</b>	IOV: 0.3 A max. per terminal for encoder supply section and 0.1 A max. per terminal for other sections IOG: 0.3 A max. per terminal for encoder supply section and 0.1 A max. per terminal for other sections
<b>NX Unit power consumption</b>	0.95 W		<b>Current consumption from I/O power supply</b>	None
<b>Weight</b>	70 g			
<b>Circuit layout</b>	<p>Encoder Input and External Inputs</p> 			
<b>Installation orientation and restrictions</b>	Installation orientation: 6 possible orientations Restrictions: There are no restrictions.			

**Terminal connection diagram**



<b>Failure detection</b>	None	<b>Protection</b>	None
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\*1. The I/O refreshing method is automatically set according to the connected Communications Coupler Unit and CPU Unit.