

LN-IO301-1, LN-IO401-1, LN-IO520-1

LN Series Remote Input/Output (I/O) Controller

Description

The LN Series Remote Input/Output (I/O) controller extends the capability of the LN Series system as well as monitors and controls various Heating, Ventilating, and Air Conditioning (HVAC) applications.

The LN Remote I/O controllers are based on LONWORKS® technology for interoperability and peer-to-peer communication between controllers without any intermediary but also integrate seamlessly into the Metasys® system.

Refer to the *LN Series Remote Input/Output (I/O) Controller Product Bulletin (LIT-12011316)* for important product application information.

Features

- interoperability - features peer-to-peer communication between controllers based on LONWORKS technology. The Remote I/O controller is LONMARK® certified according to the Interoperability Guidelines Version 3.4.

- robust hardware - features a light-weight fire retardant plastic enclosure, software configurable universal inputs, Pulse Width Modulation (PWM) or digit triac outputs, a status indicator on each output, and a fuse-protected power supply.
- configurable software - features an LNS® plug-in that provides the ability to easily configure inputs and outputs. You can also configure input and output properties and hardware Simple Network Variable Types (SNVTs).

Repair Information

If the Remote I/O controller fails to operate within its specifications, replace the unit. For a replacement, contact the nearest Johnson Controls® representative.



LN-IO520-1 Controller

Selection Chart

Code Number	Description
LN-IO301-1	Controller features 8 inputs, 8 digital outputs, and a 12-bit digital/analog converter for output resolution.
LN-IO401-1	Controller features 12 inputs, 12 digital outputs, and a 12-bit digital/analog converter for output resolution.
LN-IO520-1	Controller features 16 inputs and an LNS Plug-in

Technical Specifications

LN Series Remote I/O Controllers (Part 1 of 2)		
Product Codes		LN-IO301-1, LN-IO401-1, LN-IO520-1
Power Requirements	Voltage	24 VAC/DC; ±15%, 50/60 Hz, Class 2
	Protection	1.35 A auto-reset fuse
	Consumption	6 VA
	Maximum Consumption	15 VA
Ambient Storage Conditions	Ambient Operating Temperature	0 to 70°C (32 to 158° F)
	Ambient Storage Temperature	-20 to 70°C (-4 to 158° F)
	Ambient Relative Humidity	0 to 90% noncondensing
General	Processor	Neuron® 3150®, 8 bits, 10 MHz
	Memory	Nonvolatile Flash 64k (APB application), Nonvolatile Flash 64k (storage)
	Channel	TP/FT-10, 78 Kbps
	Communication	LonTalk® protocol
	Transceiver	FTX-1
	Status Indicator	Green LED: power status and LON jack, Orange LED: service and LON RX
Enclosure (Housing)	Communication Jack	LON audio jack mono 1/8 in. (3.5 mm)
	Material	ABS PA-765A
	Dimensions (with screws)	LN-IO301-1: 5.7 x 4.7 x 2.0 in. (144.8 x 119.4 x 50.8 mm) LN-IO401-1 and LN-IO520-1: 7.7 x 4.7 x 2.0 in. (195.6 x 119.4 x 50.8 mm)
	Shipping Weight	LN-IO301-1: 0.77 lb (0.35 kg), LN-IO401-1 and LN-IO520-1: 0.86 lb (0.39 kg)



LN Series Remote Input/Output (I/O) Controller (Continued)

LN Series Remote I/O Controllers (Part 2 of 2)		
Inputs	Quantity	Universal (software configurable)
	Input Types	Digital: Dry Contact, Analog Voltage: 0-10 VDC, Accuracy: $\pm 0.5\%$, Analog Current: 4-20 mA with 249 ohms external resistor (wired in parallel) Accuracy: $\pm 0.5\%$
	Resistor Support	Thermistor: 100 ohms (PT100), 1k (RTD I K Type 85), 10k (Type, 2, Type 3), Range: -40 to 125°C, (-40 to 257° F) Accuracy: $\pm 0.5^\circ$ C, $\pm 0.9^\circ$ F Resolution: 0.1 to 0.18° F (10k ohms to 10k ohms supported using translation table)
	Potentiometer	Translation table configurable on several points, Accuracy $\pm 0.5\%$
	Input Resolution	16 bit analog/digital converter
Compliance	CE	Emission: EN55022: 1998 class B Immunity: EN61000-4-2: 1995, level 3 in air EN61000-4-2: 1995, level 2 by contact EN61000-4-3: 1996, level 2 EN61000-4-4: 1995, level 2 EN61000-4-6: 1996, level 2 ENV 50204: 1995, level 2 United States: UL Listed UL916 Energy management equipment, material: UL94-5VA

