



Applications

Provides four additional RJ9 accessory inputs to the LON network, allowing to:

- Interface any of Distech Controls' RJ9 accessory directly with the LON network
- Add four RJ9 multi-sensors or room devices
- Add four room controller LONMARK objects to your configuration

Features & Benefits

- Easily configurable using LNS-based plug-ins or EC-Net^{AX}-based wizards, allowing you to work with your preferred network management platform
- 4 additional RJ9 inputs for decentralized switching capabilities, to bypass wiring length constraints when positioning the room module and the controller
- Direct interface between Distech Controls' RJ9 accessories and LON network for enhanced configuration capabilities and shortened communication wiring, reducing installation costs and increasing communication reliability
- Bidirectional inputs, allowing display of actual status on the room module
- LONMARK certified according to the Interoperability Guidelines Version 3.4, guaranteeing interoperability with other manufacturers' LONMARK certified controllers
- Latest LONWORKS 2.0 technology provides significantly faster operating speeds and additional functionality
- Embedded Demand Response Technology eases integration in Smart Grid systems, enabling real-time power management to cut energy bills and extend equipments lifetime
- Temperature sensing calibration to transmit actual temperature information to the network
- Compatible with the RFR Wireless Receiver, letting you create wire-free installations and use various wireless battery-less sensors and switches
- Compatible with the WMS-PB-8DI Interface, allowing direct connection of pushbuttons and switches to suit any configuration needs
- DIN rail mounting integrated into the enclosure for fast and reliable installation
- Field upgradable to benefit from latest upgrades without having to access the product.

Overview

The **RCL-ITR** is a microprocessor-based 4-channel configurable LONWORKS interface designed to provide direct connectivity between Distech Controls™' RJ9 accessories and the LON network. The four additional bidirectional RJ9 inputs, are processed to allow occupancy, lighting, sunblind, temperatures and fan speeds commands and statuses from the connected RJ9 accessories to comply with standard LONWORKS formatting and to allow for displaying LON network variables on the room module (i.e space temperature, presence sensing, ECO-Vue™ icon...).

The RCL-ITR works with a wide range of sensors, such as the MS2, an in-ceiling mini multi-sensor, and room devices, such as the Allure™ RS-Smart-Sense, a customizable room sensor that features a color TFT Touch screen and graphical menus. These accessories feature indoor temperature measurement, presence detection, lux level acquisition, setpoint adjustment, fan speed selection, and occupancy state override, as well as light and sunblinds management for a complete cross-management integration.

Moreover, the RCL-ITR embeds four room controller LONMARK objects, increasing lighting and sunblind management capability to suit the most demanding configuration requirements.

This interface can be easily configured using the LNS®-based plug-in or the EC-Net^{AX}™ wizard, powered by the Niagara^{AX} Framework®. Either way, a configuration interface exists that simplifies the setup through an intuitive menu-based user interface.



Model	RCL-ITR
Bidirectional RJ9 Inputs	4
Room controller LONMARK object	4
Open-to-Wireless™ ¹	■

1. The RCL-ITR module is Open-to-Wireless ready. Available when a RFR Series receiver or a MS2-R multi-sensor is connected to the module. Only one wireless receiver per module. The receiver uses the first bidirectional RJ9 input from the module.

Wireless Receivers



To reduce the cost of installation, and minimize the impact on existing partition walls, these wireless receivers enable the controllers to communicate with a line of wireless battery-less room sensors, remote controls and switches

RFR Series and RFR-ENOCEAN receivers



Line of Radio and EnOcean receivers

Complementary Products

Allure RS-Smart-Sense



Digital room sensor device with a touch-sensitive LCD color screen for HVAC, lighting, sunblinds and occupancy control

EC-Remote Series



Line of multi-discipline infrared, radio and EnOcean remote controls for lighting, sunblind and HVAC management.

MS2 Series



Line of infrared and radio multi-sensors for wireless reception, temperature sensing, light level measurement and motion detection.

Supported Platforms



EC-Net^{AX}

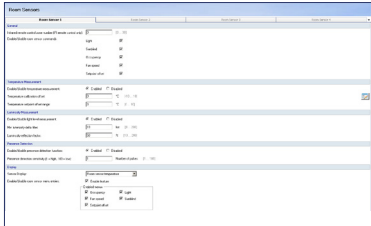
EC-Net^{AX} is a web-enabled multi-protocol integration solution powered by the Niagara^{AX} Framework, establishing a fully Internet-enabled, distributed architecture for real-time access, automation and control of devices. EC-Net^{AX}'s open framework creates a common development and management environment for integration of LonWorks[®], BACnet[®] and other protocols. Regardless of manufacturer and protocol, the EC-Net^{AX} system provides a unified modeling of diverse systems and data, providing one common platform for development, management and enterprise applications.



LonWorks Network Services (LNS)

LNS[®] is a client-server platform that allows multiple users, running different LNS-compatible applications, to access a common source for directory, installation, management, monitoring and control services for the network system being managed. Distech Controls' Lonwatcher is an example of a LNS-based network management tool that can use Plug-Ins to configure and monitor controllers and devices in the control system.

EC-Net^{AX} Wizards and LNS Plug-Ins

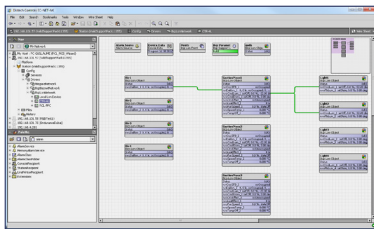


Designed for use respectively with EC-Net^{AX} (powered by the Niagara^{AX} Framework) or LNS-based softwares such as Distech Controls' Lonwatcher 3, the EC-Net^{AX} Wizards and LNS plug-in can be used to easily configure a device's parameters including RJ9 accessories, lighting and/or sunblind outputs, occupancy parameters, amongst others, and to test wiring and identify the connected devices.

- User-friendly interface to easily and efficiently configure the controller's parameters
- Powerful import/export functionalities to duplicate a controller's settings for reuse
- Download configuration to multiple devices for large BMS integration

Configuration Softwares

EC-Net^{AX}

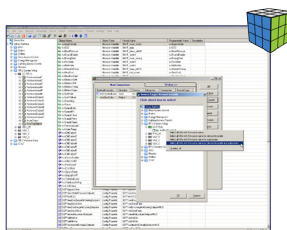


EC-Net^{AX} is a suite of Niagara^{AX}-based products designed to integrate diverse smart devices into a unified, Internet-enabled, web-based system. EC-Net^{AX} solutions integrate LonWorks[®], BACnet[®], oBIX, Internet and web services protocols in a software platform that can be used in embedded controllers or server applications.

EC-Net^{AX} includes integrated network management tools to support the design, configuration, installation, and maintenance of interoperable networks.

- Connects to almost any embedded device, regardless of manufacturer or communication protocol, as a result the common environment created by Niagara^{AX}'s open Java-based Framework.
- Includes a comprehensive, graphical toolset that enables users to build rich applications in a drag-and-drop environment. By wiring components together, developers build control strategies, alarming and scheduling applications as well as browser-based displays and reports.
- Reduces development time by merging automation, IT and Internet technologies in a single solution. With an EC-BOS^{AX}, advanced web-services applications, such as TCP/IP, HTTP, XML, SOAP, and oBIX, can be implemented so that you can read data, send commands, and respond to alarms in real-time from anywhere using any standard web browser.
- Integrates geographically dispersed, multi-vendor devices into an interoperable application to save time and money.

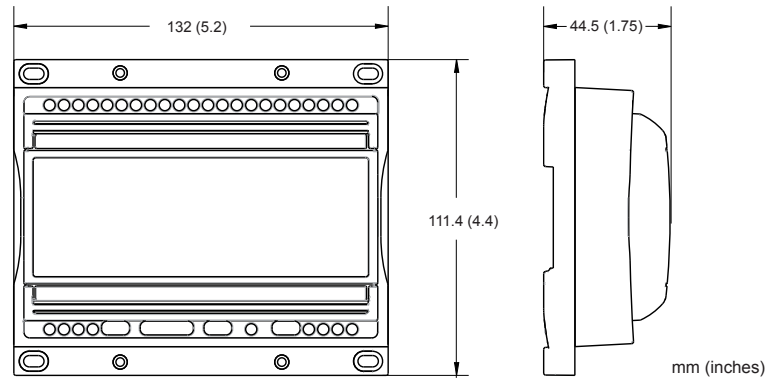
Lonwatcher 3



The Lonwatcher 3 network management tool is an innovative software for fast set-up and cost efficient implementation of the Distech Controls' LonWorks[®] products, as well as other multivendor open and interoperable LonWorks[®] networks, and their interaction. This intuitive yet sophisticated tool provides network integrators with advanced features and all the resources necessary to install, operate and maintain LonWorks[®] networks. Based on LNS TURBO Edition network operating system, Lonwatcher 3 is a performance-driven, highspeed application, allowing a fast response time from the application and increasing user productivity.

- Build, commission and maintain multi-vendor, open and interoperable LonWorks[®] networks.
- Manage multiple LonWorks[®] networks simultaneously.
- Batch operations to copy/paste multiple networks, subsystems and devices reducing time for commissioning, replacing and loading devices.
- Compatible with other LNS[®] databases created with any LNS network management tool.
- Supports LNS standard plug-in applications, allowing for easy integration of Distech Controls devices as well as other manufacturers' devices.
- Create device status reports to get information such as devices in override, in alarm, etc.
- Fully supports i.LON[®] Internet Servers.
- Create dynamic network variables.
- User Manager, to prevent unauthorized system access, and to manage user rights.
- Support of any LNS or IP network interfaces.

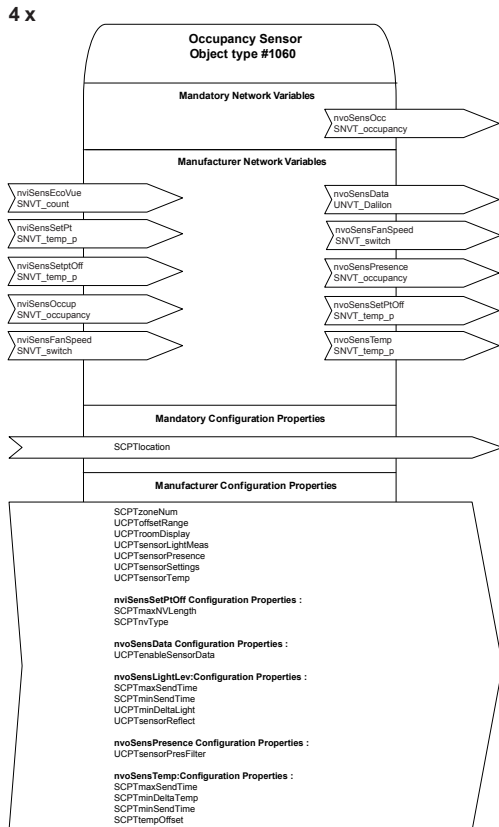
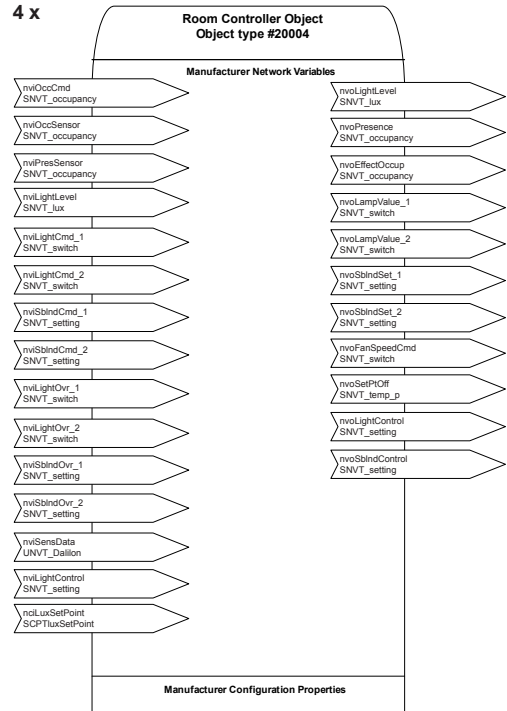
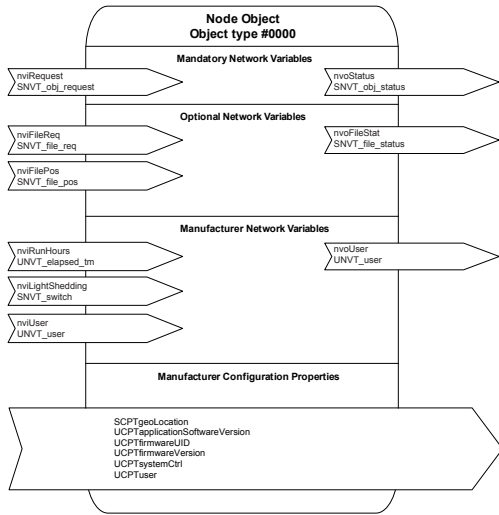
RCL-ITR Dimensions



RCL-ITR Specifications

Power		Wireless Receiver⁴	
Voltage	230 VAC; ±15% ; 50/60 Hz	Communication	EnOcean wireless standard or 868 ISM
Protection	Self-protected transformer	Supported wireless input types	Temperature Presence Setpoint adjustment Fan speed settings Occupancy Luminosity
Typical Consumption	1.88 W + all external loads ¹	Supported wireless receivers	RFR-ENOCEAN RFR (868 MHz) MS2-R
Full Load Consumption	3.02 W	Number of wireless receivers	1
Interoperability		Cable	See the wireless receiver's datasheet for wiring specifications.
Communication Channel	LonTalk protocol TP/FT-10; 78 Kbps	Standards and Regulation	
LONMARK Interoperability Guidelines	Version 3.4	CE - Emission	IEC61000-6-3: 2007; Generic standards for residential, commercial and light-industrial environments
Device Class	Generic Controller	CE - Immunity	IEC61000-6-1: 2007; Generic standards for residential, commercial and light-industrial environments
LONMARK Functional Profile		Communication Protocols	
- Node Objects	Node Object #0000	 	
- Sensor Objects	Occupancy Sensor #1060		
Connection	2 wires: LON1 / LON2		
Hardware			
Processor	ATmega (Atmel AVR), 8 bit		
CPU Speed	16 MHz		
Memory	32 kB Non-volatile Flash (Applications) 2 kB RAM 1 kB EEPROM		
Environmental			
Operating Temperature	+5°C to +45°C; 41°F to 113°F		
Storage Temperature	-20°C to 70°C; -4°F to 158°F		
Relative Humidity	+20 to 90% Non-condensing		
Enclosure			
Material ²	FR/ABS		
Color	Blue casing & grey connectors		
Dimensions (with screws)	5.2 L x 4.4 W x 1.7" H (132 x 111,4 x 44.5 mm)		
Shipping Weight	0.55 kg (1.21 lbs)		
IP	20		
Room Devices			
Supported Room Devices	Allure RS-Smart-Sense MS2 Series RIR Series RFR Series RS Series WMS-PB-08DI		
Number of devices per controller	4 x (1 Room Device + WMS-PB-08DI) ³		
Cable	See the room device's datasheet for wiring specifications.		

- External loads must include the power consumption of any connected equipment. Refer to the concerned equipment's datasheet for related power consumption information.
- All materials and manufacturing processes comply with the RoHS directive and are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive.
- Only one wireless receiver per controller.
- Available when a RFR Series receiver or a MS2-R multi-sensor is connected to the controller. The receiver uses the first bidirectional RJ9 input from the controller.



Total Quality Commitment

All Distech Controls product lines are built to meet rigorous quality standards. Distech Controls is an ISO 9001 registered company.

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