

Lighting Control Module



LC-101/LC-103

1-ch AC DI and 1/3-ch Relay Output Lighting Control Module

Features

- Cost-effective for lighting control
- Power Relay Output
- Isolated AC Digital Input
- Tiny form-factor with easy screw mounting
- Low power consumption
- Support Modbus and DCON Protocols
- Dual RJ-11 Connectors for Easy Wiring



Introduction

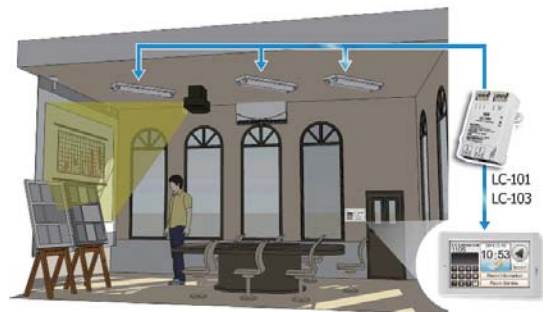
The **LC lighting control module** is easy-to-use and requires no specialist skills to install and operate, and no software is needed in order to control the DO channels.

The **LC-101** provides 1 channel for digital input (photo couple isolation) and 1 channel for relay output. The output channel is form C type relay, the input channel can directly control the relay ON and OFF sequence.

The **LC-103** provides 1 channel for digital input (photo couple isolation) and 3 channels for relay output. All output channels are form A type relays, the input channel can directly control a 3-channel relay ON and OFF sequence.

When required, communication is programmable based on the Modbus RTU protocol, and an added benefit is that different addresses can be set for Modbus RTU communication via hardware configuration.

Applications



Warning: Do not use the **LC-103** to connect to any device where the loading is greater than 80 W per channel.

System Specifications

Model	LC-101	LC-103
Communication		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	9600 ~ 115200 bps	9600 bps
Protocol	Modbus RTU / DCON	
Node Addresses	32~63	1~31
Connector	RJ-11 (6P4C or 6P6C)	
LED Display		
Power	1 LED as Power Indicator	
EMS Protection		
ESD (IEC 61000-4-2)	±2 kV Contact for Each Terminal ±4 kV Air for Random Point	
EFT (IEC61000-4-4)	±2 kV for Power	
Power Requirements		
Input Voltage Range	10 ~ 30 VDC	
Consumption	0.5 W Max.	
Connector	RJ-11	
Mechanical		
Dimensions (W x L x H)	52 mm x 98 mm x 27 mm	
Installation	Screw Mounting	
Environment		
Operating Temperature	-25 ~ +75 °C	
Storage Temperature	-30 ~ +75 °C	
Humidity	10 ~ 90% RH, Non-condensing	

I/O Specifications

Model	LC-101	LC-103
Digital Input		
Input Channels	1	
Type	90 ~ 240 VAC	
On Voltage Level	85 VAC	
Off Voltage Level	60 VAC	
Input Impedance	68 KΩ, 1 W	
Isolation	5000 Vrms	
Function	Local and Remote Direct Control Relay ON/OFF and Remote Status Monitoring	
Relay Output		
Output Channels	1	3
Type	Power Relay, Form C	Power Relay, Form A (SPST N.O.)
Operating Voltage	250 VAC or 30 VDC	
Max. Load Current	NO: 10 A, NC: 6 A	5 A
Operating Time	15 ms Max.	10 ms Max.
Release Time	5 ms Max.	
Electrical Life (Resistive load)	100,000 ops	
Mechanical Life	20,000,000 ops at no load (300 ops/minute)	

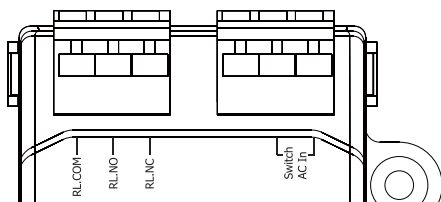
Power and Communication

RJ-11 Connector	Pin	Descriptions
	1	+VS Power Input (+10 VDC ~ 30 VDC)
	2	+VS
	3	DATA+ RS-485 Interface(D+)
	4	DATA- RS-485 Interface(D-)
	5	GND Ground
	6	GND

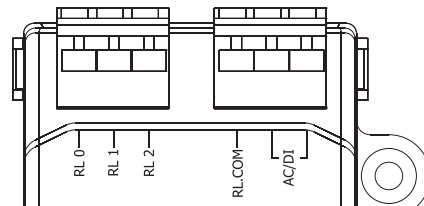
Bottom View

RS-485 and Power Input Daisy Chain using an RJ-11 Connector

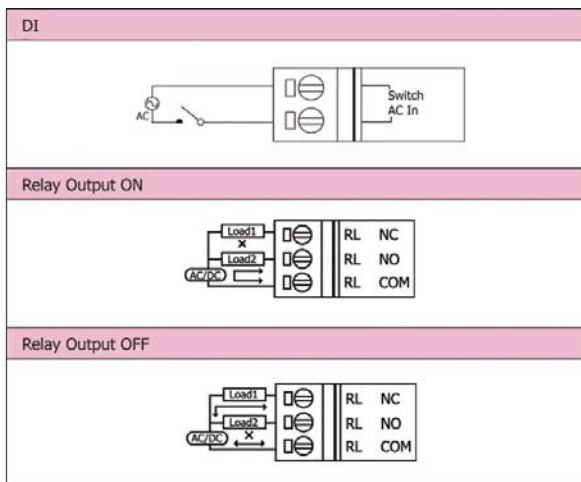
LC-101 PIN Assignment



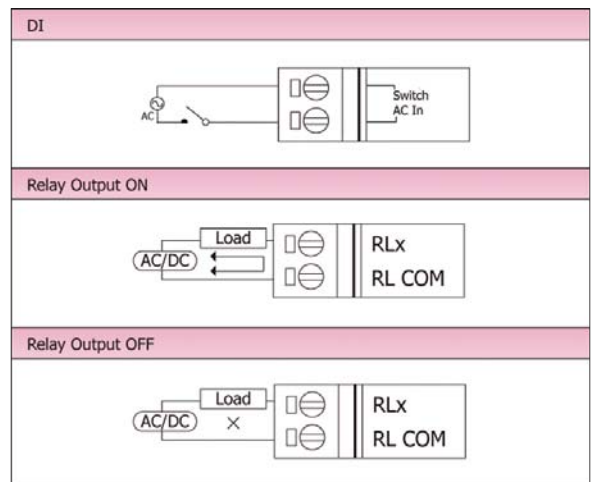
LC-103 PIN Assignment



LC-101 DIO Wire Connections

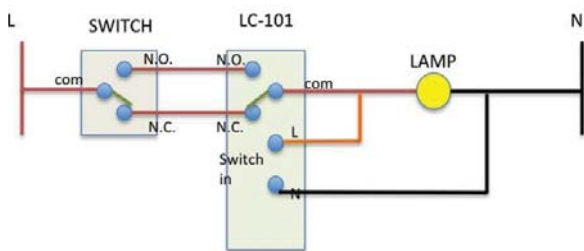


LC-103 DIO Wire Connections



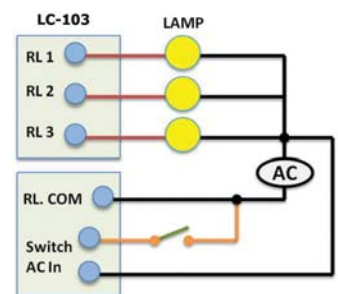
LC-101 Wiring Application

LC-101 can retain the function of the entity switch.



LC-103 Wiring Application

LC-103 has a 3-loop 3-stage switching function with light memory feature, that will turn on the light in the previous status when the light turned on again.



Ordering Information

LC-101 CR	1-channel AC Digital Input and 1-channel Relay Output Lighting Control Module (screw mount) (RoHS)
LC-101/DIN CR	1-channel AC Digital Input and 1-channel Relay Output Lighting Control Module (DIN Rail mount) (RoHS)
LC-103 CR	1-channel AC Digital Input and 3-channel Relay Output Lighting Control Module (RoHS)