



LC-223

1-channel Dimmer Control Module

Introduction

The LC-223 is an easy-to-use dimming ballast control module that can be easily installed and operated without requiring specialist knowledge or skills. The brightness of a fluorescent lamp can be controlled using a dimmer, either via digital input or a host controller. The digital input can be used to directly control the light value of the luminous flux in sequence from 10% to 100%, without the need for a remote host controller. 4 kV ESD protection and 2500 VDC intra-module isolation are also provided. When required, communication with the LC-223 is programmable based on the Modbus RTU protocol, with the added benefit that different addresses can be set via hardware configuration.

System Specifications

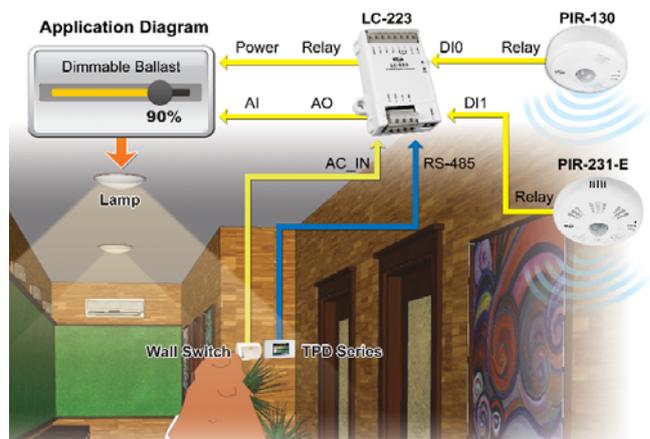
Communication	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 to 115200 bps
Protocol	DCON, Modbus RTU
Node Addresses	64 to 95
LED Indicators	
Power	1 LED as Power Indicator
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vdc
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV contact for each Terminal ±4 kV Air for Random Point
EFT (IEC 61000-4-4)	±4 kV for Power
Power	
Reverse Polarity Protection	Yes
Powered from Terminal Block	Yes, 10 to 30 VDC
Consumption	1.4 W Max.
Mechanical	
Dimensions (W x L x H)	52 mm x 98 mm x 27 mm
Installation	Screw Mounting
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-30 to +80°C
Humidity	10 to 95% RH, Non-condensing

Features

- Provide Power Relay Output to turn ON/OFF the Dimming Ballast
- Provide the wall Switch function to Control the Brightness of the Dimming Ballast when the Host Fail Communication
- Isolated Analog Output (0 to 20 mA, 0 to 10 V, 1 to 10 V) For Dimming Control
- Provide The Dry Contact to trigger the Brightness of the Dimming Ballast
- Supports Modbus RTU and DCON Protocols
- 2500 VDC Intra-Module Isolation
- ±4 kV ESD and EFT Protection
- Tiny Form-Factor with Easy Screw and DIN-Rail Mounting



Applications



I/O Specifications

Analog Output		
Channels	1	
Type	0 to 20 mA, 4 to 20 mA, 0 to 10 V, 1 to 10 V	
Resolution	12-bit	
Accuracy	±0.1% of FSR	
DA Output Response Time	10 ms	
Voltage Output Capability	20 mA	
Current Load Resistance	450 Ω	
Digital Input		
Channels	Dry Contact	2 for the Dimming Trigger
	Wet Contact	1 for the Wall Switch Control
Type	Wet Contact, Dry Contact	
Wet	ON Voltage Level	80 VAC to 240 VAC
	OFF Voltage Level	30 VAC Max.
Dry	ON Voltage Level	Close to GND
	OFF Voltage Level	Open
Relay Output		
Channels	1	
Type	Power Relay, Form A (SPST N.O.)	
Operating Voltage	250 VAC or 30 Vdc	
Max. Load Current	16 A (Res. load)	
Operate Time	15 ms Max.	
Release Time	5 ms Max.	
Mechanical Endurance	10,000,000 OPS	
Electrical Endurance	50,000 OPS	
Power-on and Safe Value	Yes, programmable	

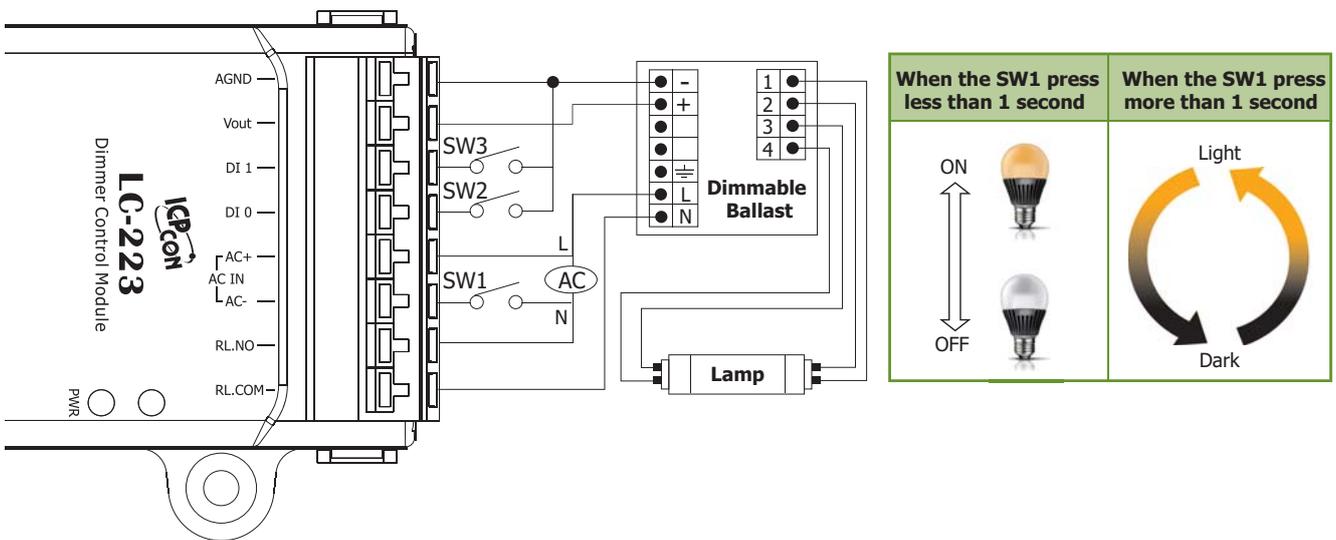
Configuration



DIP Switch Description		
SW1	ON	DCON Protocol
	OFF	Modbus RTU Protocol
SW2	ON	Software Configuration
	OFF	Hardware Configuration
SW3	ON	High Node Address
	OFF	Low Node Address
SW4	ON	INIT Mode
	OFF	Normal Mode

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LC Series

Wire Connections



Ordering Information

LC-223 CR	1-channel Dimmer Control Module with 2-channel Dry Contact Input Trigger (RoHS)
LC-223/DIN CR	1-channel Dimmer Control Module with 2-channel Dry Contact Input Trigger (DIN Rail mount) (RoHS)

Accessories

	tM-7520U CR	RS-232 to RS-485 Converter (RoHS)
	tM-7561 CR	USB to RS-485 Converter (RoHS)
	LC-485 CR	4 Channels RS-485 Active Hub (RoHS)
	TPD-280 CR	2.8" Touch HMI Device with RS-485 (RoHS)