TCM-ZB-D Series
Zigbee Wireless Lighting Module
Line Voltage Control Module with On/Off & 0-10V Dimming

Intelligent Device ECOSYSTEM

Electrical Specifications

Input Voltage Range:	100-277Vac
Frequency:	50/60 Hz Nom. (47-63 Hz Min/Max)
AC Relay Switched Current:	≤9A
AC Relay Inrush Current:	≤60A
Input Current Module Power:	≤0.05A power for control only
Wattage:	800W Max

Environmental Specifications

Maximum Case Temp.	72°C
Operating Temperature:	-5°C to +50°C
Storage Temperature:	-40°C to +80°C
Humidity:	5% to 95%
Cooling:	Convection
Vibration Frequency:	5 to 55 Hz/2g, 30 minutes
Impact Resistance:	1g/s
EMC:	FCC 47CFR Part 15 Class B compliant
Weight:	3.7oz. (105g)
MTBF:	418,000 Hours at full load and 40°C ambient conditions per MIL-217F Notice 2

- 2.4GHz, +20dBM ZigBee transmit power
- ON/OFF and 0-10V Analog Dimming Control, 100mA Sink
- Compatible with LED Drivers & Electronic Ballasts that comply with IEC60929 Annex E2, 0-10V Dimming
- ON/OFF switching up to 277Vac @9A Max
- Stores last dim setting even when driver is powered off by the module
- Dust Proof Design IP50
- ZigBee HA Certified
- Daintree ControlScope Certified
- Gray 5VA PC ABS Plastic Case
- UL Dry & Damp location rated
- Reset Button for use with recommissioning
- Designed for one module per luminaire
- UL2043 Plenum Rated for use in ceiling spaces
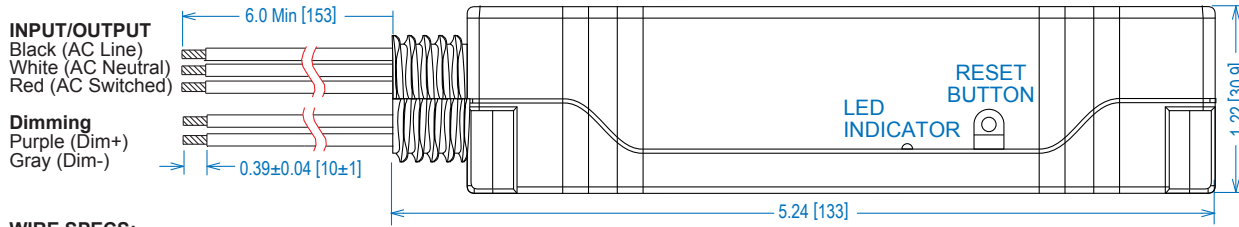- 5 year warranty

Controllers

Model	Description
TCM-ZB-D	Thomas Control Module - ZigBee Wireless Dimming Control

Class 2: US/Canada

Safety Cert.	Standard
UL/CUL	UL8750 & CAN/CSA C22.2 No. 250.13, UL2043 Plenum Rated
CE	EN 61347-1, EN61347-2-13

EMC Standard	Notes
Withstand Voltage Relay	Input to Output Across Relay Contacts: 700 Vac
Withstand Voltage AC In to Dim Out	Input to DIM: >1750 Vac
Dimming Circuit	UL & cUL Isolated Class 2, Dim+ Purple/Dim- Gray
FCC Part 15	Class B
EN61000-4-5	2kV L-N, 8/20 μsec surge protection

Dimensions

INPUT/OUTPUT
Black (AC Line)
White (AC Neutral)
Red (AC Switched)
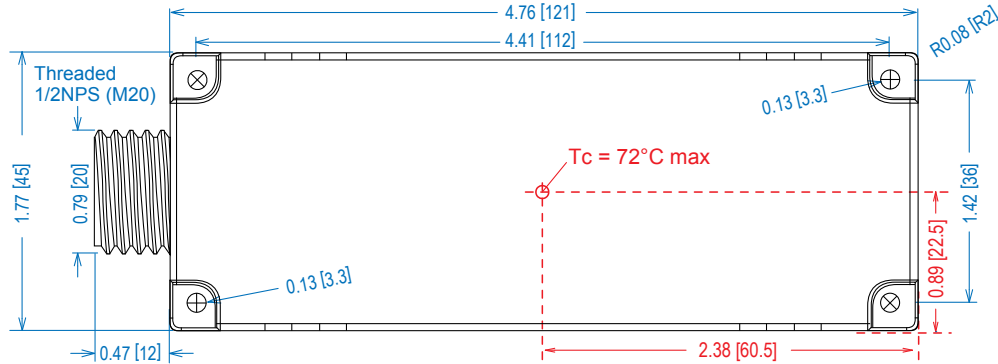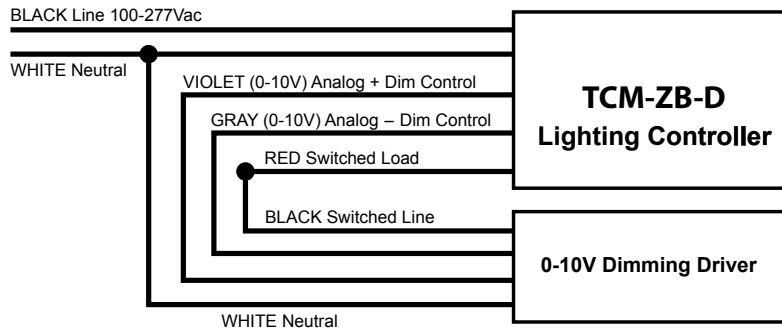
Dimming
Purple (Dim+)
Gray (Dim-)

WIRE SPECS:
Input Leads: 18 AWG, rated 600 V, 105C, min.
Output Leads: 18 AWG, rated 600 V, 105C, min.
Dimming Leads: 22 AWG, rated 300 V, 105C, min.
All wires are stranded with solder dipped ends.

RESET BUTTON
LED INDICATOR

6.0 Min [153]
0.39±0.04 [10±1]
5.24 [133]
1.22 [30.9]

Threaded 1/2NPS (M20)
4.76 [121]
4.41 [112]
R0.08 [R2]
0.13 [3.3]
Tc = 72°C max
1.77 [45]
0.79 [20]
1.42 [36]
0.89 [22.5]
0.13 [3.3]
0.47 [12]
2.38 [60.5]

Typical Application Circuit

BLACK Line 100-277Vac
WHITE Neutral
VIOLET (0-10V) Analog + Dim Control
GRAY (0-10V) Analog – Dim Control
RED Switched Load
BLACK Switched Line
WHITE Neutral

TCM-ZB-D
Lighting Controller

0-10V Dimming Driver

UL Conditions of Acceptability
See website for additional information

Reset Operation

Reset Button
The reset button is used to un-join a Zigbee network and reset the TCM-ZB-D to factory defaults. To reset: Press and hold the reset button for 7 seconds. You will hear an internal relay click once reset occurs. The green LED indicator will flash On/Off when not joined to a Zigbee network.

Joined
The green LED indicator will remain ON when TCM-ZB-D has successfully joined a Zigbee network.