

2. INTERFACE SPECIFICATIONS

2.1. FEATURES

Family of drivers for use in Ambient products within the Metalux and other brands at Eaton.

3. ELECTRICAL SPECIFICATIONS

3.1. OUTPUT CHARACTERISTICS

The Driver family allows output currents up to 0.8A and load voltages up to 42V maximum. In addition, the driver shall comply with the requirements shown in Table 1.

Output Specification (non-dimming Operation)	Test Condition / Notes	Requirement	Units
Output Voltage	Determined by load	$42 \pm 10\%$	V
Output Current	Constant, +/- 10% (max)	0.8	A
Isolation	Between input and outputs	Class 2	
Current Ripple	$(I_{max} - I_{min}) / (\text{Average})$	<30	%
Line/Load Regulation	Maximum over entire range of input voltage/output loads (any combination), and temperature range.	10	%
Start Up Delay	Maximum; From VAC turn-on until output current reaches 10% of nominal value	500	ms

Table 1 – Driver Output Characteristics

3.2. DIMMING SPECIFICATIONS

The driver shall comply with the dimming requirements defined in

0-10V Dimming Input Specification	Test Condition /Notes	Requirement	Units
Turn-On Time	At maximum dim level (Lowest light level)	1000	ms (max)
Dimming Curve Type	Dim curve between max/min values	Linear	
Dimmer Insertion loss (Sag)	Maximum	5	%
Dimming Level	Minimum Light Output	10	%
Low Level Voltage	Minimum Light Output below this voltage	1	V
High Level Voltage	Maximum Light Output below this voltage	8	V
Max Source Voltage	Maximum voltage allowed for 0-10V source (no load)	11	V
Source Current Range	Allowable current range for 0-10V (short-circuit)	0.01 – 2.0	mA

Table 2 and Table 2

0-10V Dimming Input Specification	Test Condition /Notes	Requirement	Units
Turn-On Time	At maximum dim level	1000	ms (max)

(Lowest light level)			
Dimming Curve Type	Dim curve between max/min values	Linear	
Dimmer Insertion loss (Sag)	Maximum	5	%
Dimming Level	Minimum Light Output	10	%
Low Level Voltage	Minimum Light Output below this voltage	1	V
High Level Voltage	Maximum Light Output below this voltage	8	V
Max Source Voltage	Maximum voltage allowed for 0-10V source (no load)	11	V
Source Current Range	Allowable current range for 0-10V (short-circuit)	0.01 – 2.0	mA

Table 2 – Driver 0-10V Dimming Requirements

3.3. INPUT CHARACTERISTICS

Driver power input shall be universal voltage and frequency. The driver shall comply with the requirements in Table 3.

Input Specification	Test Condition /Notes	Requirement	Units
Input Voltage	Fully Operational	90-305	V
	UL Rating	120-277	VAC
Input Frequency		47-63 Hz	Hz
Power Factor	100% Load	> 0.9	
THD (Current)	100% Load	< 20	%
In-Rush Current	Current and Duration	< 20/250	A/us
Efficiency	Minimum, 100% Load	87	%
Acoustic Noise	Not to exceed at 1 ft.	22.5	dBa SPL

Table 3 – Driver Input Characteristics

4. MECHANICAL SPECIFICATIONS

and connectivity information listed in

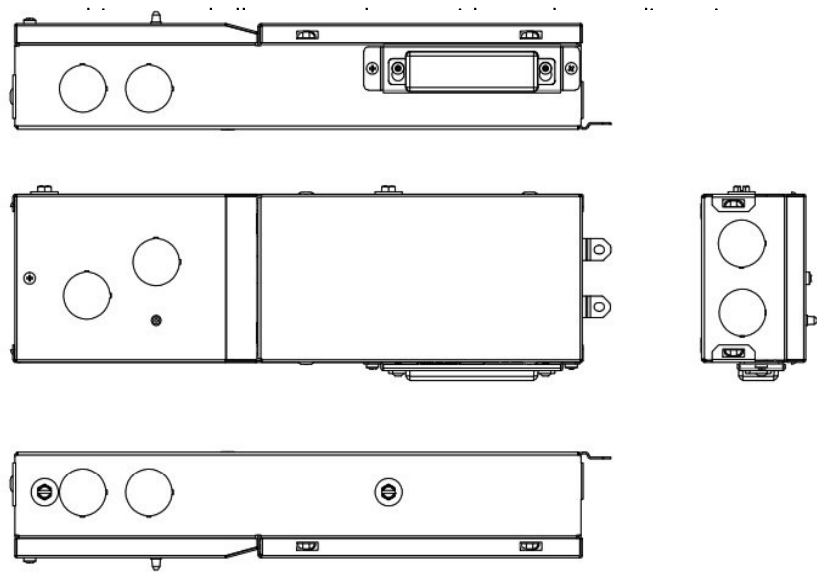


Figure 1, Table 4 and Figure 2.

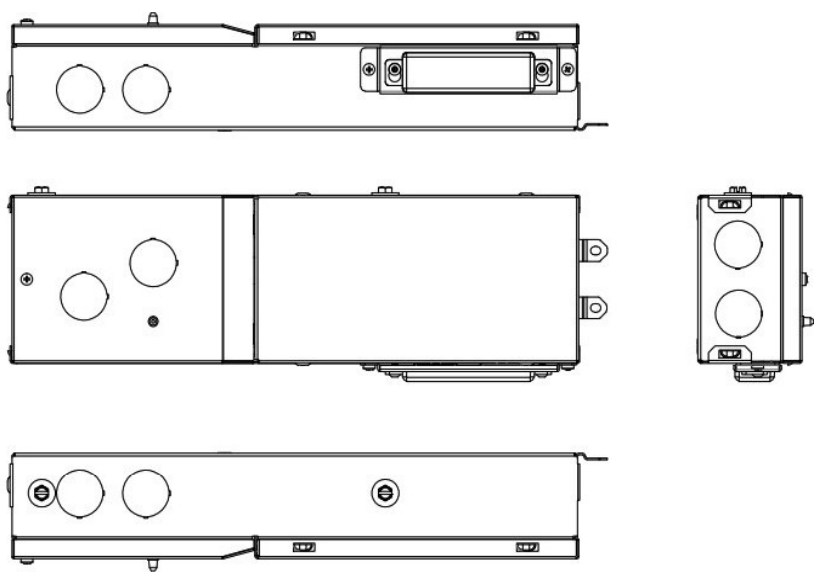


Figure 1 – Driver Case Outline Dimensions (mm)

Specification	Requirement
Dimensions (Max)	
Connectors	Push-in with release buttons:
	Input
	1. Input Line 2. Input Neutral 3. GND
	Output
	1. 0-10V dim-

- | | |
|----|--------------|
| 2. | 0-10V dim+ |
| 3. | Output LED + |
| 4. | Output LED – |
| 5. | Output LED – |

Table 4 – Driver Dimensions and Pinout Assignments

Input	
Line	
Neutral	
Earth/Chassis	
Output	Driver
PWM–	
PWM+	
LED+	
LED–	
LED–	

Figure 2 – Driver Physical Pin/Connector Arrangement

5. SAFETY AND COMPLIANCE REGULATION SPECIFICATIONS

5.1. SAFETY FEATURES

The driver shall comply with the safety requirements listed in Table 5.

Specification	Test Condition /Notes	Requirement	Units
Output Over Voltage Protection (Max)	Open Leads with AutoRestart	55	V
Output Short Circuit Protection	AutoRestart		
Maximum Case Temperature	Hottest point on case when operated at max ambient temperature and max load conditions	90	°C
Over Temperature Protection	Thermal foldback AutoRestart;		

Table 5 – Driver Safety Requirements

5.2. COMPLIANCE

The driver shall comply with the compliance standards and requirements listed in Table 6.

Specification	Standard
Safety Standards	UL 8750 Class 2 Recognized, UL 1310
EMI	FCC Part 15 Class B

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EFT/Burst	IEC 61000-4
Surge	NEMA SSL1 – 2010 Non-Roadway 2.5KV
Hazardous Substance Restrictions	Must be RoHS-compliant

Table 6 – Driver Compliance Requirements

6. ENVIRONMENTAL SPECIFICATIONS

The driver shall comply the environmental requirements listed in Table 7 **Error! Reference source not found..**

Environmental Specifications	Test Condition / Notes	Minimum	Nominal	Maximum	Units
Case Operating Temperature Range	At this case temperature maximum output power shall be achieved	-25		+85	°C
Ambient Operating Temperature Range	At max ambient temperature the driver shall deliver full output power	-20		+50	°C
Storage Temperature Range		-40		+85	°C
Humidity	Non Condensing	5		90	%
Lifetime	At Tcase 85C		50,000		hrs
Ingress Protection/UL Rating	UL Damp Location Rated		UL8750 evaluated to UL1310		
Warranty	At Tcase = 85C	5 Years			

Table 7 – Driver Environmental Requirements

7. LABEL SPECIFICATIONS

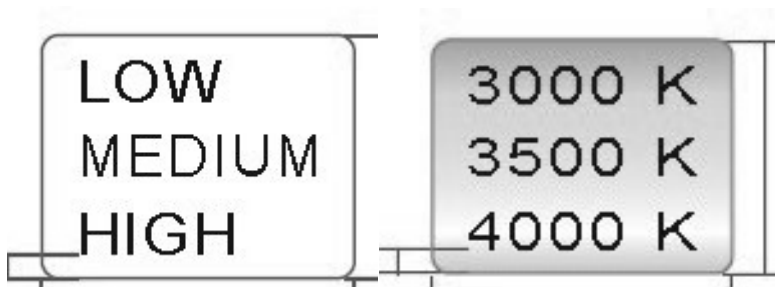
Each driver shall have a visible assembly part number and revision status number. The label should include revision status of any CCA(s) and Firmware(s).

Each driver shall have a specific barcode that can be scanned for tracking purposes.

Label type # MZ0051 (Glue# S333)

An example label is shown below in Figure 3

Switch label



RP7-PWIO034C0800M-02

Driver label

145*70mm

