

APMZ100C090UD LED Drivers

Replacement BU Voltage driver for use on the following Appleton™ LED Luminaires: 7500, 9,500, and 11,500 Lumen Mercmaster™ LED Generation 3 Zone 1 Luminaire; 9K Lumen Areamaster™ Generation 2 LED Zone 1 Luminaire; 23K Lumen Areamaster™ Generation 2 HL LED Zone 1 Luminaire; 9K Lumen Baymaster™ LED Zone 1 Luminaire; 23K Lumen Baymaster™ HL LED Zone 1 Luminaire

Features

- Input voltage: 120–277 Vac; 170–300 Vdc
- Built-in active PFC function: 0.99Typ.
- High efficiency: 90% Typ.
- Constant Current / 0–10V Dimming / Clock Dimming (CLK) / PWM Dimming
- High Surge Immunity
- Protection: OVP, SCP, OTP
- Type HL

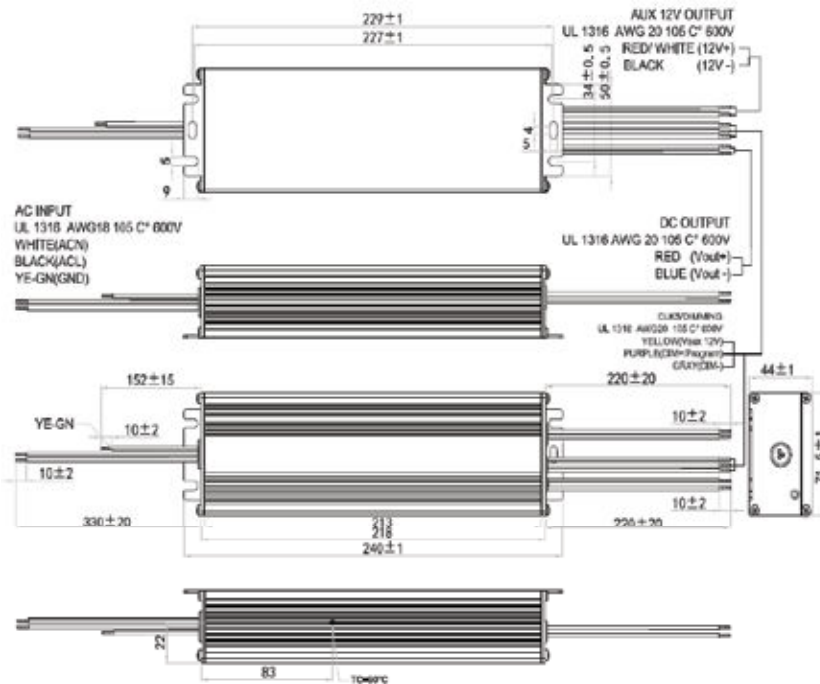
NEC/CEC and ATEX/IECEX Compliances

- UL8750; UL1012; CAN/CSA-C22.2 No.107-01
- IEC/EN61347-1; IEC/EN61347-2-13; IEC60079-0; IEC60079-18



Output Current	Input Voltage	Max. Output Power	Typical Efficiency	Typical Power Factor	Used in BU Luminaire Models	Part Number
360 mA	120-277 Vac / 170-300 Vdc	100 W	84%	0.95	MGZxL7xxxxBU	APMZ100C090UD36
410 mA	120-277 Vac / 170-300 Vdc	100 W	84%	0.95	AMLZL6, BLZL6	APMZ100C090UD41
480 mA	120-277 Vac / 170-300 Vdc	100 W	88%	0.98	MGZxH9xxxxBU MGZxL9xxxxBU	APMZ100C090UD48
530 mA	120-277 Vac / 170-300 Vdc	100 W	90%	0.98	AMHZL1, BHZL1	APMZ100C090UD53
595 mA	120-277 Vac / 170-300 Vdc	100 W	90%	0.98	MGZxH1xxxxBU	APMZ100C090UD59

Dimensions in Millimeters (Inches)

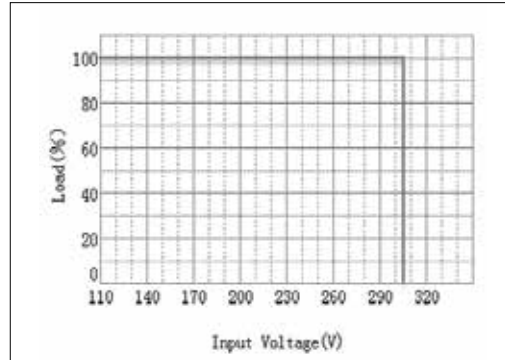


APMZ100C090UD LED Drivers

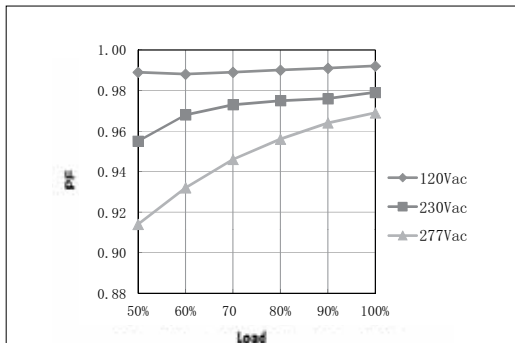
Replacement BU Voltage driver for use on the following Appleton™ LED Luminaires: 7500, 9,500, and 11,500 Lumen Mercmaster™ LED Generation 3 Zone 1 Luminaire; 9K Lumen Areamaster™ Generation 2 LED Zone 1 Luminaire; 23K Lumen Areamaster™ Generation 2 HL LED Zone 1 Luminaire; 9K Lumen Baymaster™ LED Zone 1 Luminaire; 23K Lumen Baymaster™ HL LED Zone 1 Luminaire

Diagrams

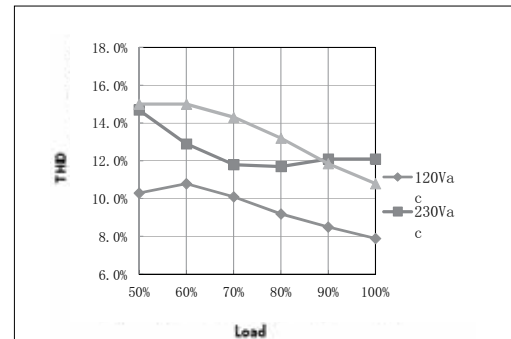
Derating Curve



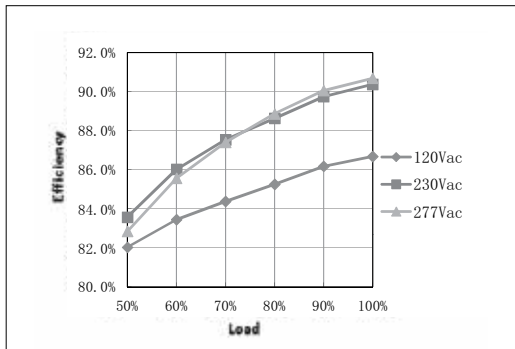
Power Factor vs. Load Curve



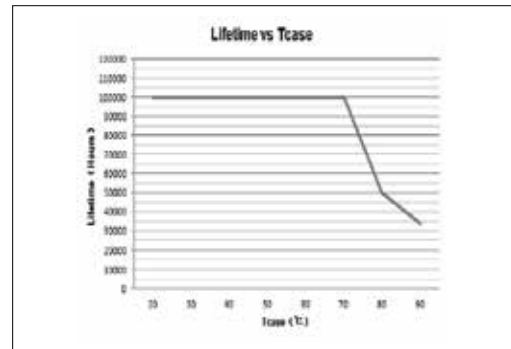
THD Curve



Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



APMZ100C090UD LED Drivers

Replacement BU Voltage driver for use on the following Appleton™ LED Luminaires: 7500, 9,500, and 11,500 Lumen Mercmaster™ LED Generation 3 Zone 1 Luminaire; 9K Lumen Areamaster™ Generation 2 LED Zone 1 Luminaire; 23K Lumen Areamaster™ Generation 2 HL LED Zone 1 Luminaire; 9K Lumen Baymaster™ LED Zone 1 Luminaire; 23K Lumen Baymaster™ HL LED Zone 1 Luminaire

Specifications (at +25 °C [+77 °F] ambient unless specified otherwise) ①

Input	Efficiency (120 Vac) ②	87% (Typical)
	Efficiency (230 Vac) ②	90% (Typical)
	Voltage Range (V) ③	108–305 Vac
	Voltage Rated (V) ③	120–277 Vac, or 170–300 Vdc (min.–max.)
	Frequency Range (Hz)	47 ~ 63
	Power Factor	0.95 (Min.) at 120–277 Vac, with 100% load
		0.90 (Min.) at 120–277 Vac, with 60%~100% load
	THD	15% (Max.) at 120–277 Vac, with 80%~100% load
		20% (Max.) at 120 Vac~277Vac, with 60%~100% load
	AC Current (Max.)	1.1A at 120 Vac input, 0.6A at 230 Vac
Inrush Current (Max.)	65A at 230Vac input, +25 °C (+77 °F), Cold Start (time wide=500uS, measured at 50% Ipeak, Not applicable for the inrush current to Noise Filter for less than 0.2ms)	
Leakage Current (Max.)	0.75 mA at 277 Vac, 60 Hz	
Output	Output Voltage Range (V)	165-55
	Output Current Range (mA)	60-900
	Output Current Settable Range	6.5%-100% of Io_max
	Rated Power (W)	100 (max.)
	Ripple Current	10% of Io_max. ((PK-AV) / AV) with LED default mode and full load)
	Current Tolerance	5%
	Line Regulation	1%
	Load Regulation	3%
Turn On Delay Time	<1s, at 120 Vac; <0.5s, at 230 Vac	
Dimming Control	12 Vdc Output Voltage (Vdc)	10.8 V min.-13.2 V max.
	12 Vdc Output Current (mA)	20 (Max.)
	0 ~ 10V / DIM+ Voltage	Absolute maximum voltage - 10 V min. ~ 20 V max.
	0 ~ 10V / DIM+ Short Current	280 uA ~ 450 uA (DIM(+)=0)
	Dimming Function	0-10V / CLK / PWM dimming, can be set by software configuration.
Protection	Over Voltage (V)	<250 Protection type: Voltage limiting output will not exceed the upper limit voltage, recovers automatically after fault condition is removed.
	Short Circuit	Protection type: Hiccup mode. Recovers automatically after short is removed.
	Over Temperature	Protection type: Decrease output current. When Tc reaches +100 °C + / - 10 °(+212 °F + / - 10 °), the output current decrease to approximate 50% of rated value until tc drops below +90 °C (+194. °F)

① All parameters NOT specially mentioned are measured at 230 Vac input, rated load and +25 °C (+77 °F) of ambient temperature.

② Measured at full load and steady-state temperature in +25 °C (+77 °F) ambient (Efficiency will be about 2% lower if measured immediately after startup).

③ Derating may be needed under low input voltage, Please Refer to 'Derating Curve'

APMZ100C090UD LED Drivers

Replacement BU Voltage driver for use on the following Appleton™ LED Luminaires: 7500, 9,500, and 11,500 Lumen Mercmaster™ LED Generation 3 Zone 1 Luminaire; 9K Lumen Areamaster™ Generation 2 LED Zone 1 Luminaire; 23K Lumen Areamaster™ Generation 2 HL LED Zone 1 Luminaire; 9K Lumen Baymaster™ LED Zone 1 Luminaire; 23K Lumen Baymaster™ HL LED Zone 1 Luminaire

Specifications (at +25 °C [+77 °F] ambient unless specified otherwise) ①

Environment	Operating Temperature	-40~+65 °C (-40~+149 °F) Refer to Derating Curve)
	Tc	+90 °C (+194 °F) max
	Operating Humidity	20 ~ 95% RH
	Storage Temp., Humidity	-40 ~ +85 °C (-40 ~ +185 °F) 10-95% RH
	Vibration	10-500 Hz, 5G 12 min/cycle, period for 72 min. each along X, Y, Z axes
Safety & EMC	Safety Standards	UL8750; UL1012; CAN/CSA-C22.2 No.107-01; IEC/EN61347-1; IEC/EN61347-2-13; IEC60079-0; IEC60079-18
	Withstand Voltage	I / P-O / P:3.75 K Vac I / P-FG:1.875 KV O / P-FG:1.5 KV
	Isolation Resistance	I / P-O / P:100M Ohms (500 Vdc / 25 °C / 70% RH)
	EMC Emission	FCC PART15 Class B, EN55015, EN61000-3-2 Class C, EN61000-3-3
	EMC Immunity	EN61000-4-2,3,4,5,6,8,11, EN61000-4-5: Line to Neutral: ±6 kV ; Line to Ground: ±6 kV ; Neutral to Ground: ±6 kV. IEEE/ANSI C62.41.2 Transient Surge Requirements, combi wave 2 ohm source impedance.
Others	MTBF	300,000 hours, measured at full load, +25 °C (+77 °F) ambient temperature
	Lifetime	100,000 Hours at Tc +70 °C (+158 °C) (Refer to "Life Time VS. Tcase (Ref.)")
	Dimension	240 x 71.5 x 44 mm (L x W x H); (9.45 x 2.81 x 1.73 inches)
	Weight (Typ.)	1.2 kg (2.65 lbs)

① All parameters NOT specially mentioned are measured at 230 Vac input, rated load and +25 °C (+77 °F) of ambient temperature.