APMZ050C135UD LED Drivers

Replacement BH Voltage driver for use on the following Appleton™ LED Luminaires: 3,500 and 5,500 Lumen Mercmaster™ Generation 3 Zone 1 LED and 3000, 4000, 5000 and 7000 Lumen FELED Series Nonmetallic LED Luminaires

Features

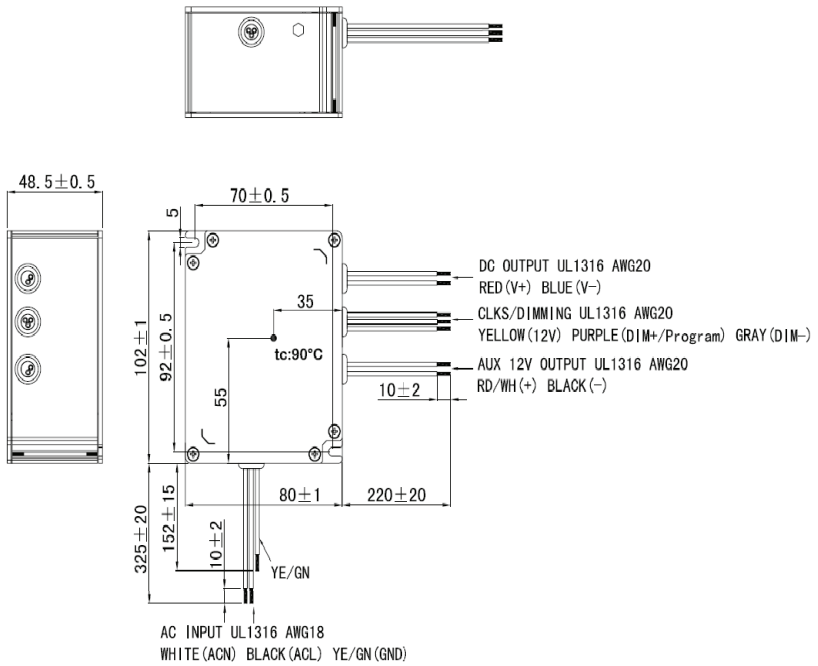
- Input voltage: 120–277 Vac
- Built-in active PFC function: 0.98Typ.
- Built-in lightning protection
- High efficiency: 87% Typ.
- Waterproof (IP66)
- Constant Current / 0–10V Dimming
- Protection: OVP, SCP, OTP

NEC/CEC/IEC 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
500 mA	120-277 Vac 170-300 Vdc	50 W	82%	0.9	MGZxL3xxxxBU	APMZ050C135UD50
550 mA	120-277 Vac 170-300 Vdc	50 W	82%	0.9	FELED3	APMZ050C135UD55
675 mA	120-277 Vac 170-300 Vdc	50 W	85%	0.9	FELED7	APMZ050C135UD67
780 mA	120-277 Vac 170-300 Vdc	50 W	86%	0.92	MGZxL5xxxxBU	APMZ050C135UD78
800 mA	120-277 Vac 170-300 Vdc	50 W	86%	0.92	FELED4	APMZ050C135UD80
950 mA	120-277 Vac 170-300 Vdc	50 W	86%	0.92	FELED5	APMZ050C135UD95

Dimensions in Millimeters (Inches)



EMERSON

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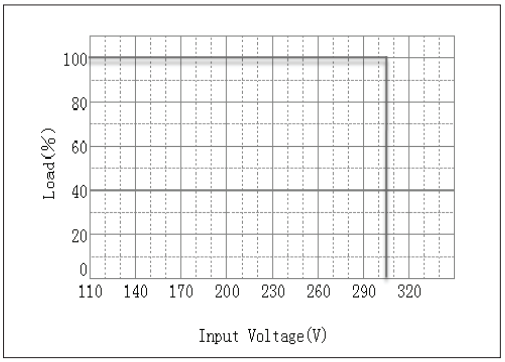
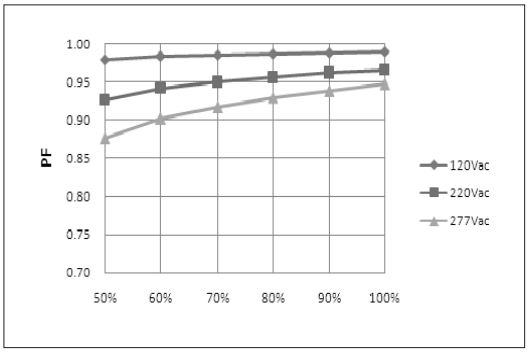
Diagrams

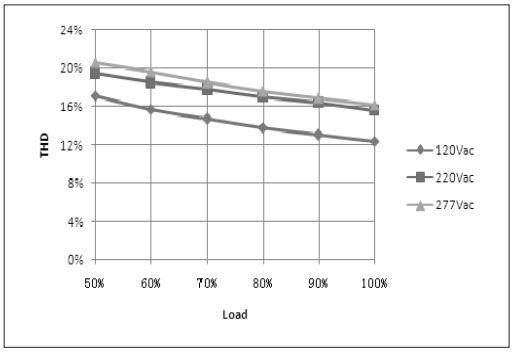
Derating Curve



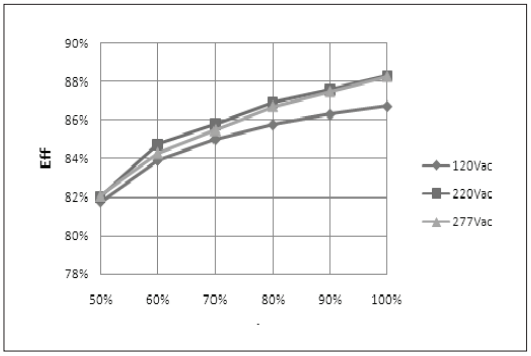
Power Factor vs. Load Curve



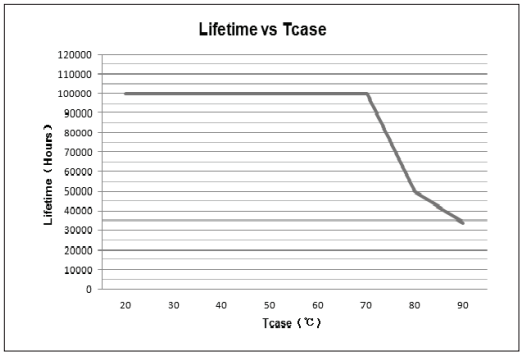
THD Curve



Efficiency vs. Load Curve



Lifetime vs. Driver Tcase



APMZ050C135UD LED Drivers

Replacement BH Voltage driver for use on the following Appleton™ LED Luminaires: 3,500 and 5,500 Lumen Mercmaster™ Generation 3 Zone 1 LED and 3000, 4000, 5000 and 7000 Lumen FELED Series Nonmetallic LED Luminaires

Specifications (at +25 °C ambient unless specified otherwise) ①		
Input	Efficiency (120 Vac) ②	86% (Typical), >86% at full load
	Efficiency (230 Vac) ②	87% (Typical), >88% at full load
	Voltage Range (V)	108–305 Vac
	Voltage Rated (V)	120–277 Vac, or 170–300 Vdc (min.–max.)
	Frequency Range (Hz)	47 ~ 63
	Power Factor	0.95 (Min.) at 120~230 Vac, with 100% load
		0.90 (Min.) at 120~277 Vac, with 60%~100% load
	THD	20% (Max.) at 120 Vac~277 Vac, with 60%~100% load
	AC Current (Max.)	0.6 A at 120 Vac input, 0.35 A at 230 Vac
	Inrush Current (Max.)	65 A at 230 Vac input +25 °C Cold Start (time wide=500 uS, measured at 50% Ipeak)
	Leakage Current (Max.)	0.75 mA at 277 Vac/60 Hz
Output	Output Voltage Range (V)	56-22
	Output Current Range (mA)	90–1350
	Rated Power (W)	50 (max.)
	Ripple Current	<10% [(PK-AV)/AV] full load
	Current Tolerance	5%
	Line Regulation	1%
	Load Regulation	3%
	Turn On Delay Time	0.5s (typ.)
Dimming Control	12 Vdc Output Voltage (Vdc)	10.8 V min. ~ 12 V typ. ~ 13.2 V max.
	12 Vdc Output Current (mA)	0 mA ~ 20 mA max.
	0 ~ 10V/DMI+ Voltage	Absolute maximum voltage - 10 V min. ~ 20 V max.
	0 ~ 10V/DMI+ Short Current	280 uA ~ 450 uA (DIM(+)=0)
	Dimming Function	0 ~ 10 V/10% Io ~ 100% Io ref.

① All parameters NOT specially mentioned are measured at 230 Vac input, rated load and 25 °C of ambient temperature.
② Measured at full load and steady-state temperature in 25 °C ambient (Efficiency will be about 2% lower if measured immediately after startup)

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Specifications (at +25 °C ambient unless specified otherwise) ①

Protection	Over Voltage (V)	<75
		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 °C, the output current decrease to approximate 50% of rated value. (See OTP plot.)
	Lightning Surge Protection	Per IEEE C62.41.2202 (6 kV, 1.2/50 ms, 8/20 ms combination wave with 2 ohms source impedance, L-N, L-PE, N-PE)
Environment	Maximum Case Temperature	+90 °C
	Minimum Case Temperature	-40 °C
	Operating Humidity	20 ~ 95% RH non-condensing
	Storage Temp., Humidity	-40 °C ~ +85 °C 10-95% RH
	Vibration	10–500 Hz,5G 12 min/cycle, period for 72 min. each along X, Y, Z axes
Safety & EMC	Agency Approbations	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:100 M 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 GND: ±6 kV ; Neutral to GND: ±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 ambient temperature, MIL-HDBK-217F (+25 °C)
	Lifetime	Refer to plot
	Dimension	102 x 80 x 48.5 (mm) (LxWxH); (4.02 x 3.15 x 1.91 inches)
	Weight (Typ.)	930 g (2.05 lbs)

① *All parameters NOT specially mentioned are measured at 230 Vac input, rated load and 25 °C of ambient temperature.*