



M-Series Specification Sheet

Magnetic Constant Voltage
Forward Phase Dimmable LED Driver

- 120V
- 12VDC
- 24VDC
- CLASS 2



Intertek



Key Features

- Dim to 1% with forward-phase (TRIAC) dimmers. Consult Dimmer Compatibility for details at magnitudeinc.com
- Compact metal enclosures
- Integrated J-box with 7/8" knockouts (1/2" trade size)
- Class 2 plus Class 1 high power options
- NEMA 3R for indoor & outdoor use
- QR Code for quick access to compatible dimmers

Specification Overview

- 120VAC 50/60Hz input
- Constant Voltage 12VDC or 24VDC output
- Power options from 20W up to 300W
- Single Channel
- Primary & Secondary circuit breakers
- ETL Listed to UL2108, CSA22.2 No. 223 & No. 250
- 5-year warranty

ORDERING INFORMATION

Part Number	Description
M20L12DC-AR	20W, 12VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M40L12DC-AR	40W, 12VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M60L12DC-AR	60W, 12VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M100L12DC-AR	100W, 12VDC Output, Magnetic LED Driver, 120VAC Input, Auto Reset Breakers
M150L12DC-AR	150W, 12VDC Output, Magnetic LED Driver, 120VAC Input, Auto Reset Breakers
M200L12DC	200W, 12VDC Output, Magnetic LED Driver, 120VAC Input, Manual Reset Breakers
M300L12DC	300W, 12VDC Output, Magnetic LED Driver, 120VAC Input, Manual Reset Breakers
M20L24DC-AR	20W, 24VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M40L24DC-AR	40W, 24VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M60L24DC-AR	60W, 24VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M96L24DC-AR	96W, 24VDC Output, Magnetic Class 2 LED Driver, 120VAC Input, Auto Reset Breakers
M150L24DC-AR	150W, 24VDC Output, Magnetic LED Driver, 120VAC Input, Auto Reset Breakers
M200L24DC	200W, 24VDC Output, Magnetic LED Driver, 120VAC Input, Manual Reset Breakers
M300L24DC	300W, 24VDC Output, Magnetic LED Driver, 120VAC Input, Manual Reset Breakers

ENCLOSURE DETAILS

Dimensions	Material	Finish	Environmental
Multiple Sizes (See Mechanical Diagrams for further information)	Steel	Black Powder Coat	NEMA 3R Dry or Damp Location

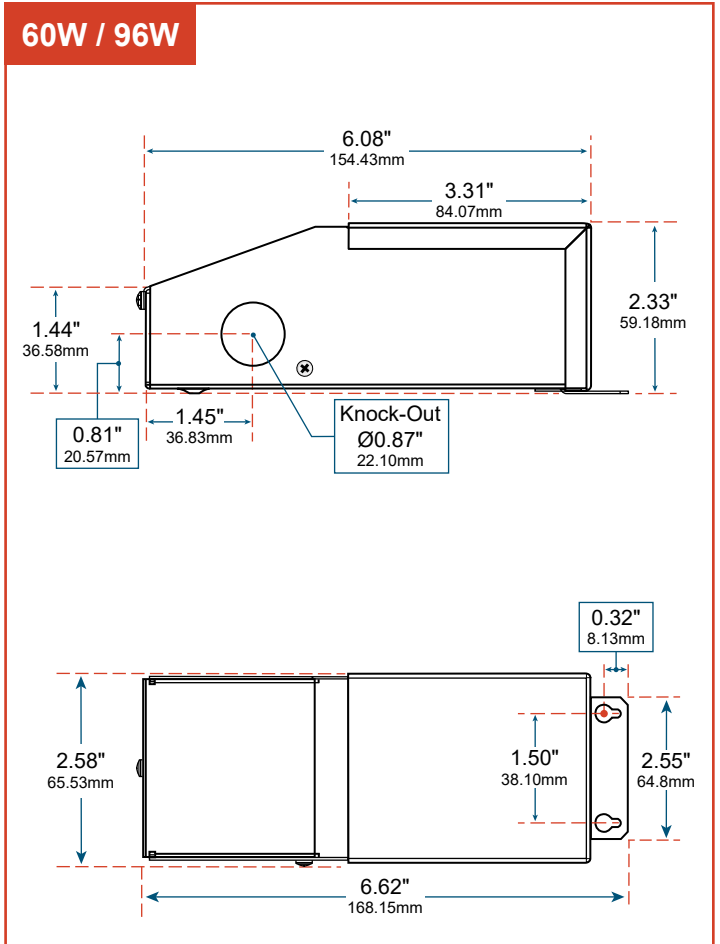
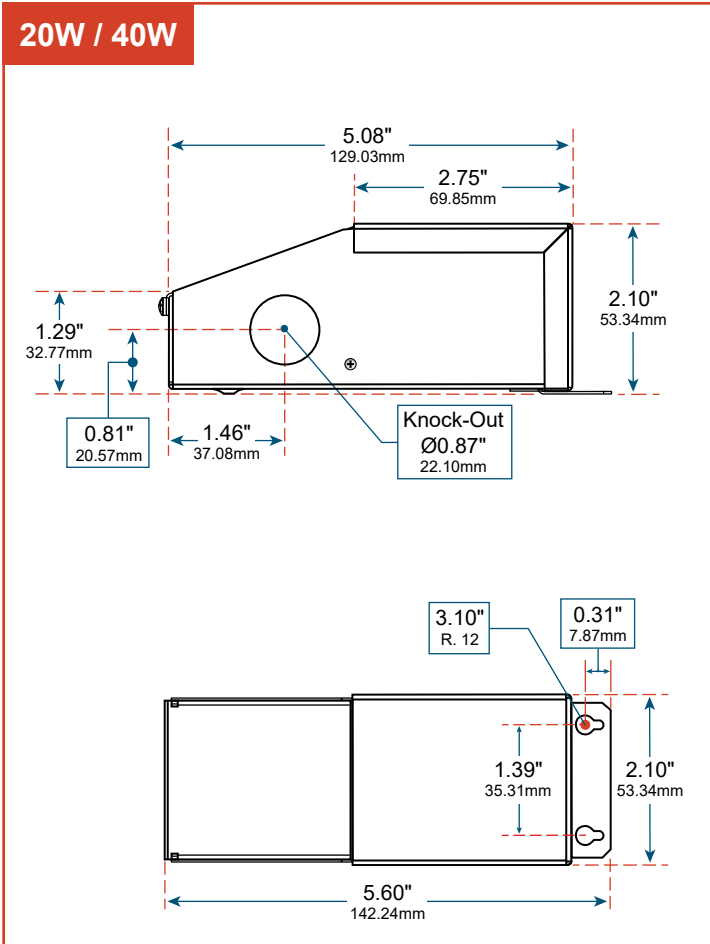
SPECIFICATIONS

Input	20W	40W	60W	96W
Input Voltage Range	120VAC ± 5%	120VAC ± 5%	120VAC ± 5%	120VAC ± 5%
Input Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Input Current	0.29A (12VDC) 0.36A (24VDC)	0.43A (12VDC) 0.40A (24VDC)	0.66A (12VDC) 0.58A (24VDC)	N/A (12VDC) 0.99A (24VDC)
Efficiency	69.73% (12VDC) 81.36% (24VDC)	73.21% (12VDC) 83.22% (24VDC)	74.00% (12VDC) 83.38% (24VDC)	N/A (12VDC) 81.23% (24VDC)
Power Factor	0.92 (12VDC) 0.93 (24VDC)	0.96 (12VDC) 0.93 (24VDC)	0.96 (12VDC) 0.93 (24VDC)	N/A (12VDC) 0.98 (24VDC)
Output				
Maximum Load	20W	40W	60W	96W
Output Voltage @ Max. Load	12.12 (12VDC) 24.10 (24VDC)	11.52 (12VDC) 22.80 (24VDC)	11.59 (12VDC) 22.40 (24VDC)	N/A (12VDC) 23.20 (24VDC)
Output Current @ Max. Load	1.47A (12VDC) 0.925A (24VDC)	3.07A (12VDC) 1.69A (24VDC)	4.84A (12VDC) 2.52A (24VDC)	N/A (12VDC) 4.10A (24VDC)
Open Circuit Output Voltage	15.3 (12VDC) 28.4 (24VDC)	15.4 (12VDC) 28.4 (24VDC)	15.2 (12VDC) 27.7 (24VDC)	N/A (12VDC) 30.1 (24VDC)
Environmental				
Protection Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
Ambient Operating Temperature	-30°C to +45°C (-22°F to 113°F)	-30°C to +45°C (-22°F to 113°F)	-30°C to +45°C (-22°F to 113°F)	-30°C to +45°C (-22°F to 113°F)
Minimum Installation Spacing	5"	5"	5"	5"
Expected Lifetime	50K hours	50K hours	50K hours	50K hours
Dimming				
Dimming Control	Forward-phase (TRIAC)	Forward-phase (TRIAC)	Forward-phase (TRIAC)	Forward-phase (TRIAC)
Minimum Dimming Level	1%	1%	1%	1%
Dimming Curve	Linear	Linear	Linear	Linear
Protection				
Circuit Breaker	Primary & Secondary Auto Reset on all models 20W, 40W, 60W and 96W			
Mechanical Housing				
Primary Leads	18AWG	18AWG	18AWG	18AWG
Secondary Leads	16AWG (12VDC) 18AWG (24VDC)	16AWG (12VDC) 18AWG (24VDC)	14AWG (12VDC) 16AWG (24VDC)	N/A (12VDC) 14AWG (24VDC)
Weight	2.2 lbs	2.2 lbs	3.1 lbs	3.5 lbs
Housing Material	All models Black powder coated steel			
Junction Box	All models feature integrated junction box			
Mounting	All models feature external 2-hole flange mount on top side of enclosure			
Approval Markings & Certifications				
Listing	UL 2108, CSA22.2 No. 223	UL 2108, CSA22.2 No. 223	UL 2108, CSA22.2 No. 223	UL 2108, CSA22.2 No. 223
Certifications	Class 2	Class 2	Class 2	Class 2

SPECIFICATIONS

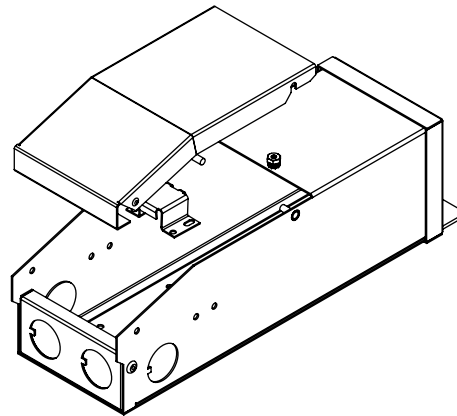
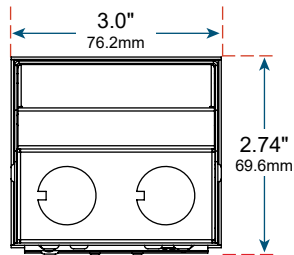
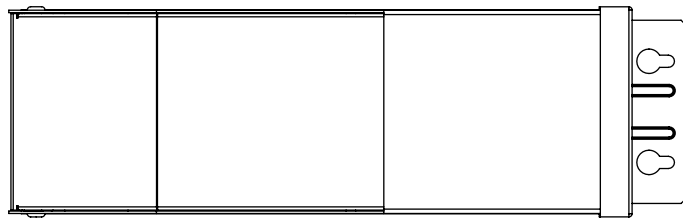
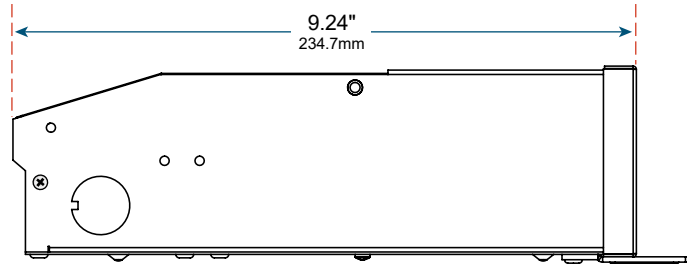
Input	100W	150W	200W	300W
Input Voltage Range	120VAC ± 5%	120VAC ± 5%	120VAC ± 5%	120VAC ± 5%
Input Frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Input Current	1.07A (12VDC) N/A (24VDC)	1.50A (12VDC) 1.32A (24VDC)	1.98A (12VDC) 1.92A (24VDC)	2.79A (12VDC) 2.93A (24VDC)
Efficiency	77.0% (12VDC) N/A (24VDC)	80.00% (12VDC) 83.34% (24VDC)	84.28% (12VDC) 86.27% (24VDC)	87.21% (12VDC) 88.23% (24VDC)
Power Factor	0.96 (12VDC) N/A (24VDC)	0.96 (12VDC) 0.98 (24VDC)	0.93 (12VDC) 0.98 (24VDC)	0.88 (12VDC) 0.90 (24VDC)
Output				
Maximum Load	100W	150W	200W	300W
Output Voltage @ Max. Load	11.52 (12VDC) N/A (24VDC)	11.52 (12VDC) 21.90 (24VDC)	11.85 (12VDC) 23.40 (24VDC)	11.60 (12VDC) 23.90 (24VDC)
Output Current @ Max. Load	8.07A (12VDC) N/A (24VDC)	12.25A (12VDC) 5.91A (24VDC)	16.40A (12VDC) 8.31A (24VDC)	24.60A (12VDC) 12.67A (24VDC)
Open Circuit Output Voltage	15.2 (12VDC) N/A (24VDC)	13.8 (12VDC) 27.7 (24VDC)	13.4 (12VDC) 26.8 (24VDC)	12.9 (12VDC) 26.7 (24VDC)
Environmental				
Protection Rating	NEMA 3R	NEMA 3R	NEMA 3R	NEMA 3R
Ambient Operating Temperature	-30°C to +45°C (-22°F to 113°F)	-30°C to +45°C (-22°F to 113°F)	-30°C to +45°C (-22°F to 113°F)	-30°C to +45°C (-22°F to 113°F)
Minimum Installation Spacing	5"	5"	5"	5"
Expected Lifetime	50K hours	50K hours	50K hours	50K hours
Dimming				
Dimming Control	Forward-phase (TRIAC)	Forward-phase (TRIAC)	Forward-phase (TRIAC)	Forward-phase (TRIAC)
Minimum Dimming Level	1%	1%	1%	1%
Dimming Curve	Linear	Linear	Linear	Linear
Protection				
Circuit Breaker	Primary & Secondary Auto Reset	Primary & Secondary Auto Reset	Primary & Secondary Manual Reset	Primary & Secondary Manual Reset
Mechanical Housing				
Primary Leads	18AWG	18AWG	18AWG	18AWG
Secondary Leads	12AWG (12VDC) N/A (24VDC)	12AWG (12VDC) 14AWG (24VDC)	12 AWG (12VDC) 12AWG (24VDC)	12AWG (12VDC) 12AWG (24VDC)
Weight	4.8 lbs	5.4 lbs	5.4 lbs	8.8 lbs
Housing Material	All models Black powder coated steel			
Junction Box	All models feature integrated junction box			
Mounting	All models feature external 2-hole flange mount on top side of enclosure			
Approval Markings & Certifications				
Listing	UL 2108, CSA22.2 No. 250	UL 2108, CSA22.2 No. 250	UL 2108, CSA22.2 No. 250	UL 2108, CSA22.2 No. 250
Certifications	Class 1	Class 1	Class 1	Class 1

MECHANICAL DIAGRAMS

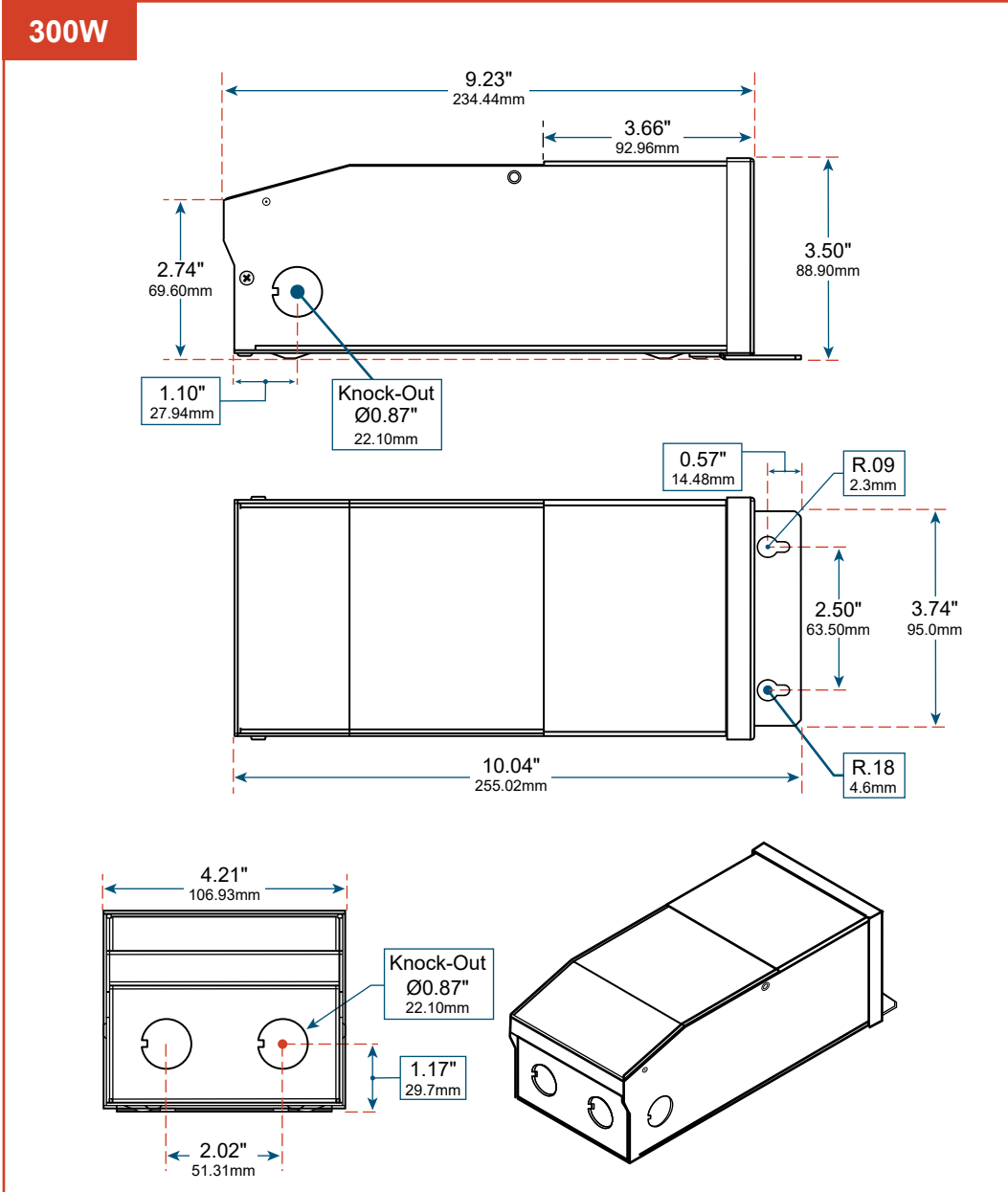


MECHANICAL DIAGRAMS

100W, 150W & 200W



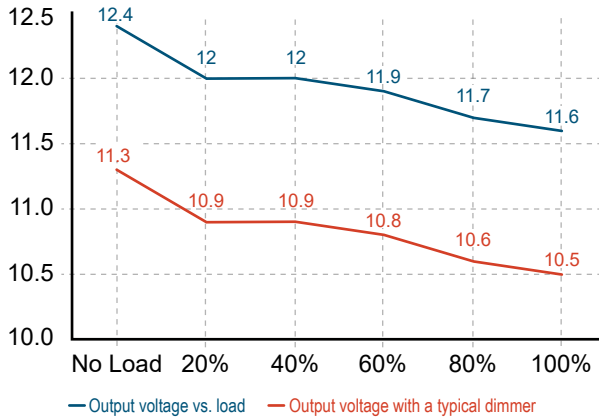
MECHANICAL DIAGRAMS



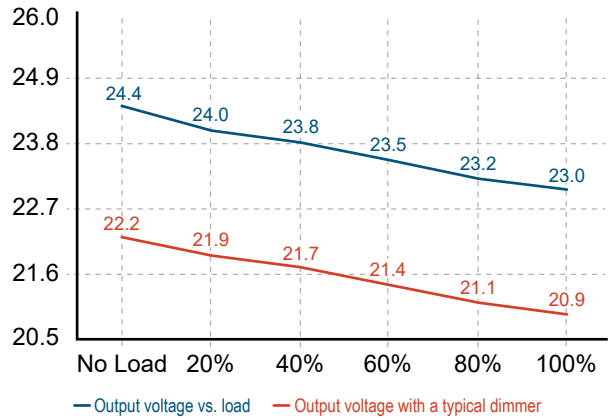
PERFORMANCE DETAILS

Output vs. Load - 20W to 60W

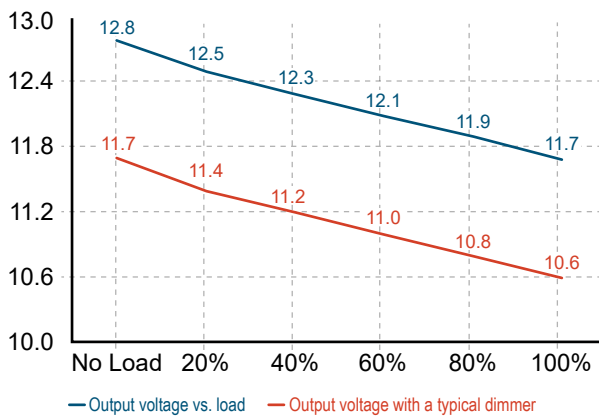
20W (12VDC)



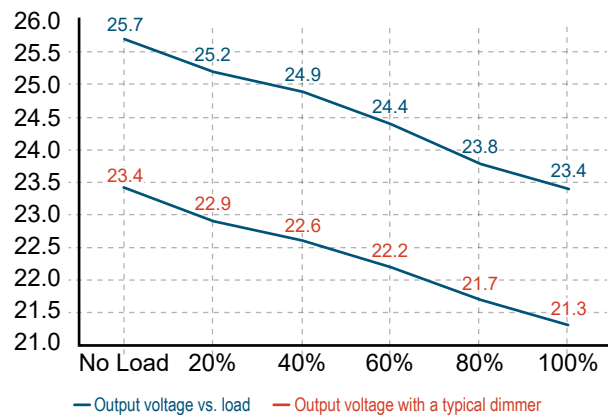
20W (24VDC)



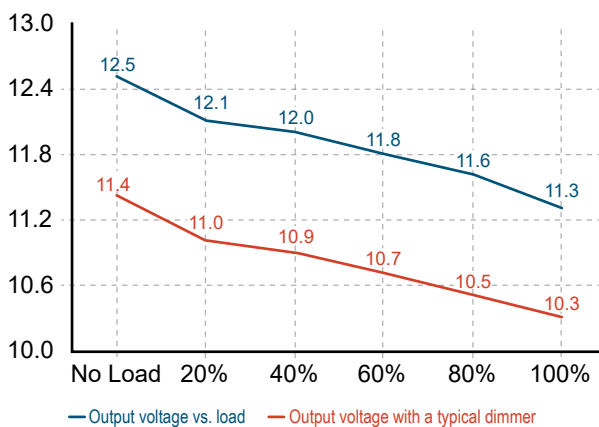
40W (12VDC)



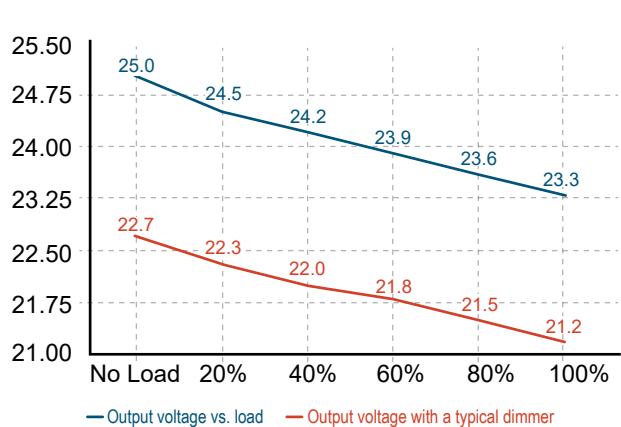
40W (24VDC)



60W (12VDC)



60W (24VDC)



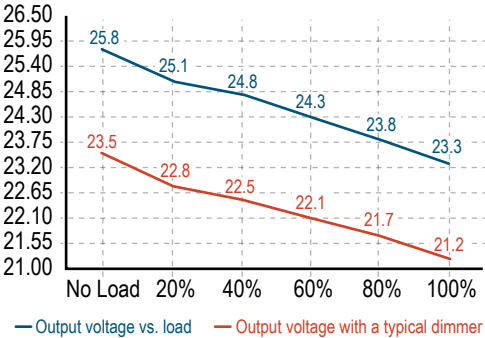
PERFORMANCE DETAILS

Output vs. Load - 96W to 150W

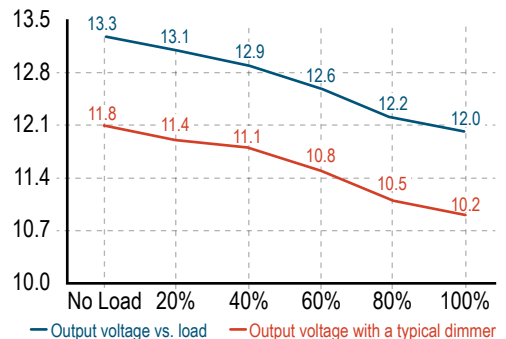
96W (12VDC)

96W (12VDC)
is not available in the M-Series

96W (24VDC)



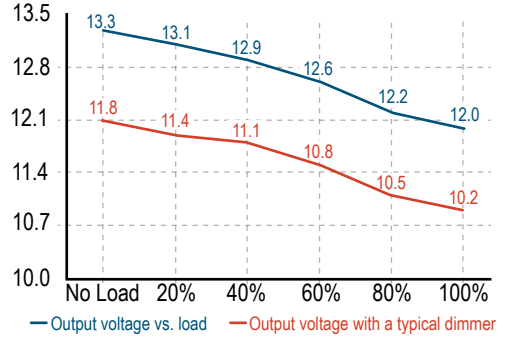
100W (12VDC)



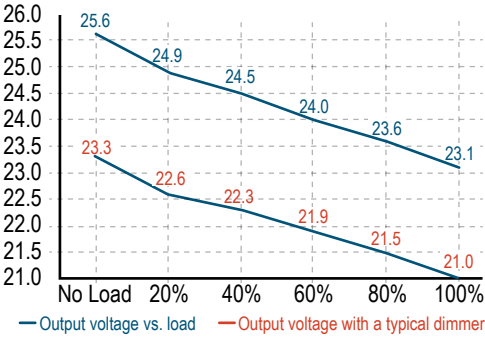
100W (24VDC)

100W (24VDC)
is not available in the M-Series

150W (12VDC)



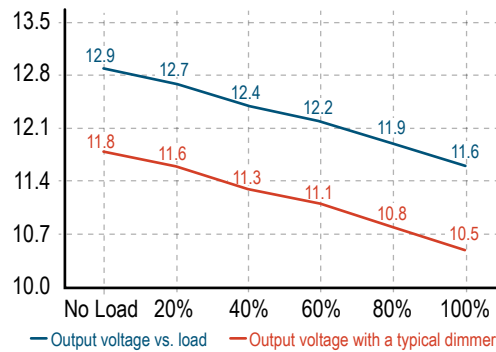
150W (24VDC)



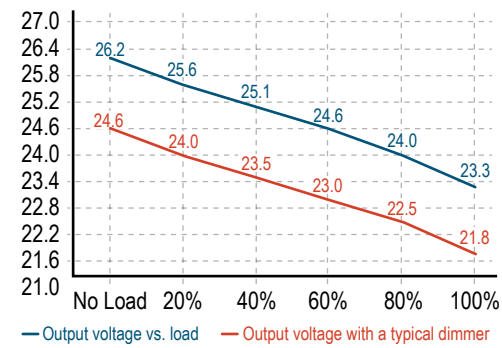
PERFORMANCE DETAILS

Output vs. Load - 200W to 300W

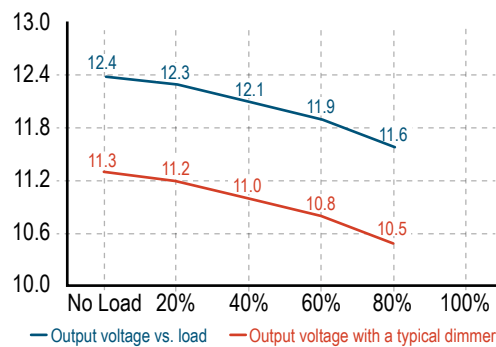
200W (12VDC)



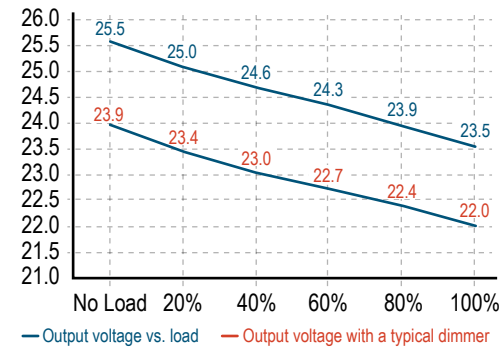
200W (24VDC)



300W (12VDC)



300W (24VDC)



WIRING DIAGRAMS

