

# MANAIRCO, INC SMART POWER CONSTANT CURRENT REGULATOR FOR AIRPORT LIGHTING (FAA L-828 & L-829)



**Ferromagnetic Reactor Type  
Air Cooled  
Comparable to Ferro-resonant Type**

Designed and manufactured in accordance with FAA Advisory Circular AC 150/5345-10H. Regulator designs and performance evaluated by personnel with many years of design and test experience. Regulators built by a company with over 50 years manufacturing experience in the airport and heliport lighting field.

- Microprocessor control for reliable current regulation
- Proven technology for airfield lighting
- Reliable for long life with low life cycle cost
- Exceeds FAA performance requirements
- Durable for various electrical vault environments
- Versatile for medium and/or high intensity lighting
- Self-protected from overloads and shorts of loads
- Noise emission free
- Air cooled - no hazardous cooling materials
- No harmful harmonics
- No SCR's in series power circuits
- Predictable - no complex electronics
- Easily maintained
- Control circuit for remote operation of #19 AWG 10,000 ft. round-trip
- Control circuits protected by circuit breakers, no spare fuses needed
- Warranty for 2 years from date of shipment or 1 year from date of installation (first occurring)



## SMARTER CONTROL



**Manairco**  
AIRPORT AND HELIPORT LIGHTING

**M ANAIRCO INC. MG SERIES**  
**Constant Current Regulator Catalog Numbers**  
**FAA AC150/5345-10H CERTIFIED**

**FAA L-828 Regulators**

Description	Catalog No.	KW	Class	Style
Ferromagnetic Reactor Saturable Type (Air Cooled)	MG02L8283B-**	2	1	1
	MG02L8285B-**	2	1	2
	MG04L8283B-**	4	1	1
	MG04L8285B-**	4	1	2
	MG07L8283B-**	7.5	1	1
	MG07L8285B-**	7.5	1	2
	MG10L8283B-**	10	1	1
	MG10L8285B-**	10	1	2
	MG15L8283B-**	15	1	1
	MG15L8285B-**	15	1	2
	MG20L8283B-**	20	1	1
	MG20L8285B-**	20	1	2
	MG25L8283B-**	25	1	1
	MG25L8285B-**	25	1	2
	MG30L8283B-**	30	1	1
	MG30L8285B-**	30	1	2
	MG30L82820-**	30	2	2
	MG50L82820-**	50	2	2

\*\* = 01 for 208 volt 60 hertz input  
 \*\* = 02 for 240 volt 60 hertz input  
 \*\* = 03 for 480 volt 60 hertz input  
 \*\* = 04V for 2400 volt 60 hertz input  
 First two digits of supply volts for special input voltage followed by first digit of hertz. Example: 380volt 50 hertz = suffix-385  
 Class 1 = 6.6 Amp  
 Class 2 = 20 Amp  
 Style 1 = 3 step  
 Style 2 = 5 step

FAA L-829 Regulators with L-827 Monitor change Catalog No. "L828" to "L829"

**FAA L-827 MONITOR**

Description	Catalog No.*	Class	Style*
For 2 & 4KW Regulator	MGML8273B-01	1	1
For 7.5KW Regulator	MGML8273B-02	1	1
For 10KW Regulator	MGML8273B-03	1	1
For 15KW Regulator	MGML8273B-04	1	1
For 20KW Regulator	MGML8273B-05	1	1
For 25 & 30KW Regulator	MGML8273B-06	1	1
For 25 & 30KW Regulator	MGML8275B-07	2	2
For 50KW Regulator	MGML8275B-08	2	2

**REMARKS** - For adding to 3 step regulator  
 \*For Style 2, 5 Step Regulator, change 3B to 5B in Catalog No.

**CONSTANT CURRENT REGULATOR OPTIONAL EQUIPMENT:**  
 FAA L-827 Monitor with regulator change catalog L-828 to L-829

Suffix Adder	Description	Suffix Adder	Description
24 VDC	Special Control Voltage 24 VDC (10,000 ft. one way control)	WM	Input Wattmeter (with C.T. and P.T. as need)
48VDC	Special Control Voltage 48VDC (10,000 ft. one way control)	OC1	Output Current Indicator with relay dry contacts (for remote indicator)
ALCMS	Dry Contacts for ALCMS connections	OCL	Output Current Indications with Light Indicator (local indicator)
ETMT	Elapsed Time Meter in Hours for Total Time On	OSI	Internal Series Plug Cut-out
ETMM	Elapsed Time Meter in Hours for Time on Maximum Brightness	OSCK	Output Short Circuit Jumper Kit
IAM	Input Ammeter (with current transformer)	OVM	Output Voltmeter (with potential transformer)
IRMS	Insulation Resistance Monitor (Megger) System	OWT	Output Watts Transducer
IPOL	Input Power on Light Indicator (dual lights for failure back-up)	OWM	Output Wattmeter, Amps, Volts, VA, & Power Factor (with current and potential transformers)
IVM	Input Voltmeter (with potential transformer if needed)	SCO	Internal SCO Cut-Out
R	For operation with L-849 REIL's, on runway circuit. Not required for stand alone or dedicated REIL's.	ODM	Output Digital Meter Amps, Volts, VA, Watts

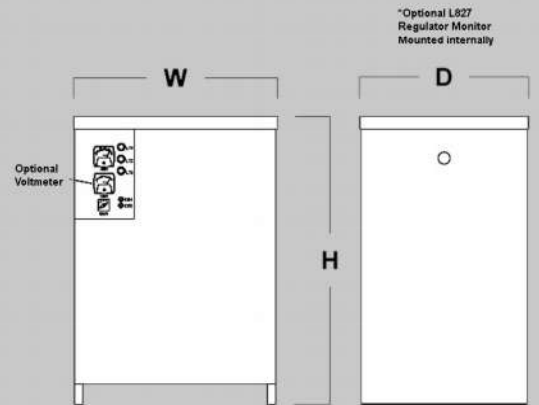
*Other specific site requirements and options available upon request.*

**STANDARD EQUIPMENT FOR ALL REGULATORS**

- User connections readily accessible
- Floor mounted stand alone enclosure for ease of replacement parts
- Stackable kits optional
- Primary surge arresters
- Primary switch for regulator control
- Control switch for "Remote" (tower) control and "Local" (direct) control
- Internally provided 120 VAC control and equipped for external supply connection
- Control circuit protection by circuit breaker with visual indicator
- Reliable custom transformer design with microprocessor control for output current
- Efficiency and power factor exceed FAA requirements
- Performance comparable to Ferroresonant Type
- Tapped Output for 50% and 75% load (Standard) for improved efficiency and power factor
- Other output taps available upon request
- Precisely controls output current for loads of short circuit to full load and for varying input voltages for - 5% to +10% of nominal input with 30% lamps outage
- Regulator shuts down system for open circuit or over-current in the load
- Output distribution type lightning arresters
- Output electrically isolated from primary
- Microcontroller board interchangeable for different KW sizes and different output currents and steps. Easily change 3 step or 5 step

Long life LED indicators for:

1. Input Power ON
2. Regulator ON
3. Fault for Open circuit or Over current
4. Diagnostic LED's on the Control Board



REGULATOR DIMENSIONS						REGULATOR WEIGHTS (APPROX.)	
	2 and 4 KW	7.5 KW	10 KW	20,30 KW	30** 50 KW	2KW	400 LBS
						4KW	450 LBS
						7.5KW	750 LBS
						10KW	800 LBS
						15KW	900 LBS
						20KW	1050 LBS
						30KW	1350 LBS
						50KW	2300 LBS

\* Status Monitor (L827) Mounted in CCR control cabinet  
 \*\* 30KW 208,240, and 2400VAC Units, Add 300 Lbs



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