

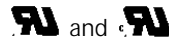


New ALC-CM "R" Series

A universal "World Class" BLDC torque mode servo-amplifier with improved safety, performance, and reliability, yet still OEM cost-effective!

Recognized to US and Canadian Component Recognition requirements under UL 508C, File No. E114915.

Perfect for OEM Embedded Servo Applications.



ALC-CM "R" SERIES

The new ALC-CM "R" torque mode servo-amplifier series provides improved safety, better noise immunity and lower EMI than any previous generation of Automotion servo-amplifiers.

Designed and manufactured with the latest generation of tough IGBT output stage transistors, the new ALC-CM "R" is conservatively rated to deliver superior reliability and durability with a high MTBF. Outstanding linear transconductance is provided by a 1.8 KHz current loop bandwidth standard (up to 4 KHz optional). A wide AC operating input voltage range accommodates all domestic and most foreign OEM application service environments.

The ALC-CM "R" is designed to run directly from a 115 or 208/230 VAC input. No isolation transformers are required. Using a unique split bus input, the user can choose between a fixed or variable AC input (+5 to +264 VAC) or a variable DC input (+8 to +360 VDC) for the main power bus. A nominal 120 or 230 VAC is required for the servo's logic supplies.

Designed to couple to today's high bandwidth, high speed microprocessor, or DSP based motion controllers, the "R" series servo-amplifiers allow the user to specify all motion control variables, including velocity and position loop parameters, exclusively in software. This digital approach to motion control eliminates troublesome analog drift and gives users "on-the-fly" adjustment capability, as well as completely dispensing with cumbersome and costly manual servo drive field set-ups or adjustments.

Additional OEM Benefits

- Full Short Circuit Protection
- Complete Optical SELV Isolation
- Under/Over Voltage Protection
- Over Temp. Trip (Both Motor & Drive)
- 1500 VAC 1 Min. Hi Pot on Every Unit Per UL 508C
- 18 KHz to 40 KHz (Optional) Switching Frequency
- Built-In, Heavy Duty Regen Circuit
- Dual 208/230-115 VAC Capability
- Optional AC Power Factor Correction
- Optional Resolver - With Encoder Emulation
- Optional Embedded uP for Dedicated OEM Motion Control.
- Two-year "No Hassle" Guarantee

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Pinouts

Connector J1—AC or DC Power In

Pin	Description
1	Logic Power Hot (AC)
2	Logic Power Neutral (AC)
3	Motor Power Hot (AC or DC)
4	Motor Power Neutral (AC or DC)
5	Chassis Ground

Connector J2—Control I/O Signals (Isolated)

1	+5 Volt DC Input (User Supplied)
2	+5 Volt DC Input (User Supplied)
3	Enable/Disable
4	Factory/User Option Input
5	Forward/Reverse Direction Input
6	Dynamic Brake Input
7	Enable/Fault-Disable Output
8	Tach Signal Output
9	I/O Common
10	I/O Common
11	Digital Current Command Input
12	+ Differential Analog Current Command Input
13	- Differential Analog Current Command Input
14	Current Signal Feedback

Connector J3—Hall Power (Isolated)

1	+9 to +28 Volt DC Input
2	S1 Commutation Input
3	S2 Commutation Input
4	S3 Commutation Input
5	Hall Common Return
6	Motor Overtemp Switch
7	Motor Overtemp Switch
8	Aux. +5 VDC Power Source
9	Common
10	Common

Connector J4—Motor Power Out

1	Chassis Ground
2	Motor Phase #1 Output
3	Motor Phase #2 Output
4	Motor Phase #3 Output

Connector J9—Shunt

1	External Shunt Resistor
2	External Shunt Resistor

Model Specifications

115 VAC Models	ALC060R	ALC120R	ALC250R
Bus Voltage	+8 to +180 VDC, 3 phase		
Peak Output Current	6A	12A	25A
Cont. Output Current	4A	8A	15A
Input Voltage - Drive	5 to +132 VAC RMS, 1 Phase, 50/60 Hz or +8 to +180 VDC		
Input Voltage - Logic	90 to 132 VAC RMS, 1 Phase, 50/60 Hz		

208/230 VAC Models	ALC06DR	ALC12DR	ALC20DR
Bus Voltage	+8 to +360 VDC, 3 phase		
Peak Output Current	6A	12A	20A
Cont. Output Current	4A	6A	12A
Input Voltage - Drive	5 to +264 VAC RMS, 1 Phase, 50/60 Hz or +8 to +360 VDC		
Input Voltage - Logic	180 to 264 VAC RMS, 1 Phase, 50/60 Hz		

General Specifications

Switching Frequency

18 kHz (standard) to 40 kHz (optional)

Current Bandwidth

1.8 kHz (standard) to 4 kHz (optional)

Current Command Input

+/- 10 VDC or 5 to 10 kHz PWM

Bridge Modulation

6 step, full wave, 4 quad, 3 phase

Min. Motor Inductance

250 uH (115 VAC), 500 uH (230 AC)

Operating (Storage) Temp.

0 to +50 C (-20 to +85 C)

Interface Power

4.5 to 5.5 VDC, 200 mA Max. Load

Weight

4.7 lb. (2.11 Kg) typical

Diagnostic LED's

Total of six. See User Manual for description and use.

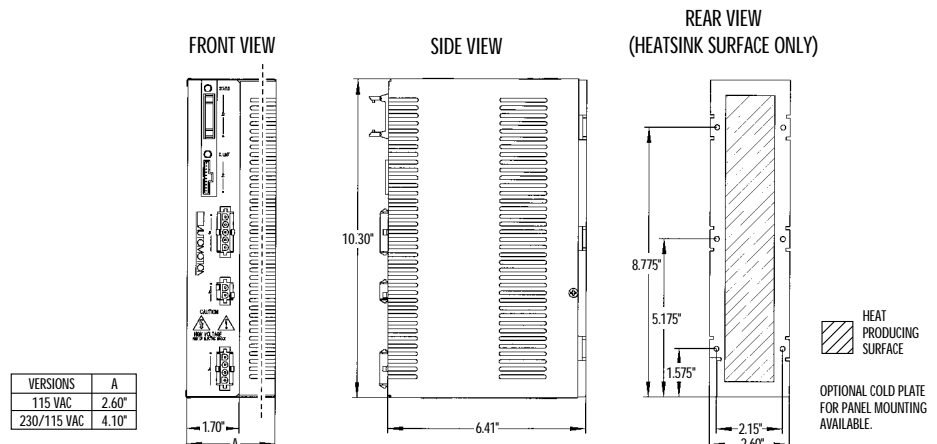
Functional & Wiring Diagrams

See User Manual.

Ordering Information

See Automotion's "How To Order" form or contact Automotion for assistance.

Dimensions



If you need more information, including custom user options available, please contact...
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