



# C-2000™ Mini-Contactors Control Relays

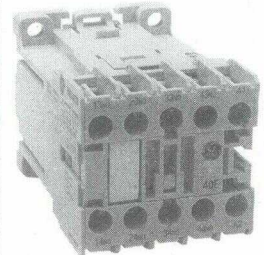
600 Volts Maximum AC  
10 Amperes Continuous  
50/60 Hertz  
Contact Rating A600, Q600

- Relays are suitable for use on alternating current (ac) control circuits up to 600 volts, and dc control circuits up to 240 Volts.
- All terminals are marked in accordance to EN50011.
- Control relays may be mounted on 35mm DIN rail EN50022-35, or may be panel-mounted using two or four #8 screws in diagonal corners.
- Screw and quick-connect terminals are protected against accidental contact in accordance with VDE0106T.100 and VBG4.
- Low-coil wattage requirement makes relay ideal for most applications. (24 Vdc PLC interface versions are available.)
- A wide range of accessories, including front-mounted auxiliary contact blocks, side-mounted auxiliary contact blocks, a timer, and surge suppressors, are easily installed on relays.

## AC Operated Control Relays

Packaged in multiples of 20 units. Each catalog number represents one unit.

Contacts		Contact Arrangement/ Terminal Numbers Per EN50011	Terminal Type	Catalog Number®	List Price, GO-10A1	Approximate Weight Each
NO	NC					
4	—		Standard Screw	MCRA040AT*	\$38.00	6oz.
			2x2.8mm Faston	MCRA040AF*	41.00	6oz.
			1x6.3mm Faston	MCRA040AH*	41.00	6oz.
			PC Board	MCRA040AI*	41.00	6oz.
3	1		Standard Screw	MCRA031AT*	38.00	6oz.
			2x2.8mm Faston	MCRA031AF*	41.00	6oz.
			1x6.3mm Faston	MCRA031AH*	41.00	6oz.
			PC Board	MCRA031AI*	41.00	6oz.
2	2		Standard Screw	MCRA022AT*	38.00	6oz.
			2x2.8mm Faston	MCRA022AF*	41.00	6oz.
			1x6.3mm Faston	MCRA022AH*	41.00	6oz.
			PC Board	MCRA022AI*	41.00	6oz.
1	3		Standard Screw	MCRA013AT*	38.00	6oz.
			2x2.8mm Faston	MCRA013AF*	41.00	6oz.
			1x6.3mm Faston	MCRA013AH*	41.00	6oz.
			PC Board	MCRA013AI*	41.00	6oz.
—	4		Standard Screw	MCRA004AT*	38.00	6oz.
			2x2.8mm Faston	MCRA004AF*	41.00	6oz.
			1x6.3mm Faston	MCRA004AH*	41.00	6oz.
			PC Board	MCRA004AI*	41.00	6oz.



© Complete catalog number reference by replacing the " \* " with the letter corresponding to the voltage and frequency of the control circuit.

## Coil Voltages Selection Table

### AC Coil Voltages

Voltage	60 Hz	24	120	208	240	277		480	600
	50 Hz			110		220		380	415
* Catalog # Suffix		C	J	M	N	R	U	W	Y

### References:

- Instructions
- GEH-5475 MC Mini-Contactor/MTO Thermal-Overload Relay. U.S. version.
- GEH-5931 MC Mini-Contactor Global Instructions
- GEH-5932 MTO Thermal-Overload Relay Global Instructions

### Field-Installed

- Accessories..... pages 3-59 to 3-62
- Technical Information..... pages 3-66 to 3-70
- Dimensions and Weights..... pages 3-71 to 3-76



# C-2000™ Mini-Contactors Technical Information

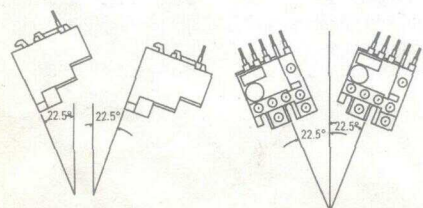
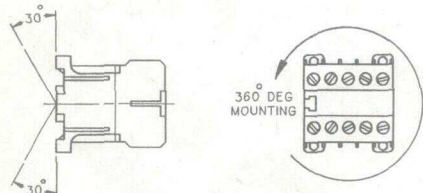
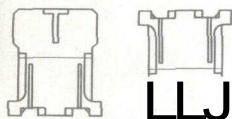
## International Certification Marks

In addition to stating the catalog number, the contactor nameplate also lists the international certification marks. All contactors, control relays, overload relays, and accessories are UL listed and CSA Certified.

Contactors and relays also conform to International Standards:

- UL listed (Underwriters Laboratories, U.S. -UL 508);
  - CSA Certified (Canadian Standards Association, Canada-CSA C22.2NO.14);
  - CEMark;
  - EC 947-1,4 (International Electrotechnical Commission);
  - BS 5424 (British Standards, UK);
  - VDE 0660 (Verband Deutscher Elektotechniker, Federal Republic of Germany);
  - (S) (SEV, Switzerland-SEV 10254);
  - (D) (DEMCO, Denmark);
  - (N) (NEMCO, Norway);
  - (FI) (SETI, Finland);
- plus other specifications approvals...
- CE117-3,17-7 (Comitato Elettrotecnico Italiano, Italy);
  - Bureau Veritas, France;
  - SEMKO, Sweden.

## Operating Position



## Operating Characteristics/Technical Data: Contactors and Control Relays

### General Data

#### Ambient Conditions

- Temperature
 

Storage	-30 to +80°C (-22 to +176°F)	
Operation	-20 to +55°C (-4 to +131°F)	
- Altitude
 

Up to 3000 meters	Rated current
3000 - 4000 meters	.9 x's rated current
4000 - 5000 meters	.8 x's rated current

#### Shock Resistance (All Axis)

- Contacts closed (80% voltage)
 

Admissible acceleration	30g
Impulse duration	11 ms
- Contacts open (no voltage)
 

Admissible acceleration	10g
Impulse duration	11 ms

#### Vibration Resistance (All Axis)

- Contacts closed (80% voltage)
 

Admissible acceleration	10g
Sweep between	10-200 hz
- Contacts open (no voltage)
 

Admissible acceleration	5g
Impulse duration	10-200 hz

#### Terminal Capacity

- Screw terminal
 

Wire size	(2) #14-18 AWG max.
Wire temperature class	60°C/75°C wire
- Quick connect (Fasten 2.8mm)
 

Wire size	(2) 1mm <sup>2</sup>
Max. thermal current	Samps
- Printed circuit terminal
 

Hole size	1.8mm
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