#### Section 5

## IEC Power Devices Mini Control Relays Overview C-2000

Contact Rating A600, Q300

#### **Control Relays**

- 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 VBG/I
- —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.



#### **Low Coil Wattage Control Relays**

While the standard line of MCRC dc operated relays requires only 3 watts coil holding current, some PLC applications require lower wattage coils to efficiently interface with the PLC. Special relays are available with 24 Vdc coils which only require 1.2 or 2 watts for pull in and holding. These relays are available with screw terminal configuration.

- —All terminals are dual marked in accordance to EN50012, and U.S. marking standards.
- —Relay may be mounted on 35mm DIN rail EN50022-35, or may be panel-mounted using two #8 screws in diagonal corners.
- —Screw-type terminals are protected against accidental contact in accordance with VDE0106T.100 and VBG4.

#### **Reference Publications**

#### Instructions

GEH-5475 MC Mini-Contactor/MT0 Thermal-Overload Relay. U.S. version.

GEH-5931 MC Mini-Contactor Global Instructions

GEH-5932 MT0 Thermal-Overload Relay Global Instructions



AC Operated Control Relay



# IEC Power Devices Mini Control Relays Selection C-2000

Contact Rating A600, Q300

#### **AC Operated Control Relays**

			List Price			
Contact Configuration	Mounting Type	Product Number <sup>1,2</sup>	GO-10A1	Approx. Weight Each		
4NO	Standard Screw	MCRA040AT*	\$38.00	6 oz.		
4NO	2x2.8mm Faston	MCRA040AF*	\$41.00	6 oz.		
4NO	1x6.3mm Faston	MCRA040AH*	\$41.00	6 oz.		
4NO	PC Board	MCRA040AI*	\$41.00	6 oz.		
3NO-1NC	Standard Screw	MCRA031AT*	\$38.00	6 oz.		
3NO-1NC	2x2.8mm Faston	MCRA031AF*	\$41.00	6 oz.		
3NO-1NC	1x6.3mm Faston	MCRA031AH*	\$41.00	6 oz.		
3NO-1NC	PC Board	MCRA031AI*	\$41.00	6 oz.		
2NO-2NC	Standard Screw	MCRA022AT*	\$38.00	6 oz.		
2NO-2NC	2x2.8mm Faston	MCRA022AF*	\$41.00	6 oz.		
2NO-2NC	1x6.3mm Faston	MCRA022AH*	\$41.00	6 oz.		
2NO-2NC	PC Board	MCRA022AI*	\$41.00	6 oz.		
1NO-3NC	Standard Screw	MCRA013AT*	\$38.00	6 oz.		
1NO-3NC	2x2.8mm Faston	MCRA013AF*	\$41.00	6 oz.		
1NO-3NC	1x6.3mm Faston	MCRA013AH*	\$41.00	6 oz.		
1NO-3NC	PC Board	MCRA013AI*	\$41.00	6 oz.		
4NC	Standard Screw	MCRA004AT*	\$38.00	6 oz.		
4NC	2x2.8mm Faston	MCRA004AF*	\$41.00	6 oz.		
4NC	1x6.3mm Faston	MCRA004AH*	\$41.00	6 oz.		
4NC	PC Board	MCRA004AI*	\$41.00	6 oz.		

 $<sup>^1</sup>$ Complete product number reference by replacing the "\*" with the letter corresponding to the voltage and frequency of the control circuit.

### (Replace asterisk (\*) in product number with coil product number suffix.)

#### **Coil Voltage Selection**

AC Coil Voltages								
Voltage	60 Hz	24	120	208	240-277		480	600
	50 Hz		110		220	380	415	500
Product Number Suffix		С	J	М	N	U	W	Y

#### **DC Operated Control Relays**

			List Price	
Contact Configuration	Mounting Type	Product Number <sup>2,3</sup>	GO-10A1	Approx. Weight Each
4NO	Standard Screw	MCRC040AT**	\$48.00	6 oz.
4NO	2x2.8mm Faston	MCRC040AF**	\$51.00	6 oz.
4NO	1x6.3mm Faston	MCRC040AH**	\$51.00	6 oz.
4NO	PC Board	MCRC040AI**	\$51.00	6 oz.
3NO-1NC	Standard Screw	MCRC031AT**	\$48.00	6 oz.
3NO-1NC	2x2.8mm Faston	MCRC031AF**	\$51.00	6 oz.
3NO-1NC	1x6.3mm Faston	MCRC031AH**	\$51.00	6 oz.
3NO-1NC	PC Board	MCRC031AI**	\$51.00	6 oz.
2NO-2NC	Standard Screw	MCRC022AT**	\$48.00	6 oz.
2NO-2NC	2x2.8mm Faston	MCRC022AF**	\$51.00	6 oz.
2NO-2NC	1x6.3mm Faston	MCRC022AH**	\$51.00	6 oz.
2NO-2NC	PC Board	MCRC022AI**	\$51.00	6 oz.

<sup>&</sup>lt;sup>2</sup>Packaged in multiples of 20 units. Each product number represents one unit.

#### (Replace asterisks (\*\*) in product number with coil product number suffix.)

#### Coil Voltage Selection

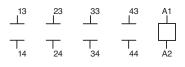
DC Coil Voltages							
Voltage	DC	12	24	48	125	250	
Product Number Suffix		В	D	G	L	S	

#### PLC Control Relays—Standard Screw Type Terminals

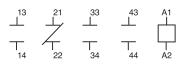
Contact Configuration	Coil Voltage	Coil Wattage	Product Number	List Price GO-10A1
2NO-2NC	24 VDC	1.2w	MCRI022ATD	\$48.00
3NO-1NC	24 VDC	1.2w	MCRI031ATD	\$48.00
4 NO	24 VDC	1.2w	MCRI040ATD	\$48.00
2NO-2NC	24 VDC	2w	MCRK022ATD	\$48.00
3NO-1NC	24 VDC	2w	MCRK031ATD	\$48.00
4NO	24 VDC	2w	MCRK040ATD	\$48.00

 $<sup>{\</sup>bf Minimum\ order\ is\ 140\ pieces.\ Packaged\ in\ multiples\ of\ 10\ units.\ Each\ product\ number\ represents\ one\ unit.}$ 

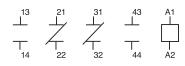
# Contact Arrangement/ Terminal Numbers per EN 50011



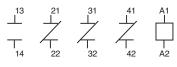
4 NO



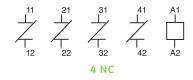
3 NO - 1 NC

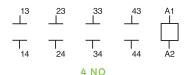


2 NO - 2 NC

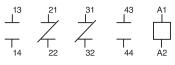


1 NO - 3 NC





3 NO - 1 NC



2 NO - 2 NC

<sup>&</sup>lt;sup>2</sup>Packaged in multiples of 20 units. Each product number represents one unit.

<sup>&</sup>lt;sup>3</sup>Complete product number reference by replacing the "\*\*" with the letter corresponding to the voltage and frequency of the control circuit.

# IEC Power Devices Mini Control Relays Accessories

C-2000

Contact Rating A600, Q300



2-Pole Front-Mounted Auxiliary Contact
Block MARN2/MACN2



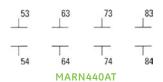
4-Pole Front-Mounted Auxiliary Contact Block MARN4/MACN4

# Terminal Numbers per EN 50005

**Contact Arrangement/** 







#### **Front-Mounted Auxiliary Contact Blocks**

			List Price	
Contact Configuration	For Use With	Product Number	GO-10A1	Approx. Weight Each
2NO	Relays	MARN220AT	\$12.00	1 oz.
1NO-1NC	Relays	MARN211AT	\$12.00	1 oz.
2NC	Relays	MARN202AT	\$12.00	1 oz.
4NO	Relays	MARN440AT	\$22.00	2 oz.
3NO-1NC	Relays	MARN431AT	\$22.00	2 oz.
2NO-2NC	Relays	MARN422AT	\$22.00	2 oz.
1NO-3NC	Relays	MARN413AT	\$22.00	2 oz.
4NC	Relays	MARN404AT	\$22.00	2 oz.

Packaged in multiples of 10 units. Each product number represents one unit.

Front-mounted contacts may be combined with side auxiliary contacts for a total maximum number of six added auxiliary contacts.

