

Advantages of a Full Featured 700 Series Relay

Since the launch of the 700 series relays in 2000, this product line has continuously evolved both functionally and visually. The 700 series product line has the perfect mix of historical Magnecraft relay quality combined with a dynamic arsenal of options. When mated with the Magnecraft sockets and accessories, these RoHS compliant relays provide a complete modular system that will meet all your plug-in relay requirements in a package that is both visually appealing and functionally outstanding.

- Offers a “one stop solution” for your power management system.
- Several Contact configurations and materials to meet your individual needs.
- Plug-In switching capabilities from 10 mA to 20 Amps.
- Several Feature Code and Operation combinations available for all budgets.
- Ejector clips, ribbed relay housings and space-saving sockets allow for easy removal from crowded DIN rails.
- Color and appearance designed for high visibility in all environments.
- Wiring diagrams include NEMA and IEC standards.
- Engineering availability allows for customized relay solutions.

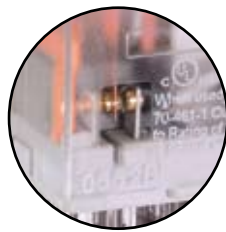


Removable Lock-Down Door
When Activated, Locks Push Button and Contacts in the Powered Position.

Color-Coded Push Button
Allows Manual Operation of Relay.
AC Coils Red or DC Coils Blue.

Finger Grip Cover
Easy Removal of Relay from Socket.

Gold Flashed Contacts
Prevents Premature Oxidation and Increases Shelf-life.



Contact Viewing Window
Shows Position of Contacts.

Isolated Input and Output Terminals
Separates Control Circuits from Load Circuits.



Slim Design
Minimizes Space on DIN Rail.

Module Compatible
Allows for Optional Protection or LED Modules to be Used With Sockets.



2-Way Side or DIN Rail Mounting System
Retrofits Existing Panel Mounting and 35mm DIN Rail.

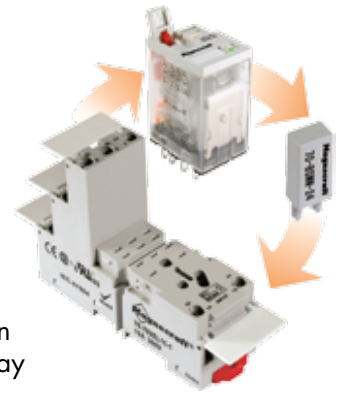
The Complete System Solution!

Flag Indicator
Shows Relay Status in Manual or Powered Condition.



Bi-Polar LED Status Lamp
Shows Coil "ON" or "OFF" Status.

I.D. Tag/Write-On Plastic Label
Used for Identification of Relays in Multi-Relay Circuits.



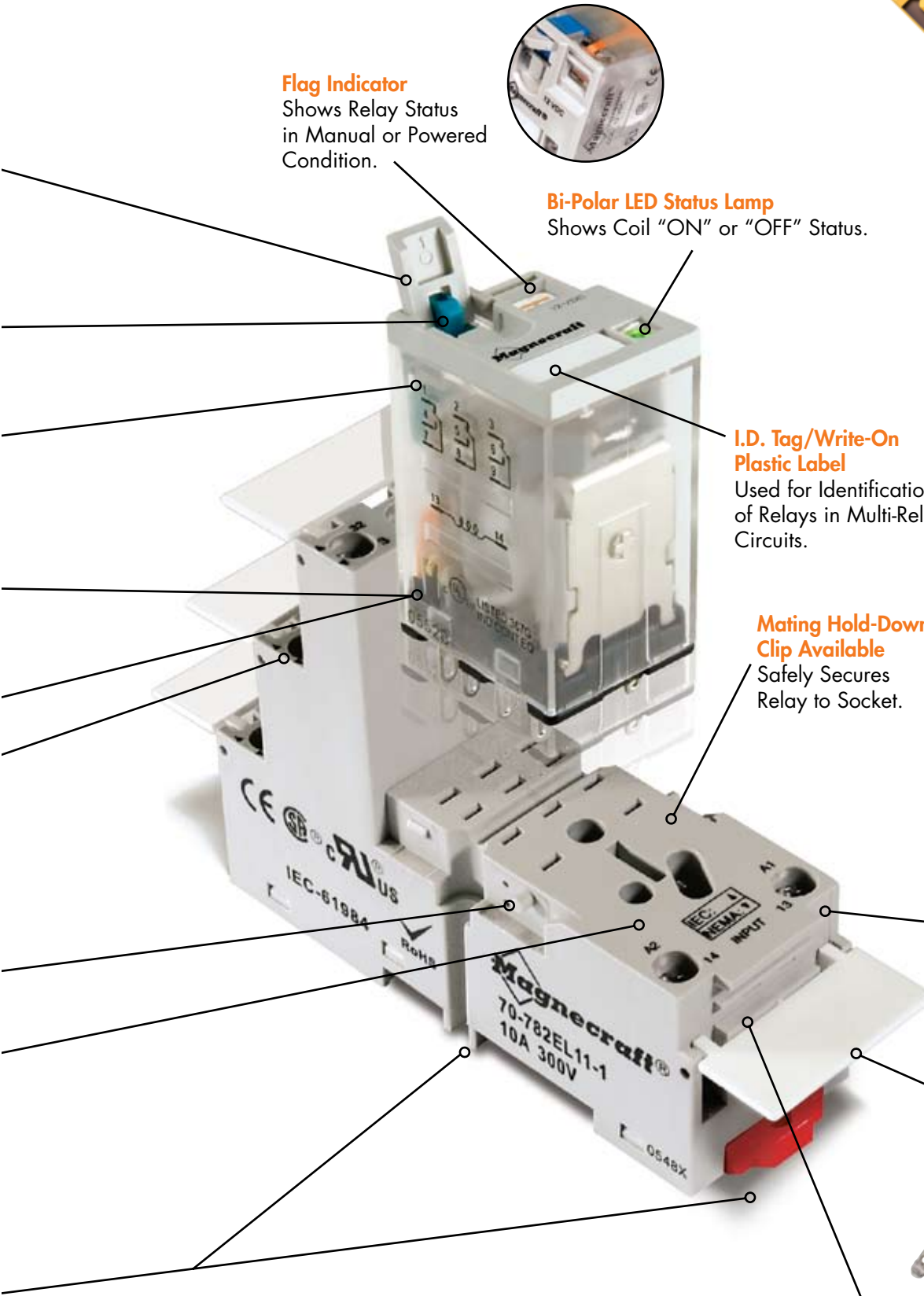
Mating Hold-Down Clip Available
Safely Secures Relay to Socket.



Finger-Safe
Protects Operators from Live Circuits.

I.D. Tag/Write-On Plastic Label
Used to Match Wire Identification Tags with Socket Connections.

Internal Coil Bus Jumper System
Allows Connection to Adjacent Sockets Without Additional Wiring.



Advantages of a Plain Cover 700 Series Relay

The Plain Cover Super Series relays support budget minded applications with premium performance. Maintaining the same ratings and internal components as the Full Feature Series; the Plain Cover Series perform as well as premium relays while maintaining low costs by offering several option configurations.

Finger Grip Cover
Easy Removal of Relay from Socket.

Contact Viewing Window
Shows Position of Contacts.



Gold Flashed Contacts
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Separates Control Circuits from Load Circuits.

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2-Way Side or DIN Rail Mounting System
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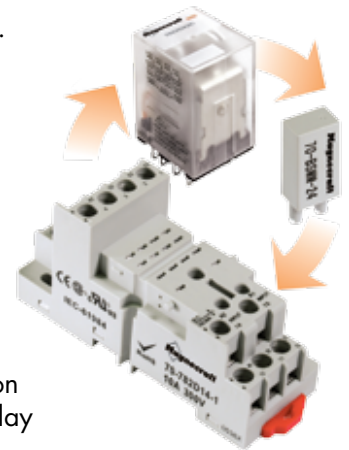


The Complete System Solution!

Flag Indicator
Shows Relay Status in Manual or Powered Condition.



Optional Bi-Polar LED Status Lamp
Shows Coil "ON" or "OFF" Status.

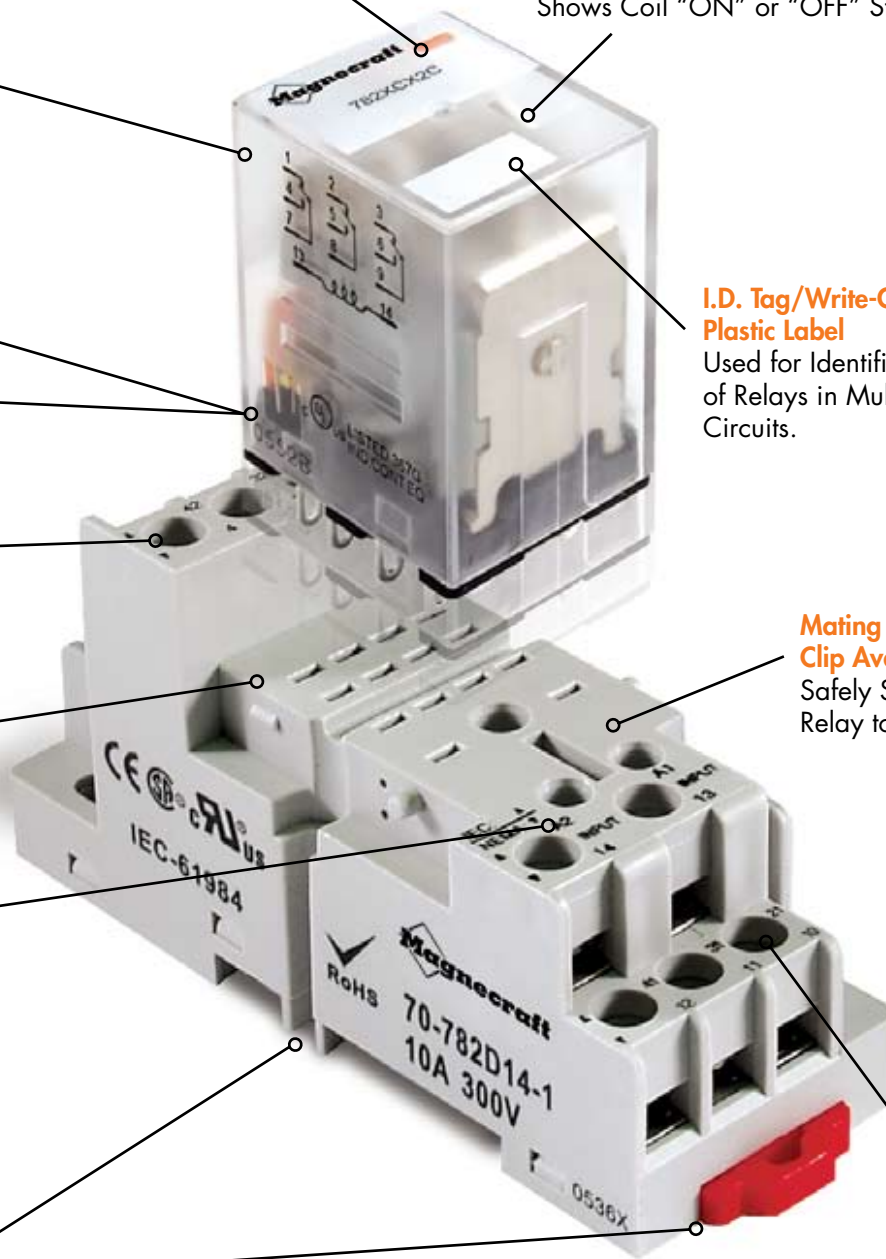


I.D. Tag/Write-On Plastic Label
Used for Identification of Relays in Multi-Relay Circuits.

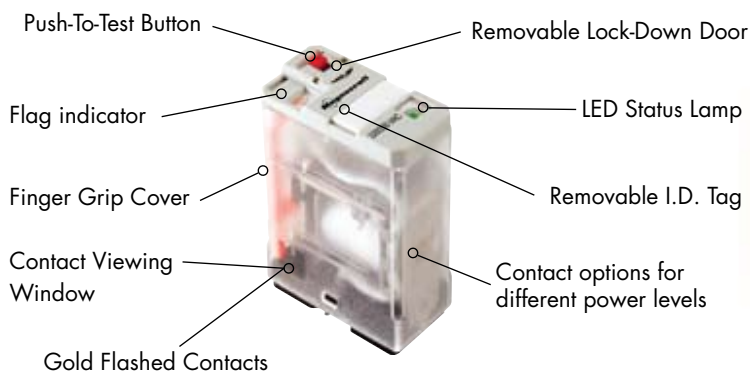
Mating Hold-Down Clip Available
Safely Secures Relay to Socket.



Finger-Safe
Protects Operators from Live Circuits.



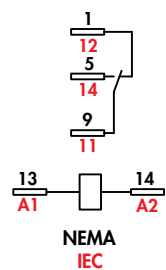
781 Ice Cube Relays/SPDT 3- 20 Amp Rating (DC & AC)

**General Specifications**

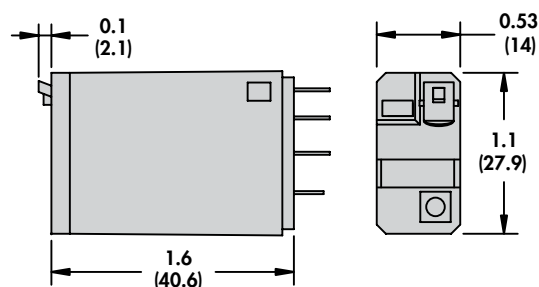
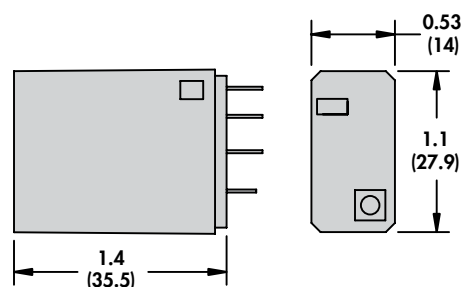
(UL 508)

781XAX**781XAX3**

Contact Characteristics		Units	Standard	Low Level
Number and type of Contacts			SPDT	SPDT
Contact materials			Silver Alloy	Bifurcated Silver
Thermal (Carrying) Current		A	20	3
Maximum Switching Voltage		V	300	300
Switching Current @ Voltage		~ Resistive	20A @ 120V 50/60Hz	3A @ 240V 50/60Hz
		~ Resistive	20A @ 277V 50/60Hz	
		⋮ Resistive	20A @ 28V	
		HP	1/2 @ 120VAC	
		HP	1 @ 277 VAC	
		Pilot Duty	B300	
Minimum Switching Requirement		mA	100 @ 5VDC (.5W)	3 @ 17VDC (.04W)
Coil Characteristics				
Voltage Range		~ V	6...240	6...240
		⋮ V	6...125	6...125
Operating Range	% of Nominal	~	85% to 110%	85% to 110%
		⋮	80% to 110%	80% to 110%
Average consumption		~ VA	0.9	0.9
		⋮ W	0.7	0.7
Drop-out voltage threshold		~	15%	15%
		⋮	10%	10%
Performance Characteristics				
Electrical Life (UL508)	Operations @ Rated Current	(Resistive)	100,000	100,000
Mechanical Life	Unpowered		10,000,000	10,000,000
Operating time (response time)		ms	20	20
Dielectric strength	Between coil and contact	~ V(rms)	2500	2500
	Between poles	~ V(rms)	1500	1500
	Between contacts	~ V(rms)	1500	1500
Environment				
Product certifications	Standard version		UL, CSA, CE	UL, CSA, CE
Ambient air temperature	Storage	°C	-40...+85	-40...+85
around the device	Operation	°C	-40...+55	-40...+55
Vibration resistance	Operational	g-n	3, 10 - 55 Hz	3, 10 - 55 Hz
Shock resistance		g-n	10	10
Degree of protection			IP 40	IP 40
Weight		grams	29	29



Wiring Diagram
Bottom View

Full Featured Dimensions**Plain Cover Dimensions**



Full Featured



Plain Cover

Standard Part Numbers

BOLD-FACED PART NUMBERS ARE NORMALLY STOCKED

Nominal Voltage	Coil Resistance	SPDT Part Number (Full-Featured) 20 Amp	SPDT Part Number (Plain Cover) 20 Amp	SPDT Part Number (Full-Featured) 3 Amp, Bifurcated
AC Operated				
6 VAC 50/60 Hz	12.2 Ohms	781XAXM4L-6A	781XAXC-6A	781XAX3M4L-6A
12 VAC 50/60 Hz	46 Ohms	781XAXM4L-12A	781XAXC-12A	781XAX3M4L-12A
24 VAC 50/60 Hz	180 Ohms	781XAXM4L-24A	781XAXC-24A	781XAX3M4L-24A
120 VAC 50/60 Hz	4430 Ohms	781XAXM4L-120A	781XAXC-120A	781XAX3M4L-120A
220-230 VAC 50/60 Hz	15000 Ohms	781XAXM4L-220/230A	781XAXC-220/230A	781XAX3M4L-220/230A
240 VAC 50/60 Hz	15720 Ohms	781XAXM4L-240A	781XAXC-240A	781XAX3M4L-240A
DC Operated				
6 VDC	47 Ohms	781XAXM4L-6D	781XAXC-6D	781XAX3M4L-6D
12 VDC	188 Ohms	781XAXM4L-12D	781XAXC-12D	781XAX3M4L-12D
24 VDC	750 Ohms	781XAXM4L-24D	781XAXC-24D	781XAX3M4L-24D
48 VDC	2600 Ohms	781XAXM4L-48D	781XAXC-48D	781XAX3M4L-48D
110-125 VDC	13800 Ohms	781XAXM4L-110/125D	781XAXC-110/125D	781XAX3M4L-110/125D

Custom Relay Part Number Builder

Series	Contact Configuration	Contact Material	Cover Options	Terminal Style	Feature Options	Coil Voltage
781	XAX = SPDT	20 Amp Silver Alloy = No Code 3 Amp Bifurcated = 3	Full Feature = No Code Plain Cover = C	Plug In = No Code PC terminal = T	Side Push Button = M Locking Push Button = M4 Bi-Polar LED = L	VAC = 6 - 240A VDC = 6 - 125D

For other mating sockets, see Section 2: 70-781F-1, 70-781T-1

