

## 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

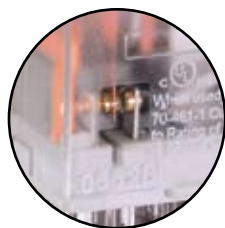
Allows Manual Operation of Relay.  
AC Coils Red or DC Coils Blue.

### 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

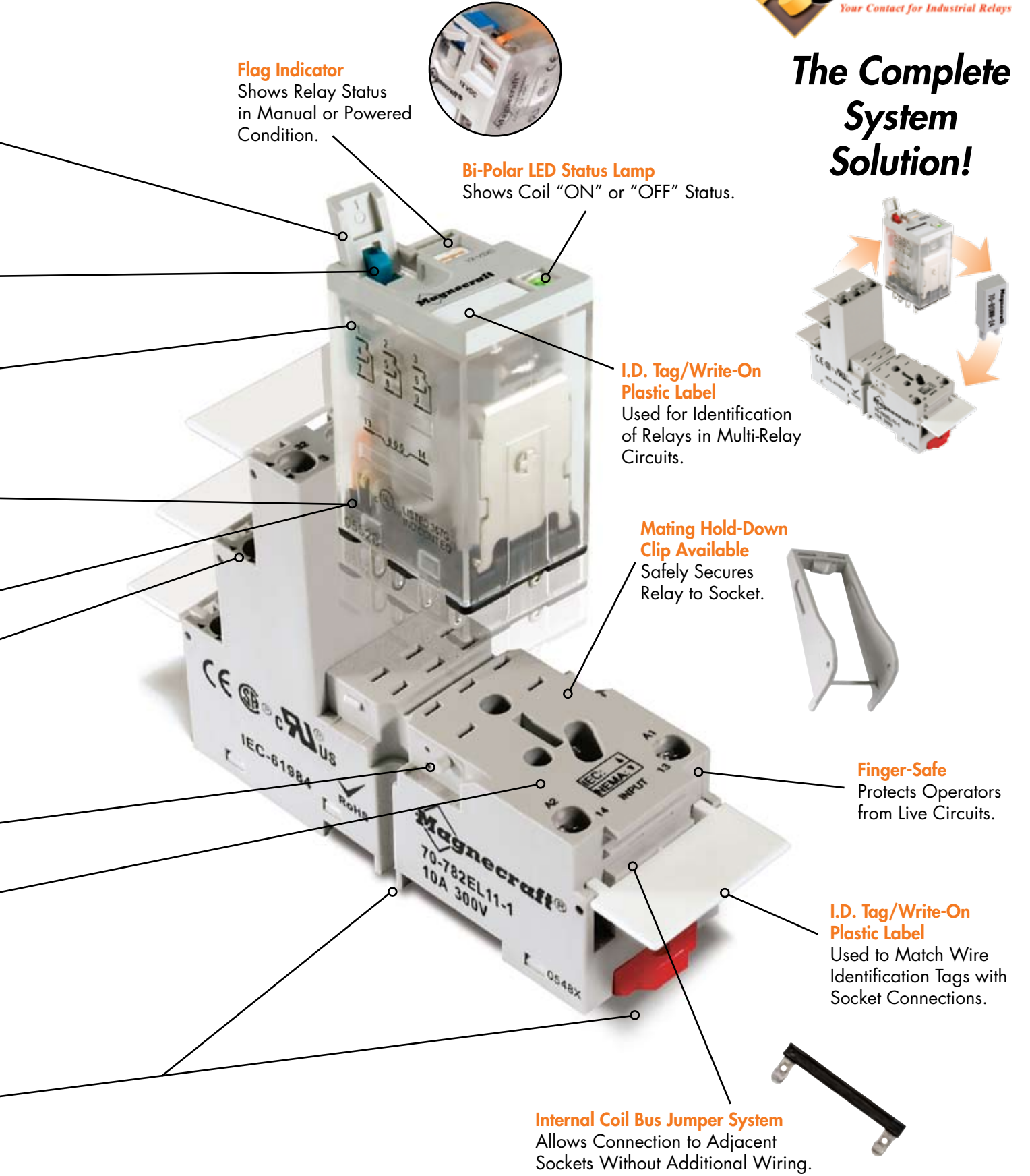
Allows for Optional Protection or LED Modules to be Used With Sockets.



### 2-Way Side or DIN Rail Mounting System

Retrofits Existing Panel Mounting and 35mm DIN Rail.

# The Complete System Solution!

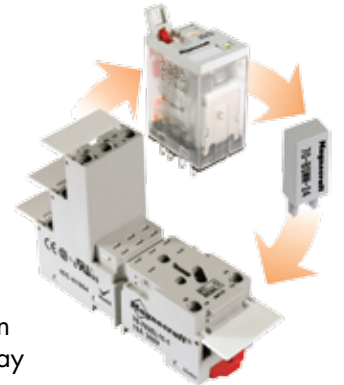


**Flag Indicator**  
Shows Relay Status in Manual or Powered Condition.



**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.

- 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.



**Contact Viewing Window**  
Shows Position of Contacts.

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

**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.

**Finger Grip Cover**  
Easy Removal of Relay from Socket.

# The Complete System Solution!

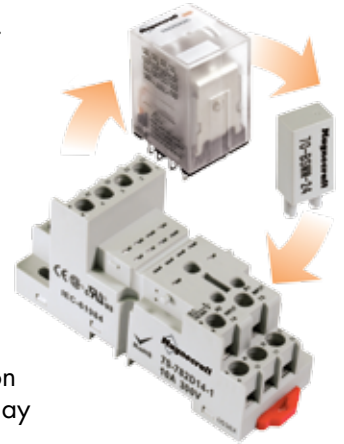
**Flag Indicator**  
Shows Relay Status in Manual or Powered Condition.



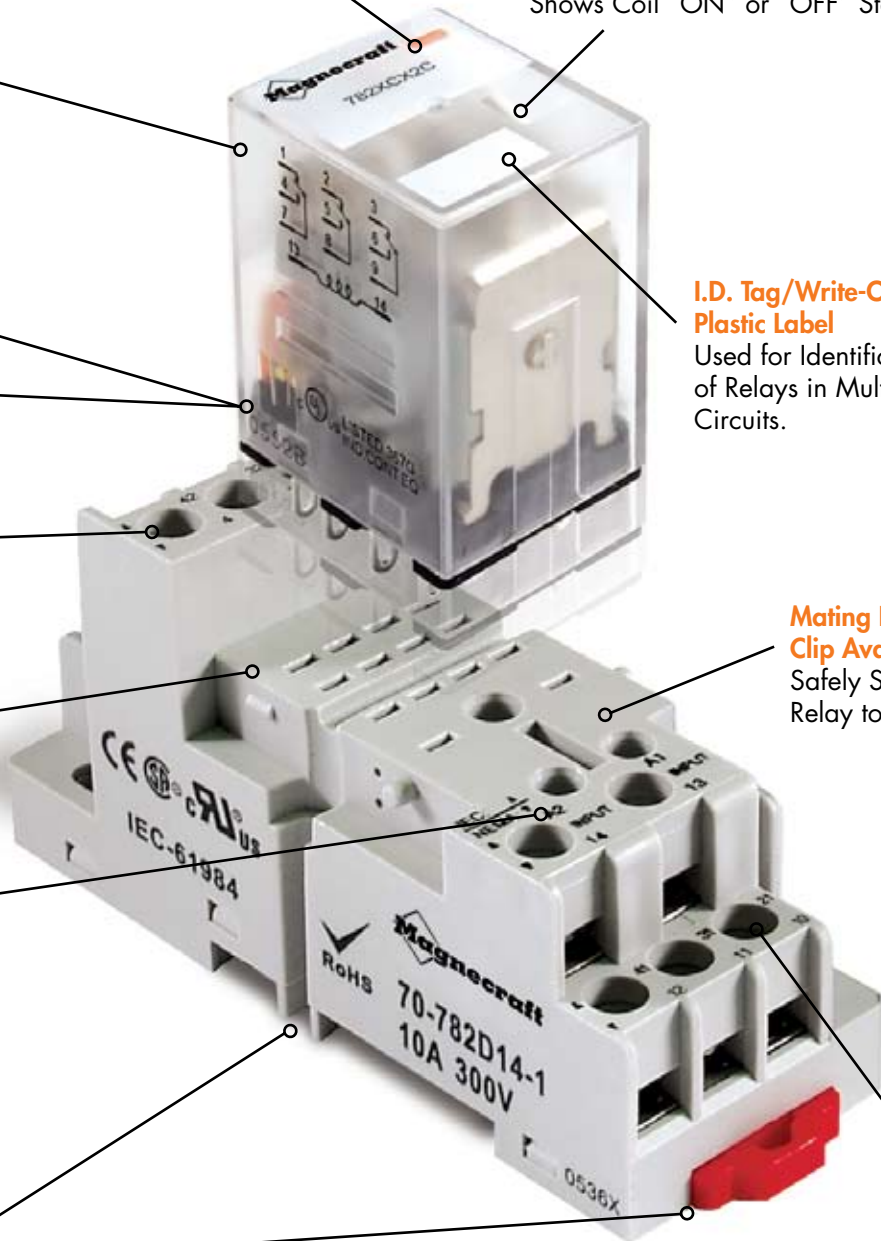
**Optional Bi-Polar LED Status Lamp**  
Shows Coil "ON" or "OFF" Status.

**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.



## Advantages of a Full Featured, Octal 700 Series Relay

Octal style mounting is a robust and historically proven form of mounting electrical components. This interface provides excellent structural support that has been recognized by the electrical industry for over half a century. Magnecraft has combined this historical platform with modern features and performance. The 750 Octal relays will mate with all forms of the 8 and 11 pin octal sockets. This package provides all the performance and features of Magnecraft's 700 series relay, while using a mounting platform that the customer has grown accustomed to.



### 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.

- 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 16 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.



### 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.

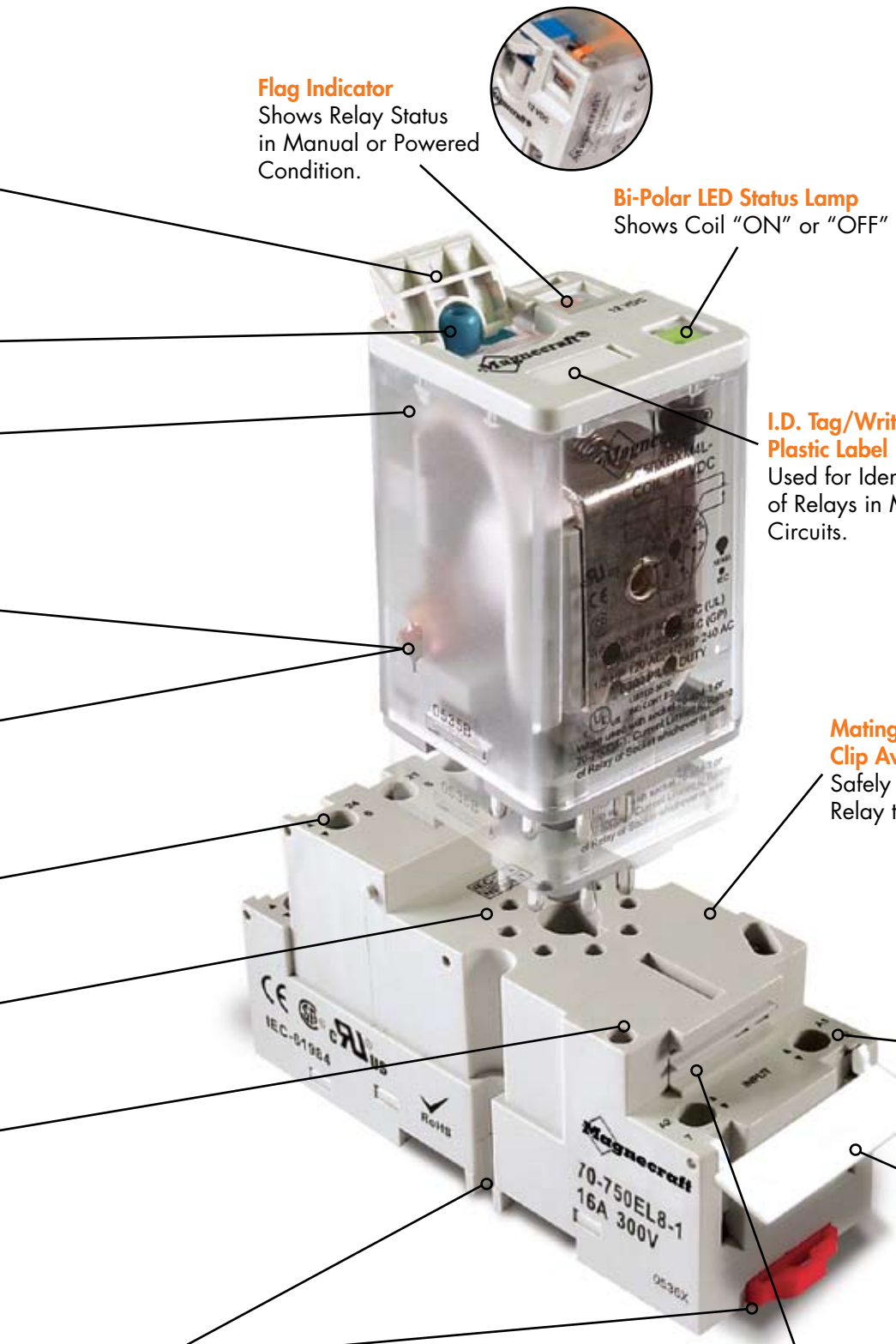
**Mating Hold-Down Clip Available**  
Safely Secures Relay to Socket.



**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, Octal 700 Series Relay

Plain Cover octal style relays provide a historical interface for the budget minded yet performance driven customer. The Plain Cover 750 relays allow the customer to utilize the performance of a premium relay while adhering to an aggressive budget. This is accomplished by Magnecraft's ability to utilize the electrical components of the Full Feature 750 relays and deleting options that may not be required by the customer. The 750 Plain Cover relays offer competitive pricing while maintaining premium performance.

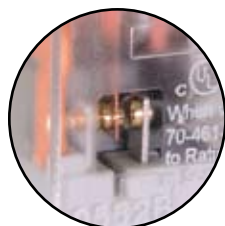
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- Plug-In switching capabilities from 10 mA to 16 Amps.
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- Color and appearance designed for high visibility in all environments.
- Wiring diagrams include NEMA and IEC standards.
- Engineering availability allows for customized relay solutions.

### 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.



### 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.

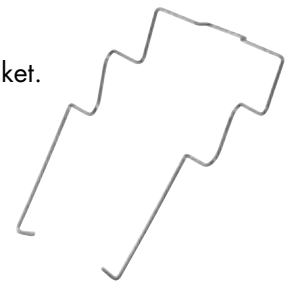


**Optional Bi-Polar LED Status Lamp**  
Shows Coil "ON" or "OFF" Status.

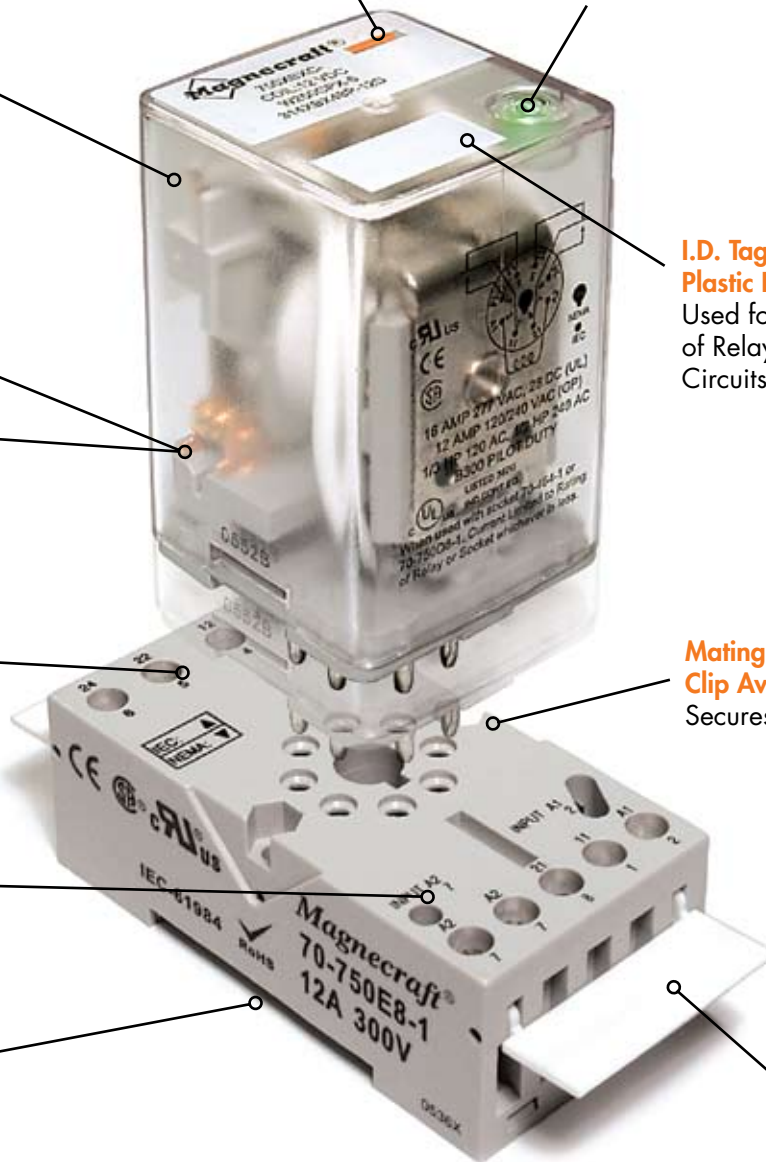


**I.D. Tag/Write-On Plastic Label**  
Used for Identification of Relays in Multi-Relay Circuits.

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

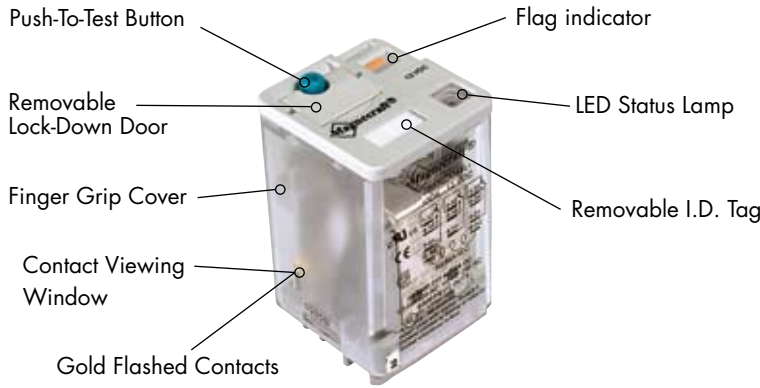


**I.D. Tag/Write-On Plastic Label**  
Used to match wire identification tags with socket connections.





# 788 Power Relays/SPDT, 16 Amp Rating (DC & AC)



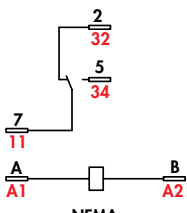
## General Specifications

(UL 508)

788XAX

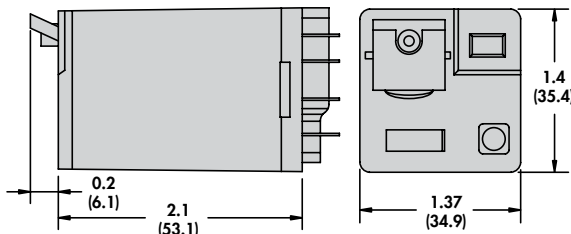
Contact Characteristics		Units	Standard
Number and type of Contacts			SPDT
Contact materials			Silver Alloy
Thermal (Carrying) Current		A	16
Maximum Switching Voltage		V	300
Switching Current @ Voltage	~	Resistive	16A @ 277V 50/60Hz
	~	Resistive	16A @ 120V 50/60Hz
	≡	Resistive	16A @ 28V
	≡	HP	1/3 @ 120VAC
	≡	HP	1/2 @ 240 VAC
Minimum Switching Requirement		Pilot Duty	B300
		mA	100 @ 5VDC (.5W)
Coil Characteristics			
Voltage Range		~	V
		≡	V
Operating Range	% of Nominal	~	6...240, 50/60 Hz
		≡	6...125
Average consumption		~	85% to 110%
		≡	80% to 110%
Drop-out voltage threshold		~	3
		≡	1.4
		~	W
		~	15%
		≡	10%
Performance Characteristics			
Electrical Life (UL508)	Operations @ Rated Current	(Resistive)	100,000
Mechanical Life	Unpowered		5,000,000
Operating time (response time)		ms	20
Dielectric strength	Between coil and contact	~	Vrms
	Between poles	~	Vrms
	Between contacts	~	Vrms
			1500
			1500
			1500
Environment			
Product certifications	Standard version		UL, CSA, CE
Ambient air temperature around the device	Storage	°C	-40...+85
	Operation	°C	-40...+55
Vibration resistance	Operational	g-n	3, 10 - 55 Hz
Shock resistance		g-n	10
Degree of protection			IP 40
Weight		grams	88

### 788XAX

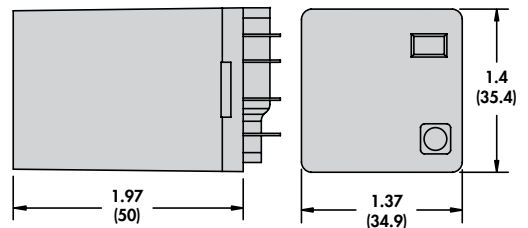


Wiring Diagram  
Bottom View

### Full Featured Dimensions



### Plain Cover Dimensions





Full Featured



Plain Cover

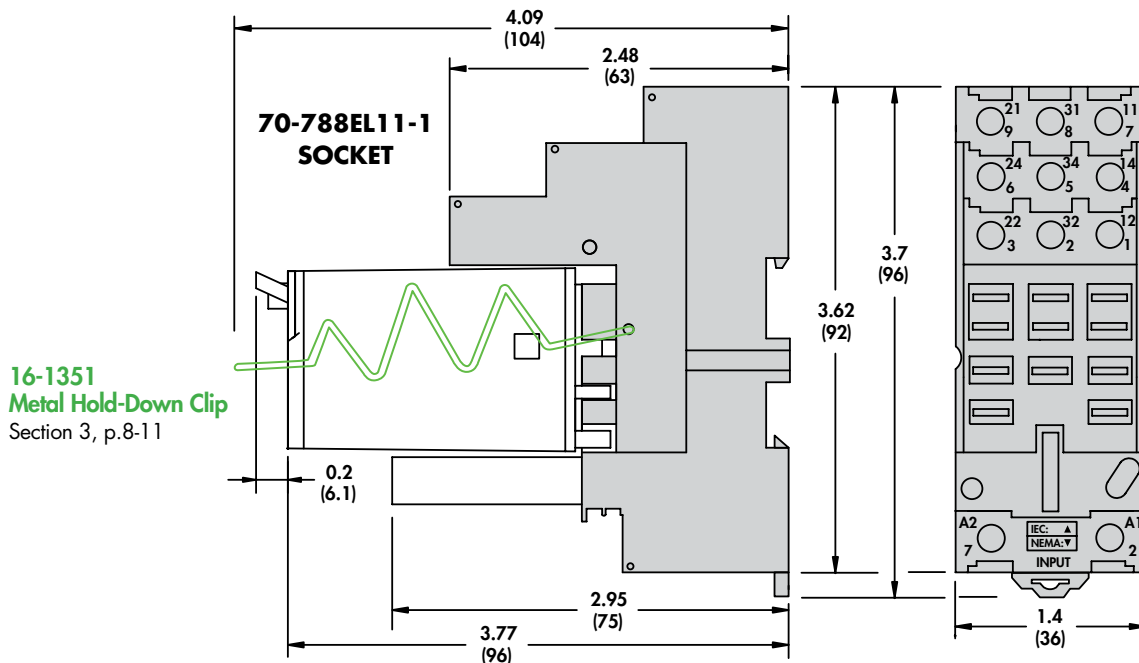
Standard Part Numbers

Nominal Voltage	Coil Resistance	SPDT Part Number (Full Feature) 16 Amp	SPDT Part Number (Plain Cover) 16 Amp
AC Operated			
6 VAC 50/60 Hz	4.2 Ohms	788XAXM4L-6A	788XAXC-6A
12 VAC 50/60 Hz	18 Ohms	788XAXM4L-12A	788XAXC-12A
24 VAC 50/60 Hz	72 Ohms	788XAXM4L-24A	788XAXC-24A
120 VAC 50/60 Hz	1700 Ohms	788XAXM4L-120A	788XAXC-120A
220-240 VAC 50/60 Hz	7200 Ohms	788XAXM4L-220/240A	788XAXC-220/240A
DC Operated			
6 VDC	32 Ohms	788XAXM4L-6D	788XAXC-6D
12 VDC	120 Ohms	788XAXM4L-12D	788XAXC-12D
24 VDC	470 Ohms	788XAXM4L-24D	788XAXC-24D
48 VDC	1800 Ohms	788XAXM4L-48D	788XAXC-48D
110-125 VDC	10000 Ohms	788XAXM4L-110/125D	788XAXC-110/125D

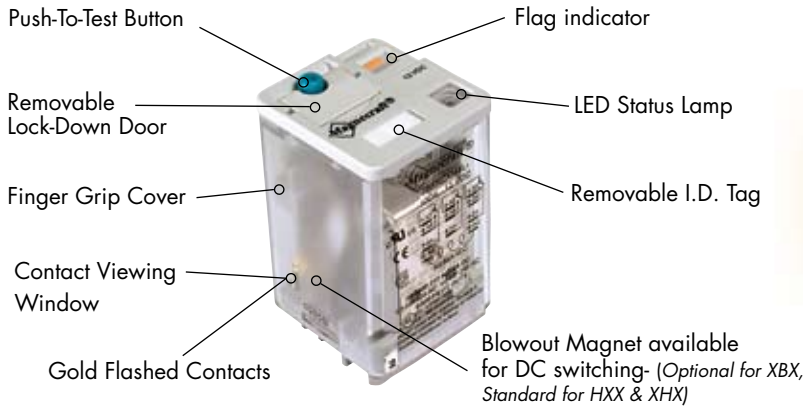
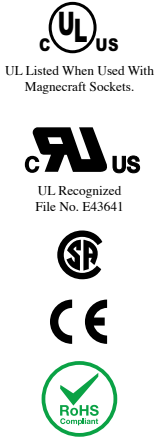
Custom Relay Part Number Builder

788	XAX		C	T	ML-	240A
Series	Contact Config.	Contact Code	Cover Options	Terminal Style	Feature Options	Coil Voltage
788	XAX = SPDT	16 Amp Silver Alloy = No Code	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: 70-463-1, 70-124-1, 70-124-2, 70-178-1, 70-178-2



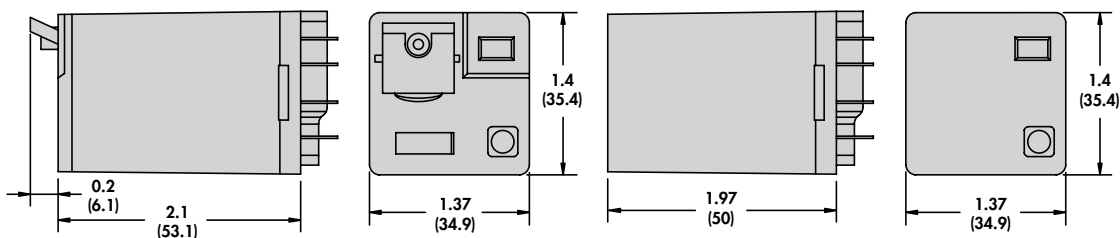
# 788 Power Relays/SPDT or DPDT, 16 Amp Rating (DC & AC)



General Specifications		(UL 508)	788XB	788HXX69, 788HX69
Contact Characteristics		Units	Standard	Standard
Number and type of Contacts			DPDT	SPST-NO-DM, SPDT-DM-DB
Contact materials			Silver Alloy	Silver Alloy
Thermal (Carrying) Current		A	16	16
Maximum Switching Voltage		V	300	300
Switching Current @ Voltage		~ Resistive	16A @ 277V 50/60Hz	16A @ 277V 50/60Hz
		~ Resistive	16A @ 120V 50/60Hz	16A @ 120V 50/60Hz
		~ Resistive	16A @ 28V	16A @ 28V
		~ HP	1/3 @ 120VAC	1/3 @ 120VAC
		~ HP	1/2 @ 240 VAC	1/2 @ 240 VAC
		~ Pilot Duty	B300	B300
Current rating with magnetic blowout *(Optional for XB, Standard for HXX & XHX)		~ A	3 @ 150VDC*	10 @ 150VDC*
Minimum Switching Requirement		mA	100 @ 5VDC (.5W)	100 @ 5VDC (.5W)
Coil Characteristics				
Voltage Range		~ V	6...240, 50/60 Hz	6...240, 50/60 Hz
		~ V	6...125	6...125
Operating Range	% of Nominal	~	85% to 110%	85% to 110%
		~	80% to 110%	80% to 110%
Average consumption		~ VA	3	3
		~ W	1.4	1.4
Drop-out voltage threshold		~	15%	15%
		~	10%	10%
Performance Characteristics				
Electrical Life (UL508)	Operations @ Rated Current	(Resistive)	100,000	100,000
Mechanical Life	Unpowered		5,000,000	5,000,000
Operating time (response time)		ms	20	20
Dielectric strength	Between coil and contact	~ Vrms	1500	1500
	Between poles	~ Vrms	1500	1500
	Between contacts	~ Vrms	1500	1500
Environment				
Product certifications	Standard version		UL, CSA, CE	UL, CSA, CE
Ambient air temperature around the device	Storage	°C	-40...+85	-40...+85
	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	88	88

Full Featured Dimensions

Plain Cover Dimensions





Full Featured



Plain Cover

Standard Part Numbers

**BOLD-FACED PART NUMBERS ARE NORMALLY STOCKED**

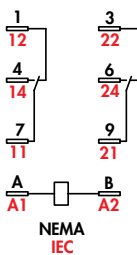
Nominal Voltage	Coil Resistance	DPDT Part Number (Full Feature) 16 Amp	DPDT Part Number (Plain Cover) 16 Amp
AC Operated			
6 VAC 50/60 Hz	4.2 Ohms	788BXM4L-6A	<b>788BXC-6A</b>
12 VAC 50/60 Hz	18 Ohms	788BXM4L-12A	<b>788BXC-12A</b>
24 VAC 50/60 Hz	72 Ohms	<b>788BXM4L-24A</b>	<b>788BXC-24A</b>
120 VAC 50/60 Hz	1700 Ohms	788BXM4L-120A	<b>788BXC-120A</b>
220-240 VAC 50/60 Hz	7200 Ohms	<b>788BXM4L-220/240A</b>	<b>788BXC-220/240A</b>
DC Operated			
6 VDC	32 Ohms	788BXM4L-6D	<b>788BXC-6D</b>
12 VDC	120 Ohms	<b>788BXM4L-12D</b>	<b>788BXC-12D</b>
24 VDC	470 Ohms	<b>788BXM4L-24D</b>	<b>788BXC-24D</b>
48 VDC	1800 Ohms	788BXM4L-48D	<b>788BXC-48D</b>
110-125 VDC	10000 Ohms	<b>788BXM4L-110/125D</b>	<b>788BXC-110/125D</b>

Custom Relay Part Number Builder

788	XBX	C	T	ML-	240A	
Series	Contact Configuration	DC Switching	Cover Options	Terminal Style	Feature Options	Coil Voltage
788	XBX = DPDT	Magnetic Blowout = 69	Full Feature = No Code	Plug In = No Code	Side Push Button = M	VAC = 6 -240A
	XHX = SPDT-DM-DB	(Optional for XBX,	Plain Cover = C	PC terminal = T	Locking Push Button = M4	VDC = 6 -125D
	HXX = SPST-NO-DM	Standard for HXX & XHX)			Bi-Polar LED = L	

For other mating sockets, see Section 2: 70-463-1, 70-124-1, 70-124-2, 70-178-1, 70-178-2

788XBX



Wiring Diagrams  
Bottom View

