

## Description

# Magnecraft General Purpose Relays

## 788 Series

DPDT and 3PDT 10 A



UL listed when used with proper Magnecraft sockets



788 Clear Cover



788 Full-Feature Cover

## Description

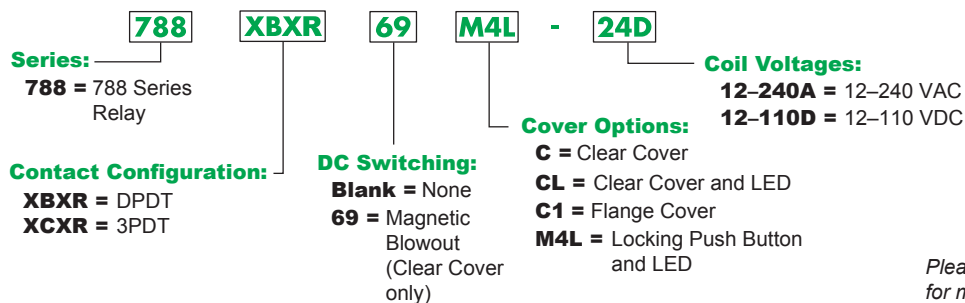
The 788 Series square base, plug-in relays offer clear, full-feature, top flange, and side flange covers as well as optional sockets and accessories.

| Feature                              | Benefit                                                                                                                          |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|
| 10 A max. switching current          | Ideal for automation panels and controls                                                                                         |
| Clear or full-feature cover options  | Full-feature covers include LED indicator and locking test button                                                                |
| DPDT and 3PDT contact configurations | Simultaneously control separate circuits                                                                                         |
| Socket mount option                  | Simplifies installation and maintenance while also allowing the use of protection modules, hold-down clips and other accessories |
| Gold-flashed contacts                | Reduces contact oxidation and increases shelf life                                                                               |
| Mechanical flag indicator            | Standard feature displays relay status during testing or operation                                                               |

| Contact Rating | Contact Configuration | Nominal Voltage | Coil Resistance (Ω) | Standard Part Number: Clear Cover | Standard Part Number: Clear Cover with LED | Standard Part Number: Flange Mount | Standard Part Number: Full-Feature |
|----------------|-----------------------|-----------------|---------------------|-----------------------------------|--------------------------------------------|------------------------------------|------------------------------------|
| 10 A           | DPDT                  | 12 Vac 50/60Hz  | 16.9                | 788XBXRC-12A                      | 788XBXRCL-12A                              | 788XBXRC1-12A                      | 788XBXRM4L-12A                     |
|                |                       | 24 Vac 50/60Hz  | 72                  | 788XBXRC-24A                      | 788XBXRCL-24A                              | 788XBXRC1-24A                      | 788XBXRM4L-24A                     |
|                |                       | 120 Vac 50/60Hz | 1700                | 788XBXRC-120A                     | 788XBXRCL-120A                             | 788XBXRC1-120A                     | 788XBXRM4L-120A                    |
|                |                       | 240 Vac 50/60Hz | 6800                | 788XBXRC-240A                     | 788XBXRCL-240A                             | 788XBXRC1-240A                     | 788XBXRM4L-240A                    |
|                |                       | 12 Vdc          | 120                 | 788XBXRC-12D                      | 788XBXRCL-12D                              | 788XBXRC1-12D                      | 788XBXRM4L-12D                     |
|                |                       | 24 Vdc          | 470                 | 788XBXRC-24D                      | 788XBXRCL-24D                              | 788XBXRC1-24D                      | 788XBXRM4L-24D                     |
|                |                       | 48 Vdc          | 1800                | 788XBXRC-48D                      | 788XBXRCL-48D                              | 788XBXRC1-48D                      | 788XBXRM4L-48D                     |
|                |                       | 110 Vdc         | 7300                | 788XBXRC-110D                     | 788XBXRCL-110D                             | 788XBXRC1-110D                     | 788XBXRM4L-110D                    |
|                | 3PDT                  | 12 Vac 50/60Hz  | 16.9                | 788XCXRC-12A                      | 788XCXRCL-12A                              | 788XCXRC1-12A                      | 788XCXRM4L-12A                     |
|                |                       | 24 Vac 50/60Hz  | 72                  | 788XCXRC-24A                      | 788XCXRCL-24A                              | 788XCXRC1-24A                      | 788XCXRM4L-24A                     |
|                |                       | 120 Vac 50/60Hz | 1700                | 788XCXRC-120A                     | 788XCXRCL-120A                             | 788XCXRC1-120A                     | 788XCXRM4L-120A                    |
|                |                       | 240 Vac 50/60Hz | 6800                | 788XCXRC-240A                     | 788XCXRCL-240A                             | 788XCXRC1-240A                     | 788XCXRM4L-240A                    |
|                |                       | 12 Vdc          | 120                 | 788XCXRC-12D                      | 788XCXRCL-12D                              | 788XCXRC1-12D                      | 788XCXRM4L-12D                     |
|                |                       | 24 Vdc          | 470                 | 788XCXRC-24D                      | 788XCXRCL-24D                              | 788XCXRC1-24D                      | 788XCXRM4L-24D                     |
|                |                       | 48 Vdc          | 1800                | 788XCXRC-48D                      | 788XCXRCL-48D                              | 788XCXRC1-48D                      | 788XCXRM4L-48D                     |
|                |                       | 110 Vdc         | 7300                | 788XCXRC-110D                     | 788XCXRCL-110D                             | 788XCXRC1-110D                     | 788XCXRM4L-110D                    |

Note: Magnetic blowout versions are also available with an added contact rating of 3 A at 150 Vdc. Please refer to the Part Number Explanation shown below.

## Part Number Explanation



Please contact Customer Service for more information (847-441-2540).

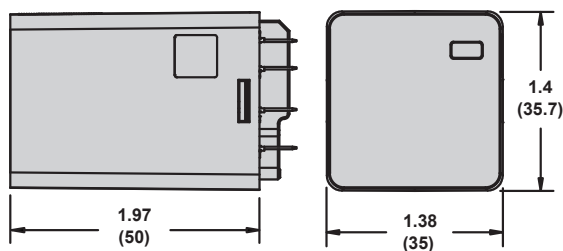
## Specifications

| Part Number                                                          | 788XBXR/XCXR                                                                                                                                                                                                                               |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Contact Characteristics</b>                                       |                                                                                                                                                                                                                                            |
| Terminal Style                                                       | Blade                                                                                                                                                                                                                                      |
| Contact Configuration                                                | DPDT/3PDT                                                                                                                                                                                                                                  |
| Maximum Current                                                      | 10 A                                                                                                                                                                                                                                       |
| Contact Materials                                                    | Silver Alloy                                                                                                                                                                                                                               |
| Maximum Switching Voltage                                            | IEC: 250 Vac / 28 Vdc<br>UL/CSA: 300 Vac / 30 Vdc                                                                                                                                                                                          |
| Rated Switching Current at Voltage (Conforming to IEC AC-1 and DC-1) | NO: 10 A at 250 Vac, NC: 5 A at 250 Vac<br>NO: 10 A at 28 Vdc, NC: 5 A at 28 Vdc                                                                                                                                                           |
| Rated Switching Current at Voltage (Conforming to UL)                | <b>Resistive:</b> 10 A at 277 Vac 50 / 60 Hz, 200k cycles<br><b>Resistive:</b> 10 A at 30 Vdc, 200k cycles<br><b>Motor:</b> 1/3 HP at 120 Vac, 6k cycles<br><b>Motor:</b> 1 HP at 277 Vac, 6k cycles<br><b>Pilot Duty:</b> B300, 6k cycles |
| Rated Current with Magnetic Blowout (Code 69)                        | UL: 3 A at 150 Vdc (DPDT only), 6k cycles                                                                                                                                                                                                  |
| Minimum Switching Requirement                                        | 10 mA at 17 Vdc                                                                                                                                                                                                                            |
| <b>Coil Characteristics</b>                                          |                                                                                                                                                                                                                                            |
| Maximum Operating Voltage                                            | 110% (AC / DC)                                                                                                                                                                                                                             |
| Maximum Pickup Voltage                                               | 85% (AC); 80% (DC)                                                                                                                                                                                                                         |
| Drop-out Voltage Threshold                                           | 15% (AC); 10% (DC)                                                                                                                                                                                                                         |
| Average Consumption                                                  | 3 VA (AC); 1.4 W (DC)                                                                                                                                                                                                                      |
| <b>General Characteristics</b>                                       |                                                                                                                                                                                                                                            |
| Electrical Life at Rated Load                                        | 100,000 operations                                                                                                                                                                                                                         |
| Mechanical Life (Unpowered)                                          | 5,000,000 operations                                                                                                                                                                                                                       |
| Operating Time (Response Time)                                       | 20 ms                                                                                                                                                                                                                                      |
| Dielectric Strength - Between Coil and Contact (AC)                  | 2500 V(rms)                                                                                                                                                                                                                                |
| Dielectric Strength - Between Poles (AC)                             | 2000 V(rms)                                                                                                                                                                                                                                |
| Dielectric Strength - Between Open Contacts (AC)                     | 1500 V(rms)                                                                                                                                                                                                                                |
| Ambient Air Temperature around the Device - Storage                  | -40 to +85 °C (-40 to +185 °F)                                                                                                                                                                                                             |
| Ambient Air Temperature around the Device - Operation                | -40 to +55 °C (-40 to +131 °F)                                                                                                                                                                                                             |
| Vibration Resistance - Operational                                   | +/- 1 mm (10–35 Hz) and 3 g-n (35–150 Hz)                                                                                                                                                                                                  |
| Shock Resistance                                                     | 10 g-n                                                                                                                                                                                                                                     |
| Degree of Protection (Housing Only)                                  | IP 40                                                                                                                                                                                                                                      |
| Weight                                                               | 83 g (2.93 oz)                                                                                                                                                                                                                             |
| Agency Approvals                                                     | UL with socket, UR (E164862), CE, CSA (225619), RoHS                                                                                                                                                                                       |

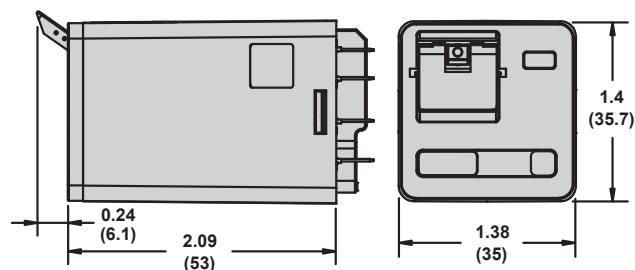
Note: Actual product performance may vary depending on application and environmental conditions.

## Dimensions — inches (millimeters)

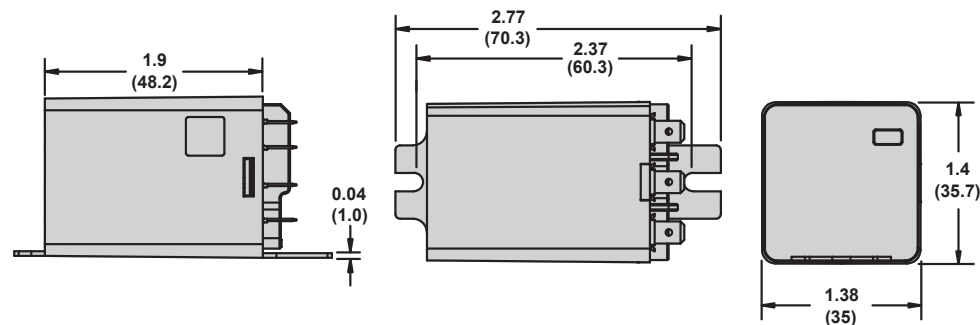
### Clear Cover Dimensions



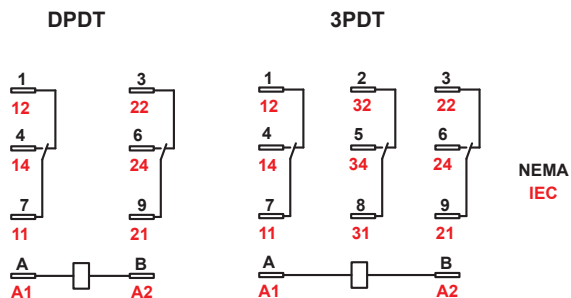
### Full-Feature Cover Dimensions



### Side Flange Cover Dimensions

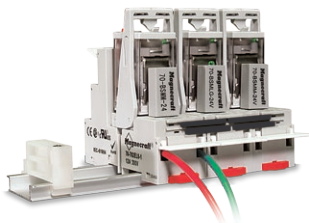


## Wiring Diagrams



# Magnecraft General Purpose Relays

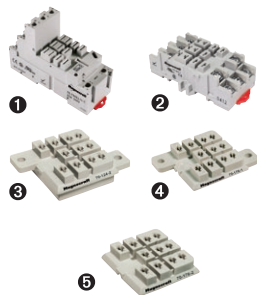
## 788 Series Accessories



### Description

Optional sockets offer customizable, Fingersafe solutions including protection modules, hold-down clips, and ID tags. Sockets are DIN rail and panel mount compatible.

### Relay Accessories



| Description | Function                                                 | For Use With Relays | Pkg. Min. | Standard Part Number |
|-------------|----------------------------------------------------------|---------------------|-----------|----------------------|
| Socket ①    | DIN mount with elevator terminals                        | 788XBX/RCXR         | 10        | 70-788EL11-1         |
| Socket ②    | DIN/Panel mount with screw terminals and clamping plates |                     | 10        | 70-463-1             |
| Socket ③    | 0.187 in. Quick Connect terminals with mounting tabs     |                     | 10        | 70-124-2             |
| Socket ④    | Printed circuit terminals with mounting tabs             |                     | 10        | 70-178-1             |
| Socket ⑤    | Printed circuit terminals without mounting tabs          |                     | 10        | 70-178-2             |

### Socket Accessories



| Description                                    | Function                                                                        | For Use With Sockets                                 | Coil Voltage    | Pkg. Min. | Standard Part Number |
|------------------------------------------------|---------------------------------------------------------------------------------|------------------------------------------------------|-----------------|-----------|----------------------|
| Metal Spring Clip ①                            | Secures relay in socket                                                         | 70-788EL11-1, 70-463-1, 70-124-1, 70-178-1, 70-178-2 | –               | 10        | 16-1351              |
| Metal Spring Clip ②                            | Secures relay in socket                                                         | 70-463-1                                             | –               | 10        | 16-1344              |
| Insulated Coil Bus Jumper System ③             | Wireless socket connection                                                      | 70-788EL11-1                                         | –               | 10        | 16-750/788CBJ-1      |
| Plastic I.D. Tag ④                             | Write-on plastic labels                                                         | 70-788EL11-1                                         | –               | 10        | 16-750/788FT-1       |
| Extruded Aluminum DIN Rail, 39.37" (1000 mm) ⑤ | Quick installation and removal of sockets                                       | 70-788EL11-1, 70-463-1                               | –               | 10        | 16-700DIN            |
| DIN Rail End Clip ⑥                            | Holds sockets firmly in place on DIN rail                                       | –                                                    | –               | 10        | 16-DCLIP-1           |
| Large Socket Module                            | MOV Suppressor<br>(Protects from damaging electrical spikes)                    | 70-788EL11-1                                         | 24 Vac/Vdc      | 10        | 70-ASMM-24           |
| Large Socket Module                            | Protection Diode<br>(Protects external drive circuitry from inductive voltages) |                                                      | 250 Vdc         | 10        | 70-ASMD-250          |
| Large Socket Module ⑥                          | LED Indicator<br>(Provides coil status at a glance)                             |                                                      | 110/240 Vac/Vdc | 10        | 70-ASMLG-110/240     |
| Large Socket Module                            | RC Suppressor<br>(Snubs back EMF of relay coil)                                 |                                                      | 110/240 Vac     | 10        | 70-ASMR-110/240      |

Note: Use of LED or RC socket module may increase coil power draw by up to 10%.