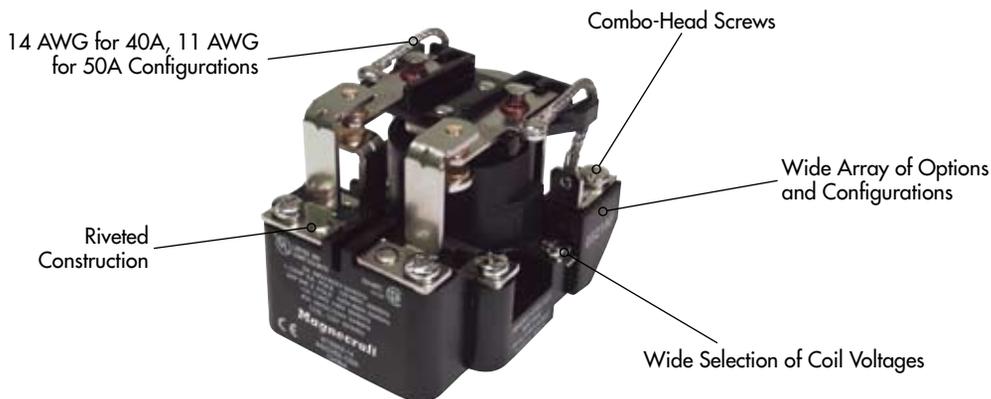


# W199 Open Style Power Relay/Single and Two Pole 40 and 50 Amp Rating (DC and AC)



## General Specifications (UL 508)

| Contact Characteristics                   |                            | Units                  | 199, 199A                                  |
|---|----------------------------|------------------------|--|
| Number and type of Contacts               |                            |                        | SPST, SPDT, DPST, DPDT                     |
| Contact materials                         |                            |                        | Silver Alloy                               |
| Thermal (Carrying) Current rating         |                            | A                      | 40   |
| Maximum Switching Voltage                 |                            | V                      | 600V                                       |
| Switching Current @ Voltage               | ~                          | Resistive              | 40A @ 277V 50/60Hz,<br>5A @ 600VAC 50/60Hz |
|   | ⋮                          | Resistive              | 40A @ 28VDC                                |
| Blowout magnet                            | ⋮                          | Resistive              | See table A below                          |
|   |                            | HP                     | 1 1/2 @ 120-600 VAC                        |
|   |                            | Tungsten               | 15A @ 120VAC                               |
|   |                            | Pilot Duty             | A600                                       |
| Minimum Switching Requirement             | Minimum                    | mA                     | 100 @ 12 VAC/VDC                           |
| Coil Characteristics                      |                            |                        |  |
| Voltage Range                             | ~                          | V                      | 6...600                                    |
|   | % of Nominal               | ⋮                      | 6...600                                    |
| Operating Range                           | ~                          |                        | 85% to 110%                                |
|   | ⋮                          |                        | 80% to 110%                                |
| Average consumption                       | ~                          | VA                     | 10   |
|   | ⋮                          | W                      | 4  |
| Drop-out voltage threshold                | ~                          |                        | 10%  |
|   | ⋮                          |                        | 10%  |
| Performance Characteristics               |                            |                        |  |
| Electrical Life (UL 508)                  | Operations @ Rated Current | (Resistive)            | 6,000                                      |
| Operating time (response time)            |                            | ms                     | 30   |
| Dielectric                                | Between coil and contact   | ~                      | 2200                                       |
|   | Between poles              | ~                      | 2200                                       |
|   | Between contacts           | ~                      | 1500                                       |
| Environment                               |                            |                        |  |
| Product certifications                    | Standard version           |                        | UL, CSA, CE                                |
| Ambient air temperature around the device | Storage                    | °C                     | -40...+85                                  |
|   | Operation                  | °C                     | -40...+55                                  |
| Connection                                |                            | AWG (mm <sup>2</sup> ) | 8 (10)                                     |
| Terminal Tightening Torque                |                            | in-lb (Nm)             | 7...9 (0.8...1.0)                          |
| Weight                                    |                            | grams                  | 227 to 312                                 |

Table A:

| Additional DC Rating with Magnetic Blowout | Single Make/Break | Double Make/Break |
|--|-------------------|-------------------|
| 110 VDC                                    | 10 A              | 20 A              |
| 144 VDC                                    | —                 | 15 A              |
| 220 VDC                                    | 4 A               | 8 A               |
| 325 VDC                                    | 2 A               | 4 A               |
| 500 VDC                                    | —                 | 2 A               |



**Optional Cover  
(50-1289-1)**  
See Section 3 p.22



| 199D, 199DY, 199AD, 199ADY                  | 199P, 199AP                                | 199DE, 199DYE, 199ADE, 199ADYE              |
|---|--|---|
| SPST-DM, SPST-DB                            | SPST, SPDT, DPST, DPDT                     | SPST-DM, SPST-DB                            |
| Silver Alloy                                | Silver Alloy                               | Silver Alloy                                |
| 40  | 50   | 50  |
| 600V  | 600V                                       | 600V  |
| 40A @ 277V 50/60Hz,<br>10A @ 600VAC 50/60Hz | 50A @ 277V 50/60Hz,<br>5A @ 600VAC 50/60Hz | 50A @ 277V 50/60Hz,<br>10A @ 600VAC 50/60Hz |
| 40A @ 28VDC                                 | 50A @ 28VDC                                | 50A @ 28VDC                                 |
| See table A below                           | See table A below                          | See table A below                           |
| 2 @ 120-600 VAC                             | 1 1/2 @ 120-600 VAC                        | 2 @ 120-600 VAC                             |
| 15A @ 120VAC                                | 15A @ 120VAC                               | 15A @ 120VAC                                |
| A600  | A600                                       | A600  |
| 100 @ 12 VAC/VDC                            | 100 @ 12 VAC/VDC                           | 100 @ 12 VAC/VDC                            |
| 6...600                                     | 6...600                                    | 6...600                                     |
| 6...600                                     | 6...600                                    | 6...600                                     |
| 85% to 110%                                 | 85% to 110%                                | 85% to 110%                                 |
| 80% to 110%                                 | 80% to 110%                                | 80% to 110%                                 |
| 10  | 10   | 10  |
| 4   | 4  | 4   |
| 10%   | 10%  | 10%   |
| 10%   | 10%  | 10%   |
| 6,000                                       | 6,000                                      | 6,000                                       |
| 30  | 30   | 30  |
| 2200  | 2200                                       | 2200  |
| 2200  | 2200                                       | 2200  |
| 1500  | 1500                                       | 1500  |
| UL, CSA, CE                                 | UL, CSA, CE                                | UL, CSA, CE                                 |
| -40...+85                                   | -40...+85                                  | -40...+85                                   |
| -40...+55                                   | -40...+55                                  | -40...+55                                   |
| 8 (10)                                      | 8 (10)                                     | 8 (10)                                      |
| 7...9 (0.8...1.0)                           | 7...9 (0.8...1.0)                          | 7...9 (0.8...1.0)                           |
| 227 to 312                                  | 227 to 312                                 | 227 to 312                                  |

**Table B:**

| Auxiliary Switch Ratings        | SPDT        | DPDT        |
|---------------------------------|-------------|-------------|
| Up to 240 VAC 50/60Hz           | 10 A (AC1)  | 10 A (AC1)  |
| Motor Load, 120-240 VAC 50/60Hz | 1/4 HP      | 1/4 HP      |
| Pilot Duty, 120-240 VAC 50/60Hz | 278 VA      | 278 VA      |
| 125 VDC                         | 0.4 A (DC1) | 0.4 A (DC1) |
| 250 VDC                         | 0.2 A (DC1) | 0.2 A (DC1) |
| Tungsten, 120 VAC 50/60Hz       | 3 A         | 3 A         |