OMRON

# Heavy Duty Power Relay
# MGN

- 30 Amp heavy duty power relay.
- Class F coil insulation system for 155°C (311°F) total temperature.
- Coil molded in DuPont Rynite® for environmental protection.
- Rugged construction rivets terminals to base.

## Ordering Information

To Order: Select part number and add the desired coil voltage rating (e.g. MGN1C-AC24).

| Base size | Contact form | **Model** |
|---|---|---|
| Short | SPDT | **MGN1C** |
| | SPST-NO | **MGN1A** |
| | SPST-NO-DM | **MGN1X** |
| | SPST-NO | **MGN1AM** (See note) |
| | SPST-NC | **MGN1B** |
| | DPST-NO | **MGN2A** |
| Long | DPDT | **MGN2C** |
| | DPDT | **MGN2CM** (See note) |
| Mg series dust cover (optional) | | **MGCOV** |

**Note:** Magnetic blow-out version.

## Specifications

### ■ CONTACT DATA

| | |
|---|---|
| Materials | All versions 5/16” diameter Ag–Alloy |
| Contact UL ratings | 30 amp or 1-1/2 hp @ 120 or 240 VAC, 2 hp @ 240 VAC, 3600w @ 120 or 240 VAC (ballast), 30 amp @ 240 VAC, 100,000 cycle (resistive), 20 amp @ 600 VAC, 30 amp @ 28 VDC |
| UL recognized file number | E41643 |

## ■ COIL DATA

**AC**

| Nominal voltage | Resistance in Ohms ±10% | Nominal coil power | Coil voltages | Coil treatment | Insulation resistance | Pick up voltage at 25°C (77°F) |
|---|---|---|---|---|---|---|
| 6 VAC | .85 | 9.5 VA | Up to 600 volts/60 Hz | Molded Rynite® Std. Class F | 100 megohms min. | 85% or less of nominal |
| 12 VAC | 2.85 | | | | | |
| 24 VAC | 11.5 | | | | | |
| 120 VAC | 295 | | | | | |
| 240 VAC | 1170 | | | | | |
| 480 VAC | 4860 | | | | | |

**DC**

| Nominal voltage | Resistance in Ohms ±10% | Nominal coil power | Coil voltages | Coil treatment | Insulation resistance | Pick up voltage at 25°C (77°F) |
|---|---|---|---|---|---|---|
| 6 VDC | 18 | 2 W | Up to 125 volts | Molded Rynite® Std. Class F | 100 megohms min. | 75% or less of nominal |
| 12 VDC | 72 | | | | | |
| 24 VDC | 290 | | | | | |
| 48 VDC | 1150 | | | | | |
| 110 VDC | 6050 | | | | | |

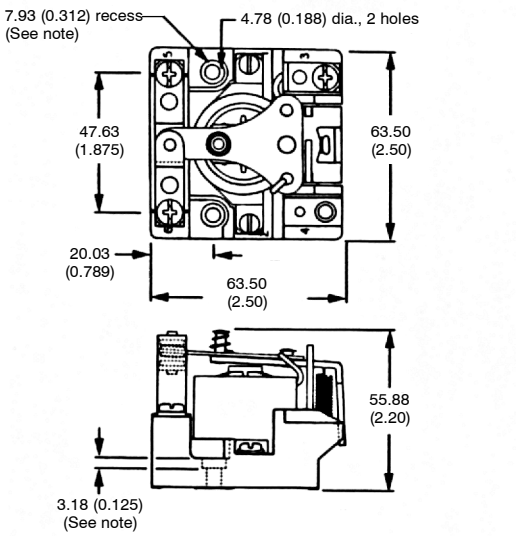
## ■ CHARACTERISTICS

| | | |
|---|---|---|
| Operate time | | Approximately 30 ms |
| Release time | | Approximately 30 ms |
| Operating ambient temperature | | AC: -45° to 80°C (-49° to 176°F) @ 30 amps |
| | | DC: -45° to 115°C (-49° to 239°F) @ 30 amps |
| Coil temperature rise | | 25°C ambient-continuous duty<br>AC: 70°C (158°F) approx. @ 60 Hz (use at 50 Hz will cause slight increase in coil rise)<br>DC: 35°C (95°F) approx. |
| Life expectancy | Electrical at rated load | 100,000 operations (minimum) |
| | Mechanical | 1,000,000 operations |
| Dielectric strength | | 2200 VRMS, 60 Hz between contacts<br>2200 VRMS, 60 Hz between other elements |
| Terminals | | Screw type |
| Weight | | Short base version: approx 227 g (8 oz)<br>Long base version: approx. 283 g (10 oz) |

# Dimensions

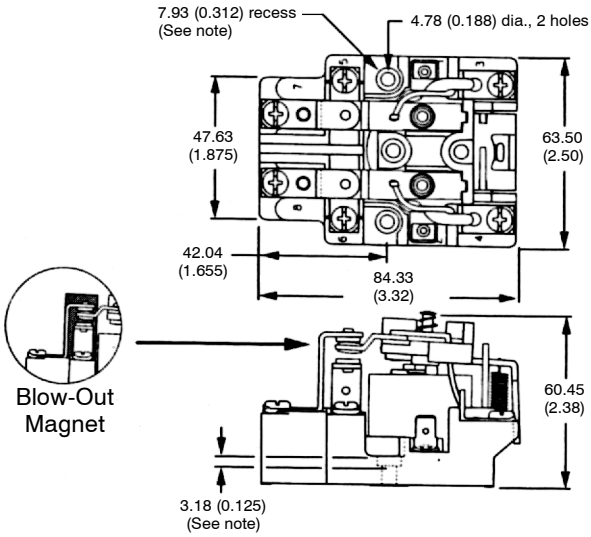
Unit: mm (inch)

## ■ MGN (SHORT BASE)



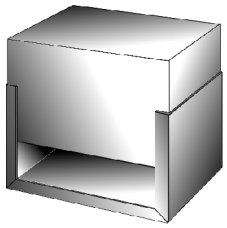

**Note:** Recess for screw mounting on units with 300-600 VAC coils

## ■ MGN (LONG BASE)




**Note:** Recess for screw mounting on units with 300-600 VAC coils

## ■ MG SERIES DUST COVER (OPTIONAL)



Sealed knock-out holes for standard conduit fittings. Relay mounts on pre-drilled base. Constructed of Aluminum. Snap-action cover release.

127W x 76.2H x 101.6D mm (5W x 3H x 4D in)