

# DLR

## industrial power relay

# DURAKOOL



- High current switching - 6,600VA max.
- Good inrush current resistance
- Wide range AC coils
- DIN Rail mounting options
- Screw, plug-in or PCB terminals
- Applications include heaters, HVAC and motor controls
- RoHS Compliant



### Contacts

|  |   |  |
|--|---|--|
| Contact number & arrangement           | SPST-NO (1 Form A); DPST-NO (2 Form A)                    |  |
| Contact material                       | AgCdO, AgSnO <sub>2</sub> (Special Order only)            |  |
| Max. switching voltage                 | AC/DC   | 250VAC, 30VDC  |
| Min. breaking capacity                 | W   | 0.5W (AgCdO), 1W (AgSnO <sub>2</sub> )   |
| Rated load (resistive - cos φ=1)       | AC1   | SPST-NO, DPST-NO PCB : 20A/220VAC<br>SPST-NO: 30A/220VAC / DPST-NO: 25A/220VAC |
| Max. switching power                   | 4,400VA (PCB types); 5,500VA (DPST-NO); 6,600VA (SPST-NO) |  |
| Initial resistance                     | ≤ 50mΩ, max. at 1A/24VDC                                  |  |
| Max. operating frequency at rated load | AC1   | 1,800 cycles per hour  |

### Coil

|                                   |                       |              |
|-----------------------------------|-----------------------|--------------|
| Rated voltage                     | AC                    | 6...200/240V |
|                                   | DC                    | 6...100V     |
| Must release voltage              | ≥0.15Un               |              |
| Operating range of supply voltage | See coil tables 1 & 2 |              |

### Insulation


|                           |                                       |                           |
|---------------------------|---------------------------------------|---------------------------|
| Insulation resistance     | ≥1000MΩ at 500VDC, 50%RH              |                           |
| Impulse withstand voltage | Between coil and contact: 10,000V     |                           |
| Dielectric strength       | coil to contact                       | 4,000Vrms, 1min (50/60Hz) |
|                           | contacts of the same pole             | 2,000Vrms, 1min (50/60Hz) |
|                           | contacts of different poles (DPST-NO) | 2,000Vrms, 1min (50/60Hz) |

### General Data

|                          |  |  |
|--------------------------|--|--|
| Operating time (typical) | mS   | ≤ 30   |
| Release time (typical)   | mS   | ≤ 30   |
| Electrical Life          | ops  | 1 x 10 <sup>5</sup> at 1,800 ops/hour at rated load (Fig 1.) |
| Mechanical life          | ops  | 5 x 10 <sup>6</sup> at 1,800 ops/hour                        |
| Dimensions               | L x W x H  | various - see drawings (Fig 2.)                              |
| Weight                   | approx. 90g (3.17oz) quick connect (fast-on) type              |  |
|                          | approx. 100g (3.52oz) PCB terminal type                        |  |
|                          | approx. 120g (4.23oz) Screw terminal type                      |  |
| Ambient temperature      | -40 to 85°C  |  |
| Shock resistance         | approx. 100G mechanical durability, 10G malfunction durability |  |
| Vibration resistance     | DA 1.5mm 10-55Hz   |  |

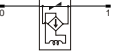
DC Coil Data (at 23°C)

Table 1

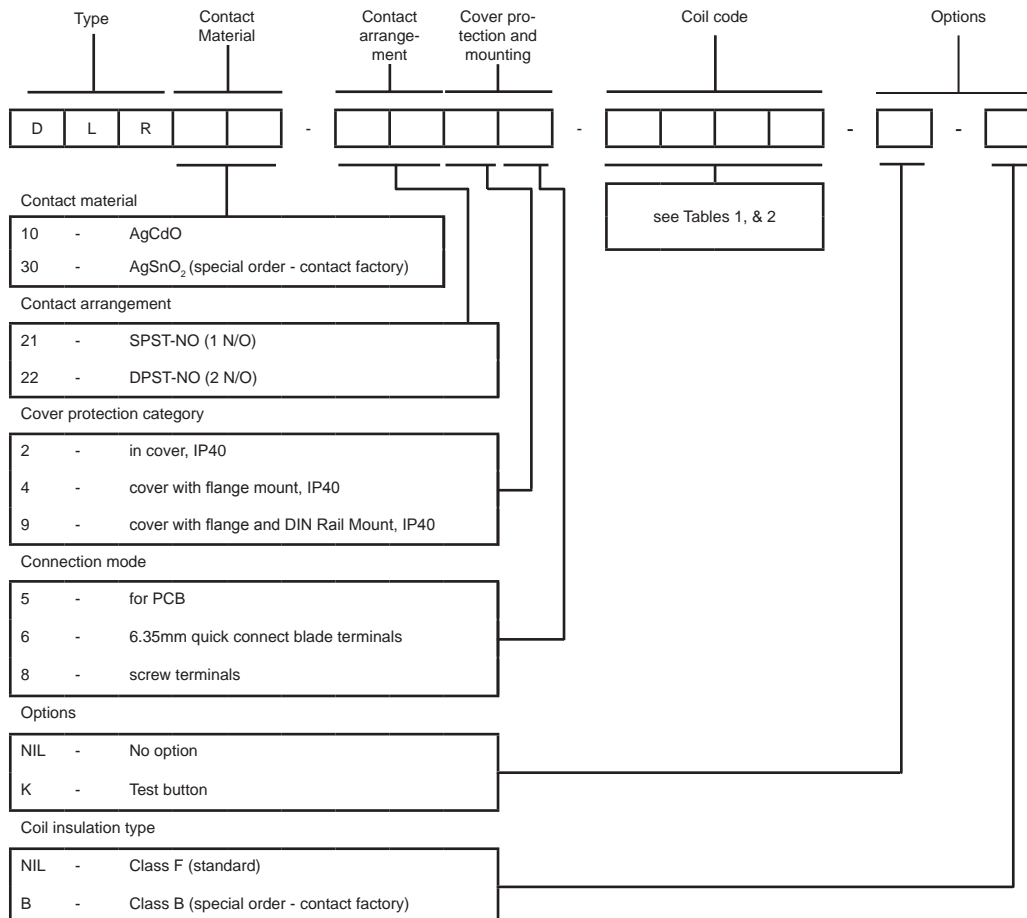
| Coil Voltage Code | Nominal Voltage (V DC) | Coil Resistance ( $\Omega$ ) $\pm 10\%$ | Power Consumption approx. (mW)  | Must Operate Voltage max. (V DC) | Must Release Voltage min. (V DC) | Max. Allowable Voltage (V DC) |
|-------------------|------------------------|---|---|----------------------------------|----------------------------------|-------------------------------|
| 1006              | 6                      | 18.9                                    | 1.9W<br> | 4.5                              | 0.9                              | 6.6                           |
| 1012              | 12                     | 75                                      |   | 9                                | 1.8                              | 13.2                          |
| 1024              | 24                     | 303                                     |   | 18                               | 3.6                              | 26.4                          |
| 1048              | 48                     | 1220                                    |   | 36                               | 7.2                              | 52.8                          |
| 1100              | 100                    | 5260                                    |   | 75                               | 15.0                             | 110.0                         |

AC Coil Data (at 23°C)

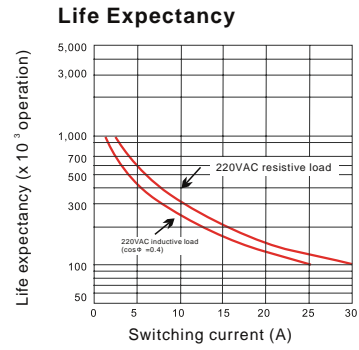
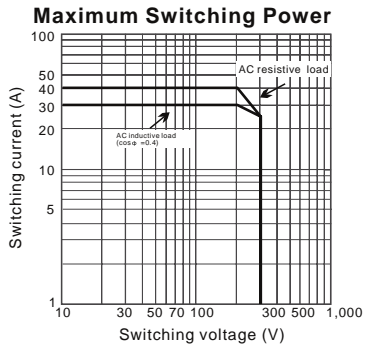
Table 2

| Coil Voltage Code | Nominal Voltage (V AC) | Rated Coil Current (mA) $+15/-20\%$ | Power Consumption approx. (mW)   | Must Operate Voltage max. (V AC) | Must Release Voltage min. (V AC) | Max. Allowable Voltage (V AC) |
|-------------------|------------------------|-------------------------------------|--|----------------------------------|----------------------------------|-------------------------------|
| 5012              | 12                     | 142                                 | 1.7 to 2.5VA (60Hz)<br> | 9                                | 0.9                              | 13.2                          |
| 5024              | 24                     | 71                                  |  | 18                               | 1.8                              | 26.4                          |
| 5050              | 50                     | 34                                  |  | 37.5                             | 3.6                              | 55                            |
| 5120              | 100 to 120             | 17 to 20.4                          |  | 75                               | 18                               | 132                           |
| 5230              | 200 to 240             | 8.5 to 10.2                         |  | 150                              | 36                               | 264                           |

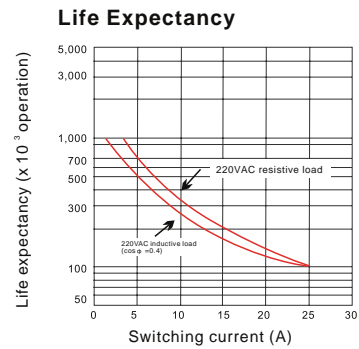
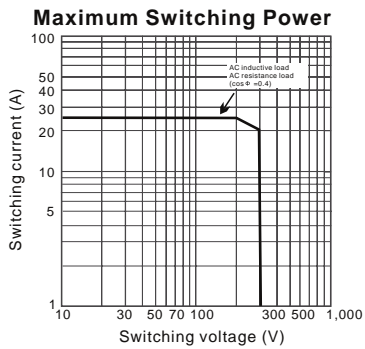
Ordering codes



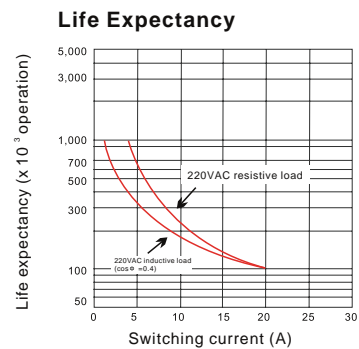
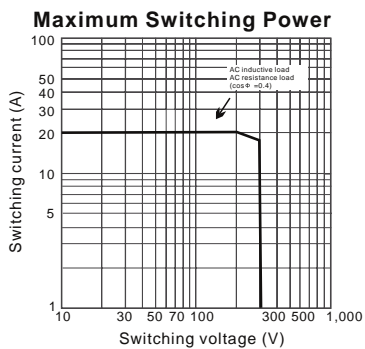
DLR SPST-NO (except PCB)



DLR DPST-NO (except PCB)



DLR PCB SPST-NO, DPST-NO



# DLR

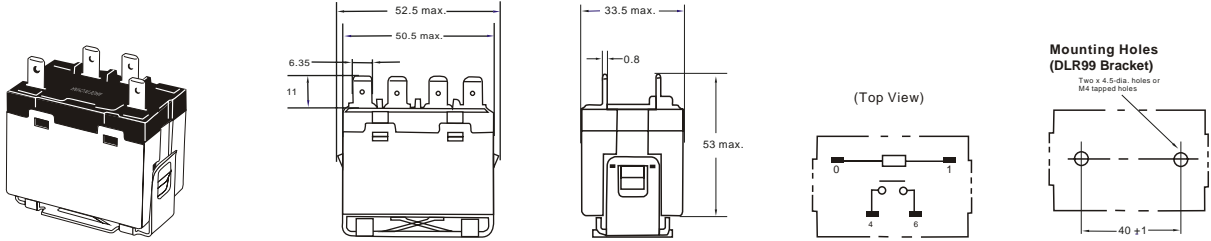
## industrial power relay



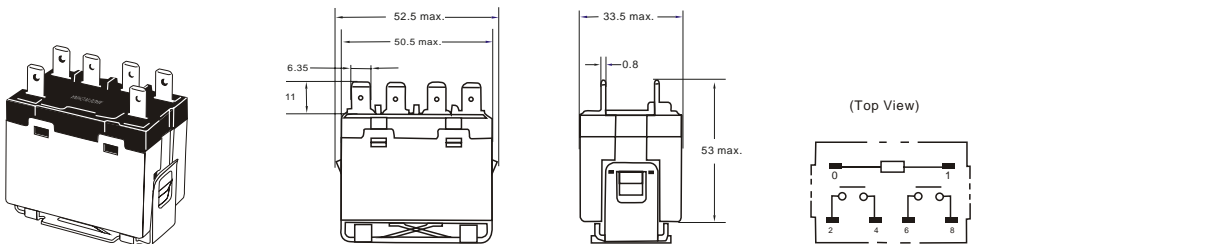
Overall Dimensions and Wiring Diagrams

Fig. 2

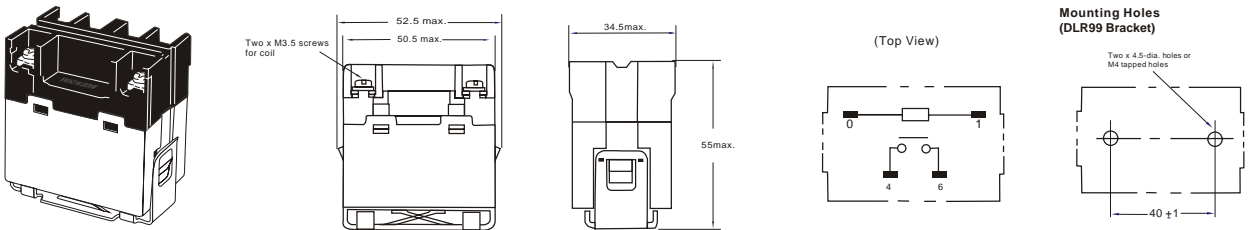
DLR10-2126 / DLR10-2126-K  
(shown with DLR99 mounting bracket)



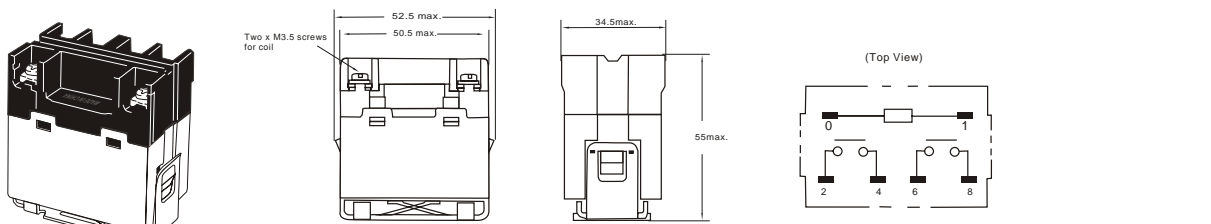
DLR10-2226 / DLR10-2226-K  
(shown with DLR99 mounting bracket)



DLR10-2128 / DLR10-2128-K  
(shown with DLR99 mounting bracket)



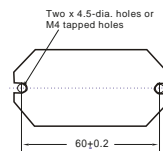
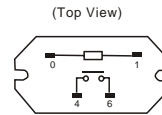
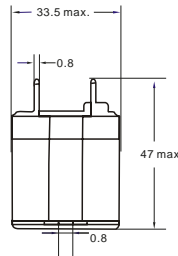
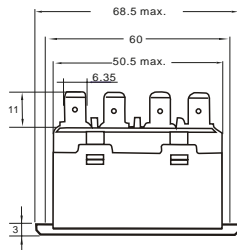
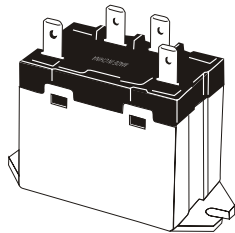
DLR10-2228 / DLR10-2228-K  
(shown with DLR99 mounting bracket)



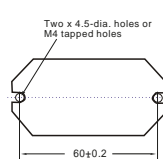
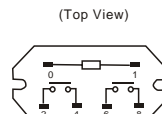
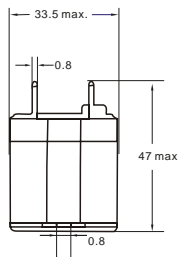
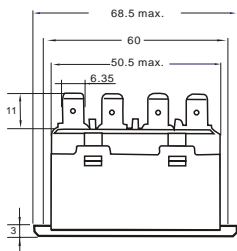
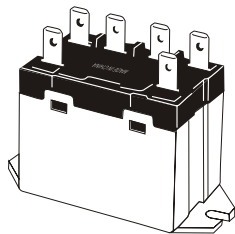
All dimensions in mm

Specifications are subject to change without notice. E&OE.

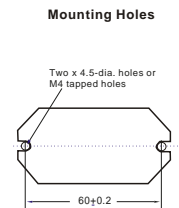
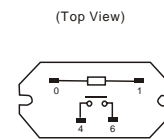
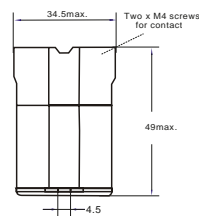
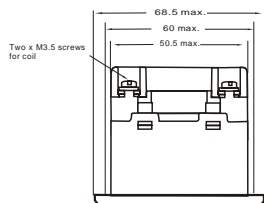
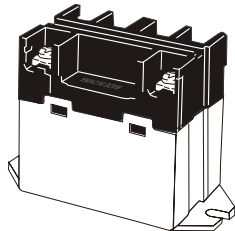
DLR10-2146 / DLR10-2146-K



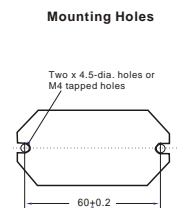
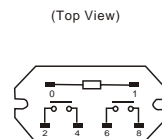
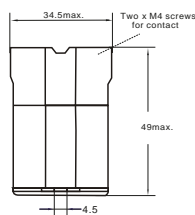
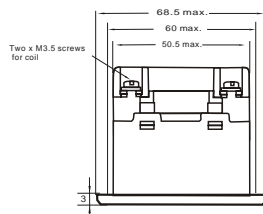
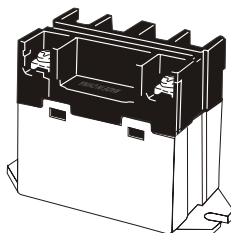
DLR10-2246 / DLR10-2246-K



DLR10-2148 / DLR10-2148-K



DLR10-2248 / DLR10-2248-K



All dimensions in mm

# DLR

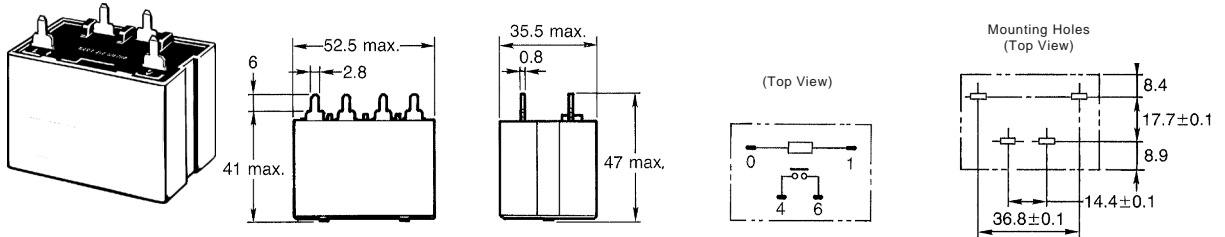
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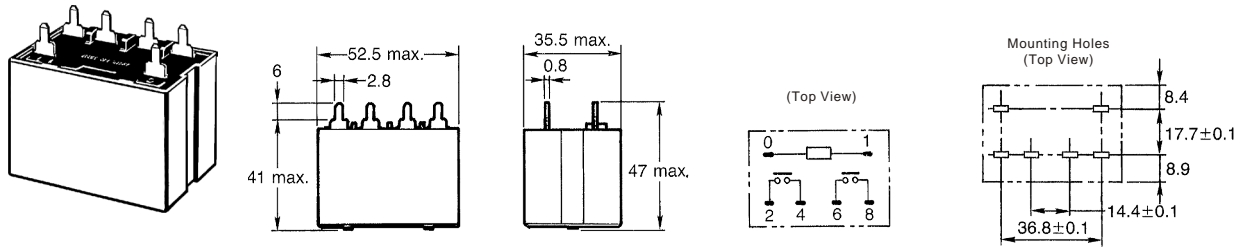
Overall Dimensions and Wiring Diagrams

Fig. 2 (cont.)

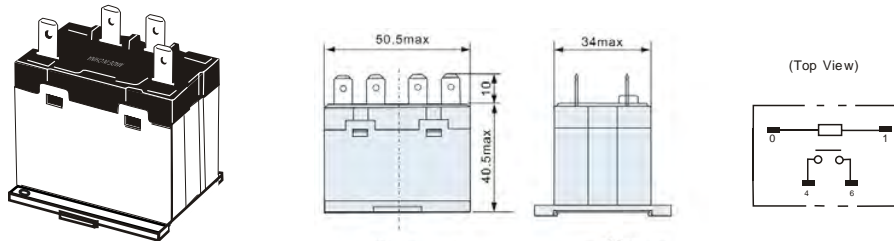
DLR10-2125  
(for PCB mounting)



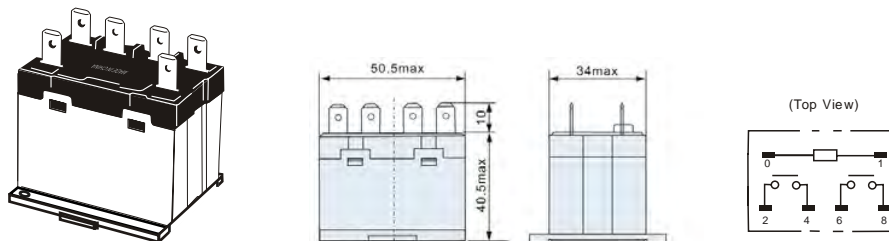
DLR10-2225  
(for PCB mounting)



DLR10-2196  
(for DIN rail mounting)



DLR10-2296  
(for DIN rail mounting)



All dimensions in mm

Specifications are subject to change without notice. E&OE.

# DLR

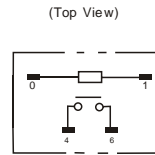
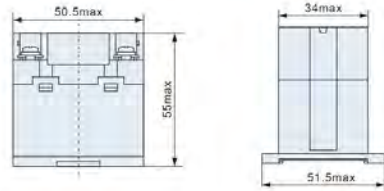
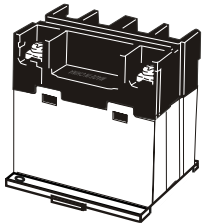
industrial power relay



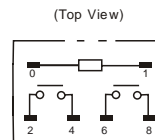
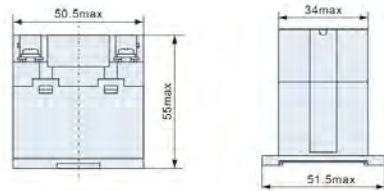
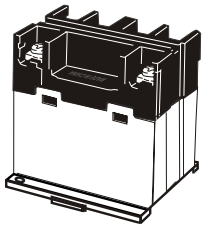
Fig. 2 (cont.)

Overall Dimensions and Wiring Diagrams

DLR10-2198 / DLR10-2198-K  
(for DIN rail mounting)



DLR10-2298 / DLR10-2298-K  
(for DIN rail mounting)

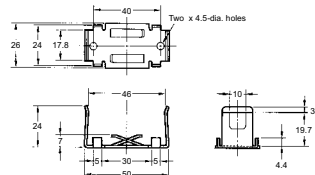
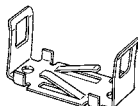


All dimensions in mm

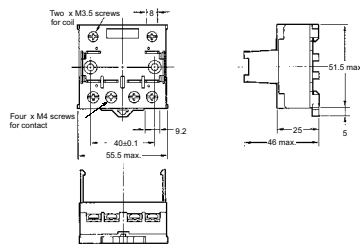
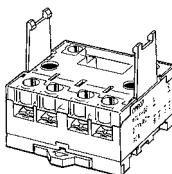
Accessories / Overall Dimensions

Fig. 3

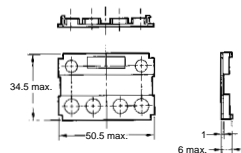
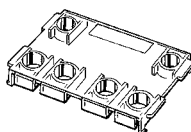
DLR99 Mounting Bracket



DLR7LF-06 DIN Rail Socket



DLR7LF-C Finger protection cover



All dimensions in mm