

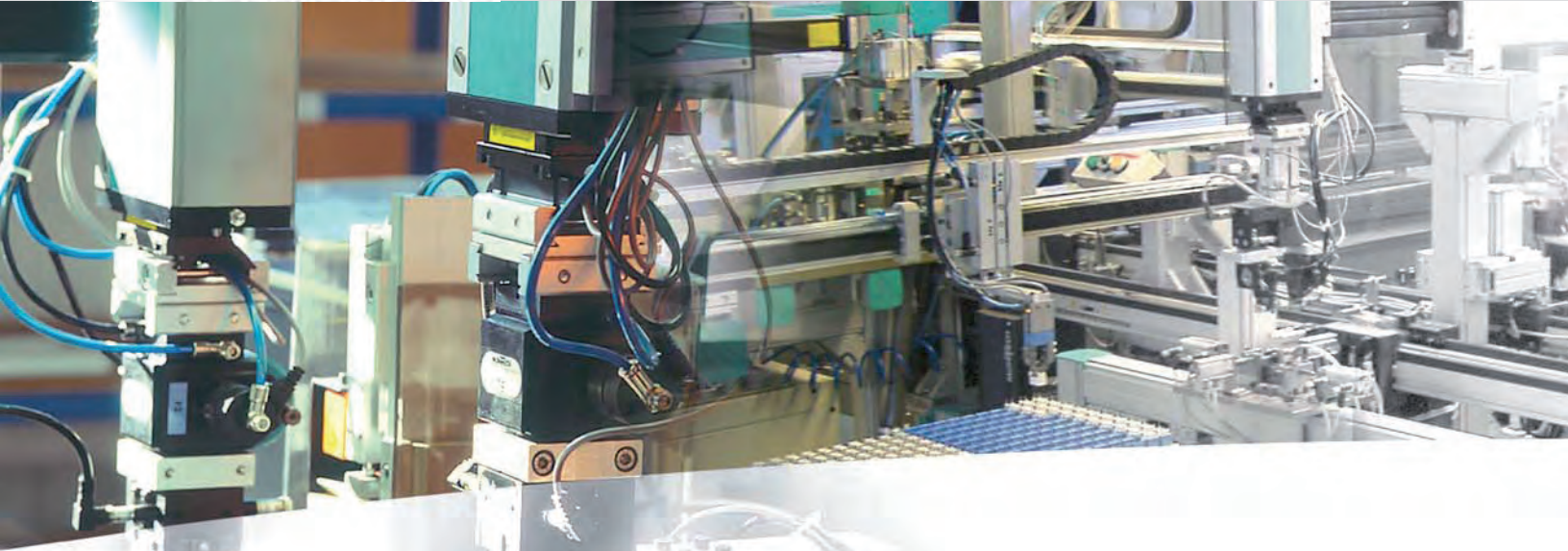
DURAKOOL

Electromechanical
relays
& contactors



miniature relays
industrial relays
automotive relays
interface relays
definite purpose contactors

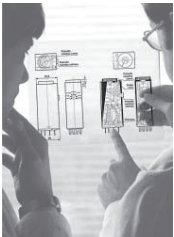
www.durakoolrelays.com



Established in 1935 to manufacture switching devices for power generation

Durakool is a renowned manufacturer of switching and sensing components

used in industrial and power automation, power electronics, industrial electronics, automotive and telecommunications applications.

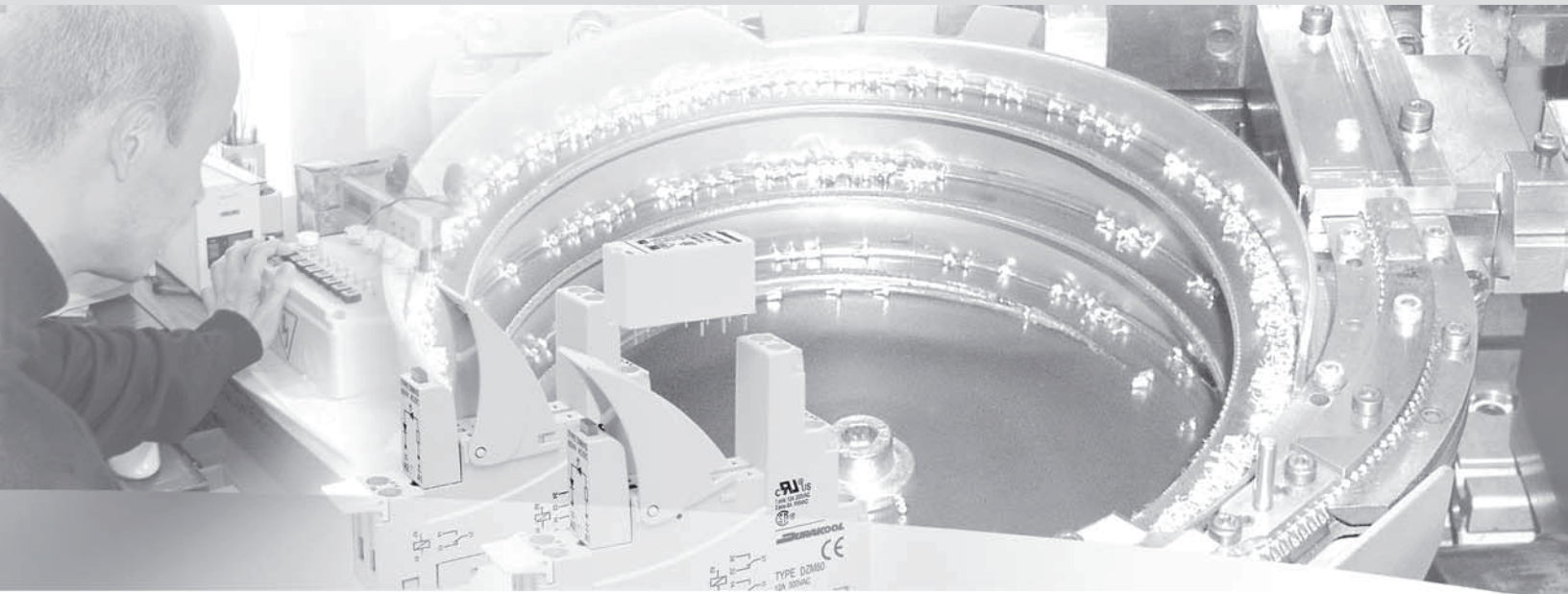


American Electronic Components and Durakool provide their partners technical consultation based upon extensive application knowledge and experience.

After many years of development and innovation, we understand that **quality is paramount** and we pursue a policy of continuous improvement.

For in depth information and data sheets, visit our web site at www.durakoolrelays.com or www.aecensors.com

Due to our very wide product range, **please consult us or your distributor for non-standard items.**



Controlling electricity for over 75 years!

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offer an extensive range of:

ELECTROMECHANICAL RELAYS AND CONTACTORS

RELAY SOCKETS

MERCURY RELAYS AND CONTACTORS

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FLOAT SWITCHES


LIQUID LEVEL SENSORS

PROXIMITY SENSORS

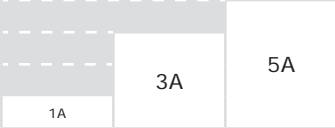
G-FORCE SENSORS AND SWITCHES

HERMETIC SEALS, FEED THRU'S AND SIGHT GLASSES

Series

| Series | DTC0 / DTC0B | DTC1 | DTC2 |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 16 x 11 x 11.5 mm 0.63 x 0.43 x 0.45 in | 12.7 x 7.6 x 10 mm 0.5 x 0.3 x 0.40 in | 21 x 10 x 11.6 mm 0.83 x 0.4 x 0.46 in |
| Features & Applications | Sub-miniature DIL pitch, Two styles 5A / 24V DC rating | Ultra-Miniature High sensitivity SMD type available | Sub-miniature DIL pitch Telecom Relay |

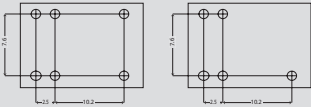
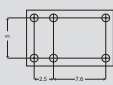
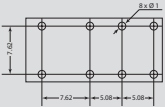
Contacts

| Contact form | SPDT | SPDT | DPDT |
|------------------------|--|----------------------|------------------------|
| Contact materials | AgNi 0.15, AgNi 0.15+Au | AgNi 0.15+Au (0.2µm) | Ag + Au (2µm) |
| Max. switching current |  | 2A | 1A / 2A |
| Max. switching voltage | 120V AC / 24V DC | 120V AC / 60VDC | 120V AC / 24V DC |
| Max. switching power | | 240VA / 48W | 120VA / 48W |
| Rated load (resistive) | 3A 120V AC / 24V DC, 5A 120V AC / 24V DC | 2A 120V AC / 24V DC | 1A 120V AC / 2A 24V DC |





Coil

| | | | |
|---------------------------------|--------------|------------|-------------|
| Rated voltage | DC 3...24V | DC 3...24V | DC 3...48V |
| Rated nominal power consumption | 0.36W, 0.45W | 0.15W | 0.2W, 0.36W |

General data

| | | | |
|---|---|--|---|
| Dielectric strength (between coil and contacts) | 1,250VRMS | 1,000VRMS | 1,000VRMS |
| (between contact poles) | - | - | 1,000VRMS |
| Ambient temperature (operating) | -25...+55°C | -30...+70°C | -30...+80°C |
| Operate/release time (typical) | 5 / 5 ms | 4 / 3 ms | 8 / 4 ms |
| Electrical life (operations) | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| Mechanical life (operations) | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |
| PC Board layout |  |  |  |
| Terminal type | PCB | PCB & SMT | PCB |
| Recognitions, directives, approvals | RoHS | RoHS | RoHS |
| Cross references | Omron: G2E Tyco: OUAZ P&B: T81 | Omron: G5V-1 Panasonic: HY | Omron: G5V-2 Panasonic: DS |

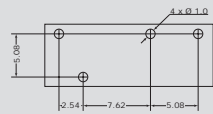
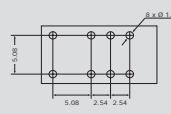
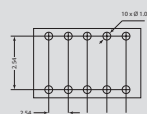
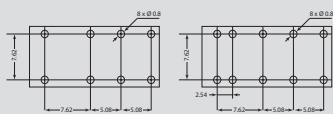
miniature pcb relays

| DTC3 | DTC4 | DTC5 | DG6D |
|---|---|--|---|
|  |  |  |  |
| 20.2 x 10.2 x 10.6 mm 0.79 x 0.40 x 0.42 in | 14 x 9 x 5 mm 0.55 x 0.3 x 0.2 in | 15 x 7.5 x 8.4 mm 0.6 x 0.3 x 0.33 in | 17.5 x 6.5 x 12.5 mm 0.69 x 0.26 x 0.49 in |
| Sub-miniature Latching coils option Sensitive coils | Sub-miniature, low profile Surface mount options Latching coils option | Ultra - miniature Surface mount option Latching coil option | Miniature 5A Power Relay |

| DPDT | DPDT | DPDT | SPST-NO |
|------------------------|--------------------------|-------------|----------------------|
| Ag + Au (2µm) | AgPd + Au (0.2µm) | Ag Alloy | Ag Alloy |
| 1A / 2A | 1A | 2A | 5A |
| 125V AC / 30V DC | 250V AC / 220V DC | 220V DC | 30V DC / 250V AC |
| 125VA / 60W | 62.5VA / 30W | 60W | 1,250VA / 150W |
| 1A 125V AC / 2A 30V DC | 0.5A 125V AC / 1A 30V DC | 2A / 30V DC | 5A / 30V DC, 250V AC |




| | | | |
|-------------------------------------|-------------------------------------|-------------------------------------|------------|
| DC 3...48V DC 3...24V (latching) | DC 3...24V DC 3...24V (latching) | DC 3...24V DC 3...24V (latching) | DC 5...24V |
| 0.075W, 0.15W, 0.2W | 0.1W, 0.14W, 0.2W | 0.1W, 0.14W | 0.2W |

| | | | |
|---------------------|---------------------|---------------------|---------------------|
| 1,000VRMS | 1,000VRMS | 2,000VRMS | 3,000VRMS |
| 1,000VRMS | 1,000VRMS | 1,000VRMS | - |
| -30...+85°C | -30...+85°C | -40...+85°C | -25...+75°C |
| 4 / 3 ms | 2 / 1 ms | 4 / 4 ms | 10 / 5 ms |
| 1 x 10 ⁵ | 2 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| 1 x 10 ⁸ | 1 x 10 ⁸ | 1 x 10 ⁸ | 2 x 10 ⁷ |



| | | | |
|---------------------------------|------------------------------------|----------------------------------|------------|
| PCB | PCB & SMT | PCB & SMT | PCB |
| RoHS | RoHS | RoHS | RoHS |
| Omron: G5V-2 Panasonic: DS2Y | Omron: G6H, G6H2F Panasonic: TQ | Fujitsu: FTR-C1 Panasonic: TX | Omron: G6D |

Series

| | DG18 | DM05 | DG31 |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 15.7 x 12.3 x 14 mm 0.62 x 0.48 x 0.55 in | 20.5 x 10.6 x 15.3 mm 0.8 x 0.42 x 0.6 in | 18.7 x 15.4 x 15.6 mm 0.74 x 0.6 x 0.61 in |
| Features & Applications | Miniature low cost power relay | Small PCB footprint Good isolation - 4kV Sensitive 200mW coil | Industry standard style Low cost DC Motor Control / Lamps |

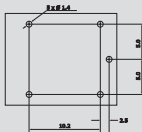
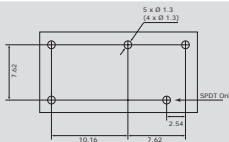
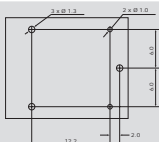



Contacts

| Contact form | SPST-NO / SPDT | SPST-NO / SPDT | SPST-NO / SPDT |
|------------------------|--|---|---------------------------------------|
| Contact materials | Ag Alloy | Ag Alloy | AgCdO / AgSnO ₂ |
| Max. switching current | 16A 10A 8A 5A 3A 2A 1A | 10A (SPST-NO) | 10A |
| Max. switching voltage | 240V AC / 28V DC | 277V AC / 30V DC | 250V AC / 30V DC |
| Max. switching power | 840VA / 400W | 1,250VA / 150W | 1,750VA / 280W |
| Rated load (resistive) | 5A 240V AC 20A 14V DC | 10A 250V AC (UL) 5A 250V AC / 30V DC | 12A 120VAC 7A 250V AC / 10A 28V DC |





Coil

| | | | |
|---------------------------------|-------------|--------------|-----------|
| Rated voltage | DC 6...24V | DC 3...24V | DC 3...48 |
| Rated nominal power consumption | 0.6W / 0.8W | 0.2W / 0.45W | 0.36W |

General data

| | | | |
|--|--|---|--|
| Dielectric strength (between coil and contacts) (between contact poles) | 500VRMS - | 4,000VRMS - | 1,500VRMS - |
| Ambient temperature (operating) | -55...+70°C | -40...+70°C | -40...+70°C |
| Operate/release time (typical) | 10 / 5 ms | 8 / 5 ms | 8 / 5 ms |
| Electrical life (operations) | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| Mechanical life (operations) | 1 x 10 ⁶ | 1 x 10 ⁷ | 1 x 10 ⁷ |
| PC Board layout |  |  |  |
| Terminal type | PCB | PCB | PCB |
| Recognitions, directives, approvals | RoHS  | RoHS  | RoHS  |
| Cross references | Tyco: T78 | Omron: G5Q Panasonic: JQ Fujitsu: JY | Omron: G5LA Tyco: T7N |

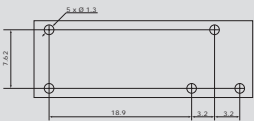
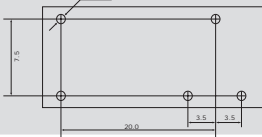
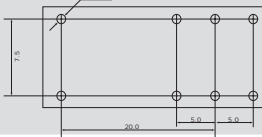
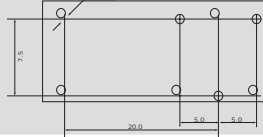




miniature pcb relays

| DG6L | DM41 | DM42 | DM43 |
|---|---|--|---|
|  |  |  |  |
| 28.5 x 10.1 x 12.3 mm 1.12 x 0.4 x 0.48 in | 29 x 13 x 25.3 mm 1.14 x 0.51 x 1.00 in | 29 x 13 x 25.3 mm 1.14 x 0.51 x 1.00 in | 29 x 13 x 25.3 mm 1.14 x 0.51 x 1.00 in |
| 8A switching capability 5kV coil to contact isolation Low height | Industry Standard 10A switching capability 5kV coil to contact isolation | Industry Standard 5A switching capability 5kV coil to contact isolation | Industry Standard 16A switching capability 5kV coil to contact isolation |




| SPST-NO / SPDT | SPST-NO / SPST-NC / SPDT | DPST-NO / DPDT | SPST-NO / SPDT |
|-------------------------|----------------------------|----------------------------|----------------------------|
| AgCdO | AgCdO / AgSnO ₂ | AgCdO / AgSnO ₂ | AgCdO / AgSnO ₂ |
| 8A | 10A | 5A | 16A |
| 440V AC / 125V DC | 240V AC / 28V DC | 240V AC / 28V DC | 240V AC / 28V DC |
| 2,000VA / 150W | 2,400VA / 280W | 1,250VA / 150W | 4,000VA / 450W |
| 8A 250V AC 5A 30V DC | 10A 240V AC 10A 28V DC | 5A 240V AC 5A 28V DC | 16A 240V AC 16A 28V DC |

| | | | |
|---------------|---------------------------|---------------------------|---------------------------|
| DC 5...60 | DC 5...110 AC 12...220 | DC 5...110 AC 12...220 | DC 3...110 AC 12...220 |
| 0.22W / 0.25W | 0.53W / 1.0VA | 0.53W / 1.0VA | 0.53W / 1.0VA |

| | | | |
|---------------------|---------------------|---------------------|---------------------|
| 5,000VRMS | 5,000VRMS | 5,000VRMS | 5,000VRMS |
| - | - | 1,000VRMS | - |
| -40...+85°C | -55...+75°C | -55...+70°C | -55...+70°C |
| 7 / 3 ms | 20 / 10 ms | 20 / 10 ms | 20 / 10 ms |
| 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |

| | | | |
|--|--|---|--|
|  |  |  |  |
| PCB | PCB | PCB | PCB |
| RoHS  | RoHS  | RoHS  | RoHS  |
| Omron: G6RN Tyco: RYII | Omron: G2R1 Tyco: RPII/1 | Omron: G2R2 Tyco: RPII/2 | Omron: G2R1-AE Tyco: RPII/1 |

Series

| | DM84 | DM85 | DM87 |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 29 x 12.7 x 15.7 mm 1.14 x 0.5 x 0.62 in | 29 x 12.7 x 15.7 mm 1.14 x 0.5 x 0.62 in | 29 x 12.7 x 15.7 mm 1.14 x 0.5 x 0.62 in |
| Features & Applications | DPDT 8A switching capability Low Profile 12.7mm Reduced current coil | SPDT 16A Low Profile 12.7mm Reduced current coil | SPDT 12A Low Profile 12.7mm Reduced current coil |

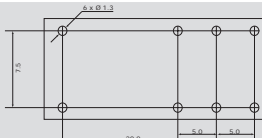
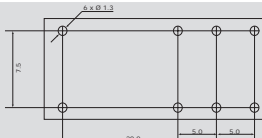
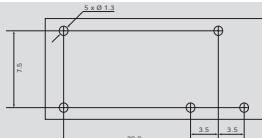












Contacts

| Contact form | DPST-NO / DPDT | SPST-NO / SPDT | SPST-NO / SPDT |
|------------------------|--|--|--|
| Contact materials | AgNi / AgNi+Au5mm / AgSnO ₂ | AgNi / AgNi+Au5mm / AgSnO ₂ | AgNi / AgNi+Au5mm / AgSnO ₂ |
| Max. switching current | 8A | 16A | 12A |
| Max. switching voltage | 400V AC / 300V DC | 400V AC / 300V DC | 400V AC / 300V DC |
| Max. switching power | 2,000VA / 192W | 4,000VA / 385W | 3,000VA / 280W |
| Rated load (resistive) | 8A 250V AC 8A 24V Dc | 16A 250V AC 16A 24V DC | 12A 250V AC 12A 24V DC |

Coil

| | | | |
|---------------------------------|---------------------------|---------------------------|---------------------------|
| Rated voltage | DC 3...110 AC 12...240 | DC 3...110 AC 12...240 | DC 3...110 AC 12...240 |
| Rated nominal power consumption | 0.4...0.48W / 0.75VA | 0.4...0.48W / 0.75VA | 0.4...0.48W / 0.75VA |

General data

| | | | |
|---|--|---|--|
| Dielectric strength (between coil and contacts) | 5,000VRMS | 5,000VRMS | 5,000VRMS |
| (between contact poles) | 2,500VRMS | - | - |
| Ambient temperature (operating) | -40...+70°C | -40...+70°C | -40...+70°C |
| Operate/release time (typical) | 7 / 3 ms | 7 / 3 ms | 7 / 3 ms |
| Electrical life (operations) | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| Mechanical life (operations) | 3 x 10 ⁷ | 3 x 10 ⁷ | 3 x 10 ⁷ |
| PC Board layout |  |  |  |
| Terminal type | PCB & SMT | PCB & SMT | PCB & SMT |
| Recognitions, directives, approvals | RoHS     | RoHS     | RoHS     |
| Cross references | Tyco: RT Omron: G2RL | Tyco: RT Omron: G2RL | Tyco: RT Omron: G2RL |

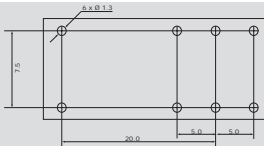
miniature pcb relays

| DX84 | DX85 | DX87 | DX85V |
|---|---|--|---|
|  |  |  |  |
| 29 x 12.7 x 15.7 mm 1.14 x 0.5 x 0.62 in | 29 x 12.7 x 15.7 mm 1.14 x 0.5 x 0.62 in | 29 x 12.7 x 15.7 mm 1.14 x 0.5 x 0.62 in | 41 x 12.7 x 15.7 mm 1.6 x 0.5 x 0.62 in |
| DPDT 8A switching capability Low Profile 12.7mm Reduced current coil | SPDT 16A Low Profile 12.7mm Reduced current coil | SPDT 12A Low profile 12.7mm Sensitive 250mW coil option | Fast-on power terminals High temperature 125°C 20A switching capability |

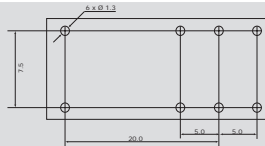
| DPDT | SPDT | SPDT | SPST-NO |
|---------------------------|---------------------------|---------------------------|--------------------------|
| AgNi / AgSnO ₂ | AgNi / AgSnO ₂ | AgNi / AgSnO ₂ | AgSnO ₂ |
| 8A | 16A | 10A / 12A | 20A |
| 440V AC / 125V DC | 440V AC / 125V DC | 440V AC / 125V DC | 440V AC / 125V DC |
| 2,000VA / 240W | 4,000VA / 480W | 3,000VA / 290W | 5,000VA |
| 8A 250V AC 8A 30V DC | 16A 250V AC 16A 30V DC | 12A 250V AC 12A 24V DC | 20A 250V AC 20A 30VDC |

| | | | |
|------------|------------|-------------|------------|
| DC 5...110 | DC 5...110 | DC 5...110 | DC 5...110 |
| 0.4W | 0.4W | 0.25 / 0.4W | 0.4W |

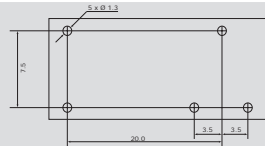
| | | | |
|---------------------|---------------------|---------------------|---------------------|
| 5,000VRMS | 5,000VRMS | 5,000VRMS | 5,000VRMS |
| 2,500VRMS | - | - | - |
| -40...+85°C | -40...+85°C | -40...+85°C | -40...+125°C |
| 15 / 8 ms | 15 / 8 ms | 15 / 8 ms | 15 / 8 ms |
| 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |



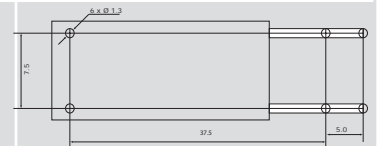
PCB



PCB



PCB



PCB

RoHS 

RoHS 

RoHS 

RoHS 

Tyco: RT
Omron: G2RL

Tyco: RT
Omron: G2RL

Tyco: RT
Omron: G2RL

Tyco: RF

Series

| | DG34 | DG38 | DG38L |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 31.7 x 26.9 x 19.1 mm 1.25 x 1.06 x 0.75 in | 32.5 x 27 x 20.5 mm 1.27 x 1.06 x 0.81 in | 32.2 x 27.5 x 28 mm 1.27 x 1.08 x 1.10 in |
| Features & Applications | 30A High Current Open, sealed and chassis ideal for heavy loads | High Current - up to 40A PCB mounting ideal for heavy loads | High Current - up to 45A Heavy loads - 10800VA Magnetic arc quench |

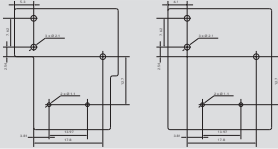
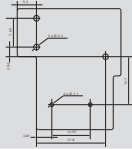
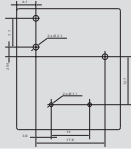






Contacts

| Contact form | SPST-NO, SPDT | SPST-NO, SPST-NC, SPDT | SPST-NO, SPDT |
|------------------------|--|---------------------------|--------------------------|
| Contact materials | AgCdO, AgSnOInO, AgSnO ₂ | AgCdO, AgSnO ₂ | AgCdO, AgSnOInO |
| Max. switching current | 100A 80A 60A 40A 30A 20A 10A | | |
| | 30A | 30 / 40A | 45A |
| Max. switching voltage | 277V AC / 30V DC | 240V AC / 110V DC | 240V AC / 28V DC |
| Max. switching power | 7,200VA / 900W | 7,200VA / 1,100W | 10,800VA / 1,260W |
| Rated load (resistive) | 30A 277V AC 30A 30V DC | 40A 240V AC 40A 14V DC | 45A 240V AC 45A 28VDC |

Coil

| | | | |
|---------------------------------|-------------|-----------------------------|-------------|
| Rated voltage | DC 5...110V | DC 3...110V AC 12...220V | DC 5...110V |
| Rated nominal power consumption | 0.9W / 1.0W | 0.6W / 0.9W / 2VA | 0.9W |

General data

| | | | |
|---|--|--|--|
| Dielectric strength (between coil and contacts) (between contact poles) | 1,500VRMS - | 4,000VRMS - | 1,500VRMS - |
| Ambient temperature (operating) | -55...+85°C | -55...+125°C | -55...+85°C |
| Operate/release time (typical) | 15 / 15 ms | 15 / 10 ms | 15 / 10 ms |
| Electrical life (operations) | 1 x 10 ⁵ | 1 x 10 ⁵ | 1.5 x 10 ⁴ |
| Mechanical life (operations) | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |
| PC Board layout |  |  |  |
| Terminal type | PCB, Fast-on & PCB+Fast-on | PCB | PCB+Fast-on |
| Recognitions, directives, approvals | RoHS   | RoHS   | RoHS   |
| Cross references | Tyco: T9A Omron: G8P | Tyco: T9A Omron: G8P | |

automotive relays

Series

DG17

DG19

DG20

Click on photograph for data sheet



Dimensions L x W x H

16 x 13.2 x 19.7 mm
0.63 x 0.52 x 0.78 in

26.5 x 21.5 x 21.5 mm
1.04 x 0.85 x 0.85 in

12.9 x 12 x 9.9 mm
0.50 x 0.47 x 0.39 in

Features

6 different contact configurations
Open frame or sealed

Open or enclosed options.
USA & Europe styles
DC motor control, flashers

Ultra Miniature
Extremely light weight
High current - 30A

Contacts

Contact form

SPST-NO, SPST-NC, SPDT,
SPST-NO-DM, SPST-NC-DB,
SPST-DB-DM

SPST-NO, SPST-NC, SPDT

SPST-NO, SPDT

Contact materials

AgNi0.15, AgNi, AgSn0In0, AgCdO

AgNi0.15, AgNi, AgSn0In0, AgCdO

AgNi0.15, AgSn0In0

Max. switching current

100A
80A
60A
40A
30A
20A
10A

15A (100A inrush)

45A (180A inrush)

30A (100A inrush)

Max. switching voltage

16V DC

30V DC

16V DC

Max. switching power

1,200W

2,160W

1,200W

Rated load (resistive)

NO: 15A / NC: 10A

NO: 45A / NC: 30A

NO: 30A / NC: 25A

Coil

Rated voltage

DC 6, 12, 24V

DC 6, 12, 24

DC 6, 10, 12

Rated nominal power consumption

1.1W

1.5W

0.55W

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

500V_{RMS}

500V_{RMS}

500V_{RMS}

-

-

-

Ambient temperature (operating)

-40...+85°C

-40...+125°C

-40...+105°C

Operate/release time (typical)

3 / 1.5 ms

5 / 3 ms

3 / 1.5 ms

Electrical life (operations)

2 x 10⁵

2 x 10⁵

1 x 10⁵

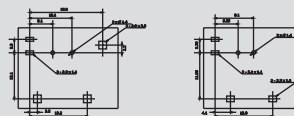
Mechanical life (operations)

1 x 10⁷

1 x 10⁷

1 x 10⁷

PC Board layout



Terminal type

PCB

PCB

PCB

Recognitions, directives, approvals

RoHS

RoHS

RoHS

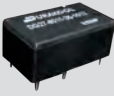


Cross references

Tyco: Mini K (V23072)
P&B: VKM

Tyco: K (V23076)
P&B: VKP
Omron: G8PE

Tyco: Micro K (V23086)

Series

| Series | DG27 | DG31A | DG34A |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 23.5 x 12.9 x 9.5 mm 0.93 x 0.51 x 0.37 in | 19 x 15.5 x 15 mm 0.75 x 0.61 x 0.59 in | 31.7 x 26.9 x 19.1 mm 1.25 x 1.06 x 0.75 in |
| Features & Applications | Sub-miniature 2 x DG20 up to 2 x 30A switching ideal for DC motor reversing | Low cost Industry standard footprint 20A switching capability | Low cost 30A switching capability Optimised for DC |

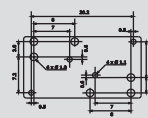
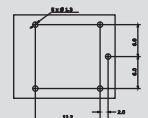
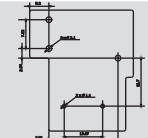
Contacts

| | | | |
|------------------------|--|---------------------------------|---------------------------------|
| Contact form | 2 x SPST-NO, 2 x SPDT | SPST-NO, SPDT | SPST-NO, SPST-NC, SPDT |
| Contact materials | AgNi0.15, AgSn0InO | AgNi0.15, AgNi, AgSn0InO, AgCdO | AgNi0.15, AgNi, AgSn0InO, AgCdO |
| Max. switching current | 100A 80A 60A 40A 30A 20A 10A | | |
| Max. switching voltage | 16V DC | 16V DC | 75V DC |
| Max. switching power | 1,200W | 320W | 360W |
| Rated load (resistive) | NO: 30A / NC: 25A | 20A | NO: 30A / NC: 15, 20A |

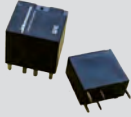



Coil

| | | | |
|---------------------------------|---------------|---------------|---------------|
| Rated voltage | DC 6, 10, 12V | DC 6, 12, 24V | DC 6, 12, 24V |
| Rated nominal power consumption | 0.55W | 0.8W | 0.9W, 1W |

General data

| | | | |
|---|---|--|---|
| Dielectric strength (between coil and contacts) (between contact poles) | 500V _{RMS} - | 1,000V _{RMS} - | 500V _{RMS} - |
| Ambient temperature (operating) | -55...+105 °C | -40...+85 °C | -40...+125 °C |
| Operate/release time (typical) | 3 / 1.5 ms | 10 / 5 ms | 9 / 7 ms |
| Electrical life (operations) | 1 x 10 ⁵ | 1 x 10 ⁵ | 2 x 10 ⁵ |
| Mechanical life (operations) | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |
| PC Board layout |  |  |  |
| Terminal type | PCB | PCB | PCB |
| Recognitions, directives, approvals | RoHS | RoHS | RoHS |
| Cross references | Tyco: Double Micro K (V23086) | Tyco: T72M Panasonic: CQ Omron: G8SN | Tyco: T91 / T9AR Panasonic: JT-N |

automotive relays

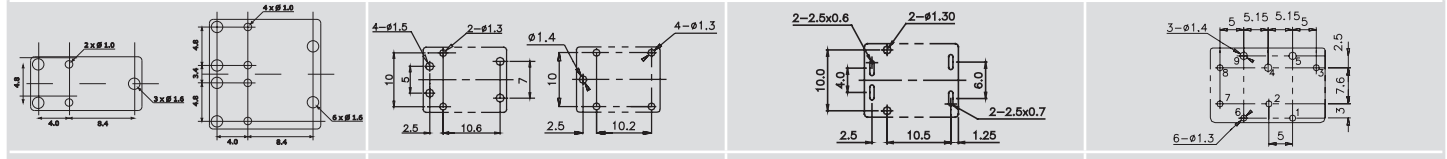
| DG60 | DG81 | DG81C | DG08 |
|---|---|--|---|
|  |  |  |  |
| 14.3 x 7.5 x 13.8 mm (single) 14.3 x 14.7 x 13.8 mm (twin) | 15.7 x 12.3 x 13.7 mm 0.62 x 0.48 x 0.54 in | 15.7 x 12.3 x 13.8 mm 0.62 x 0.48 x 0.54 in | 24.3 x 15.8 x 14.0 mm 0.96 x 0.62 x 0.55 in |
| Ultra miniature Twin & single relay types | High current capabilities Extended temperature 125°C Double make configurations | High current 2 x 35A 1 Form U contact | 2 x DG81 High current switching Ideal for DC motor control |

| | | | |
|--------------------|------------------------------------|---------------------------|---------------------------------|
| SPDT, 2 x SPDT | SPST-NO, SPST-NC, SPDT, SPST-NO-DM | SPST-NO-DM | 2 x SPDT |
| AgSnO ₂ | AgNi0.15, AgSnOInO, AgCdO | AgNi0.15, AgSnOInO, AgCdO | AgNi0.15, AgNi, AgSnOInO, AgCdO |
| | | | |
| | | | |

| | | | |
|--------|------------------|----------------------|----------------------|
| 25A | 30A (60A inrush) | 2 x 30A (35A inrush) | 2 x 35A (60A inrush) |
| 16V DC | 16V DC | 16V DC | 16VDC |
| 300W | 360W | 2 x 360W (2 min) | 420W (10 min) |
| 25A | 35A / 2 x 10A | 2 x 30A | 2 x 35A (10 min) |

| | | | |
|-------------------|------------|------------|------------|
| DC 12V | DC 6...24V | DC 6...12V | DC 6...24V |
| 0.64W, 0.8W, 1.1W | 0.6W, 0.8W | 0.85W | 0.6W, 0.8W |

| | | | |
|---------------------|---------------------|---------------------|---------------------|
| 500V _{RMS} | 500V _{RMS} | 500V _{RMS} | 500V _{RMS} |
| - | - | - | - |
| -40...+105°C | -40...+125°C | -40...+85°C | -30...+85°C |
| 2.5 / 1.2 ms | 10 / 5 ms | 10 / 5 ms | 10 / 5 ms |
| 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| 1 x 10 ⁶ | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |



| | | | |
|------------------------|---|---|---------------------|
| PCB | PCB | PCB | PCB |
| RoHS | RoHS | RoHS | RoHS |
| Omron: G8N, G8ND, G8NW | Fujitsu: FBR51 / FBR52 Panasonic: JJM Omron: G8QN | Fujitsu: FBR53ND10-Y-HW Panasonic: JJM-DM Omron: G8SE | Fujitsu: FBR510-520 |

Series

| Series | DG82 | DG90 | DG56A |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 23.7 x 15.7 x 26.0 mm 0.93 x 0.62 x 1.02 in (exc. terminals) | 22.5 x 15.2 x 15.7 mm 0.89 x 0.60 x 0.62 in (exc. terminals) | 26 x 26 x 24 mm 1.02 x 1.02 x 0.94 in (exc. terminals) |
| Features & Applications | Micro - ISO style 40A continuous current PCB mounting option | Micro-ISO style Reduced height 20A continuous current | Mini-ISO style 40A continuous current Plug-in, PCB & Bracket |

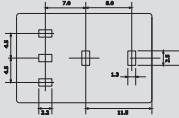
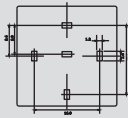
Contacts

| | | | |
|------------------------|--|--------------------|----------------------------|
| Contact form | SPST-NO, SPST-NC, SPDT | SPST-NO | SPST-NO, SPDT |
| Contact materials | AgNi0.15, AgNi, AgSn0In0, AgCdO | AgSnO ₂ | AgSnO ₂ |
| Max. switching current | 100A 80A 60A 40A 30A 20A 10A | | |
| | 40A (120A inrush) | 20A (40A inrush) | 40A (120A inrush) |
| Max. switching voltage | 16V DC (current dependent) | 16V DC | 30V DC (current dependent) |
| Max. switching power | 1,440W | 240W | 1,440W |
| Rated load (resistive) | NO: 40A / NC: 30A | 20A | NO: 40A / NC: 30A |





Coil

| | | | |
|---------------------------------|---------------|-------|--------------|
| Rated voltage | DC 6, 12, 24V | DC 12 | DC 6, 12, 24 |
| Rated nominal power consumption | 1.2W, 1.5W | 1.2W | 1.6W |

General data

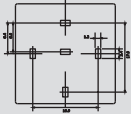
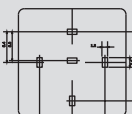
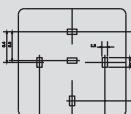
| | | | |
|--|---|--|---|
| Dielectric strength (between coil and contacts) (between contact poles) | 500V _{RMS} - | 500V _{RMS} - | 500V _{RMS} - |
| Ambient temperature (operating) | -55...+125°C | -40...+120°C | -40...+85°C |
| Operate/release time (typical) | 39 / 7 ms | | 7 / 5 ms |
| Electrical life (operations) | 2 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| Mechanical life (operations) | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |
| PC Board layout |  | See Durakool Socket Catalogue for suitable sockets |  |
| Terminal type | PCB & Plug-in | Plug-in only | PCB & Plug-in |
| Recognitions, directives, approvals | RoHS | RoHS | RoHS |
| Cross references | Tyco: Micro A Tyco: VFM | | Tyco: VF4 (V23134) |

automotive relays

| DG56B | DG4F | DG85A | DG85B |
|---|---|--|---|
|  |  |  |  |
| 26 x 26 x 24 mm 1.02 x 1.02 x 0.94 in (exc. terminals) | 36 x 25.2 x 21 mm 1.42 x 0.99 x 0.83 in (exc. terminals) | 28 x 28 x 25 mm 1.10 x 1.10 x 1 in (exc. terminals) | 28 x 28 x 25 mm 1.10 x 1.10 x 1 in (exc. terminals) |
| Mini-ISO style 60A continuous current Plug-in, PCB & Bracket | Mini ISO style Integrated Auto Fuse Holder Plug-in with Bracket option | Mini-ISO style 40A continuous current Plug-in, PCB & Bracket | Mini-ISO style 60A continuous current Plug-in, PCB & Bracket |

| | | | |
|----------------------------|----------|---------------------------------------|---------------------------------------|
| SPST-NO, SPDT | SPST-NO | SPST-NO, SPDT | SPST-NO, SPDT |
| AgSnO ₂ | AgSnOInO | AgCdO, AgNi0.15, AgNi 90/10, AgSnOInO | AgCdO, AgNi0.15, AgNi 90/10, AgSnOInO |
| 60A (120A inrush) | 30A | 40A (120A inrush) | 60A (120A inrush) |
| 30V DC (current dependent) | 14V DC | 30VDC (current dependent) | 30VDC (current dependent) |
| 1,440W | 420W | 1440W | 1440W |
| NO: 60A / NC: 40A | 30A | NO: 40A / NC: 30A | NO: 60A / NC: 40A |

| | | | |
|--------------|--------------|--------------|--------------|
| DC 6, 12, 24 | DC 6, 12, 24 | DC 6, 12, 24 | DC 6, 12, 24 |
| 1.6W | 1.8W | 1.6W | 1.6W |

| | | | |
|---|---|--|---|
| 500V _{RMS} | 550V _{RMS} | 500V _{RMS} | 500V _{RMS} |
| - | - | - | - |
| -40...+85°C | -40...+125°C | -40...+125°C | -40...+125°C |
| 7 / 5 ms | 7 / 5 ms | 7 / 2 ms | 7 / 2 ms |
| 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ |
|  | See Durakool Socket Catalogue for suitable sockets |  |  |
| PCB & Plug-in | Plug-in only | PCB & Plug-in | PCB & Plug-in |
| RoHS | RoHS | RoHS | RoHS |
| Tyco: F7 (V23134) | | Tyco: VF4 (V23134) Panasonic: CB | Tyco: VF4 Omron: G8JN |

Series

DG85C

DG85D

DG85F

Click on photograph for data sheet



Dimensions L x W x H

28 x 28 x 25 mm
1.10 x 1.10 x 1 in (exc. terminals)

28 x 28 x 25 mm
1.10 x 1.10 x 1 in (exc. terminals)

28 x 28 x 25 mm
1.10 x 1.10 x 1 in (exc. terminals)

Features & Applications

Mini-ISO style
80A continuous current
Plug-in, PCB & Bracket

Mini-ISO style
100A continuous current
Plug-in, PCB & Bracket

Mini-ISO style
Optimised for 24V DC
60A continuous current

Contacts

Contact form

SPST-NO, SPDT

SPST-NO

SPST-NO, SPDT

Contact materials

AgCdO, AgNiO.15, AgNi 90/10, AgSnOInO

AgCdO, AgNiO.15, AgNi 90/10, AgSnOInO

AgCdO, AgNiO.15, AgNi 90/10, AgSnOInO

Max. switching current

100A
80A
60A
40A
30A
20A
10A

80A (240A inrush)

100A (240A inrush)

60A (120A inrush)

Max. switching voltage

30VDC (current dependent)

30VDC (current dependent)

24VDC

Max. switching power

2,880W

2,880W

1,440W

Rated load (resistive)

NO: 80A / NC: 60A

100A

60A

Coil

Rated voltage

DC 6, 12, 24V

DC 6, 12, 24V

DC 6, 12, 24V

Rated nominal power consumption

1.6W

1.6W

2.3W

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

500V_{RMS}

500V_{RMS}

500V_{RMS}

Ambient temperature (operating)

-40...+125°C

-40...+125°C

-40...+125°C

Operate/release time (typical)

7 / 2 ms

7 / 2 ms

7 / 2 ms

Electrical life (operations)

1 x 10⁵

1 x 10⁵

5 x 10⁴

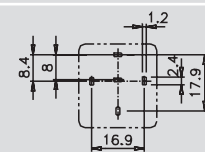
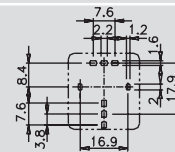
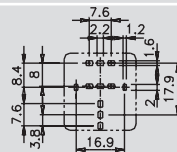
Mechanical life (operations)

1 x 10⁷

1 x 10⁷

5 x 10⁵

PC Board layout



Terminal type

PCB & Plug-in

PCB & Plug-in

PCB & Plug-in

Recognitions, directives, approvals

RoHS

RoHS

RoHS

Cross references

Tyco: VF7

industrial relays

Series

D2

D3

D4

Click on photograph for data sheet



Dimensions L x W x H

27.5 x 21.2 x 35.6 mm
1.08 x 0.83 x 1.4 in

27.5 x 21.2 x 35.6 mm
1.08 x 0.83 x 1.4 in

27.5 x 21.2 x 35.6 mm
1.08 x 0.83 x 1.4 in

Features & Applications

12A switching
Test lever and LED
Industry standard pin relay

10A switching
Test lever and LED
Industry standard pin relay

6A switching
Test lever and LED
Industry standard relay

Contacts

Contact form

DPDT

3PDT

4PDT

Contact materials

AgNi, AgNi/Au 0.2µm, AgNi/Au 5µm

AgNi, AgNi/Au 0.2µm, AgNi/Au 5µm

AgNi, AgNi/Au 0.2µm, AgNi/Au 5µm

Max. switching current

35A
30A
25A
20A
15A
10A
5A

12A

10A

6A

Max. switching voltage

250V AC, 250V DC

250V AC, 250V DC

250V AC, 250V DC

Max. switching power

3,000VA / 288W

2,500VA / 240W

1,500VA / 145W

Rated load (resistive)

12A 250V AC
12A 24V DC

10A 250V AC
10A 24V DC

6A 250V AC
6A 24V DC

Coil

Rated voltage

DC 5...220V
AC 6...240V

DC 5...220V
AC 6...240V

DC 5...220V
AC 6...240V

Rated nominal power consumption

DC 0.9W, AC 1.6VA

DC 0.9W, AC 1.6VA

DC 0.9W, AC 1.6VA

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

2,500V AC

2,500V AC

2,500V AC

2,500V AC

2,500V AC

2,500V AC

Ambient temperature (operating)

AC: -40...+55°C
DC -40...+70°C

AC: -40...+55°C
DC -40...+70°C

AC: -40...+55°C
DC -40...+70°C

Operate/release time (typical) AC

AC: 10 / 8, DC: 13 / 3 ms

AC: 10 / 8, DC: 13 / 3 ms

AC: 10 / 8, DC: 13 / 3 ms

Electrical life (operations)

1 x 10⁵

1 x 10⁵

1 x 10⁵

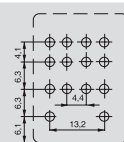
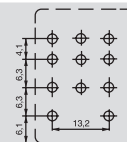
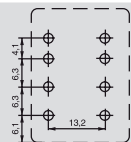
Mechanical life (operations)

2 x 10⁷

2 x 10⁷

2 x 10⁷

PC Board layout



Terminal type

Plug-in, PCB

Plug-in, PCB

Plug-in, PCB

Recognitions, directives, approvals

RoHS

RoHS

RoHS

Cross references

Omron: MY2

Omron: MY4

Series

DX2

DX4

DY

Click on photograph for data sheet



Dimensions L x W x H

27 x 21 x 36.5 mm
1.06 x 0.83 x 1.44 in

27 x 21 x 36.5 mm
1.06 x 0.83 x 1.44 in

28 x 21 x 36 mm
1.1 x 0.83 x 1.42 in

Features Applications

Industry standard relay
10A switching
LED and test lever

Industry standard relay
5A switching, 3PDT option
LED & Test Lever

16A SPDT / 10A DPDT
General purpose relay
Industry standard style

Contacts

Contact form

DPDT

4PDT

SPDT, DPDT

Contact materials

AgNi

AgNi

AgCdO

Max. switching current

35A
30A
25A
20A
15A
10A
5A

10A

5A

16A
SPDT

10A
DPDT

Max. switching voltage

240V AC / 28V DC

240V AC / 28V DC

277V AC / 28V DC

Max. switching power

2,400VA / 280W

1,200VA / 140W

3,840VA / 450W

Rated load (resistive)

10A 240VAC
10A 28V DC

5A 240V AC
5A 28V DC

16A 240V AC
16A 28V DC

Coil

Rated voltage

DC 6...220V
AC 6...380V

DC 6...220V
AC 6...380V

DC 6...220V
AC 6...380V

Rated nominal power consumption

0.9W / 1.2VA

0.9W / 1.2VA

0.9W / 1.2VA

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

1,500V_{RMS}

1,500V_{RMS}

1,500V_{RMS}

1,000V_{RMS}

1,000V_{RMS}

1,000V_{RMS}

Ambient temperature (operating)

-55...+70°C

-55...+70°C

-40...+70°C

Operate/release time (typical)

20 /20 ms

20 /20 ms

20 /20 ms

Electrical life (operations)

1 x 10⁵

1 x 10⁵

1 x 10⁵

Mechanical life (operations)

1 x 10⁷

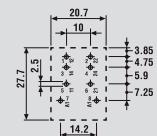
1 x 10⁷

1 x 10⁷

PC Board layout

See Durakool Socket
Catalogue for suitable PCB
sockets

See Durakool Socket
Catalogue for suitable PCB
sockets



Terminal type

Plug-in

Plug-in

PCB, Plug-in

Recognitions, directives, approvals

RoHS

RoHS

RoHS 





Cross references

Omron: MY2

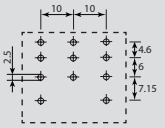
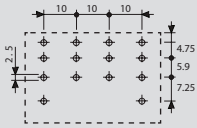




Omron: MY4

Omron: LY1 & LY2
Tycos: PCLH

industrial relays

| DY | DY | DY2 | D15 |
|---|---|--|---|
|  |  |  |  |
| 28 x 31 x 36 mm 1.1 x 1.22 x 1.42 in | 28 x 41 x 36 mm 1.1 x 1.61 x 1.42 in | 27.5 x 21.1 x 34.5 mm 1.08 x 0.83 x 1.36 in | 35 x 35 x 54.4 mm 1.38 x 1.38 x 2.14 in |
| 10A 3PDT PCB & Plug-in styles Industry standard relay | 10A 4PDT PCB & Plug-in styles Industry standard relay | 12A DPDT Plug-in and chassis mounting 2.5 kV isolation | 10A DPDT & 3PDT Octal & 11 pin LED & Test lever |

| 3PDT | 4PDT | DPDT | DPDT, 3PDT |
|----------------------------|----------------------------|----------------------------|----------------------------------|
| AgCdO | AgCdO | AgNi, AgCdO | AgNi, AgNi/Au 0.2µm, AgNi/Au 5µm |
| | | | |
| | | | |
| 10A | 10A | 12A | 10A |
| 277V AC / 28V DC | 277V AC / 28V DC | 250V AC / 250V DC | 250V AC / 250V DC |
| 2,400VA / 280W | 2,400VA / 280W | 3,000VA / 360W | 2500VA / 240W, |
| 10A 240V AC 10A 28V DC | 10A 240V AC 10A 28V DC | 12A 250V AC 12A 30V DC | 10A 250V AC 10A 24V DC |
| DC 6...220V AC 6...380V | DC 6...220V AC 6...380V | DC 5...220V AC 6...240V | DC 6...220V AC 6...240V |
| 0.9W / 1.2VA | 0.9W / 1.2VA | 0.9W / 1.6VA | 1.5W / 2.8VA |

| | | | |
|--|--|---|--|
| 1,500V _{RMS} | 1,500V _{RMS} | 2,500V _{RMS} | 2,500V _{RMS} |
| 1,000V _{RMS} | 1,000V _{RMS} | 2,500V _{RMS} | 2,000V _{RMS} |
| -40...+70°C | -40...+70°C | -40...+55°C | -40...+55°C |
| 20 / 20 ms | 20 / 20 ms | 15 / 10 ms | AC: 12 / 10 ms DC: 18 / 7 ms |
| 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ | 2 x 10 ⁵ |
| 1 x 10 ⁷ | 1 x 10 ⁷ | 1 x 10 ⁷ | 2 x 10 ⁷ |
|  |  | See Durakool Socket Catalogue for suitable sockets | See Durakool Socket Catalogue for suitable sockets |
| PCB, Plug-in | PCB, Plug-in | Plug-in | Plug-in |
| RoHS  | RoHS  | RoHS  | RoHS  |
| Omron: LY3 | Omron: LY4 | Omron: LY2 Tyco: PCLH | Omron: MK Tyco: MT |

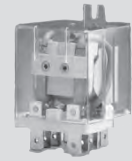
Series

D15 4P

DX15

DA

Click on photograph for data sheet



Dimensions L x W x H

35 x 42.5 x 54.5 mm
1.38 x 1.67 x 2.14 in

35 x 35 x 54.4 mm
1.38 x 1.38 x 2.14 in

35.5 x 35.5 x 42 mm
1.4 x 1.4 x 1.65 in

Features & Applications

10A 4PDT
Optional LED & test feature
Plug-in

10A DPDT & 3PDT
Octal & 11 pin
LED & Test lever

Compact 16A DPDT relay
Chassis or PCB mounting
3mm contact gap

Contacts

Contact form

4PDT

DPDT, 3PDT

DPDT, DPST-NO, DPST-NC

Contact materials

AgCdO, AgCdO/Au 0.2µm, AgCdO/Au 5µm

AgNi

AgNi

Max. switching current

35A
30A
25A
20A
15A
10A
5A

10A

10A

16A

Max. switching voltage

250V AC / 250V DC

250V AC / 30V DC

400V AC / 30V DC

Max. switching power

2,500VA / 240W

2,500VA / 300W

4,000VA

Rated load (resistive)

10A 250V AC
10A 24V DC

10A 250V AC
10A 24V DC

16A 250V AC
16A 24V DC

Coil

Rated voltage

DC 6...220V
AC 6...240V

DC 6...220V
AC 6...240V

DC 6...110V
AC 6...230V

Rated nominal power consumption

1.5W / 2.8VA

2W / 3.5AV

1.3W / 2.2VA

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

2,500V_{RMS}

1,500V_{RMS}

3,000V_{RMS}

2,000V_{RMS}

1,200V_{RMS}

2,500V_{RMS}

Ambient temperature (operating)

-40...+55°C

-40...+70°C

Operate/release time (typical)

AC: 12 / 10 ms DC: 18 / 7 ms

20 / 20 ms

10 ms / 12 ms

Electrical life (operations)

2 x 10⁵

1 x 10⁵

1 x 10⁵

Mechanical life (operations)

2 x 10⁷

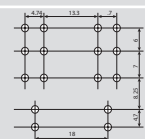
1 x 10⁷

5 x 10⁶

PC Board layout

See Durakool Socket
Catalogue for suitable
sockets

See Durakool Socket
Catalogue for suitable
sockets



Terminal type

Plug-in

Plug-in

PCB, Plug-in

Recognitions, directives, approvals

RoHS

RoHS

RoHS

Cross references

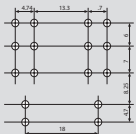
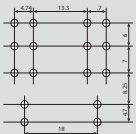
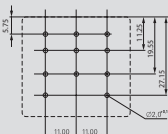




Omron: MK
Tyco: MT

industrial relays




| DA | DA | DB16 | DUC |
|---|---|--|---|
|  |  |  |  |
| 35.5 x 35.5 x 42 mm 1.4 x 1.4 x 1.65 in | 35.5 x 35.5 x 42 mm 1.4 x 1.4 x 1.65 in | 42 x 44 x 66 mm 1.65 x 1.73 x 2.6 in | 38.6 x 36.1 x 45.5 mm 1.52 x 1.42 x 1.79 in |
| Compact 20A SPST relay Custom versions >3mm contact gap | Compact 30A SPST-NO relay Custom versions Chassis or PCB mounting | 16A 3PDT chassis mounting Suitable for 3 phase Compact style | 16A SPDT, DPDT & 3PDT Industry standard style 3mm contact gap option |

| SPST-NC, SPST-NO+SPST-NC | SPST-NO | SPDT, DPDT, 3PDT SPST-NO, DPST-NO, 3PST-NO | SPDT, 3PDT, DPST-NO, 3PST-NO, 3mm Gap DPST-NO, 3PST-NO |
|---------------------------|---------------------------|---|---|
| AgNi | AgNi | AgNi | AgNi, AgCdO |
| 20A | 30A | 16A | 16A |
| 400V AC / 30V DC | 400V AC / 30V DC | 400V AC | 400V AC / 400V DC |
| 5,000VA | 7,500VA | 4,000VA | 4,000VA |
| 20A 250V AC 20A 24V DC | 30A 250V AC 30A 24V DC | 16A 250V AC 16A 24V DC | 16A 250V AC, 10A 380V AC 16A 24V DC |

| | | | |
|----------------------------|----------------------------|----------------------------|----------------------------|
| DC 6...110V AC 6...230V | DC 6...110V AC 6...230V | DC 6...110V AC 6...400V | DC 6...110V AC 6...380V |
| 1.3W / 2.2VA | 1.3W / 2.2VA | 2W / 3.9VA | |

| | | | |
|--|--|---|--|
| 4,000V _{RMS} | 4,000V _{RMS} | 2,500V _{RMS} | 2,500V _{RMS} |
| 2,500V _{RMS} | 2,500V _{RMS} | 2,500V _{RMS} | 2,500V _{RMS} |
| -40...+70°C | -40...+70°C | -10...+55°C | -40...+70°C |
| 10 ms / 12 ms | 10 ms / 12 ms | 15 ms / 12 ms | AC: 12 / 10, DC: 12 / 7 ms |
| 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| 5 x 10 ⁶ | 5 x 10 ⁶ | 1 x 10 ⁶ | 1 x 10 ⁷ |
|  |  | |  |
| PCB, Plug-in | PCB, Plug-in | Fast-on Terminals | PCB, Plug-in |
| RoHS  | RoHS  | RoHS  | RoHS  |
| | | | Tyco (Schrack): RM Tyco (P&B): |

Series

| | DB30 | DG36 | DLR |
|------------------------------------|---|--|---|
| Click on photograph for data sheet |  |  |  |
| Dimensions L x W x H | 42 x 44 x 66 mm 1.65 x 1.73 x 2.6 in | 52.3 x 34.5 x 30.5 mm 2.06 x 1.36 x 1.2 in | 52.5 x 33.5 max x 53 mm 2.07 x 1.32 max x 2.09 in |
| Features & Applications | Up to 30A 3PDT 3 phase power switching Chassis mounting | 30A DPST-NO PCB or Chassis mounting 4kV isolation | Up to 30A switching Screw terminals, PCB or Socket mounting |

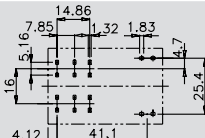
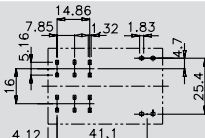
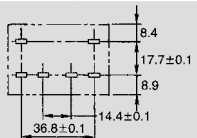



Contacts

| | | | |
|------------------------|---|---|-------------------------|
| Contact form | SPST-NO, DPST-NO, 3PST-NO SPDT, DPDT, 3PDT | DPST-NO, DPDT | SPST-NO, DPST-NO |
| Contact materials | AgNi | AgCdO, AgSnO ₂ | AgCdO |
| Max. switching current | 35A 30A 25A 20A 15A 10A 5A | 30A (DPST-NO) | 20/25A 30A (SPST-NO) |
| Max. switching voltage | 400V AC | 277V AC | 250V AC |
| Max. switching power | 7,500VA | 7,500VA | 4,400VA...6,600VA |
| Rated load (resistive) | 30A 250V AC 30A 24V DC | 30A 277V AC (DPST-NO) 20A 28V DC (DPST-NO) | 20A...30A 220V AC |



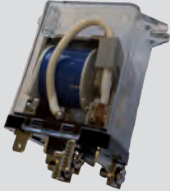
Coil

| | | | |
|---------------------------------|----------------------------|-----------------------------|----------------------------|
| Rated voltage | DC 6...110V AC 6...400V | DC 6...110V AC 24...277V | DC 6...100V AC 6...240V |
| Rated nominal power consumption | 2W / 3.9VA | 1.7W / 4VA | 1.9W / 2VA |

General data



| | | | |
|---|--|--|--|
| Dielectric strength (between coil and contacts) (between contact poles) | 2,500V _{RMS} | 4,000V _{RMS} | 4,000V _{RMS} |
| | 2,500V _{RMS} | 2,000V _{RMS} | 2,000V _{RMS} |
| Ambient temperature (operating) | -10...+55°C | DC: -55...+85°C | -20...+85°C |
| Operate/release time (typical) | 15 / 12 ms | 15 / 10 ms | 30 / 30 ms |
| Electrical life (operations) | 1 x 10 ⁵ | 1 x 10 ⁵ | 1 x 10 ⁵ |
| Mechanical life (operations) | 1 x 10 ⁶ | 5 x 10 ⁶ | 5 x 10 ⁶ |
| PC Board layout |  |  |  |
| Terminal type | Fast-On Terminals | PCB, Fast-On Terminals | PCB, Fast-On, Screw Terminals |
| Recognitions, directives, approvals | RoHS  | RoHS  | RoHS  |
| Cross references | | Tyco P&B: T92 | Omron: G7L |

industrial relays

| DT | HHC71-4 | HHC71C | HHC71E |
|---|---|--|---|
|  |  |  |  |
| 60 x 48 x 70 mm 2.36 x 1.89 x 2.75 in | 60 x 53.5 x 67.5 mm 2.4 x 2.1 x 2.65 in | 40 x 46 x 60.2 mm 1.57 x 1.81 x 2.37 in | 47 x 54 x 67 mm 1.85 x 2.1 x 2.64 in |
| High Voltage (5kV) Ceramic Body Suitable for defibrillators | 80A 3PDT Chassis mounting DC motor control | 50A SPDT Chassis mounting Low cost & reliable | 80A DPDT Chassis mounting Screw terminals |

| SPST-NO, DPST-NO, DPDT | SPST-NO, SPST-NC, SPDT 3PST-NO, 3PST-NC, 3PDT | SPST-NO, SPST-NC, SPDT | SPST-NO, SPST-NC, SPDT DPST-NO, DPST-NC, DPDT |
|------------------------|--|---------------------------|--|
| AgSnO ₂ | AgSnO ₂ | AgSnO ₂ | AgSnO ₂ |
| | 80A | 50A | 80A |
| 10A | | | |
| 5,000V AC | 250V AC / 24V DC | 250V AC / 24V DC | 250V AC / 24V DC |
| 5,000VA | 20,000VA / 1920W | 12,500VA / 1200W | 20,000VA / 1920W |
| 10A 500VAC | 80A 250V AC 80A 24V DC | 50A 250V AC 50A 24V DC | 80A 250V AC 80A 24V DC |

| | | | |
|-----------------------------|----------------------------|----------------------------|----------------------------|
| DC 6...110V AC 12...400V | DC 6...110V AC 6...380V | DC 6...110V AC 6...220V | DC 6...110V AC 6...380V |
| 5.5W | | 2W / 6.5VA | 3.6W |

| | | | |
|--|--|---|--|
| 8,000V _{RMS} | 2,500V _{RMS} | 2,500V _{RMS} | 2,500V _{RMS} |
| 2,000V _{RMS} | 1,500V _{RMS} | 1,500V _{RMS} | 1,500V _{RMS} |
| -10...+50°C | -40...+70°C | -40...+70°C | -40...+70°C |
| 40 / 20 ms | 25 / 25 ms | 25 / 25 ms | 25 / 25 ms |
| 1 x 10 ⁵ | 2 x 10 ⁴ | 5 x 10 ⁴ | 2 x 10 ⁴ |
| 5 x 10 ⁵ | 1 x 10 ⁶ | 1 x 10 ⁶ | 1 x 10 ⁶ |
| | | | |
| Fast-On Terminals | Solder Tag Terminals | Screw Terminals | Screw Terminals |
| RoHS  | RoHS  | RoHS  | RoHS  |

Series

HHC71F

HHC71G

HHC71G-2

Click on photograph for data sheet



Dimensions L x W x H

59 x 64 x 62 / 86 x 68 x 65.5 mm
2.3 x 2.5 x 2.4 / 3.4 x 2.7 x 2.6 in

48 x 48.5 x 64.5 mm
1.89 x 1.91 x 2.54 in

47.5 x 60 x 68 mm
1.87 x 2.36 x 2.68 in

Features & Application

Up to 100A switching
Fully enclosed
Contactor alternative

Up to 60A / 250VAC
DIN rail or chassis mounting
Screw terminals

Up to 40A DPDT
DIN rail or chassis mounting
Solder tags

Contacts

Contact form

SPST-NO, SPST-NC, SPDT
DPST-NO, DPST-NC, DPDT

SPST-NO, SPST-NC, SPDT

DPST-NO, DPST-NC, DPDT

Contact materials

AgSnO₂

AgSnO₂

AgSnO₂

Max. switching current

100A
80A
60A
40A
30A
20A
10A

80A
DPST, DPDT

100A
SPST, SPDT

60A

40A

Max. switching voltage

250V AC / 24V DC

250V AC / 24V DC

250V AC / 24V DC

Max. switching power

25,000VA / 2,400W

15,000VA / 1,440W

10,000VA / 960W

Rated load (resistive)

SPST: 100A / DPST: 80A

60A / 250V AC
60A / 24V DC

40A / 250V AC
40A / 24V DC

Coil

Rated voltage

DC 6...110V
AC 6...360V

DC 6...110V
AC 6...220V

DC 6...110V
AC 6...220V

Rated nominal power consumption

2W / 17.5VA

2W / 6.5VA

2W / 6.5VA

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

2,500V_{RMS}

2,500V_{RMS}

2,500V_{RMS}

1,500V_{RMS}

1,500V_{RMS}

1,500V_{RMS}

Ambient temperature (operating)

-40...+70°C

-40...+70°C

-40...+70°C

Operate/release time (typical)

25 / 25 ms

25 / 25 ms

25 / 25 ms

Electrical life (operations)

2 x 10⁴

5 x 10⁴

5 x 10⁴

Mechanical life (operations)

5 x 10⁶

1 x 10⁶

1 x 10⁶

Terminal type


Screw Terminals

Screw Terminals

Solder Tags

Recognitions, directives, approvals





RoHS 

RoHS 

RoHS 


Cross references

industrial interface relays

| D2RS | DP6-1P | DP6-1T | DP6-OC |
|---|---|--|---|
|  |  |  |  |
| | 80 x 6.2 x 93.8 mm 3.15 x 0.24 x 3.69 in | 80 x 6.2 x 93.8 mm 3.15 x 0.24 x 3.69 in | 80 x 6.2 x 93.8 mm 3.15 x 0.24 x 3.69 in |
| DIN Rail Mounting Relay with blade terminals Integral LED and test feature | DIN Rail Mounting Only 6.2mm wide LED & screw terminals | DIN Rail Mounting Only 6.2mm wide AC Solid-state output | DIN Rail Mounting Only 6.2mm wide DC solid-state output |

| SPDT, DPDT | | SPDT | SPST-NO | SPST-NO |
|---|----------|--|----------------|---------------|
| AgNi | | AgSnO ₂ , AgSnO ₂ / Au 3µm | TRIAC | TRANSISTOR |
| 10A | | | | |
| 5A | | | | |
| 4A | | | | |
| 3A | 5A DPDT | 6A | | |
| 2A | 10A SPDT | | | 0.5A |
| 1A | | | 1.2A | |
| 250V AC / 30V DC | | 250V AC / 220V DC | 400V AC | 70V DC |
| 1250VA 150W / 2,500VA 300W | | 1,500VA / 144W | 480VA | 35W |
| 5A / 250V AC // 10A / 250VAC 5A / 30V DC // 10A / 30V DC | | 6A / 250V AC 6A / 24V DC | 1.2A / 400V AC | 0.5A / 70V DC |

| | | | |
|----------------------------|------------------------------|--|--|
| DC 6...115V AC 6...230V | DC 12...230V AC 24...230V | DC 5-32V Control AC 24-230V Control | DC 5-32V Control AC 24-230V Control |
| 0.53W / | 0.3...1.6W / 0.35...2.2VA | 0.3...1.6W / 0.3...1.6VA | 0.3...1.0W / 0.3...1.0VA |

| | | | |
|---|--|-----------------------|-----------------------|
| 5,000V _{RMS} | 4,000V _{RMS} | 4,000V _{RMS} | 3,000V _{RMS} |
| 1,000V _{RMS} | 1,000V _{RMS} | Not Applicable | Not Applicable |
| -40...+65°C | -40...+40/50/60°C | -40...+55°C | -40...+55°C |
| 20 / 10 ms | AC: 7/15 ms DC: 6/10 ms | 10ms / 10ms | |
| 1 x 10 ⁵ | 1 x 10 ⁵ | | |
| 1 x 10 ⁷ | 2 x 10 ⁷ | Not Applicable | Not Applicable |
| See Data Sheet for suitable DIN Rail sockets | | | |
| Plug-in only | Screw Terminals | Screw Terminals | Screw Terminals |
| RoHS | RoHS  | RoHS | RoHS |

Series

30C20

30C25

30C30

30C40

Click on photograph for data sheet



Dimensions L x W x H

83.8 x 53.3 x 76.2 (max) mm
3.3 x 2.1 x 3.0 in

83.8 x 53.3 x 76.2 (max) mm
3.3 x 2.1 x 3.0 in

83.8 x 53.3 x 76.2 (max) mm
3.3 x 2.1 x 3.0 in

83.8 x 53.3 x 76.2 (max) mm
3.3 x 2.1 x 3.0 in

Features

20FLA rating
Robust
Arc covers standard
Variety of terminations.
Fan motors, heating

25FLA rating
Robust
Arc covers standard
Variety of terminations.
HVAC

30FLA rating
Robust
Arc covers standard
Variety of terminations.
Heating elements,
lighting

40FLA rating
Robust
Arc covers standard
Variety of terminations.
Motors, power supplies,
heating, HVAC

Contacts

Contact form

SPST-NO-DM, DPST-NO-DM,
3PST-NO-DM, 4PST-NO-DM

SPST-NO-DM, DPST-NO-DM,
3PST-NO-DM, 4PST-NO-DM

SPST-NO-DM, DPST-NO-DM,
3PST-NO-DM, 4PST-NO-DM

SPST-NO-DM, DPST-NO-DM,
3PST-NO-DM, 4PST-NO-DM

Contact materials

AgCdO, AgSnOInO

AgCdO, AgSnOInO

AgCdO, AgSnOInO

AgCdO, AgSnOInO

Resistive load (250,000 operations)

30A

35A

40A

50A

FLA rating

20A

25A

30A

40A

LRA rating
(Locked Rotor Amps)

120V AC

120A

150A

150A (180A 4 Pole)

200A (240A 3&4P)

240/277VAC

120A

150A

150A (180A 4 Pole)

200A (240A 3&4P)

480V AC

100A

125A

125A (150A 4 Pole)

200A

600V AC

80A

100A

100A (100A 4 Pole)

200A (160A 3&4P)

Max. switching voltage

600V AC

600V AC

600V AC

600V AC

Coil

Rated voltage

AC 24...480V

AC 24...480V

AC 24...480V

AC 24...480V

Rated nominal power consumption

VA 5...9

VA 5...9

VA 5...9

VA 5...9

General data

Dielectric strength
(between coil and contacts)
(between contact poles)

2200V AC

2200V AC

2200V AC

2200V AC

2200V AC

2200V AC

2200V AC

2200V AC

Ambient temperature (operating)

-40...+65°C

-40...+65°C

-40...+65°C

-40...+65°C

Operate/release time

20 / 10 ms

20 / 10 ms

20 / 10 ms

20 / 10 ms

Terminations

Coil Terminals

Dual 0.250" QC

Dual 0.250" QC

Dual 0.250" QC

Dual 0.250" QC

Power Terminals

#10-32 Screw or
#14-4 AWG box lug
+ dual 0.25" QC

#10-32 Screw or
#14-4 AWG box lug
+ dual 0.25" QC or
quad 0.25" QC

#10-32 Screw or
#14-4 AWG box lug
+ dual 0.25" QC or
quad 0.25" QC

#10-32 Screw or
#14-4 AWG box lug
+ dual 0.25" QC or
quad 0.25" QC

Recognitions, directives, approvals

RoHS 

RoHS 

RoHS 

RoHS 

definite purpose contactors

| Series | 30C50 | 30C60 | 30C75 | 30C90 |
|------------------------------------|---|---|---|---|
| Click on photograph for data sheet |  |  |  |  |
| Dimensions L x W x H | 102 x 71 x 92 mm 4.02 x 2.79 x 3.62 in | 102 x 71 x 92 mm 4.02 x 2.79 x 3.62 in | 127 x 95.3 x 103 mm 5 x 3.75 x 4.05 in | 127 x 95.3 x 103 mm 5 x 3.75 x 4.05 in |
| Features | 50FLA rating Robust Arc covers standard Variety of terminations | 60FLA rating Robust Arc covers standard Variety of terminations | 75FLA rating Robust Arc covers standard Variety of terminations | 90FLA rating Robust Arc covers standard Variety of terminations |

Contacts

| | | | | |
|-------------------------------------|---|---------------------------|---------------------------|---------------------------|
| Contact form | DPST-NO-DM, 3PST-NO-DM | DPST-NO-DM, 3PST-NO-DM | DPST-NO-DM, 3PST-NO-DM | DPST-NO-DM, 3PST-NO-DM |
| Contact materials | AgCdO, AgSnOInO | AgCdO, AgSnOInO | AgCdO, AgSnOInO | AgCdO, AgSnOInO |
| Resistive load (250,000 operations) | 65A | 75A | 93A | 120A |
| FLA rating | 50A | 60A | 75A | 90A |
| LRA rating (Locked Rotor Amps) | 120V AC 300A 240/277VAC 300A 480V AC 250A 600V AC 200A | 300A | 300A | 300A |
| Max. switching voltage | 240A (200A 3 Pole) | 300A | 300A | 300A |
| | 600V AC | 600V AC | 600V AC | 600V AC |

Coil

| | | | | |
|---------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Rated voltage | AC 24...480V | AC 24...480V | AC 24...480V | AC 24...480V |
| Rated nominal power consumption | VA 13(60Hz) / 18 (50Hz) | VA 13(60Hz) / 18 (50Hz) | VA 27(60Hz) / 42 (50Hz) | VA 27(60Hz) / 42 (50Hz) |

General data

| | | | | |
|---|--|--|--|--|
| Dielectric strength (between coil and contacts) | 2200V AC | 2200V AC | 2200V AC | 2200V AC |
| (between contact poles) | 2200V AC | 2200V AC | 2200V AC | 2200V AC |
| Ambient temperature (operating) | -40...+65°C | -40...+65°C | -40...+65°C | -40...+65°C |
| Operate/release time | 30 / 15 ms | 30 / 15 ms | 40 / 25 ms | 20 / 10 ms |
| Terminations | | | | |
| Coil Terminals | Dual 0.250" QC | Dual 0.250" QC | Dual 0.250" QC | Dual 0.250" QC |
| Power Terminals | #1/4-20 Screw or #14-2 AWG box lug + dual 0.25" QC | #1/4-20 Screw or #14-2 AWG box lug + dual 0.25" QC | #1/4-20 Screw or #14-1 AWG box lug + dual 0.25" QC | #1/4-20 Screw or #14-1 AWG box lug + dual 0.25" QC |
| Recognitions, directives, approvals | RoHS  | RoHS  | RoHS  | RoHS  |

Due to our constant development policy, American Electronic Components Inc. reserves the right to introduce changes to the data and characteristics of the products. The devices shall be operated by skilled personnel in accordance with the regulations in force pertaining to electrical systems. The technical data is of informational nature. Thus, American Electronic Components Inc. does not accept any liability for inappropriate use of the presented products.

DURAKOOL

Durakool and American Electronic Components Inc., specializes in the design and manufacture of electronic, electrical, and mechanical components. AEC's products are shipped worldwide for a diverse set of markets which include automotive, consumer electronics, appliance, industrial control and outdoor power equipment manufacturers.

For more information, contact the AEC Sales Department toll free [USA] 888-847-6552.

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- tilt switches
- tip-over switches
- G - force switches
- float switches
- liquid level switches & sensors
- hermetic seals & feed-thru's
- sight glasses



Mercury Contactors



Tilt and Tip-over Switches



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Proximity sensors

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