

# RELAYS & CONTACTORS

## IDEC GENERAL-PURPOSE RELAYS RH, RJ, RR SERIES



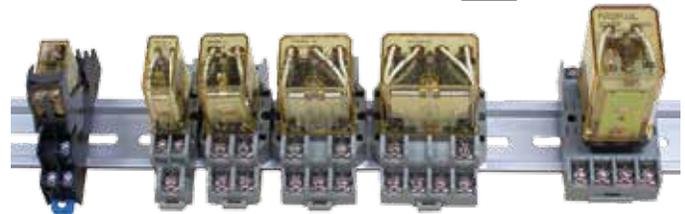
### DESCRIPTION

The IDEC general-purpose relays are available in the **RH Series** blade-style relays and the **RR Series** pin-style relays and the **RJ Series** compact relays.

The **RH Series** features a 10A switching capacity. They are available in SPDT, DPDT, 3PDT, and 4PDT contact configurations, driven by AC or DC coils, and they have blade terminals for socket mounting.

The **RR Series** has a 10A contact rating. The **RR Series** relays are available in SPDT, DPDT, and 3PDT configurations driven by AC or DC coils, and they have pin or blade terminals for socket mounting.

The **RJ Series** is compact to reduce space requirements. They are available in a 12A SPDT version and an 8A DPDT version. They are driven by AC or DC coils and have blade terminals for socket mounting.



RJ Series

RH Series

RR Series

### FEATURES

- Blade style, pin style, and compact models
- Indicator light and/or check button available
- Surface or DIN rail mount
- UL recognized, CSA certified



### SPECIFICATIONS

#### COIL RATINGS

| RH SERIES     |                                |      |      |      |       |      |      |      |                                 |      |      |        |       |    |      |     |     |
|---------------|--------------------------------|------|------|------|-------|------|------|------|---------------------------------|------|------|--------|-------|----|------|-----|-----|
| RATED VOLTAGE | RATED CURRENT (mA) ±15% @ 20°C |      |      |      |       |      |      |      | COIL RESISTANCE (Ω) ±10% @ 20°C |      |      |        |       |    |      |     |     |
|               | 60 Hz                          |      |      |      | 50 Hz |      |      |      |                                 |      |      |        |       |    |      |     |     |
|               | SPDT                           | DPDT | 3PDT | 4PDT | SPDT  | DPDT | 3PDT | 4PDT | SPDT                            | DPDT | 3PDT | 4PDT   |       |    |      |     |     |
| AC            | 12                             | 75   | 100  | 140  | 165   | 86   | 121  | 165  | 196                             | 165  | 39.3 | 25.3   | 21.2  |    |      |     |     |
|               | 24                             | 37   | 50   | 70   | 83    | 42   | 60.5 | 81   | 98                              | 83   | 153  | 103    | 84.5  |    |      |     |     |
|               | 120                            | 7.5  | —    | 14.2 | 16.5  | 8.6  | —    | 16.4 | 19.5                            | 16.5 | —    | 10,800 | 7,360 |    |      |     |     |
|               | 240                            | 4.3  | —    | 7.1  | 8.3   | 4.9  | —    | 8.2  | 9.8                             | 8.3  | —    | 12,100 | 9,120 |    |      |     |     |
| DC            | SPDT                           |      | DPDT |      | 3PDT  |      | 4PDT |      | SPDT                            |      | DPDT |        | 3PDT  |    | 4PDT |     |     |
|               | 12                             | 64   | 75   | 120  | 125   | 188  | 160  | 100  | 96                              | 24   | 32   | 36.9   | 60    | 62 | 750  | 650 | 400 |

| RR Series     |                                |      |       |      |                                 |
|---------------|--------------------------------|------|-------|------|---------------------------------|
| RATED VOLTAGE | Rated Current (mA) ±15% @ 20°C |      |       |      | COIL RESISTANCE (Ω) ±10% @ 20°C |
|               | 60 Hz                          |      | 50 Hz |      |                                 |
|               | SPDT                           | DPDT | 3PDT  | 4PDT |                                 |
| 12            | 210                            |      | 245   |      | 365                             |
| 24            | 105                            |      | 121   |      | 182                             |
| 120           | 20.5                           |      | 24    |      | 35                              |
| 240           | 10.5                           |      | 12.1  |      | 18                              |
| DC            | 120                            |      | 100   |      | 400                             |

| RJ Series |                                |       |                       |       |      |                                 |       |
|-----------|--------------------------------|-------|-----------------------|-------|------|---------------------------------|-------|
| MODELS    | Rated Current (mA) ±15% @ 20°C |       |                       |       |      | COIL RESISTANCE (Ω) ±10% @ 20°C |       |
|           | WITHOUT LED <sup>1</sup>       |       | WITH LED <sup>1</sup> |       |      |                                 |       |
|           | 60 Hz                          | 50 Hz | 60 Hz                 | 50 Hz |      |                                 |       |
| AC        | BLADE & PCB                    | 24V   | 37.5                  | 43.9  | 41.1 | 47.5                            | 243   |
|           |                                | 120V  | 7.5                   | 8.8   | 7.4  | 8.7                             | 6,400 |
|           |                                | 24V   | 22.1                  | 25.7  | —    | —                               | 1,080 |
| DC        | PCB                            | 24V   | 22.1                  | —     | —    | —                               | 1,080 |

1. LED indicator is only available on Blade relays.

#### CONTACT RATINGS

| RH SERIES (UL ratings) |           |      |      |         |             |      |         |                   |     |
|------------------------|-----------|------|------|---------|-------------|------|---------|-------------------|-----|
| VOLTAGE                | RESISTIVE |      |      |         | GENERAL USE |      |         | HORSEPOWER RATING |     |
|                        | RH1 RH2   | RH3  | RH4  | RH1 RH2 | RH3         | RH4  | RH1 RH2 | RH3               | RH4 |
| 240V AC                | 10A       | 7.5A | 7.5A | 7A      | 6.5A        | 5A   | 1/3 hp  | 1/3 hp            | —   |
| 120V AC                | —         | 10A  | 10A  | —       | 7.5A        | 7.5A | 1/6 hp  | 1/6 hp            | —   |
| 30V DC                 | 10A       | 10A  | —    | 7A      | —           | —    | —       | —                 | —   |
| 28V DC                 | —         | —    | 10A  | —       | —           | —    | —       | —                 | —   |

| RR SERIES (UL ratings) |               |                         |                 |
|------------------------|---------------|-------------------------|-----------------|
| VOLTAGE                | RESISTIVE (A) | INDUCTIVE (A) cosφ= 0.3 | MOTOR LOAD (hp) |
| 240 AC                 | 10            | 7                       | 1/3             |
| 120 AC                 | 10            | 7.5                     | 1/4             |
| 30 DC                  | 10            | 7                       | —               |

| RJ Series (UL ratings)   |                          |                             |                           |
|--------------------------|--------------------------|-----------------------------|---------------------------|
| Resistive Load (Maximum) | CONTACT                  | RJ1S                        | RJ2S                      |
|                          | Inductive Load (Maximum) | N.O.                        | 12A @ 250 VAC/30 VDC      |
| N.C.                     |                          | 12A @ 250 VAC; 6A @ 30 VDC  | 8A @ 250 VAC; 4A @ 30 VDC |
| Inductive Load (Maximum) | N.O.                     | 7.5A @ 250 VAC; 6A @ 30 VDC | 4A @ 250 VAC; 4A @ 30 VDC |
|                          | N.C.                     | 7.5A @ 250 VAC; 3A @ 30 VDC | 4A @ 250 VAC; 2A @ 30 VDC |

|   |                              |
|---|------------------------------|
| <b>Maximum continuous applied voltage</b> |                              |
| RH, RR                                    | 110% of rated voltage        |
| RJ  | 140% of rated voltage        |
| <b>Pull-in voltage</b>                    |                              |
| RH, RR, RJ/AC                             | 80% of rated voltage         |
| RJ, RJ/DC                                 | 70% of rated voltage         |
| <b>Drop-out voltage</b>                   |                              |
| AC  | 30% or more of rated voltage |
| DC  | 10% or more of rated voltage |
| <b>Contact material</b>                   |                              |
| RH  | Silver cadmium oxide         |
| RR  | Silver                       |
| RJ  | Silver nickel alloy          |

|   |                            |
|---|----------------------------|
| <b>Contact resistance</b>   |                            |
| RH  | 50 mΩ maximum              |
| RR  | 30 mΩ maximum              |
| RJ  | 50 mΩ maximum              |
| <b>Operate time</b>   |                            |
| RH, RR  | 25 ms maximum              |
| RJ  | 15 ms maximum              |
| <b>Release time</b>   |                            |
| RH, RR  | 25 ms maximum              |
| RJ  | 10 ms maximum              |
| <b>Min load</b>   |                            |
| RH  | 24 VDC/30 mA, 5 VDC/100 mA |
| RR  | 1 VDC/10 mA                |
| RJ  | 5 VDC/100 mA               |
| <b>Operating temp</b>   |                            |
| -22° to 158°F (-30° to 70°C)  |                            |
| <b>Agency approvals</b>   |                            |
| UL-recognized component, (RH, RR): File #E66043, (RJ): File #E55996 |                            |
| CSA certified, File #LR35144;                                       |                            |
| CE certified (not RR blade style)                                   |                            |
| <b>Warranty</b>   |                            |
| 1 year  |                            |



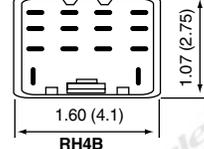
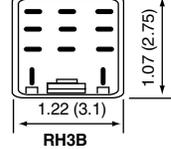
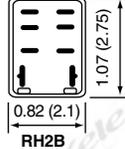
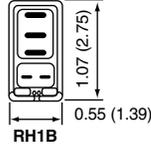
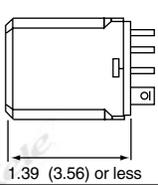
# RELAYS & CONTACTORS

## IDEC GENERAL-PURPOSE RELAYS

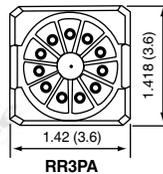
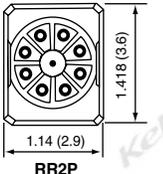
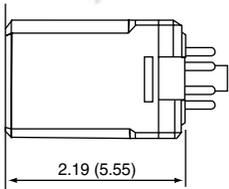
### RH, RJ, RR SERIES

#### DIMENSIONS

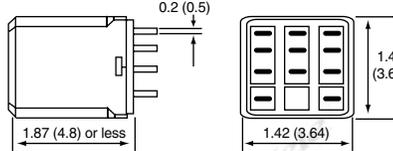
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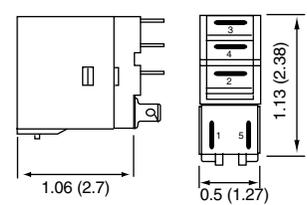
**RH Series Relays (blade)**



**RR Series Relays (pin)**



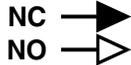
**RR Series Power Relays (blade)**



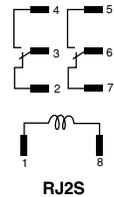
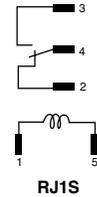
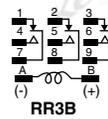
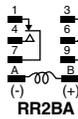
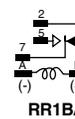
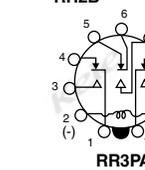
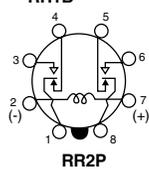
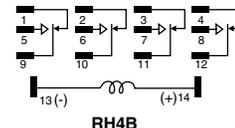
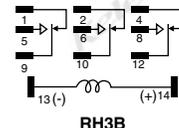
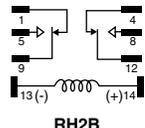
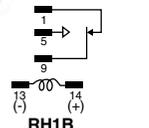
**RJ Series Relays (blade)**

#### WIRING

##### Legend



##### Bottom View



#### ORDERING INFORMATION

| MODEL  | DESCRIPTION                             |
|--------|---|
| RH1B   | Relay, SPDT, blade (use SH1B-05 socket) |
| RH2B   | Relay, DPDT, blade (use SH2B-05 socket) |
| RH3B   | Relay, 3PDT, blade (use SH3B-05 socket) |
| RH4B   | Relay, 4PDT, blade (use SH4B-05 socket) |
| U      | Standard relay                          |
| UL     | Indicator light                         |
| ULC    | Indicator light and check button        |
| AC12V  | 12 VAC coil voltage                     |
| AC24V  | 24 VAC coil voltage                     |
| AC120V | 120 VAC coil voltage                    |
| AC240V | 240 VAC coil voltage                    |
| DC12V  | 12 VDC coil voltage                     |
| DC24V  | 24 VDC coil voltage                     |

RH1B U AC24V

| MODEL | DESCRIPTION                       |
|-------|-----------------------------------|
| RJ1S  | Relay, SPDT (use SJ1S-05B socket) |
| RJ2S  | Relay, DPDT (use SJ2S-05B socket) |
| C     | No options                        |
| CL    | LED indicator                     |
| A24   | 24 VAC coil voltage               |
| A120  | 120 VAC coil voltage              |
| D24   | 24 VDC coil voltage               |

RJ1S C A24

| MODEL  | DESCRIPTION                                 |
|--------|---|
| RR2P   | Relay, DPDT, 8 pin (use SR2P-05 or SR2P-06) |
| RR3PA  | Relay, 3PDT, 11 pin (use SR3P-06 socket)    |
| RR1BA  | Relay, SPDT, 11 blade (use SR3B-05 socket)  |
| RR2BA  | Relay, DPDT, 11 blade (use SR3B-05 socket)  |
| RR3B   | Relay, 3PDT, 11 blade (use SR3B-05 socket)  |
| U      | Standard relay                              |
| UL     | Indicator light                             |
| ULC    | Indicator light and check button            |
| AC12V  | 12 VAC coil voltage                         |
| AC24V  | 24 VAC coil voltage                         |
| AC120V | 120 VAC coil voltage                        |
| AC240V | 240 VAC coil voltage                        |
| DC12V  | 12 VDC coil voltage                         |
| DC24V  | 24 VDC coil voltage                         |

RR2P U AC24V

**Example:** RR2PUAC24V DPDT relay 8 pin with 24VAC coil

#### RELATED PRODUCTS

- DIN-3F** 35 mm DIN rail, steel, 39.4" (1m), RoHS compliant
- DIN-3F, BAM-1000** DIN rail
- SH, SR, SJ Series** Relay sockets