

# Limit Switches

## HK244 and WK244

### Momentary-contact limit switches for low voltage circuit HK244 and WK244

#### ■ Description

HK244 and WK244 limit switches have been developed for use in low voltage and low current circuits. They will operate effectively in 3 Volts AC or DC, 5mA circuits although they are recommended that they are used in 48 Volts or 110 Volts circuits for best results.

#### HK244 limit switches

HK244 limit switches are provided with pure silver contacts. The movable contact carries out a scrubbing action during make/break operation ensuring good connections at all times. The switch body is molded from a high performance resin, and versions with transparent plastic covers and with aluminum die-cast housing are also available.

#### WK244 limit switches

The bifurcated contact is made of pure silver and like the HK244 series they are also suitable for use with low voltage circuits. The dimensions and operating strokes are similar to the standard type.

#### ■ Ordering information

Specify the following:  
1. Type number or ordering code

#### Example

Limit switch ..... PL  
With enclosure ..... 5  
Scrubbing contact ..... H  
Cast-metal clad enclosure ..... G  
Top roller lever plunger ..... R  
Contact 1NO+1NC, normal stroke ..... -22  
Ordering code ..... PL5HGR-22

#### ■ Dimensions, mm

Same as standard type limit switch K244 series. See page 05/115 to 05/117, 05/119.

#### ■ Ordering code: See page 05/113.



#### ■ Ratings

##### HK244

| Thermal current (A) | Making current (A) | Breaking current *1 |             |                |                                    |       |
|---------------------|--------------------|---------------------|-------------|----------------|------------------------------------|-------|
|                     |                    | AC Voltage (V)      | Current (A) | DC Voltage (V) | Current (A)<br>Resistive Inductive |       |
| 10                  | 50                 | 24                  | 10          | 24             | 7                                  | 7     |
|                     |                    | 110                 | 10          | 110            | 1.5                                | 0.9   |
|                     |                    | 220                 | 10          | 220            | 0.63                               | 0.28  |
|                     |                    | 440                 | 10          | 440            | 0.28                               | 0.14  |
|                     |                    | 550                 | 10          | 550            | 0.22*2                             | 0.1*2 |

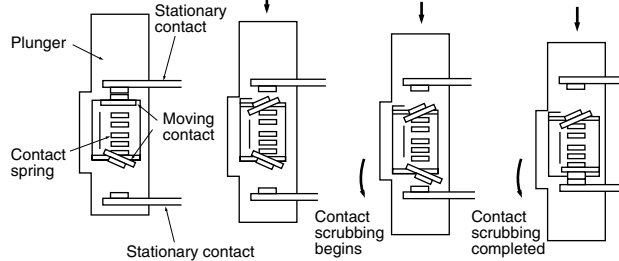
##### WK244

| Thermal current (A) | Making current (A) | Breaking current *1 |             |                |                                    |     |
|---------------------|--------------------|---------------------|-------------|----------------|------------------------------------|-----|
|                     |                    | AC Voltage (V)      | Current (A) | DC Voltage (V) | Current (A)<br>Resistive Inductive |     |
| 10                  | 12.5               | 110                 | 2.5         | 110            | 1.5                                | 0.2 |
|                     |                    | 220                 | 2.5         | 220            | 0.63                               | —   |

Notes: \*1 When NO and NC contacts are wired in same polarity.  
\*2 Opposite contacts are not permitted to carry potential.

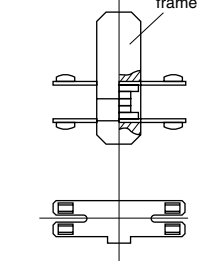
#### ■ Contacts

##### HK244



Process of scrubbing contact

##### WK244



Bifurcated contact

#### ■ Technical data

##### HK244

Insulation resistance: Over 100MΩ at 500VDC  
Dielectric strength: 2500V AC rms 1 minute  
Max. operating cycle: 3000 cycles per hour  
Life expectancy Mechanical: 10 million operations  
Electrical: 1.3 million operations at 24 to 550V AC 3A  
Allowable ambient temperature: -5° to +60°C

##### WK244

Insulation resistance: Over 100MΩ at 500VDC  
Dielectric strength: 2500VAC rms 1 minute  
Max. operating cycle: 3000 cycles per hour  
Life expectancy Mechanical: 10 million operations  
Electrical: 1 million operations at 220V AC 1.5A  
Allowable ambient temperature: -5° to +60°C

■ HK244 and WK244 series

| Description  | Contact arrangement | Travel (mm) of HK series (WK series: Same as standard series, pages 05/115 to 05/117) | HK series With scrubbing contact action Type | Ordering code | WK series With bifurcated contact Type | Ordering code | Dimensions (Same as K244) |   |  |                       |           |                       |           |             |
|--|---------------------|---|--|---------------|--|---------------|---------------------------|---|--|-----------------------|-----------|-----------------------|-----------|-------------|
| <b>Top push rod plunger transparent plastic cover</b><br>Normal stroke     |                     |   | <b>HK244xp-2</b>                             | PL4HGN-22     | <b>WK244xp-2</b>                       | PL4WGN-22     | Page 05/115               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244xp-2U</b>     | PL4HGN-23 | <b>WK244xp-2U</b>     | PL4WGN-23 | Page 05/115 |
| <b>Top push rod plunger cast-metal clad</b><br>Normal stroke               |                     |   | <b>HK244g-2</b>                              | PL5HGN-22     | <b>WK244g-2</b>                        | PL5WGN-22     | Page 05/115               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244g-2U</b>      | PL5HGN-23 | <b>WK244g-2U</b>      | PL5WGN-23 | Page 05/115 |
| <b>Top roller lever plunger cast-metal clad</b><br>Normal stroke           |                     |   | <b>HK244gR-2</b>                             | PL5HGR-22     | <b>WK244gR-2</b>                       | PL5WGR-22     | Page 05/116               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244gR-2U</b>     | PL5HGR-23 | <b>WK244gR-2U</b>     | PL5WGR-23 | Page 05/116 |
| <b>Reversing top roller lever plunger cast-metal clad</b><br>Normal stroke |                     |   | <b>HK244gRA-2</b>                            | PL5HGW-22     | <b>WK244gRA-2</b>                      | PL5WGW-22     | Page 05/119               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244gRA-2U</b>    | PL5HGW-23 | <b>WK244gRA-2U</b>    | PL5WGW-23 | Page 05/119 |
| <b>Top push rod plunger cast-metal clad</b><br>Normal stroke               |                     |   | <b>HK244g-2/2</b>                            | PL5HGN-41     | <b>WK244g-2/2</b>                      | PL5WGN-41     | Page 05/116               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244g-2U/2U</b>   | PL5HGN-43 | <b>WK244g-2U/2U</b>   | PL5WGN-43 | Page 05/116 |
|  |                     |   |  |               |  |               |                           | Complex (Normal stroke + Make-before-break) |  | <b>HK244g-2/2U</b>    | PL5HGN-46 | <b>WK244g-2/2U</b>    | PL5WGN-46 | Page 05/116 |
| <b>Top roller lever plunger cast-metal clad</b><br>Normal stroke           |                     |   | <b>HK244gR-2/2</b>                           | PL5HGR-41     | <b>WK244gR-2/2</b>                     | PL5WGR-41     | Page 05/117               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244gR-2U/2U</b>  | PL5HGR-43 | <b>WK244gR-2U/2U</b>  | PL5WGR-43 | Page 05/117 |
|  |                     |   |  |               |  |               |                           | Complex (Normal stroke + Make-before-break) |  | <b>HK244gR-2/2U</b>   | PL5HGR-46 | <b>WK244gR-2/2U</b>   | PL5WGR-46 | Page 05/117 |
| <b>Reversing top roller lever plunger cast-metal clad</b><br>Normal stroke |                     |   | <b>HK244gRA-2/2</b>                          | PL5HGW-41     | <b>WK244gRA-2/2</b>                    | PL5WGW-41     | Page 05/119               |   |  |                       |           |                       |           |             |
|  |                     |   |  |               |  |               |                           | Make-before-break                           |  | <b>HK244gRA-2U/2U</b> | PL5HGW-43 | <b>WK244gRA-2U/2U</b> | PL5WGW-43 | Page 05/119 |
|  |                     |   |  |               |  |               |                           | Complex (Normal stroke + Make-before-break) |  | <b>HK244gRA-2/2U</b>  | PL5HGW-46 | <b>WK244gRA-2/2U</b>  | PL5WGW-46 | Page 05/119 |

■ Contact closed  
□ Contact open