

## Smallest Class of Safety Limit Switches in the World

- The world's smallest limit switch with a direct opening mechanism (four-contact construction model).
- High-sensitivity safety limit switch.
- Built-in switches with two- or four-contact construction are available.
- Degree of protection: IP67
- Conforms to EN115-1, EN81-1 and EN81-2. (slow-action models only)
- Certified standards: UL, EN (TÜV), and CCC
- Conforms to ISO 14119



**!** Be sure to read the "Safety Precautions" on page 6 and the "Precautions for All Safety Limit Switches".

For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

## Model Number Structure

### Model Number Legend

D4F-□□-□□  
1 2 3 4

#### 1. Built-in Switch

- 1: 1NC/1NO (slow-action)
- 2: 2NC (slow-action)
- 3: 2NC/2NO (slow-action)
- 4: 4NC (slow-action)

#### 2. Actuator

- 02: Roller plunger  
(Metal roller)
- 20: Roller lever  
(Metal lever, resin roller)

#### 3. Cable Length

- 1: 1 m
- 3: 3 m
- 5: 5 m

#### 4. Pull-outing direction of cable



- R: Horizontal
- D: Vertical

## Ordering Information

### List of Models

#### Safety Limit Switches (with Direct Opening Mechanism)

Consult with your OMRON representative when ordering any models that are not listed in this table.

| Actuator   | Cable length | Pull-outing direction of cable | Built-in switch       |                |                   |                |                       |                |                   |                |
|--|--------------|--------------------------------|-----------------------|----------------|-------------------|----------------|-----------------------|----------------|-------------------|----------------|
|  |              |                                | 1NC/1NO (slow-action) |                | 2NC (slow-action) |                | 2NC/2NO (slow-action) |                | 4NC (slow-action) |                |
|  |              |                                | Model                 | Direct opening | Model             | Direct opening | Model                 | Direct opening | Model             | Direct opening |
| Roller lever<br>(Metal lever, resin roller)<br> | 1 m          | Horizontal                     | D4F-120-1R            | ⊕              | D4F-220-1R        | ⊖              | D4F-320-1R            | ⊕              | D4F-420-1R        | ⊕              |
|  |              | Vertical                       | D4F-120-1D            | ⊖              | D4F-220-1D        | ⊕              | D4F-320-1D            | ⊖              | D4F-420-1D        | ⊖              |
|  | 3 m          | Horizontal                     | D4F-120-3R            | ⊕              | D4F-220-3R        | ⊖              | D4F-320-3R            | ⊕              | D4F-420-3R        | ⊕              |
|  |              | Vertical                       | D4F-120-3D            | ⊖              | D4F-220-3D        | ⊕              | D4F-320-3D            | ⊖              | D4F-420-3D        | ⊖              |
|  | 5 m          | Horizontal                     | D4F-120-5R            | ⊕              | D4F-220-5R        | ⊖              | D4F-320-5R            | ⊕              | D4F-420-5R        | ⊕              |
|  |              | Vertical                       | D4F-120-5D            | ⊖              | D4F-220-5D        | ⊕              | D4F-320-5D            | ⊖              | D4F-420-5D        | ⊖              |
| Roller plunger<br>(Metal roller)<br>            | 1 m          | Horizontal                     | D4F-102-1R            | ⊕              | D4F-202-1R        | ⊖              | D4F-302-1R            | ⊕              | D4F-402-1R        | ⊕              |
|  |              | Vertical                       | D4F-102-1D            | ⊖              | D4F-202-1D        | ⊕              | D4F-302-1D            | ⊖              | D4F-402-1D        | ⊖              |
|  | 3 m          | Horizontal                     | D4F-102-3R            | ⊕              | D4F-202-3R        | ⊖              | D4F-302-3R            | ⊕              | D4F-402-3R        | ⊕              |
|  |              | Vertical                       | D4F-102-3D            | ⊖              | D4F-202-3D        | ⊕              | D4F-302-3D            | ⊖              | D4F-402-3D        | ⊖              |
|  | 5 m          | Horizontal                     | D4F-102-5R            | ⊕              | D4F-202-5R        | ⊖              | D4F-302-5R            | ⊕              | D4F-402-5R        | ⊕              |
|  |              | Vertical                       | D4F-102-5D            | ⊖              | D4F-202-5D        | ⊕              | D4F-302-5D            | ⊖              | D4F-402-5D        | ⊖              |

## Specifications

### Standards and EC Directives

Conforms to the following EC Directives:

- Machinery Directive
- Low Voltage Directive
- EN50047
- EN60204-1
- EN ISO 14119
- GS-ET-15

### Certified Standards

| Certification body | Standards                                 | File No.             |
|--------------------|---|----------------------|
| TÜV SÜD            | EN60947-5-1<br>(certified direct opening) | *1                   |
| UL *2              | UL508<br>CSA C22.2 No.14                  | E76675               |
| CQC (CCC) *3       | GB14048.5                                 | 20030103050<br>64266 |

\*1. Contact your OMRON sales representative.

\*2. Certification has been obtained for CSA C22.2 No. 14 under UL.

\*3. Ask your OMRON representative for information on certified models.

### Certified Standard Ratings

TÜV (EN60947-5-1), CCC (GB14048.5)

| Item                                      | Utilization category | AC-15  | DC-13  |
|---|----------------------|--------|--------|
| Rated operating current (I <sub>e</sub> ) |                      | 0.75 A | 0.27 A |
| Rated operating voltage (U <sub>e</sub> ) |                      | 240 V  | 250 V  |

**Note:** Use a 10 A fuse type gI or gG that conforms to IEC60269 as a short-circuit protection device.

### UL/CSA (UL508, CSA C22.2 No. 14)

#### C300

| Rated voltage      | Carry current | Current (A) |             | Volt-amperes (VA) |       |
|--------------------|---------------|-------------|-------------|-------------------|-------|
|                    |               | Make        | Break       | Make              | Break |
| 120 VAC<br>240 VAC | 2.5 A         | 15<br>7.5   | 1.5<br>0.75 | 1,800             | 180   |

#### Q300

| Rated voltage      | Carry current | Current (A)  |              | Volt-amperes (VA) |       |
|--------------------|---------------|--------------|--------------|-------------------|-------|
|                    |               | Make         | Break        | Make              | Break |
| 125 VDC<br>250 VDC | 2.5 A         | 0.55<br>0.27 | 0.55<br>0.27 | 69                | 69    |