

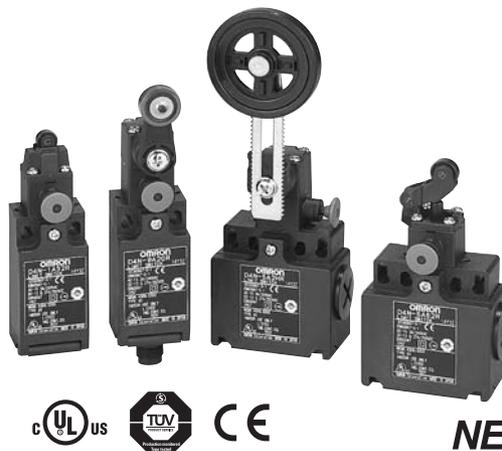
Miniature Manual Reset Limit Switch D4N-□R

A Series of Pull-reset Models Now Available

- Lineup includes three contact models with 2NC/1NO and 3NC contact forms in addition to the previous contact forms 1NC/1NO, and 2NC.
- M12-connector models are available, saving on labor and simplifying replacement.
- Standardized gold-clad contacts provide high contact reliability. Can be used with both standard loads and microloads.
- Free of lead, cadmium, and hexavalent chrome, reducing the burden on the environment.
- Conforms to EN115 and EN81-1.

Caution

Be sure to read the *Safety Precautions* on page 11.



Note: Contact your sales representative for details on models with safety standard certification.

Model Number Structure

Model Number Legend

D4N-□□□□R
1 2 3

1. Conduit/Connector size

- 1: Pg13.5 (1-conduit)
- 2: G1/2 (1-conduit)
- 3: 1/2-14NPT (1-conduit)
- 4: M20 (1-conduit)
- 5: Pg13.5 (2-conduit)
- 6: G1/2 (2-conduit)
- 7: 1/2-14NPT (M20 2-conduit with 1/2-14NPT changing adaptor included)
- 8: M20 (2-conduit)
- 9: M12 connector (1-conduit)

2. Built-in Switch

- A: 1NC/1NO (slow-action)
- B: 2NC (slow-action)
- C: 2NC/1NO (slow-action)
- D: 3NC (slow-action)

3. Head and Actuator

- 20: Roller lever (resin lever, resin roller)
- 2G: Adjustable roller lever, form lock (metal lever, resin roller)
- 2H: Adjustable roller lever, form lock (metal lever, rubber roller)
- 31: Top plunger
- 32: Top roller plunger
- 62: One-way roller arm lever (horizontal)
- 72: One-way roller arm lever (vertical)

Ordering Information

■ List of Models

| Actuator | Conduit size | | Built-in switch mechanism | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------|---------------------------|----------------------|--------------------------|----------------------|
| | | | 1NC/1NO (Slow-action) | 2NC (Slow-action) | 2NC/1NO (Slow-action) | 3NC (Slow-action) |
| Roller lever (resin lever, resin roller)  | 1-conduit | Pg13.5 | D4N-1A20R | D4N-1B20R | D4N-1C20R | D4N-1D20R |
| | | G1/2 | D4N-2A20R | D4N-2B20R | D4N-2C20R | D4N-2D20R |
| | | 1/2-14NPT | D4N-3A20R | D4N-3B20R | D4N-3C20R | D4N-3D20R |
| | | M20 | D4N-4A20R | D4N-4B20R | D4N-4C20R | D4N-4D20R |
| | | M12 connector | D4N-9A20R | D4N-9B20R | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A20R | D4N-5B20R | D4N-5C20R | D4N-5D20R |
| | | G1/2 | D4N-6A20R | D4N-6B20R | D4N-6C20R | D4N-6D20R |
| | | 1/2-14NPT (See note 2.) | D4N-7A20R | D4N-7B20R | D4N-7C20R | D4N-7D20R |
| | | M20 | D4N-8A20R | D4N-8B20R | D4N-8C20R | D4N-8D20R |
| | | | | | | |
| Adjustable roller lever, form lock (metal lever, resin roller)  | 1-conduit | Pg13.5 | D4N-1A2GR | D4N-1B2GR | D4N-1C2GR | D4N-1D2GR |
| | | G1/2 | D4N-2A2GR | D4N-2B2GR | D4N-2C2GR | D4N-2D2GR |
| | | 1/2-14NPT | D4N-3A2GR | D4N-3B2GR | D4N-3C2GR | D4N-3D2GR |
| | | M20 | D4N-4A2GR | D4N-4B2GR | D4N-4C2GR | D4N-4D2GR |
| | | M12 connector | D4N-9A2GR | D4N-9B2GR | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A2GR | D4N-5B2GR | D4N-5C2GR | D4N-5D2GR |
| | | G1/2 | D4N-6A2GR | D4N-6B2GR | D4N-6C2GR | D4N-6D2GR |
| | | 1/2-14NPT (See note 2.) | D4N-7A2GR | D4N-7B2GR | D4N-7C2GR | D4N-7D2GR |
| | | M20 | D4N-8A2GR | D4N-8B2GR | D4N-8C2GR | D4N-8D2GR |
| | | | | | | |
| Adjustable roller lever, form lock (metal lever, rubber roller)  | 1-conduit | Pg13.5 | D4N-1A2HR | D4N-1B2HR | D4N-1C2HR | D4N-1D2HR |
| | | G1/2 | D4N-2A2HR | D4N-2B2HR | D4N-2C2HR | D4N-2D2HR |
| | | 1/2-14NPT | D4N-3A2HR | D4N-3B2HR | D4N-3C2HR | D4N-3D2HR |
| | | M20 | D4N-4A2HR | D4N-4B2HR | D4N-4C2HR | D4N-4D2HR |
| | | M12 connector | D4N-9A2HR | D4N-9B2HR | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A2HR | D4N-5B2HR | D4N-5C2HR | D4N-5D2HR |
| | | G1/2 | D4N-6A2HR | D4N-6B2HR | D4N-6C2HR | D4N-6D2HR |
| | | 1/2-14NPT (See note 2.) | D4N-7A2HR | D4N-7B2HR | D4N-7C2HR | D4N-7D2HR |
| | | M20 | D4N-8A2HR | D4N-8B2HR | D4N-8C2HR | D4N-8D2HR |
| | | | | | | |
| Plunger  | 1-conduit | Pg13.5 | D4N-1A31R | D4N-1B31R | D4N-1C31R | D4N-1D31R |
| | | G1/2 | D4N-2A31R | D4N-2B31R | D4N-2C31R | D4N-2D31R |
| | | 1/2-14NPT | D4N-3A31R | D4N-3B31R | D4N-3C31R | D4N-3D31R |
| | | M20 | D4N-4A31R | D4N-4B31R | D4N-4C31R | D4N-4D31R |
| | | M12 connector | D4N-9A31R | D4N-9B31R | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A31R | D4N-5B31R | D4N-5C31R | D4N-5D31R |
| | | G1/2 | D4N-6A31R | D4N-6B31R | D4N-6C31R | D4N-6D31R |
| | | 1/2-14NPT (See note 2.) | D4N-7A31R | D4N-7B31R | D4N-7C31R | D4N-7D31R |
| | | M20 | D4N-8A31R | D4N-8B31R | D4N-8C31R | D4N-8D31R |
| | | | | | | |
| Roller plunger  | 1-conduit | Pg13.5 | D4N-1A32R | D4N-1B32R | D4N-1C32R | D4N-1D32R |
| | | G1/2 | D4N-2A32R | D4N-2B32R | D4N-2C32R | D4N-2D32R |
| | | 1/2-14NPT | D4N-3A32R | D4N-3B32R | D4N-3C32R | D4N-3D32R |
| | | M20 | D4N-4A32R | D4N-4B32R | D4N-4C32R | D4N-4D32R |
| | | M12 connector | D4N-9A32R | D4N-9B32R | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A32R | D4N-5B32R | D4N-5C32R | D4N-5D32R |
| | | G1/2 | D4N-6A32R | D4N-6B32R | D4N-6C32R | D4N-6D32R |
| | | 1/2-14NPT (See note 2.) | D4N-7A32R | D4N-7B32R | D4N-7C32R | D4N-7D32R |
| | | M20 | D4N-8A32R | D4N-8B32R | D4N-8C32R | D4N-8D32R |
| | | | | | | |

| Actuator | Conduit size | | Built-in switch mechanism | | | |
|-------------------------------------------------------------------------------------------------------------------------------|--------------|----------------------------|---------------------------|----------------------|--------------------------|----------------------|
| | | | 1NC/1NO (Slow-action) | 2NC (Slow-action) | 2NC/1NO (Slow-action) | 3NC (Slow-action) |
| One-way roller arm lever (horizontal)  | 1-conduit | Pg13.5 | D4N-1A62R | D4N-1B62R | D4N-1C62R | D4N-1D62R |
| | | G1/2 | D4N-2A62R | D4N-2B62R | D4N-2C62R | D4N-2D62R |
| | | 1/2-14NPT | D4N-3A62R | D4N-3B62R | D4N-3C62R | D4N-3D62R |
| | | M20 | D4N-4A62R | D4N-4B62R | D4N-4C62R | D4N-4D62R |
| | | M12 connector | D4N-9A62R | D4N-9B62R | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A62R | D4N-5B62R | D4N-5C62R | D4N-5D62R |
| | | G1/2 | D4N-6A62R | D4N-6B62R | D4N-6C62R | D4N-6D62R |
| | | 1/2-14NPT (See note 2.) | D4N-7A62R | D4N-7B62R | D4N-7C62R | D4N-7D62R |
| | | M20 | D4N-8A62R | D4N-8B62R | D4N-8C62R | D4N-8D62R |
| | | M12 connector | D4N-9A62R | D4N-9B62R | --- | --- |
| One-way roller arm lever (vertical)  | 1-conduit | Pg13.5 | D4N-1A72R | D4N-1B72R | D4N-1C72R | D4N-1D72R |
| | | G1/2 | D4N-2A72R | D4N-2B72R | D4N-2C72R | D4N-2D72R |
| | | 1/2-14NPT | D4N-3A72R | D4N-3B72R | D4N-3C72R | D4N-3D72R |
| | | M20 | D4N-4A72R | D4N-4B72R | D4N-4C72R | D4N-4D72R |
| | | M12 connector | D4N-9A72R | D4N-9B72R | --- | --- |
| | 2-conduit | Pg13.5 | D4N-5A72R | D4N-5B72R | D4N-5C72R | D4N-5D72R |
| | | G1/2 | D4N-6A72R | D4N-6B72R | D4N-6C72R | D4N-6D72R |
| | | 1/2-14NPT (See note 2.) | D4N-7A72R | D4N-7B72R | D4N-7C72R | D4N-7D72R |
| | | M20 | D4N-8A72R | D4N-8B72R | D4N-8C72R | D4N-8D72R |
| | | M12 connector | D4N-9A72R | D4N-9B72R | --- | --- |

- Note:** 1. It is recommended that M20 be used for Switches to be exported to Europe and 1/2-14NPT be used for Switches to be exported to North American countries.
 2. The 1/2-14NPT 2-conduit models include an M20-to-1/2-14NPT changing adaptor.

Specifications

Standards and EC Directives

- Conforms to the following EC Directives:
 Machinery Directive
 Low Voltage Directive
 EN50047
 EN1088
 GS-ET-15

Approved Standards

| Agency | Standard | File No. |
|---------------------|---------------------------------------|------------------|
| TÜV Product Service | EN60947-5-1 (approved direct opening) | B03 11 39656 061 |
| UL (See note.) | UL508, CSA C22.2 No.14 | E76675 |

Note: Approval for CSA C22.2 No. 14 is authorized by the UL mark.

CCC (China Compulsory Certification) Mark

| Agency | Standard | File No. |
|--------|-----------|-------------------|
| CQC | GB14048.5 | Under application |

Approved Standard Ratings

TÜV (EN60947-5-1)

| Item | Utilization category | AC-15 | DC-13 |
|-----------------------------------|----------------------|-------|--------|
| Rated operating current (I_n) | | 3 A | 0.27 A |
| Rated operating voltage (U_n) | | 240 V | 250 V |

Note: Use a 10-A fuse type gI or gG that conforms to IEC269 as a short-circuit protection device. This fuse is not built into the Switch.

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

A300

| Rated voltage | Carry current | Current | | Volt-amperes | |
|---------------|---------------|---------|-------|--------------|--------|
| | | Make | Break | Make | Break |
| 120 VAC | 10 A | 60 A | 6 A | 7,200 VA | 720 VA |
| 240 VAC | | 30 A | 3 A | | |

Q300

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

■ Characteristics

| | | |
|----------------------------------------------------|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Degree of protection (See note 3.) | | IP67 (EN60947-5-1) |
| Durability (See note 4.) | Mechanical | 1,000,000 operations min. |
| | Electrical | 500,000 operations min. for a resistive load of 3 A at 250 VAC (See note 5.) 300,000 operations min. for a resistive load of 10 A at 250 VAC |
| Operating speed | | 1 to 500 mm/s (D4N-1A20R) |
| Operating frequency | | 30 operations/minute max. |
| Contact resistance | | 25 mΩ max. |
| Minimum applicable load (See note 6.) | | Resistive load of 1 mA at 5 VDC (N-level reference value) |
| Rated insulation voltage (U_i) | | 300 V |
| Protection against electric shock | | Class II (double insulation) |
| Pollution degree (operating environment) | | Level 3 (EN60947-5-1) |
| Impulse withstand voltage (EN60947-5-1) | | Between terminals of the same polarity: 2.5 kV |
| | | Between terminals of different polarities: 4 kV |
| | | Between other terminals and uncharged metallic parts: 6 kV |
| Insulation resistance | | 100 MΩ min. |
| Contact gap | | Snap-action: 2 x 0.5 mm min Slow-action: 2 x 2 mm min |
| Vibration resistance | Malfunction | 10 to 55 Hz, 0.75-mm single amplitude |
| Shock resistance | Destruction | 1,000 m/s ² |
| | Malfunction | 300 m/s ² |
| Conditional short-circuit current | | 100 A (EN60947-5-1) |
| Rated open thermal current (I_{th}) | | 10 A (EN60947-5-1) |
| Ambient temperature | | Operating: -30°C to 70°C with no icing |
| Ambient humidity | | Operating: 95% max. |
| Weight | | Approx. 92 g (D4N-1A20R) |

- Note:**
- The above values are initial values.
 - Once a contact has been used to switch a standard load, it cannot be used for a load of a smaller capacity. Doing so may result in roughening of the contact surface and contact reliability may be lost.
 - The degree of protection is tested using the method specified by the standard (EN60947-5-1). Confirm that sealing properties are sufficient for the operating conditions and environment beforehand. Although the switch box is protected from dust or water penetration, do not use the D4N-□R in places where foreign material such as dust, dirt, oil, water, or chemicals may penetrate through the head. Otherwise, premature wear, Switch damage or malfunctioning may occur.
 - The durability is for an ambient temperature of 5°C to 35°C and an ambient humidity of 40% to 70%. For more details, consult your OMRON representative.
 - If the ambient temperature is greater than 35°C, do not pass the 3-A, 250-VAC load through more than 2 circuits.
 - This value will vary with the switching frequency, environment, and reliability level. Confirm that correct operation is possible with the actual load beforehand.