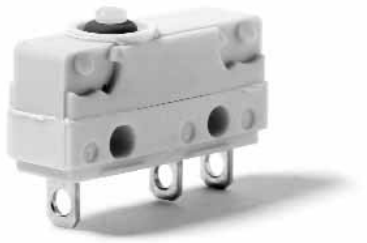
## V4N



**Characteristics**
- Peg mounting option
- Solder terminals
- 2.8 mm faston (quick connect) terminals
- PCB terminals
- Sealed (IP 67) / unsealed (IP 40)
- Pre-wired option
- Snap-on terminal covers

**Dimensions (mm)**
V4N 20 x 10 x 6
V4NS 20 x 17.5 x 6.4

**Actuator** Plunger, plain lever, roller lever

**Approvals** UL, CSA and ENEC



## Preferred Product Range

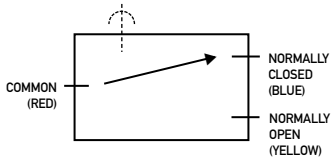
| Ordering Reference | Actuating Force (N) | (oz) | Sealing | Operating position (mm) | (in) | Terminal | Circuit | Actuator | Contacts | Electrical rating |
|---|---|---|---|---|---|---|---|---|---|---|
| V4NT7UL | 1.40 | 5.0 | IP40 | 8.40 | 0.33 | Solder | CO | Plain plunger | Silver | 250 VAC, 5 A |
| V4NST7UL | 2.50 | 9.0 | IP67 | 8.40 | 0.33 | Solder | CO | Plain plunger | Silver | 250 VAC, 5 A |
| V4NSUL | 2.50 | 9.0 | IP67 | 8.40 | 0.33 | Pre-wired | CO | Plain plunger | Silver | 250 VAC, 5 A |
| V4NT7Y1UL | 0.50 | 1.8 | IP40 | 10.7 | 0.42 | Solder | CO | Straight lever | Silver | 250 VAC, 5 A |
| V4NST7Y1UL | 0.90 | 3.2 | IP67 | 10.6 | 0.42 | Solder | CO | Straight lever | Silver | 250 VAC, 5 A |
| V4NSY1UL | 0.90 | 3.2 | IP67 | 10.6 | 0.42 | Pre-wired | CO | Straight lever | Silver | 250 VAC, 5 A |
| V4NT7YR1UL | 0.50 | 1.8 | IP40 | 15.7 | 0.62 | Solder | CO | Roller lever | Silver | 250 VAC, 5 A |
| V4NST7YR1UL | 0.90 | 3.2 | IP67 | 15.6 | 0.62 | Solder | CO | Roller lever | Silver | 250 VAC, 5 A |
| V4NSYR1UL | 0.90 | 3.2 | IP67 | 15.6 | 0.62 | Pre-wired | CO | Roller lever | Silver | 250 VAC, 5 A |

## Specifications

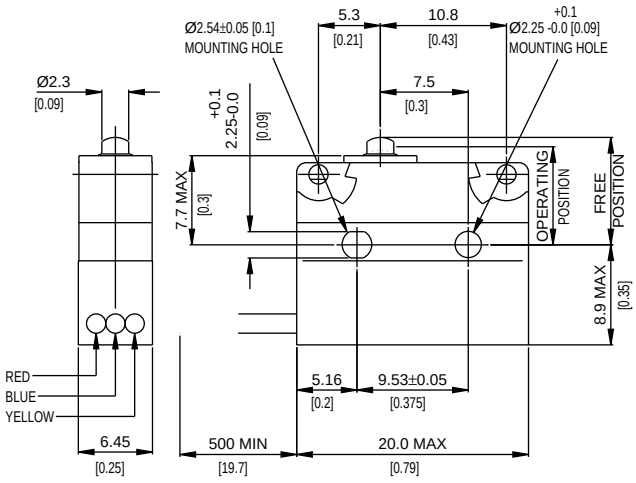
| | |
|---|---|
| Housing | Flame-retardant glass-fiber reinforced nylon |
| Plunger | Polyacetal (POM) |
| Mechanism | Snap-action coil spring mechanism with stainless steel spring |
| Functions | Change-over, normally-closed or normally-open |
| Contacts | Silver |
| Terminals | Gold flashed |
| Temperature range °C | –40°C to +85°C |
| Mechanical life | 5 x $10^6$ cycles minimum (impact free actuation) |
| Protection | IP40 (V4N - enclosure), IP67 (V4NS - enclosure) |
| Mounting | Side mounting |
| Actuators | Plain lever, Roller lever |
| Accessories | Insulating sheet - N04619, Clip-on terminal cover - TC102, Long overtravel actuator - QA4 |



Circuit diagram



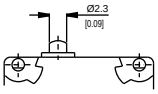
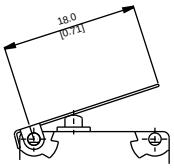
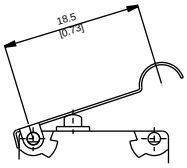
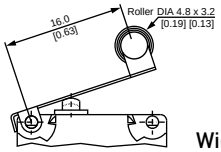

Dimensions mm [in]




## Recommended Maximum Electrical Ratings

| | Voltage (max) | Load (A) | Inductive load (A) | Approval |
|---|---|---|---|---|
| V4NT7/V4NST7-UL | 250 VAC | 5 (0.75 pf) | | UL 1054/CSA 22.2 No. 55 - 6,000 operations - 65° C |
| | 250 VAC | 5 | 2 | EN61058-1, T85, 10,000 operations |
| | 0 - 15 VDC | 5 | 3 | General rating - 50,000 operations (85° C) |
| | 15 - 30 VDC | 5 | 3 | General rating - 50,000 operations (85° C) |
| V4NS-UL | 250 VAC | 3 (0.75 pf) | | UL 1054/CSA 22.2 No. 55 - 6,000 operations - 65° C |
| | 250 VAC | 5 | 2 | EN61058-1, T85, 10,000 operations |
| | 0 - 15 VDC | 3 | 3 | General rating - 50,000 operations (85° C) |
| | 15 - 30 VDC | 3 | 3 | General rating - 50,000 operations (85° C) |

## Operating Characteristics

| Actuator | Reference | Actuating Force Maximum (N) | (oz) | Release Force Minimum (N) | (oz) | Free Position Maximum (mm) | (in) | Operating Position (mm) | (in) | Movement Differential Maximum (mm) | (in) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Plunger mm [in]   | V4NT7UL | 1.4 | 5.00 | 0.28 | 1.00 | 9.2 | 0.36 | 8.4 ± 0.3 | 0.33 ± 0.012 | 0.1 | 0.004 |
| | V4NST7UL | 2.5 | 9.00 | 0.30 | 1.00 | 9.2 | 0.36 | 8.4 ± 0.3 | 0.33 ± 0.012 | 0.1 | 0.004 |
| | V4NSUL | 2.5 | 9.00 | 0.3 | 1.00 | 9.2 | 0.36 | 8.4 ± 0.3 | 0.33 ± 0.012 | 0.1 | 0.004 |
| Y1 lever mm [in]   | V4NT7Y1UL | 0.5 | 1.80 | 0.07 | 0.25 | 13.2 | 0.52 | 10.7 ± 1.0 | 0.42 ± 0.04 | 0.4 | 0.016 |
| | V4NST7Y1UL | 0.9 | 3.20 | 0.07 | 0.25 | 13.2 | 0.52 | 10.6 ± 1.2 | 0.42 ± 0.05 | 0.4 | 0.016 |
| | V4NSY1UL | 0.9 | 3.20 | 0.07 | 0.25 | 13.2 | 0.52 | 10.6 ± 1.2 | 0.42 ± 0.05 | 0.4 | 0.016 |
| | Width of lever 4.0 mm/0.16 in | | | | | | | | | | |
| YC1 lever mm [in]   | /4NT7YC1UL | 0.5 | 1.80 | 0.07 | 0.25 | 17.8 | 0.70 | 15.7 ± 1.0 | 0.62 ± 0.04 | 0.4 | 0.016 |
| | /4NST7YC1UL | 0.9 | 3.20 | 0.07 | 0.25 | 17.8 | 0.70 | 15.6 ± 1.2 | 0.61 ± 0.05 | 0.4 | 0.016 |
| | /4NSYC1UL | 0.9 | 3.20 | 0.07 | 0.25 | 17.8 | 0.70 | 15.6 ± 1.2 | 0.61 ± 0.05 | 0.4 | 0.016 |
| | Width of lever 4.0 mm/0.16 in | | | | | | | | | | |
| YR1 lever mm [in] | V4NT7YR1 | 0.5 | 1.80 | 0.07 | 0.25 | 17.8 | 0.70 | 15.7 ± 1.0 | 0.62 ± 0.04 | 0.4 | 0.016 |
| | V4N2T7YR1 | 0.2 | 0.70 | 0.02 | 0.07 | 17.8 | 0.70 | 15.7 ± 1.0 | 0.62 ± 0.04 | 0.4 | 0.016 |
|   | | | | | | | | | | | |
| | Width of lever 4.0 mm/0.16 in | | | | | | | | | | |

Over travel: Plunger can be depressed flush with housing. The housing should not be used as an end stop.

## Ordering Reference – How to Build a Part Number

| | | |
|---|---|---|
| Type | V4N | |
| Type of sealing | No digit | Unsealed |
| | S | Sealed IP67 |
| Terminals | No digit | Pre-wired, 0.5m PVC cable (V4NS only) |
| | T7 | Solder |
| | T8 | PCB 0.8 x 0.8 mm |
| | T9 | 0.110 in. quick connect (2.8 x 0.5 mm) |
| Circuit | No digit | Change-over |
| | C2 | Normally closed |
| | C4 | Normally open |
| Actuators | No digit | Plunger |
| | Y1 | Plain lever |
| | YR1 | Roller lever |
| | YC1 | Cam follower |
| Approvals | UL | UL approval |

## QA4/PBA4

Characteristics

- Long overtravel stainless steel plunger
- Molded frame (QA4)
- 2 locknuts
- M6 fine thread sleeves
- Can be fitted to all standard travel V4NC switches
- Simple clip-on attachment
- Choice of either round or square push buttons and bezels
- Single hole mounting (Ø 6.35 mm) or via switch mounting holes
- Panel sealing if required
- Long overtravel actuator version with min. 5 mm overtravel



## Preferred Product Range

| Ordering Reference | Basic switch | Button | Bezel | Sealing kit | Actuator kit |
|---|---|---|---|---|---|
| V4NCT7QA4 | V4NCT7 | PBRR | BZR | PBSLK | QA4 |

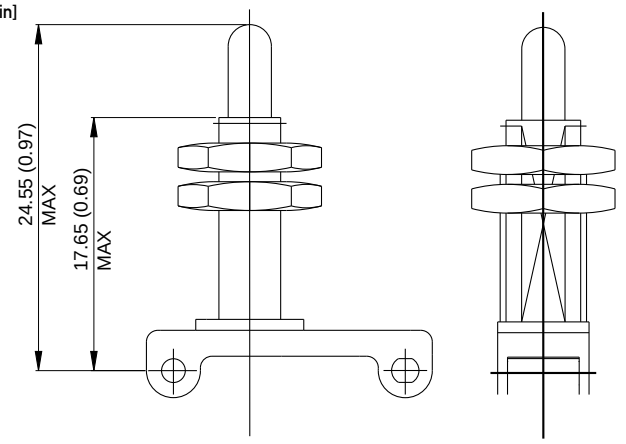
## Specifications

| | |
|---|---|
| Clip-on frame | Glass fiber reinforced polyamide (PA 6.6) |
| Bezel | ABS polymer - black |
| Cowl | Synthetic rubber |
| "O"-Ring | Nitrile |
| Locknut | Brass nickel plate |
| Button | ABS polymer |
| Basic switches | V4NC (see pages 41 to 44) |
| Temperature °C | -10°C to +85°C |
| Mechanical Life | 5 x $10^6$ cycles minimum (Mechanism 2 x $10^6$ cycles minimum) (Impact free actuation) |
| Mounting mm [in] | Single hole Ø 6.4 (0.25) suitable for panels up to 8.0 (0.3) thick |
| Torque max. Nm | 0.4 to be applied to locknut |

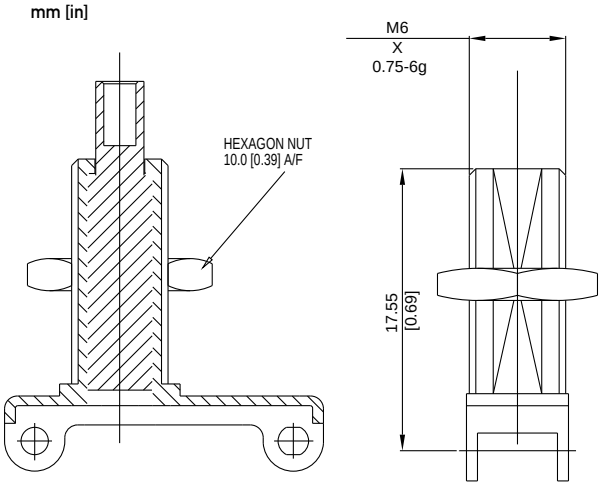


Dimensions mm [in]

QA4

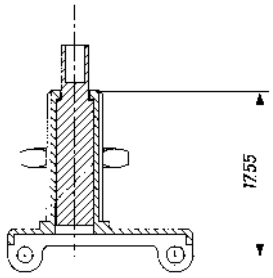


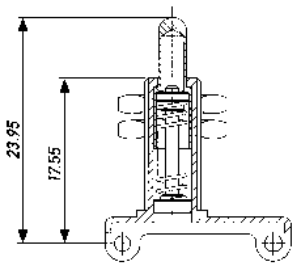

PBA4
mm [in]



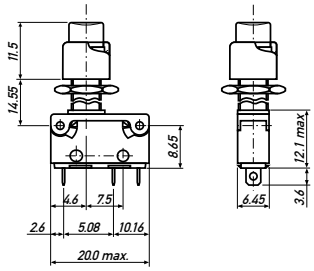
## Ordering Reference – How to Build a Part Number

Actuator kit PBA4 QA4



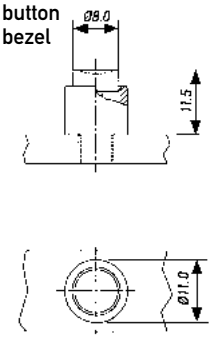




Basic switch V4NC... See pages A28–A31

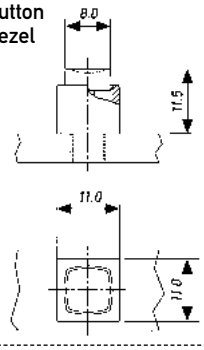



| Button | Round button | Square button | Button color |
|---|---|---|---|
| | PBRR | PBSR | Red |
| | PBRY | PBSY | Yellow |
| | PBRG | PBSG | Green |
| | PBRBU | PBSBU | Blue |
| | PBRW | PBSW | White |
| | PBRB | PBSBU | Black |

Round button
Round bezel




Square button
Square bezel




Bezel BZR round BZS square

Sealing kit PBSLK Sealing kit ("0"-ring and diaphragm) suitable for square and round versions

