

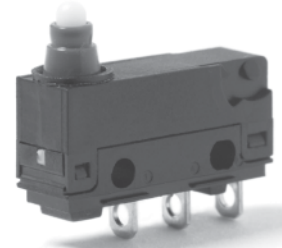
V4L

Snap-action Microswitches

Subminiature

V4L

| | |
|-----------------|--|
| Characteristics | <ul style="list-style-type: none"> ■ Long overtravel of 2.2 mm minimum ■ Available sealed to IEC 1167 ■ Prewired option available |
| Rating | 250 VAC, 5 A |
| Dimensions (mm) | 20 × 6,4 × 16,4 |
| Actuator | Plain lever, Ice break lever |
| Approvals | VDE (EN) |



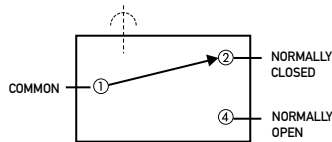
Preferred Range

| Ordering Reference | Actuating Force (N) (ozf) | | Sealing | Operating pos. (mm) | Terminal | Circuit | Actuator | Contacts | Electrical rating |
|--------------------|------------------------------|-----|----------|------------------------|--------------|---------|-------------|-------------|-------------------|
| V4LSK2 | 2.5 | 9.0 | IP6K7 | 11,7 ± 0,4 | Cable 500 mm | CO | Plunger | Fine silver | 250 VAC, 5 A |
| V4LSK2A1 | 2.5 | 9.0 | IP6K7 | 14,5 ± 0,8 | Cable 500 mm | CO | Plain lever | Fine silver | 250 VAC, 5 A |
| V4LSK2A2 | 2.0 | | IP6K7 | 16,5 ± 1,0 | Cable 500 mm | CO | Plain lever | Fine silver | 250 VAC, 5 A |
| V4LST7 | 2.5 | 9.0 | IP6K7 | 11,7 ± 0,4 | Solder | CO | Plunger | Fine silver | 250 VAC, 5 A |
| V4LST7A1 | 2.5 | | IP6K7 | 14,5 ± 0,8 | Solder | CO | Plain lever | Fine silver | 250 VAC, 5 A |
| V4LST7A2 | 2.0 | | IP6K7 | 14,6 ± 1,0 | Solder | CO | Plain lever | Fine silver | 250 VAC, 5 A |
| V4LT7 | 2,4 | 8,6 | No digit | 11,7 ± 0,4 | Solder | CO | Plunger | Fine silver | 250 VAC, 5 A |

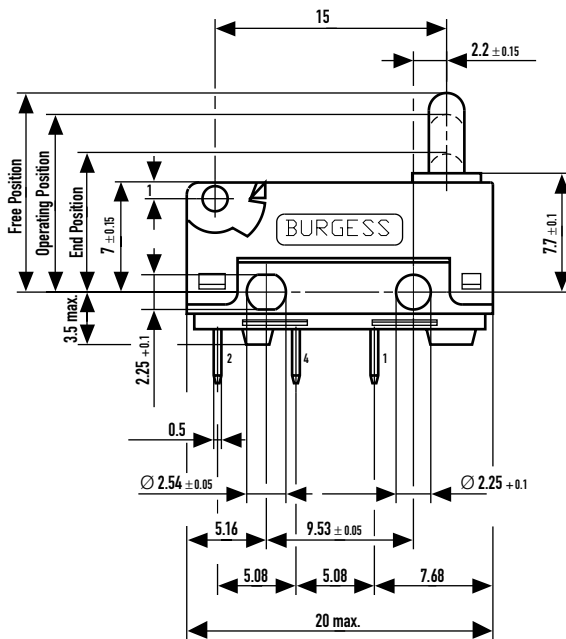
Specifications

| | |
|----------------------|--|
| Housing | Glass fibre reinforced polyamide (PA 6.6) |
| Plunger | Polyacetal (POM) |
| Mechanism | Snap-action coil spring mechanism with stainless steel spring. Change-over, normally closed or normally open |
| Contact carrier | Brass. Moving contact beryllium-copper |
| Contacts | Fine silver or gold crosspoint |
| Terminals | V4L – solder tags (gold flashed), V4LS – PVC covered leads 0.5 m long |
| Temperature range °C | -40°C to +85°C |
| Mechanical life | V4L 2×10^6 cycles/min., V4LS 2×10^5 cycles/min. (impact free actuation) |
| Protection | V4L series IP40, V4LS series IP67, with encapsulated terminals |
| Mounting | Side mounting to a flat surface. |
| Actuators | Plain lever, Simulated roller, Cam follower, Roller lever, Ice break lever, Spring (ice break) lever |
| Cowl | Silicon elastomer |

Circuit diagram



Dimensions

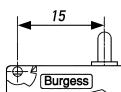
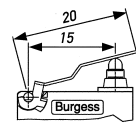
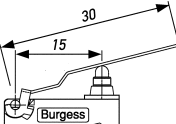
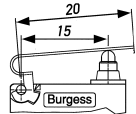


Recommended maximum electrical ratings

| Voltage (VAC) | Resistive load (A) (Ag Contact) | Incandescent lamp load (A) (Ni1 Contact) | Inductive load (A) (Ag Contact) | Voltage (VDC) up to | Resistive load (A) (Ag Contact) | Incandescent lamp load (A) (Ni1 Contact) | Inductive load (A) (Ag Contact) |
|---------------|---------------------------------|--|---------------------------------|---------------------|---------------------------------|--|---------------------------------|
| 125 | 5 | 2 | 2 | 30 | 5 | 2 | 3 |
| 250 | 5 | 2 | 2 | 50 | 1 | 0.4 | 1 |
| | | | | 75 | 0.75 | 0.3 | 0.75 |
| | | | | 125 | 0.5 | 0.2 | 0.03 |
| | | | | 250 | 0.25 | 0.1 | 0.03 |

Circuit, breaking capacities quoted refer to the switch. The loading of the leads and cable depends on the heat dissipation and has to be checked by testing. Gold-plated contacts are intended for use in signal circuits where the energy being switched is at the milliwatt level. Power being switched must be limited in order to avoid overheating and possible dispersal of the gold from the contact area.

Operating Characteristics

| Actuator | Reference | Actuating Force | | Release Force | | Free Position | | Operating Position | | Movement Differential | | Total overtravel | | Overtravel | |
|--|-----------|---|------------------|---------------|-------|---------------|-------|--------------------|--------------|-----------------------|-------|------------------|------|------------|------|
| | | Maximum (N) | (ozf) | Minimum (N) | (ozf) | Maximum (mm) | (in) | (mm) | (in) | Maximum (mm) | (in) | Minimum (mm) | (in) | (mm) | (in) |
|  Plunger | V4LT7 | 2,4 | 8,60 | 0,4 | 1,44 | 12,9 | 0,507 | 11,7 ± 0,4 | 0,46 ± 0,012 | 0,9 | 0,023 | 9,2 | 0,36 | 2,2 | 0,09 |
| | V4LST7 | 2,5 | 9,00 | 0,5 | 1,78 | 12,9 | 0,507 | 11,7 ± 0,4 | 0,46 ± 0,012 | 0,9 | 0,023 | 9,2 | 0,36 | 2,2 | 0,09 |
|  A1 Lever | V4L... | 2,4 | 8,60 max. 2,5 | 0,4 | 1,44 | 14,5 | 0,57 | 12,6 ± 0,8 | 0,59 ± 0,03 | 1,0 | 0,04 | | | | |
| | V4LS... | | | 0,5 | 1,78 | 14,5 | 0,57 | 12,6 ± 0,8 | 0,59 ± 0,03 | 1,0 | 0,04 | | | | |
| Width of lever 4.0 mm/0.16 in | | | | | | | | | | | | | | | |
|  A2 Lever | V4L... | 1,5 | | 0,3 | 1,08 | 16,5 | 0,65 | 13,5 ± 1,0 | 0,53 ± 0,04 | 1,3 | 0,05 | | | 2,9 | 1,1 |
| | V4LS... | 2 | | 0,3 | 1,08 | 16,5 | 0,65 | 13,5 ± 1,0 | 0,53 ± 0,04 | 1,3 | 0,05 | | | 2,9 | 1,1 |
| Width of lever 4.0 mm/0.16 in | | | | | | | | | | | | | | | |
|  F Lever | V4L... | For positions and forces of this actuator please contact Saia-Burgess | | | | | | | | | | | | | |
| | V4LS... | | | | | | | | | | | | | | |
| Width of lever 4.0 mm/0.16 in | | | | | | | | | | | | | | | |

Ordering Reference

| | | |
|--------------------------|---|--|
| Type | V4L | |
| Environmental Protection | No digit S | IP40 IP67 |
| Terminals | T7 Solder T8 Solder | 0,5 × 2,95 0,8 × 0,5 |
| | All other terminals on special request. | |
| Cover | K2 K3 | 8,7 mm max. 10,7 mm max. |
| Circuit | No digit C2 C4 | Change-over Normally closed Normally open |
| Mounting | No digit | Mounting holes Please request dimensional drawing |
| Actuators | No digit A1 A2 AC1 F | Plunger Plain lever 20.0 mm (0.79 in) Plain lever 30.0 mm (1.18 in) Cam follower 23.0 mm (0.9 in) Spring lever 20.0 mm (0.79 in) |
| Contacts | No digit AUX AgNi1 | Silver Gold alloy on silver palladium crosspoint Silver nickel |

Switches

| Snap-action Microswitches, Miniature | Type | Preferred Products | Preferred Products | Page |
|--------------------------------------|------|--|---|------|
| | XG | XGG2-88Z1 XGG2-88-J23Z1 XGG2-88-J26Z1 XGG2-88-J27Z1 XGG2-88-S20Z1 XGG2-88-S21Z1 XGG3-88Z1 XGG6-88Z1 XGC2-88Z1 XGC2-88-J23Z1 XGC2-88-S20Z1 XGC6-88Z1 | XGK2-88Z1 XGK2-88-J26Z1 XGK2-88-S21Z1 XGK3-88Z1 XGK6-88Z1 XG02-88Z1 XG02-88-J27Z1 XG02-88-S20Z1 XG06-88Z1 | 56 |
| | X3 | X3M302K2KA X3M302K2KA X3M302K2KAJ32 X3M302K2KAJ62 X3M302K2KAT02 X3M303K2KA X3M306K2KA | X3C302K2LB X3C302K2LBJ32 X3C303K2LB X3C306K2LB X3L302K6DD X3L303K6DD | 60 |
| | G3 | G3M1T1RULAU G3M1T1PULAU G3M1T1RUL G3M1T1PUL G3M1T2RUL G3M1T2PUL | G3M1T3RUL G3M1T3PUL G3M1T4RUL G3M1T4PUL G3G4T1RUL G3G4T1PUL | 64 |
| | V3S | V3SUL V3SYRUL V3SYR1UL V3SY1UL | | 67 |
| | V9N | V9N V9NLR V9NLR1 V9NL V9NML V9NV | V9NLRV V9NLR1V V9NLV V9NMLV V9NMRV V9NMLRV | 70 |