

ENCLOSED LIMIT SWITCHES SN9 SERIES



Features

- Compact and rugged Aluminum housing
- Large wiring enclosure
- High precision switch
- High repeatability of switching point
- Long service life
- Large breaking power
- Conduit opening available in:
M20: suffix -C
1/2NPT: suffix -A

Definitions of Operating Characteristics

- OF Operating Force
- RF Releasing Force
- OT Overtravel
- TT Total Travel
- PT Pretravel
- MD Movement Differential
- OP Operating Position

Specifications

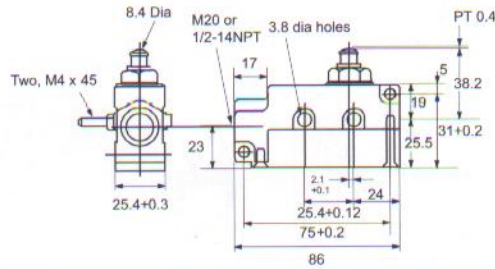
Operating Speed	0.02mm-0.5m/sec
Operating Frequency	Mechanical: 120ops/min Electrical: 20 ops/min
Insulation Resistance	>100MΩ@500V DC
Contact Resistance	<25mΩ
Rated Current/Voltage (UL file E240199)	SN91: 15A, 125/250/480VA; 1/8HP/125VAC, 1/4HP/250VAC SN92: 20A, 125/250/480VA; 1HP/125VAC, 2HP/250VAC SN93: 25A, 125/250/480VA; 1HP/125VAC, 2HP/250VAC
Dielectric Strength	1000VAC for 1 min between current carrying parts 2500VAC for 1 min between non-current carrying parts
Service Life	Mechanically 1.0 x 10 ⁷ (operations) Electrically 5 x 10 ⁵ (operations)
Operating Temperature	-25~+80°C (-13~176°F)
Humidity	< 95%RH
Degree of Protection	IP65

Dimensions

Unit:mm



SN91-Q11
SN92-Q11
SN93-Q11

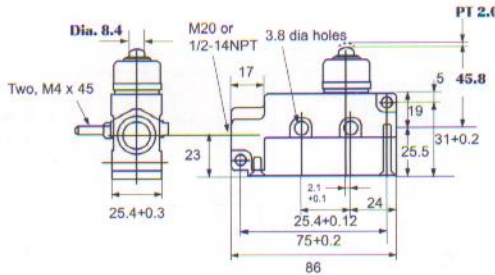


Operating Characteristics

- OF_{max} 250 to 350gf
- RF_{min} 114gf
- PT_{max} 0.4mm
- OT_{min} 5.5mm
- MD_{max} 0.05mm
- OP 38.2± 0.8mm



SN91-N11
SN92-N11
SN93-N11

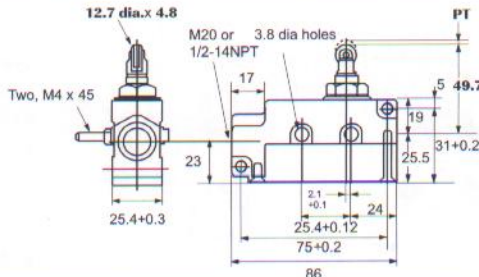


Operating Characteristics

- OF_{max} 800gf
- RF_{min} 240gf
- PT_{max} 2mm
- OT_{min} 5mm
- MD_{max} 0.1mm
- OP 45.8± 0.8mm



SN91-Q12
SN92-Q12
SN93-Q12



Operating Characteristics

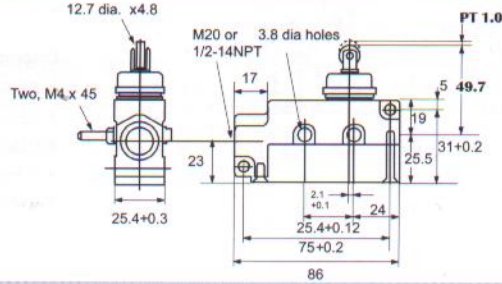
- OF_{max} 250 to 350gf
- RF_{min} 114gf
- PT_{max} 0.5mm
- OT_{min} 3.6mm
- MD_{max} 0.05mm
- OP 49.7± 1mm

* Add suffix: -A for 1/2NPT -B for PG13.5 -C for M20x1.5

ENCLOSED LIMIT SWITCHES SN9 SERIES



SN91-N12
SN92-N12
SN93-N12

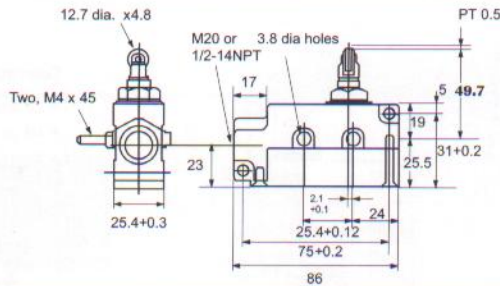


Operating Characteristics

- OF_{max} 500gf
- RF_{min} 100gf
- PT_{max} 1mm
- OT_{min} 3.5mm
- MD_{max} 0.12mm
- OP 49.7±0.8mm



SN91-Q22
SN92-Q22
SN93-Q22

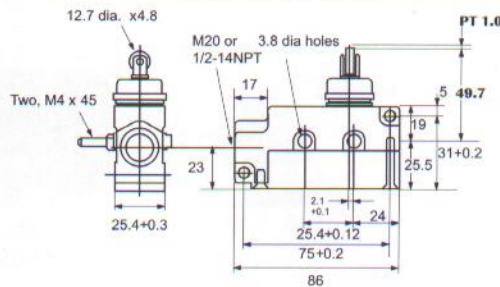


Operating Characteristics

- OF_{max} 250 to 350gf
- RF_{min} 114gf
- PT_{max} 0.5mm
- OT_{min} 3.6mm
- MD_{max} 0.05mm
- OP 49.7±1mm



SN91-N22
SN92-N22
SN93-N22

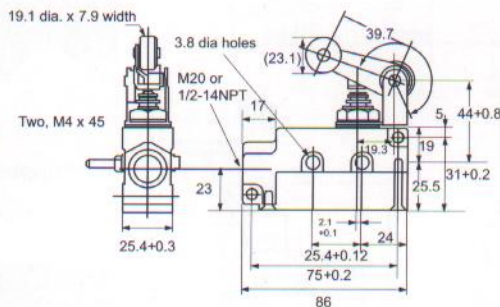


Operating Characteristics

- OF_{max} 500gf
- RF_{min} 100gf
- PT_{max} 1mm
- OT_{min} 3.5mm
- MD_{max} 0.12mm
- OP 49.7±0.8mm



SN91-Q62
SN92-Q62
SN93-Q62




Operating Characteristics

- OF_{max} 570gf
- RF_{min} 170gf
- PT_{max} 4mm
- OT_{min} 6mm
- MD_{max} 0.4mm

* Add suffix: -A for 1/2NPT -B for PG13.5 -C for M20x1.5

ENCLOSED LIMIT SWITCHES SN9 SERIES

19.1 dia. x 7.9 width

3.8 dia holes (23.1)

M20 or 1/2-14NPT

Two, M4 x 45

25.4±0.3

17

39.7

53.4±0.8

19

31±0.2

25.5

2.1±0.1

24

25.4±0.12


75±0.2

86

Operating Characteristics

- OF_{max} 640gf
- RF_{min} 230gf
- PT_{max} 5mm
- OT_{min} 6mm
- MD_{max} 0.4mm

**SN91-N62
SN92-N62
SN93-N62**



18.7 dia. x 9 width

← Operates in this direction only

3.8 dia holes

M20 or 1/2-14NPT

Two, M4 x 45

25.4±0.3

17

39.7

44±0.8

19

31±0.2

25.5

2.1±0.1

24

25.4±0.12


75±0.2

86

Operating Characteristics

- OF_{max} 570gf
- RF_{min} 170gf
- PT_{max} 4mm
- OT_{min} 6mm
- MD_{max} 0.4mm

**SN91-Q63
SN92-Q63
SN93-Q63**



18.7 dia. x 9 width

← Operates in this direction only

3.8 dia holes

M20 or 1/2-14NPT

Two, M4 x 45

25.4±0.3

17

39.7

53.4±0.8

19

31±0.2

25.5

2.1±0.1

24

25.4±0.12


75±0.2

86

Operating Characteristics

- OF_{max} 640gf
- RF_{min} 230gf
- PT_{max} 5mm
- OT_{min} 6mm
- MD_{max} 0.4mm

**SN91-N63
SN92-N63
SN93-N63**



ø 5 (0.20)

130 (5.12)

44 (1.73)

25.4±0.3 (1.00)

48 (1.89)

4

6

130 (5.12)

Rubber cap and clamping band

M4 x 25 (0.98) counter-sunk head screw

M4 x 8 (0.32) counter-sunk head screw

Two, 6-32 UNC round head screws

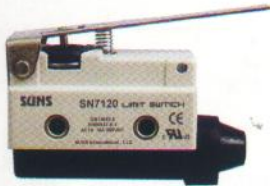
Operating Characteristics

- OF_{max} 150gf
- PT_{max} 15 degree

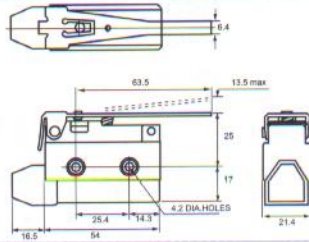
**SN91-N66
SN92-N66
SN93-N66**

* Add suffix: **-A** for 1/2NPT **-B** for PG13.5 **-C** for M20x1.5

MINI ENCLOSED LIMIT SWITCHES SN7 SERIES

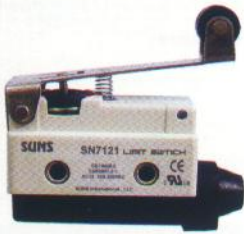


SN7120

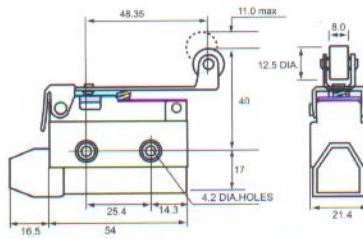


Operating Characteristics

- OF_{max} 1.47N
- RF_{min} 0.39N
- PT_{max} 13.5mm
- OT_{min} 4.0mm
- MD_{max} 3.2mm
- FP_{max} 38.5mm
- OP 25±2.0mm

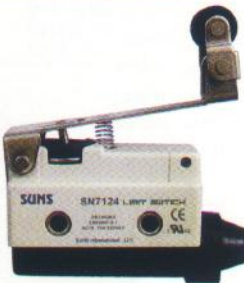


SN7121

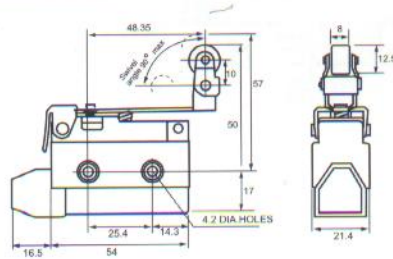


Operating Characteristics

- OF_{max} 1.77N
- RF_{min} 0.49N
- PT_{max} 11.0mm
- OT_{min} 3.0mm
- MD_{max} 2.4mm
- FP_{max} 51mm
- OP 40±1.9mm

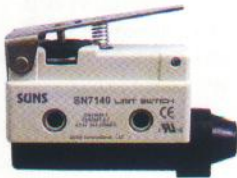


SN7124

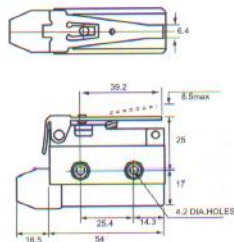


Operating Characteristics

- OF_{max} 2.16N
- RF_{min} 0.59N
- PT_{max} 11.0mm
- OT_{min} 3.0mm
- MD_{max} 2.4mm
- FP_{max} 57
- OP 50±2.0mm

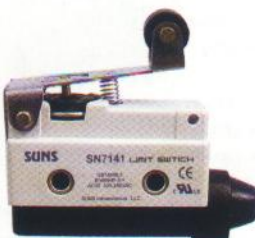


SN7140

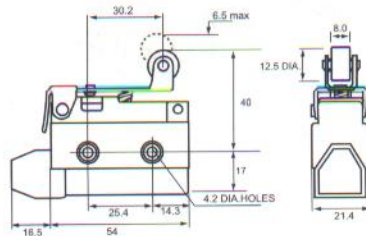


Operating Characteristics

- OF_{max} 2.16N
- RF_{min} 0.59N
- PT_{max} 8.5mm
- OT_{min} 2.5mm
- MD_{max} 2.0mm
- FP_{max} 33.5mm
- OP 25±1.3mm



SN7141



Operating Characteristics

- OF_{max} 2.35N
- RF_{min} 0.87N
- PT_{max} 6.5mm
- OT_{min} 2.0mm
- MD_{max} 1.5mm
- FP_{max} 46.5mm
- OP 40±1.6mm