

TFS Series Splash Proof Mid Size Snap-acting Switches



Features/Benefits

- Reliable snap action mechanism
- Low cost - high performance
- RoHS compatible
- IP40

Typical Applications

- Alarm devices / Home security
- Air conditioner
- Food processor
- Water heaters
- Industrial
- Forklifts

UL61058-1  

Specifications

CONTACT RATING / ELECTRICAL LIFE:

- 0.1A @ 125/250 V AC / 10,000 operations
- 3A @ 125/250 VAC / 10,000 operations
- 6A @ 125/250 VAC / 10,000 operations
- 10A @ 125/250 VAC / 10,000 operations

ELECTRICAL OPERATING FREQUENCY: 10-30 operations per min.

MECHANICAL LIFE: 1,000,000 operations

MECHANICAL OPERATING FREQUENCY: 120 operations per min.

INSULATION RESISTANCE: (at 500 VDC/minute) 100 M ohm min.

DIELECTRIC STRENGTH: 1500 VAC (50 -60 Hz)

OPERATING TEMPERATURE: -40°C to 85°C (with no icing)

OPERATING FORCE: 200 grams.

Materials

CASE: Nylon

COVER: PBT

ACTUATOR: PBT

MOVABLE CONTACTS: Silver alloy

TERMINALS: Brass

LEVER: Stainless steel

WIRE: PVC+CU

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Snap-acting

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog, consult Customer Service Center.



Electrical Rating

| ELECTRICAL RATING | AMPS (GRAMS) | OPERATING FORCE | | | | |
|-------------------|--------------|-----------------|--------|---------|---------|---------|
| | | S (200) | D (50) | J (100) | L (150) | H (300) |
| 01 | 0.1 | • | • | • | • | • |
| 03 | 3 | • | • | • | • | • |
| 06 | 6 | • | • | • | • | • |
| 10 | 10 | • | X | X | X | • |

- Available
- X Not available

Operating Force

- S** 200 grams
- D** 50 grams
- J** 100 grams
- L** 150 grams
- H** 300 grams

Actuator Lever Fixed

- P00** Button
- T10** Lever - high force
- T20** Lever - low force
- A05** Lever roller - High force, short lever
- A10** Lever roller - high force
- A20** Lever roller - low force
- A25** Lever roller - Low force, short lever

Circuit Arrangement

- C** SPDT
- Y** SPST N.O.
- W** SPST N.C.

Mounting Hole Size

- NONE** 3.1 mm (3 mm screw clearance hole)
- S** 2.9 mm (4-40 screw clearance hole)

Terminal Type

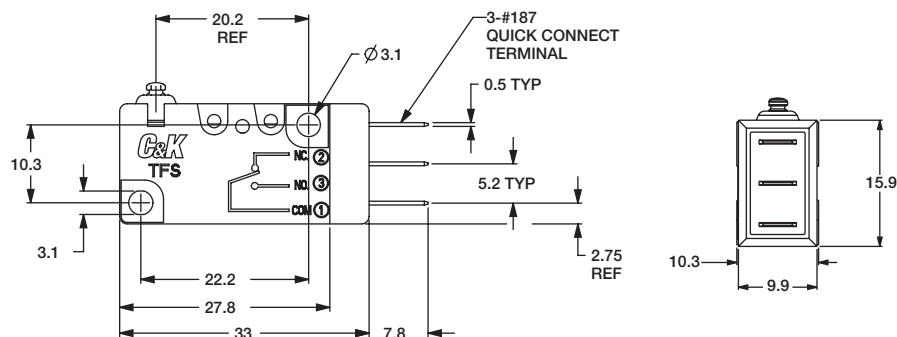
- 40** .187" quick connect



TFS Series Splash Proof Mid Size Snap-acting Switches

SERIES

TFS MID SIZE SNAP-ACTING SWITCHES

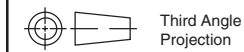


ELECTRICAL RATING

| OPTION CODE | RoHS COMPLIANT | RoHS COMPATIBLE | ELECTRICAL RATING |
|-------------|----------------|-----------------|--|
| 10 | Yes | Yes | 10A @ 125/250 V AC / 10,000 operations |
| 06 | Yes | Yes | 6A @ 125/250 VAC / 10,000 operations |
| 03 | Yes | Yes | 3A @ 125/250 VAC / 10,000 operations |
| 01 | Yes | Yes | 0.1A @ 125/250 VAC / 10,000 operations |

OPERATING FORCE

| OPTION CODE | BASIC SWITCH OPERATING FORCE |
|-------------|------------------------------|
| S | 200 GRAMS |
| D | 50 grams |
| J | 100 grams |
| L | 150 grams |
| H | 300 grams |



Third Angle
Projection

Dimensions are shown: mm
Specifications and dimensions subject to change



30 Apr 21

J-69

www.ckswitches.com

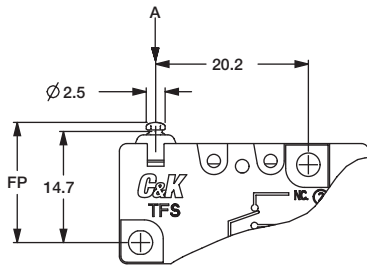


Snap-acting

TFS Series Splash Proof Mid Size Snap-acting Switches

ACTUATOR

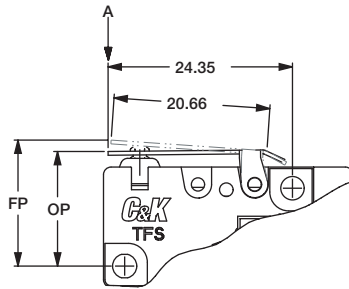
P00 BUTTON



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 200 grams |
| Min. release force | 30 grams |
| Operating position OP | 14.7 ± 0.4 mm |
| Max. movement differential | 0.4 mm |
| Min. over travel OT | 1.0 mm |
| Max. pre-travel PT | 1.2 mm |

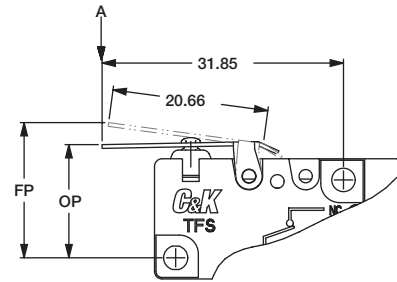
T10 LEVER, HIGH FORCE



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 160 grams |
| Min. release force | 25 grams |
| Operating position OP | 15.1 ± 0.6 mm |
| Max. movement differential | 0.6 mm |
| Min. over travel OT | 1.1 mm |
| Max. pre-travel PT | 2.6 mm |

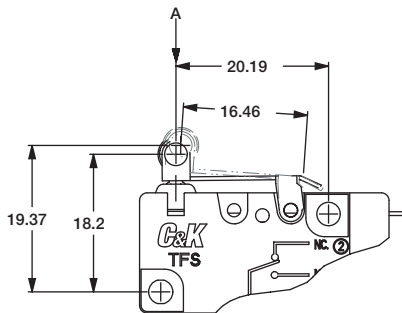
T20 LEVER, LOW FORCE



Measure at Point "A"

| | |
|----------------------------|-------------|
| Max. operating force | 90 grams |
| Min. release force | 10 grams |
| Operating position OP | 15 ± 1.1 mm |
| Max. movement differential | 1.1 mm |
| Min. over travel OT | 1.2 mm |
| Max. pre-travel PT | 5.1 mm |

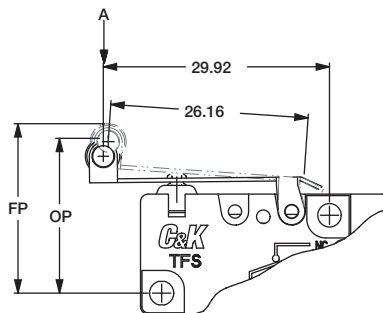
A05 LEVER ROLLER
HIGH FORCE, SHORT LEVER



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 200 grams |
| Min. release force | 30 grams |
| Operating position OP | 20.6 ± 0.5 mm |
| Max. movement differential | 0.5 mm |
| Min. over travel OT | 1.0 mm |
| Max. pre-travel PT | 2.1 mm |

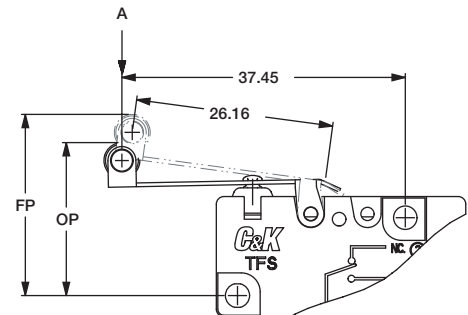
A10 LEVER ROLLER
HIGH FORCE



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 130 grams |
| Min. release force | 20 grams |
| Operating position OP | 20.4 ± 0.7 mm |
| Max. movement differential | 0.7 mm |
| Min. over travel OT | 1.3 mm |
| Max. pre-travel PT | 3.3 mm |

A20 LEVER ROLLER
LOW FORCE



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 70 grams |
| Min. release force | 10 grams |
| Operating position OP | 20.2 ± 1.2 mm |
| Max. movement differential | 1.4 mm |
| Min. over travel OT | 1.5 mm |
| Max. pre-travel PT | 6.5 mm |

Snap-acting



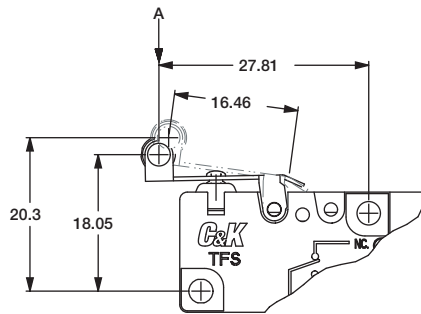
Third Angle
Projection

Dimensions are shown: mm
Specifications and dimensions subject to change

TFS Series Splash Proof Mid Size Snap-acting Switches

ACTUATOR

A25 LEVER ROLLER
LOW FORCE, SHORT LEVER

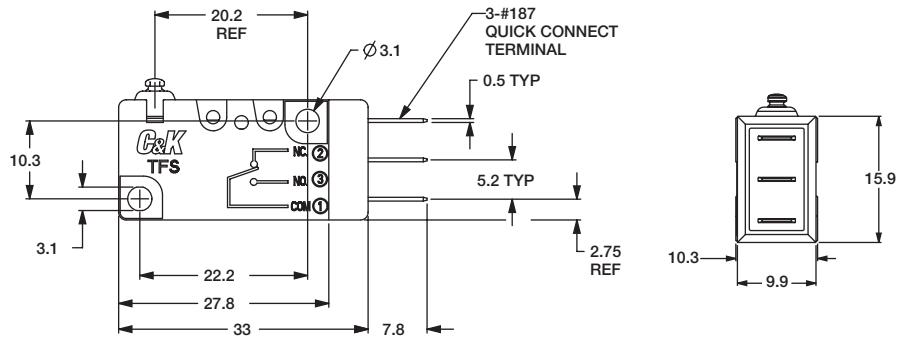


Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 150 grams |
| Min. release force | 15 grams |
| Operating position OP | 20.4 ± 0.9 mm |
| Max. movement differential | 0.9 mm |
| Min. over travel OT | 1.2 mm |
| Max. pre-travel PT | 4.2 mm |

TERMINAL TYPE

40 .187" QUICK CONNECT



Snap-acting

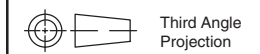
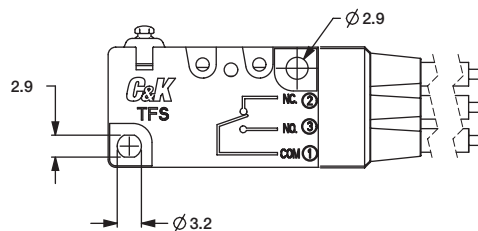
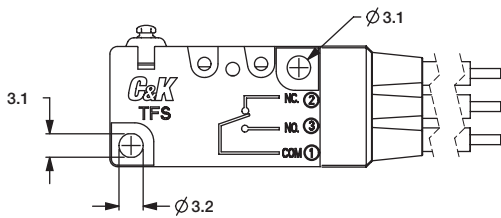
CIRCUITRY

- C** SPDT (Single Pole, Double Throw)
- Y** SPST N.O. (Single Pole, Single Throw, Normally Open)
- W** SPST N.C. (Single Pole, Single Throw, Normally Closed)

MOUNTING HOLE SIZE

NONE 3.1 mm (3mm SCREW CLEARANCE HOLE)

S 2.9 mm (4-40 SCREW CLEARANCE HOLE)



Dimensions are shown: mm
Specifications and dimensions subject to change

TFS Series

Sealed Mid Size Snap-acting Switches (Water Proof)



Features/Benefits

- IP67
- Reliable snap action mechanism
- Low cost - high performance
- RoHS compatible

Typical Applications

- Alarm devices / Home security
- Air conditioner
- Food processor
- Water heaters
- Industrial
- Forklifts

UL61058-1



Specifications

CONTACT RATING / ELECTRICAL LIFE:

- 0.1A @ 125/250 V AC / 10,000 operations
- 3A @ 125/250 VAC / 10,000 operations
- 6A @ 125/250 VAC / 10,000 operations
- 10A @ 125/250 VAC / 10,000 operations

ELECTRICAL OPERATING FREQUENCY: 10-30 operations per min.

MECHANICAL LIFE: 1,000,000 operations

MECHANICAL OPERATING FREQUENCY: 120 operations per min.

INSULATION RESISTANCE: (at 500 VDC/minute) 100 M ohm min.

DIELECTRIC STRENGTH: 1500 VAC (50 -60 Hz)

OPERATING TEMPERATURE: see wire type

OPERATING FORCE: 200 grams.

Materials

CASE: Nylon

COVER: PBT

ACTUATOR:PBT

MOVABLE CONTACTS: Silver alloy.

TERMINALS: Brass.

LEVER: Stainless steel

WIRE: PVC+CU

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Snap-acting

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. For additional options not shown in catalog, consult Customer Service Center.

Electrical Rating
see chart below

Operating Force

- S** 200 grams
- D** 50 grams
- J** 100 grams
- L** 150 grams
- H** 300 grams

Actuator Lever Fixed

- P00** Button
- T10** Lever - high force
- T20** Lever - low force
- A05** Lever roller - High force , short lever
- A10** Lever roller - high force
- A20** Lever roller - low force
- A25** Lever roller - Low force, short lever

Terminal Type

- W** Wire

Circuit Arrangement

- C** SPDT
- Y** SPST N.O.
- W** SPST N.C.

Wire UL #

- B** UL1015 (T55)

Mounting Hole Size

- NONE** 3.1 mm (3 mm screw clearance hole)
- S** 2.9 mm (4-40 screw clearance hole)

| ELECTRICAL RATING | AMPS | WIRE TYPE | | | | | |
|-------------------|------|-----------|---------|---------|---------|---------|---------|
| | | C 16AWG | D 18AWG | E 20AWG | F 22AWG | G 24AWG | H 26AWG |
| 01 | 0.1 | • | • | • | • | • | • |
| 03 | 3 | • | • | • | X | X | X |
| 06 | 6 | • | • | X | X | X | X |
| 10 | 10 | • | X | X | X | X | X |

Wire Type

- C** 16 AWG
- D** 18 AWG
- E** 20 AWG
- F** 22 AWG
- G** 24 AWG
- H** 26 AWG

OPERATING TEMPERATURE

-40°C to + 85°C (with UL1015 wire)

• Available
X Not available

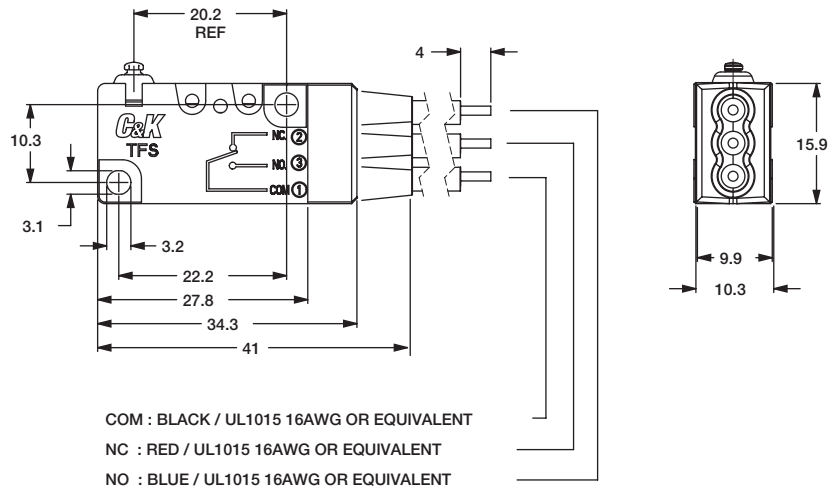


Dimensions are shown: mm
Specifications and dimensions subject to change

TFS Series Sealed Mid Size Snap-acting Switches (Water Proof)

SERIES

TFS MID SIZE SNAP-ACTING SWITCHES – WATERPROOF



ELECTRICAL RATING

| OPTION CODE | RoHS COMPLIANT | RoHS COMPATIBLE | ELECTRICAL RATING |
|-------------|----------------|-----------------|--|
| 10 | Yes | Yes | 10A @ 125/250 V AC / 10,000 operations |
| 06 | Yes | Yes | 6A @ 125/250 VAC / 10,000 operations |
| 03 | Yes | Yes | 3A @ 125/250 VAC / 10,000 operations |
| 01 | Yes | Yes | 0.1A @ 125/250 VAC / 10,000 operations |

OPERATING FORCE

| OPTION CODE | BASIC SWITCH OPERATING FORCE |
|-------------|------------------------------|
| S | 200 GRAMS |
| D | 50 grams |
| J | 100 grams |
| L | 150 grams |
| H | 300 grams |

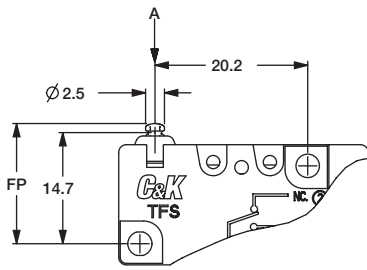


Dimensions are shown: mm
 Specifications and dimensions subject to change

TFS Series Sealed Mid Size Snap-acting Switches (Water Proof)

ACTUATOR

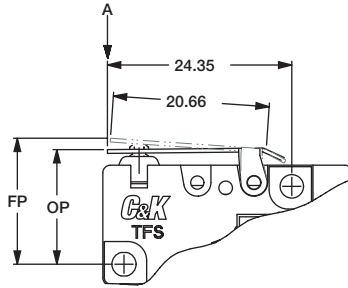
P00 BUTTON



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 200 grams |
| Min. release force | 30 grams |
| Operating position OP | 14.7 ± 0.4 mm |
| Max. movement differential | 0.4 mm |
| Min. over travel OT | 1.0 mm |
| Max. pre-travel PT | 1.2 mm |

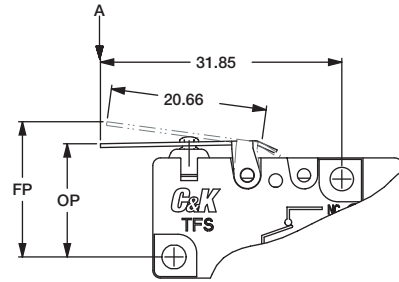
T10 LEVER, HIGH FORCE



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 160 grams |
| Min. release force | 25 grams |
| Operating position OP | 15.1 ± 0.6 mm |
| Max. movement differential | 0.6 mm |
| Min. over travel OT | 1.1 mm |
| Max. pre-travel PT | 2.6 mm |

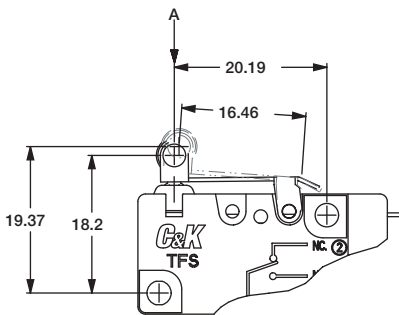
T20 LEVER, LOW FORCE



Measure at Point "A"

| | |
|----------------------------|-------------|
| Max. operating force | 90 grams |
| Min. release force | 10 grams |
| Operating position OP | 15 ± 1.1 mm |
| Max. movement differential | 1.1 mm |
| Min. over travel OT | 1.2 mm |
| Max. pre-travel PT | 5.1 mm |

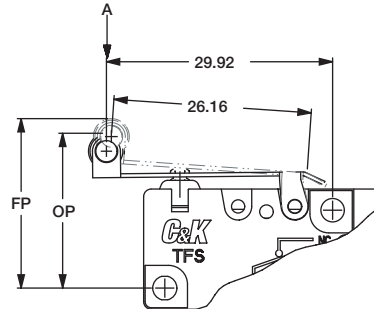
A05 LEVER ROLLER
HIGH FORCE, SHORT LEVER



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 200 grams |
| Min. release force | 30 grams |
| Operating position OP | 20.6 ± 0.5 mm |
| Max. movement differential | 0.5 mm |
| Min. over travel OT | 1.0 mm |
| Max. pre-travel PT | 2.1 mm |

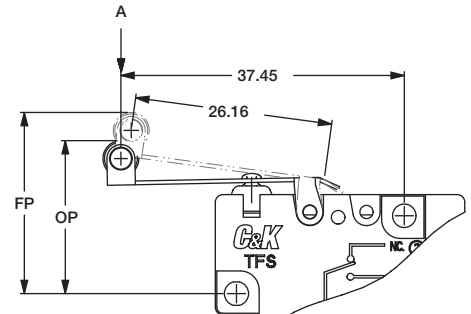
A10 LEVER ROLLER
HIGH FORCE



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 130 grams |
| Min. release force | 20 grams |
| Operating position OP | 20.4 ± 0.7 mm |
| Max. movement differential | 0.7 mm |
| Min. over travel OT | 1.3 mm |
| Max. pre-travel PT | 3.3 mm |

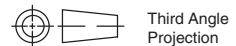
A20 LEVER ROLLER
LOW FORCE



Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 70 grams |
| Min. release force | 10 grams |
| Operating position OP | 20.2 ± 1.2 mm |
| Max. movement differential | 1.4 mm |
| Min. over travel OT | 1.5 mm |
| Max. pre-travel PT | 6.5 mm |

Snap-acting



Third Angle
Projection

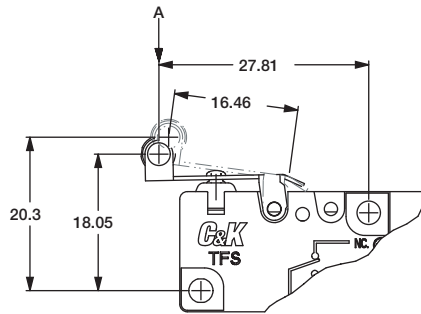
Dimensions are shown: (mm)

Specifications and dimensions subject to change

TFS Series Sealed Mid Size Snap-acting Switches (Water Proof)

ACTUATOR

A25 LEVER ROLLER
LOW FORCE, SHORT LEVER

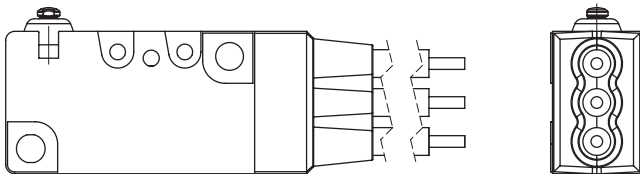


Measure at Point "A"

| | |
|----------------------------|---------------|
| Max. operating force | 150 grams |
| Min. release force | 15 grams |
| Operating position OP | 20.4 ± 0.9 mm |
| Max. movement differential | 0.9 mm |
| Min. over travel OT | 1.2 mm |
| Max. pre-travel PT | 4.2 mm |

TERMINAL TYPE

W WIRE UL1015



CIRCUITRY

- C** SPDT (Single Pole, Double Throw)
- Y** SPST N.O. (Single Pole, Single Throw, Normally Open)
- W** SPST N.C. (Single Pole, Single Throw, Normally Closed)

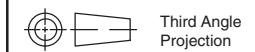
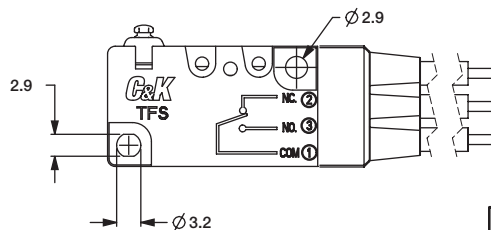
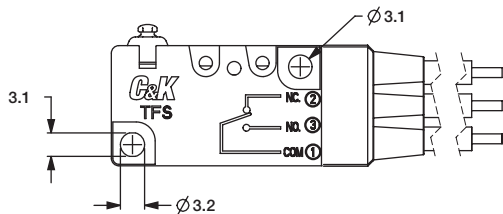
WIRE TYPE

- C** 16 AWG
- D** 18 AWG
- E** 20 AWG
- F** 22 AWG
- G** 24 AWG
- H** 26 AWG

MOUNTING HOLE SIZE

NONE 3.1 mm (3mm SCREW CLEARANCE HOLE)

S 2.9 mm (4-40 SCREW CLEARANCE HOLE)



Dimensions are shown: (mm)
Specifications and dimensions subject to change

