NP Series
Sealed Industrial Pushbutton Switch

Features/Benefits

- ***IP68 sealed***
- ***1,000,000 life cycle***
- ***Multiple housing styles***
- ***Capable of up to 5A resistive load***
- ***Wirelead options available***
- ***RoHS compliant***

Typical Applications

- ***Harsh environments***
- ***Off-Road***
- ***Industrial***
- ***Transportation***
- ***Military***



Specifications

FUNCTION: SPDT Double Break (Form Z) Momentary
CONTACT ARRANGEMENT: N.O. and N.C.
MOUNTING TYPE: Threaded front or rear mount and slot mount
TORQUE SPEC FOR THREADED BODY: Do not exceed 50 in-lbs (5.65 N-m)

Mechanical

OPERATING LIFE: 1,000,000 cycles
TOTAL TRAVEL: 1.6 ± 0.15 mm
OPERATING POINT 0.9 ± 0.25 mm
OVER TRAVEL: 0.45 min.
OPERATING FORCE: 8N ± 1.5N
VIBRATION: 10-500 Hz 10g Max
SHOCK: 50g 11ms sawtooth wave

Electrical

CONTACT RATING:
Option G - Gold over Silver
10mA/5 VDC (1,000,000 cycles)
Option Q - Silver
1A/32 VDC resistive (100,000 cycles)
5A/32 VDC resistive (25,000 cycles)
3A/32 VDC resistive (25,000 cycles)

Electrical (cont.)

DIELECTRIC STRENGTH: 1000 V AC for 1 min.
INSULATION RESISTANCE: 1 G Ω @ 500 VDC
INITIAL CONTACT RESISTANCE 50 mΩ max (without wire leads)
BOUNCE TIME: <5 ms

Materials

HOUSING: 6061-T6 Aluminum, black or clear anodized
BASE: PBT
CAP: PBT
ACTUATOR: PBT
INTERNAL SEAL: Silicone rubber
TERMINALS: Copper with silver nickel inlay, silver plating
MOVABLE CONTACT: Copper alloy, gold over silver plating
TERMINAL SEAL: Epoxy

Operating Environment

OPERATING TEMPERATURE: -40°C to +85°C
ESD PROTECTION: 15KV min.

Process Environment

SEALING: IP68

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

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box.

N	P		8								E

Designation
NP NP Series

Operating Force
8 8 Newtons

Actuator Style
S Standard
E Extended (D housing style only)

Actuator Color*
2 Black (STD)
3 Red
4 Orange
5 Yellow
9 Gray

* Please contact Customer Service for additional colors.

Housing Style
T Standard threaded mount
L Long threaded mount
H Short threaded mount
S Slot mount
R Rear mount
D Dome bezel
P Tapered bezel

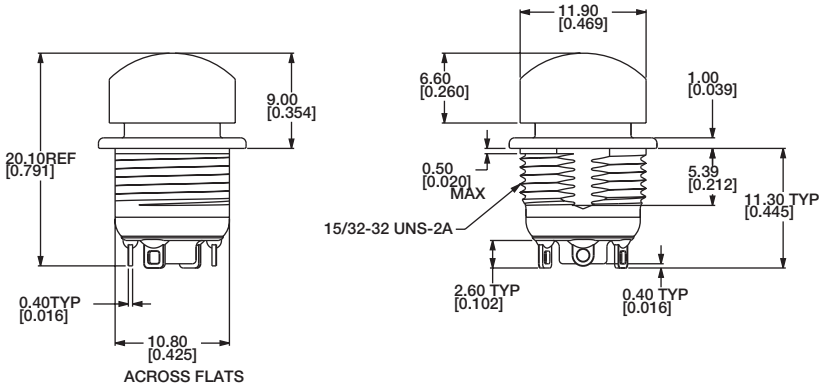
Housing Anodizing Color
1 Clear anodized
2 Black anodized (STD)

Termination
03 Solder Lug (STD)
02 PC Pin (G Contact Material)
W4 4x 12" 22 AWG UL1569 wire (overmolded)
W3 3x 12" 22 AWG UL1569 wire (overmolded)

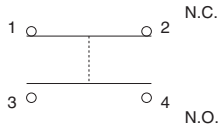
Contact Material
Q Silver (STD)
G Gold over silver

Terminal Seal
E Epoxy
All models are epoxy sealed

STANDARD VIEW



ELECTRICAL SCHEMATIC

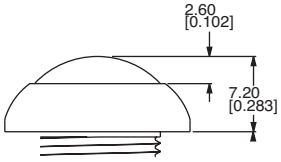


OPERATING FORCE

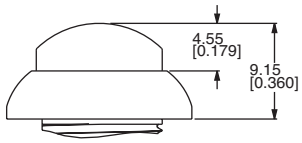
OPTION CODE	OPERATING FORCE
8	8 N

ACTUATOR STYLE

S STANDARD



E EXTENDED (D HOUSING STYLE ONLY)



ACTUATOR COLOR

OPTION CODE	ACTUATOR COLOR
2	Black
3	Red
4	Orange
5	Yellow
9	Gray

For additional colors please contact Customer Service.

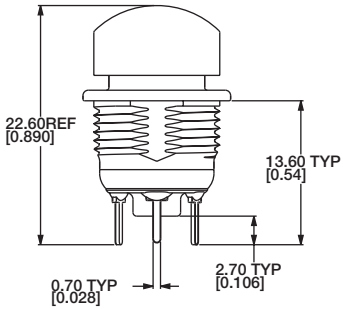
Third Angle Projection

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

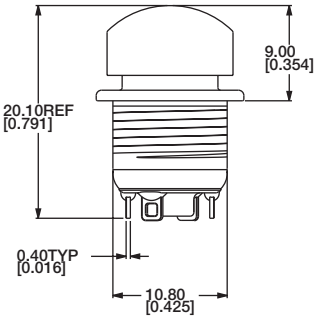
NP Series
Sealed Industrial Pushbutton Switch

HOUSING STYLE

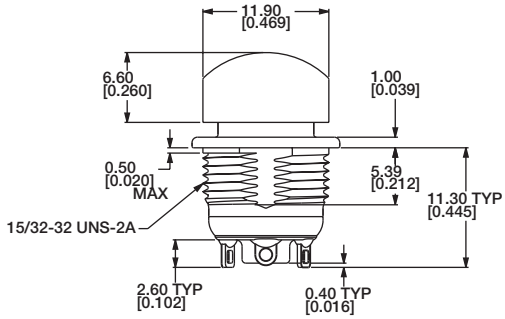
T STANDARD THREADED MOUNT

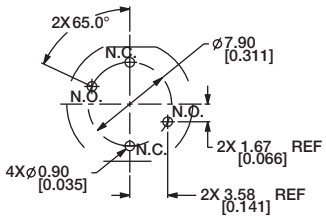


PC TERMINALS

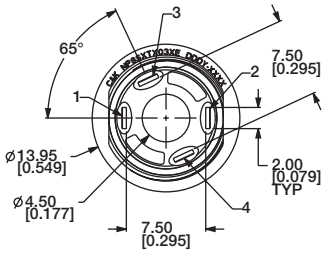


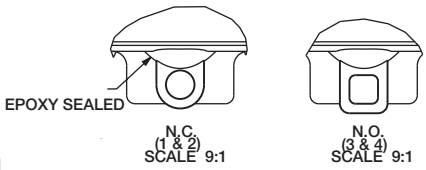
ACROSS FLATS

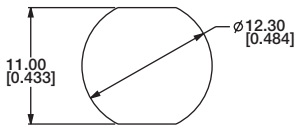




PC HOLE PATTERN
BOARD VIEW

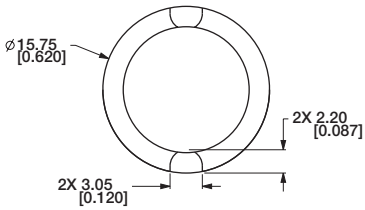


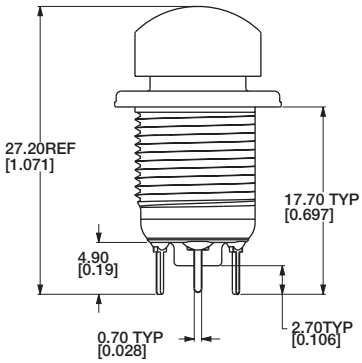




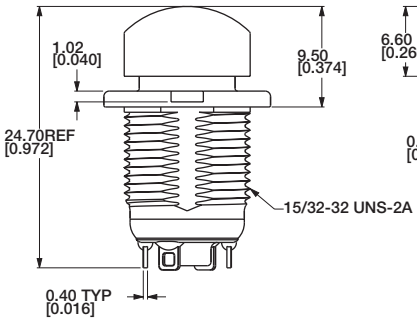
PANEL CUTOUT

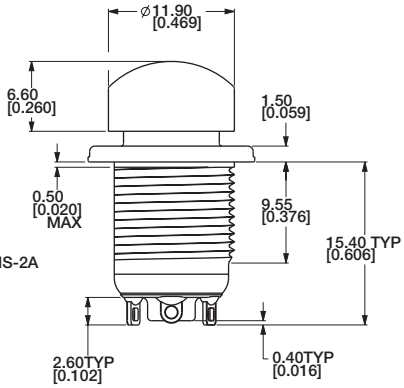
L LONG THREADED MOUNT

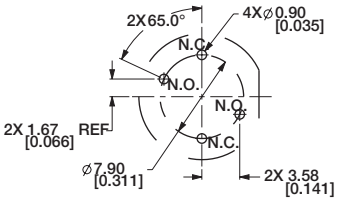




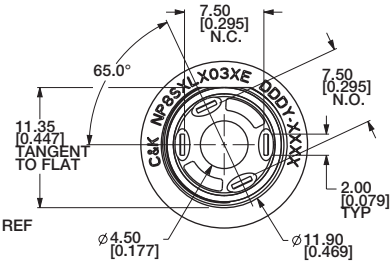
PC TERMINALS

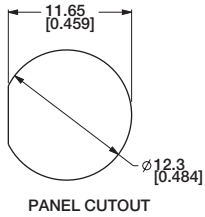






PC HOLE PATTERN
BOARD VIEW





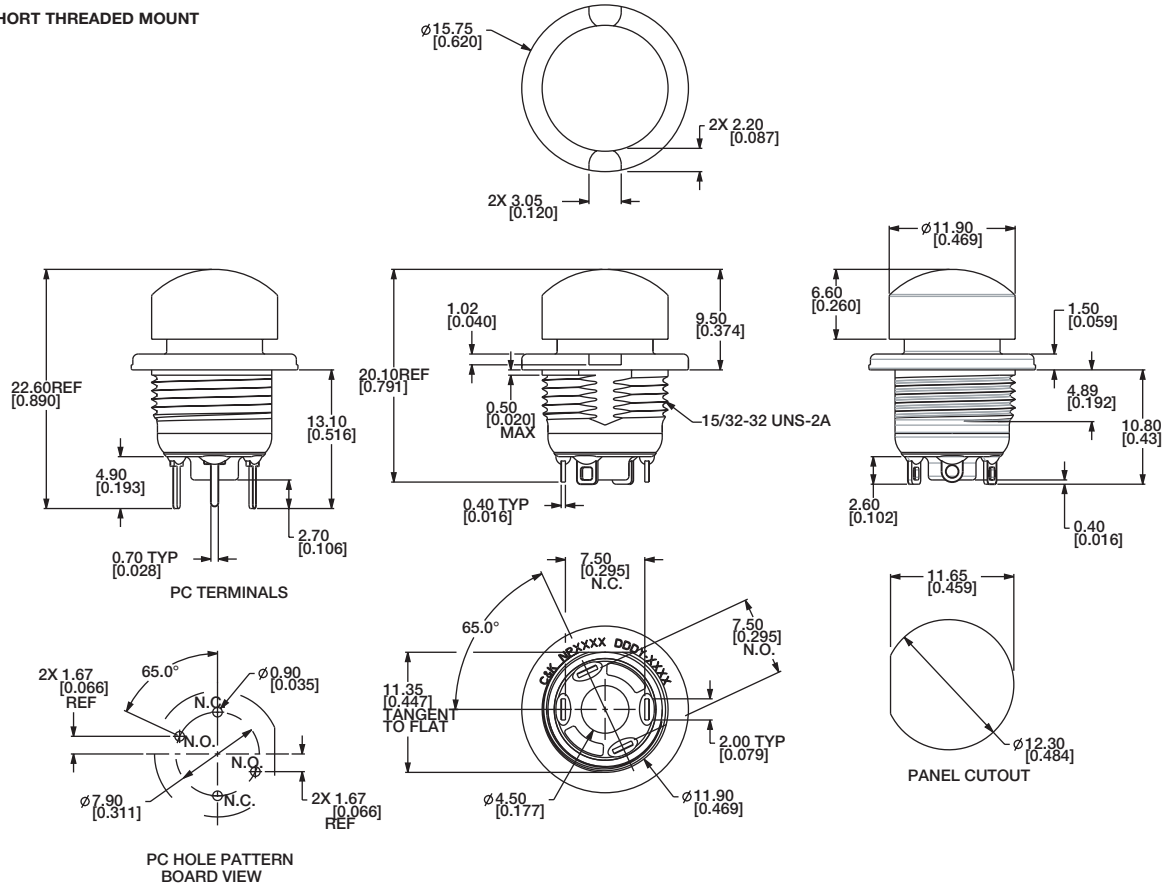
PANEL CUTOUT

Third Angle Projection

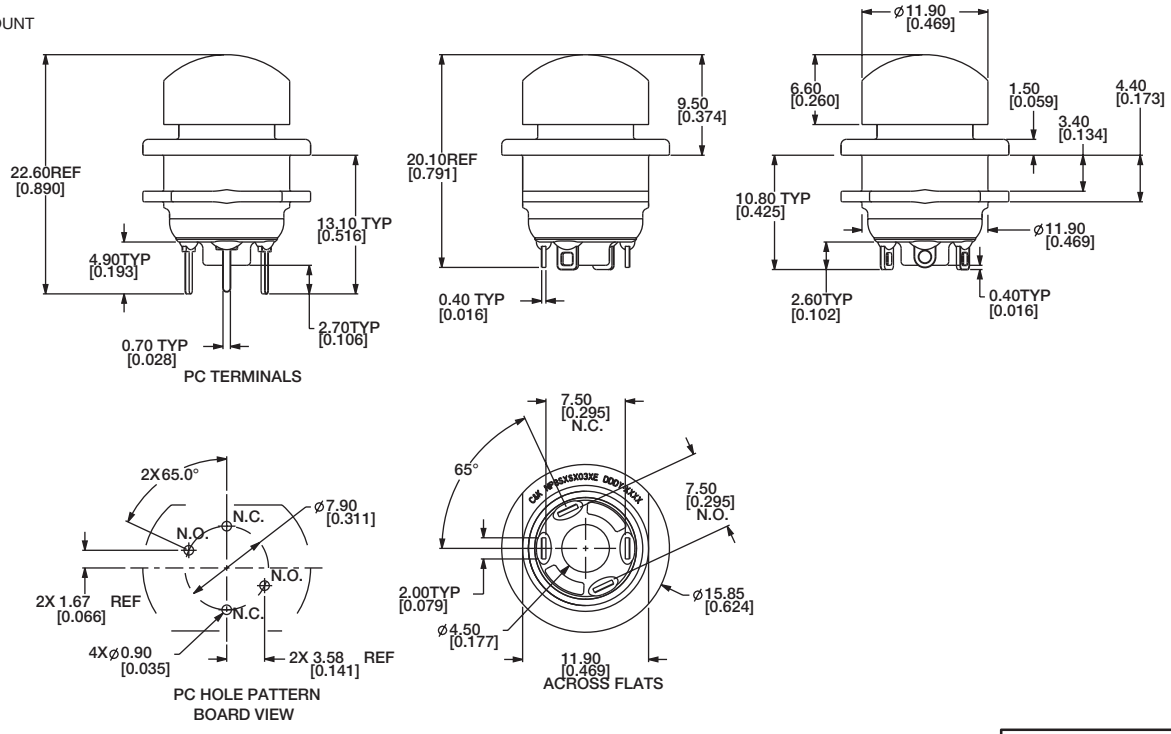
Dimensions are shown: mm (inches)
Specifications and dimensions subject to change

HOUSING STYLE

H SHORT THREADED MOUNT



S SLOT MOUNT



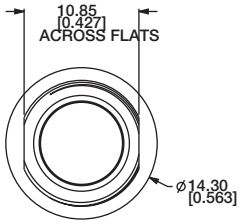
Third Angle Projection

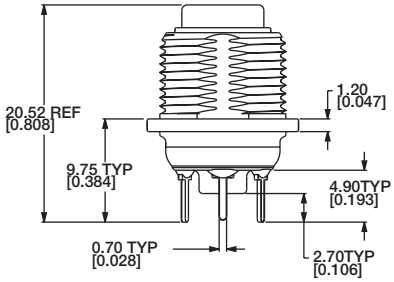
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NP Series
Sealed Industrial Pushbutton Switch

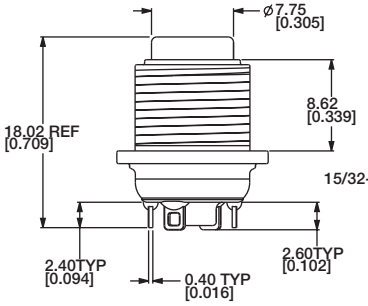
HOUSING STYLE

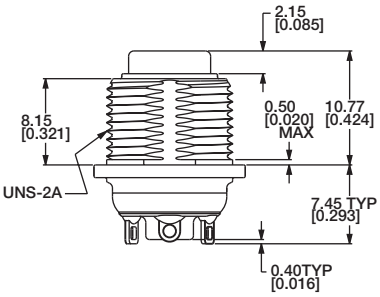
R REAR MOUNT

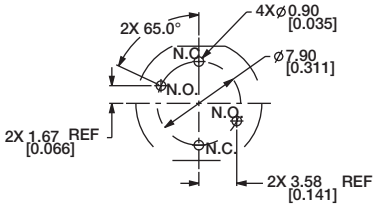




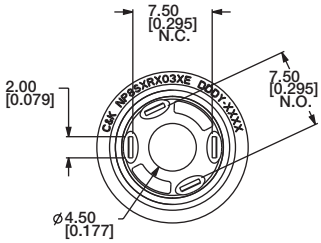
PC TERMINALS

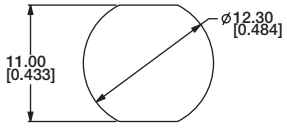






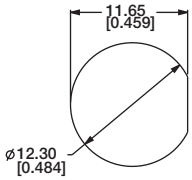
PC HOLE PATTERN
BOARD VIEW



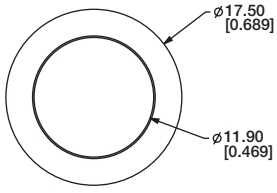


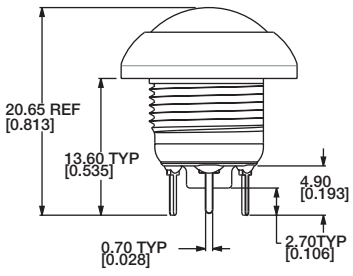
PANEL CUTOUT

D DOME BEZEL

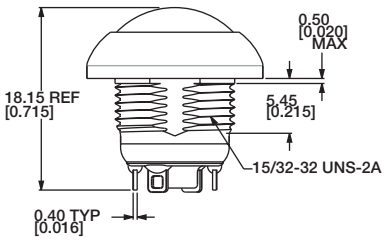


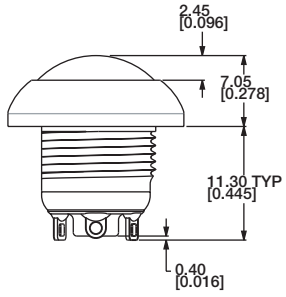
PANEL CUTOUT

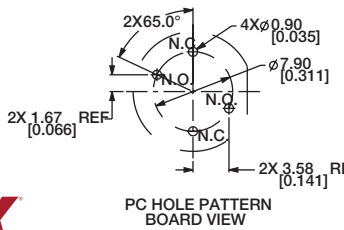




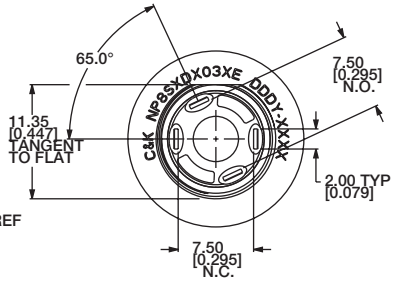
PC TERMINALS

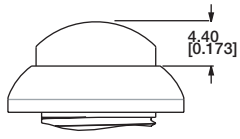






PC HOLE PATTERN
BOARD VIEW





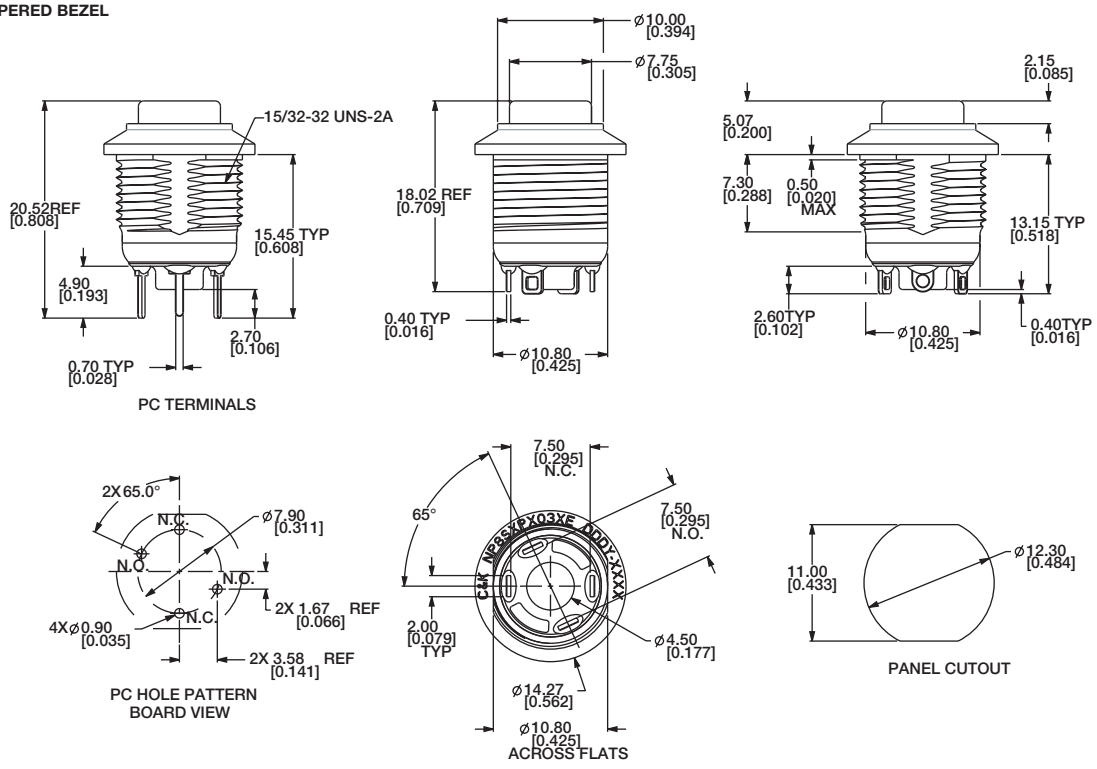
EXTENDED CAP

Third Angle
Projection

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

HOUSING STYLE

P TAPERED BEZEL

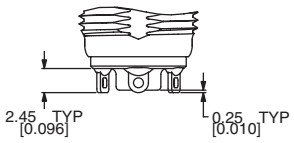


HOUSING ANODIZING COLOR

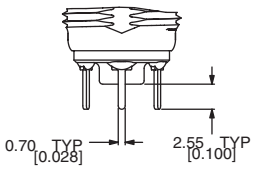
OPTION CODE	ANODIZING COLOR
1	Clear anodized
2	Black anodized (STD)

TERMINATION

03 SOLDER LUG (STD)



02 PC PIN (G CONTACT MATERIAL)

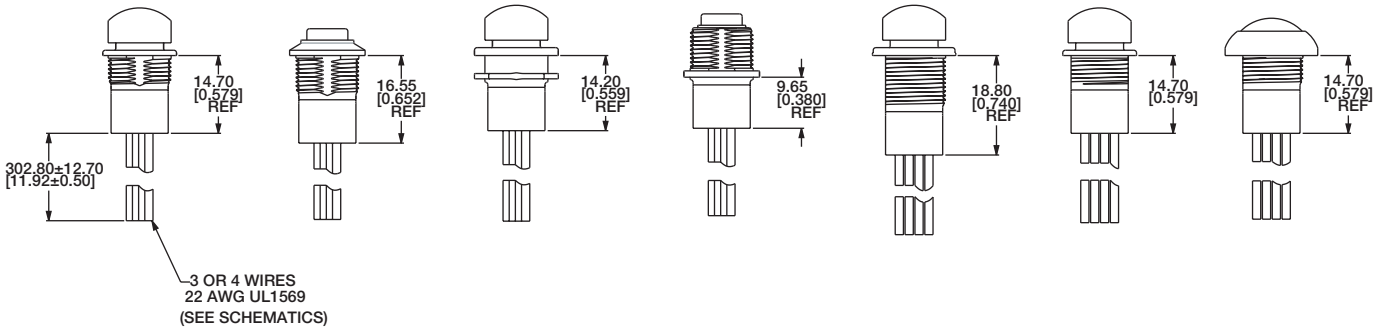


Third Angle Projection

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

NP Series
Sealed Industrial Pushbutton Switch

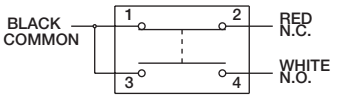
TERMINATION



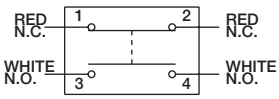
W3 3X 12" 22 AWG UL1569 WIRE (OVERMOLDED)

W4 **4X 12" 22 AWG UL1569 WIRE (OVERMOLDED)**

ELECTRICAL SCHEMATIC - 3 WIRES



ELECTRICAL SCHEMATIC - 4 WIRES



CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL
Q	Silver (STD)
G	Gold over Silver

TERMINAL SEAL

E EPOXY

All models are epoxy sealed

HARDWARE

HEX NUT

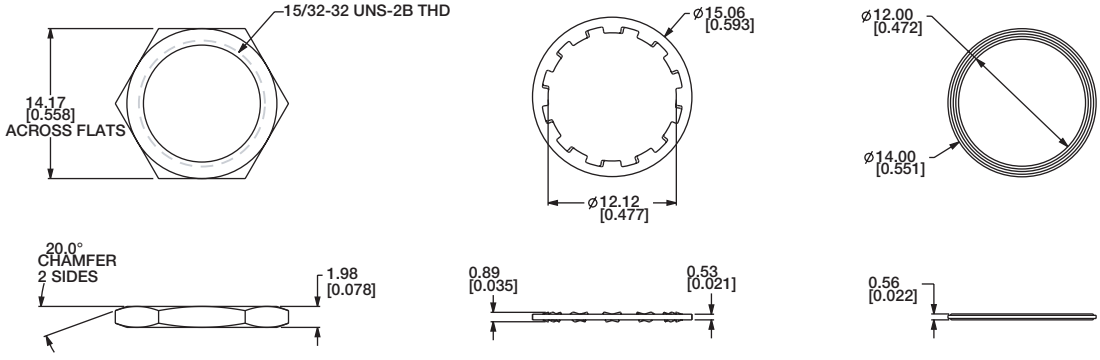
707100201 Nickel-plated

LOCKWASHER

700302202

PANEL GASKET

851D02000



Third Angle Projection

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Specifications and dimensions subject to change