



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.

Designation _____		Operating Force _____		Actuator Style _____		Actuator Color* _____		Housing Style _____		Terminal Seal _____		Contact Material _____		Termination _____		Housing Anodizing Color _____	
NP NP Series		8 8 Newtons		S Standard E Extended (D housing style only)		1 White 2 Black (STD) 3 Red 4 Orange 5 Yellow 6 Green 7 Blue 9 Gray		T Standard threaded mount L Long threaded mount H Short threaded mount S Slot mount R Rear mount D Dome bezel P Tapered bezel		E Epoxy All models are epoxy sealed		Q Silver (STD) G Gold over silver		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)		1 Clear anodized 2 Black anodized (STD)	

* Please contact Customer Service
for additional colors.

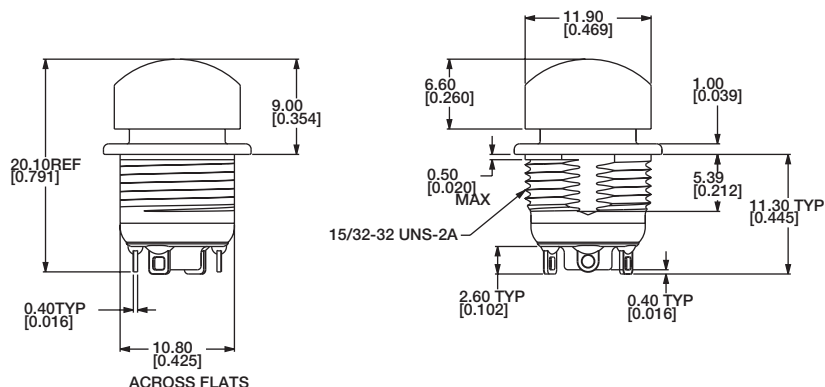
NP Series Sealed Industrial Pushbutton Switch



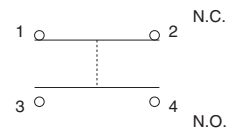
A

Pushbutton

STANDARD VIEW



ELECTRICAL SCHEMATIC



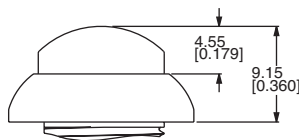
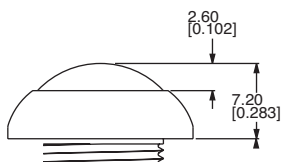
OPERATING FORCE

OPTION CODE	OPERATING FORCE
8	8 N

ACTUATOR STYLE

S STANDARD

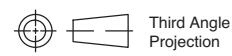
E EXTENDED (D HOUSING STYLE ONLY)



ACTUATOR COLOR

OPTION CODE	ACTUATOR COLOR
1	White
2	Black
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
9	Gray

For additional colors please contact Customer Service.



Third Angle
Projection



4 May 20

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



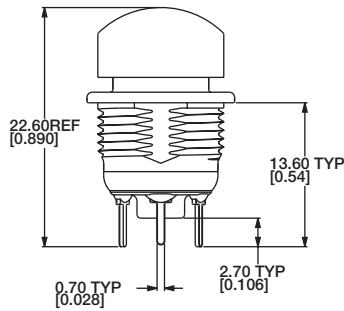
NP Series Sealed Industrial Pushbutton Switch

HOUSING STYLE

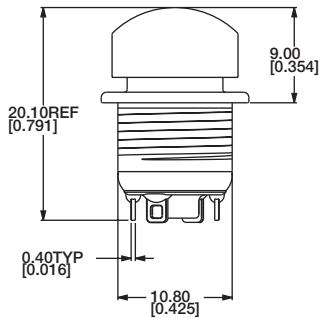
Pushbutton

A

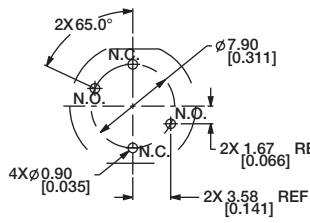
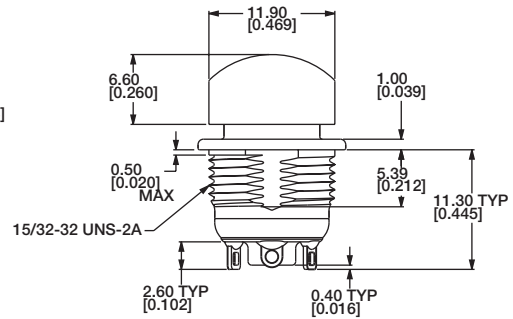
T STANDARD THREADED MOUNT



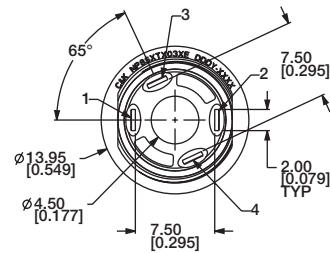
PC TERMINALS



ACROSS FLATS



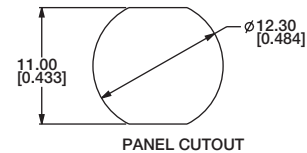
PC HOLE PATTERN
BOARD VIEW



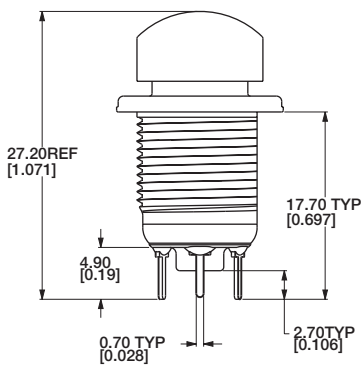
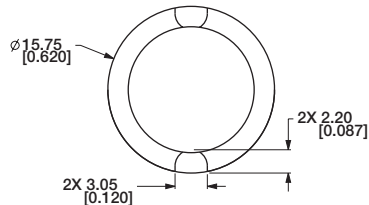
N.C.
(1 & 2)
SCALE 9:1



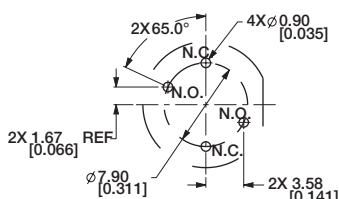
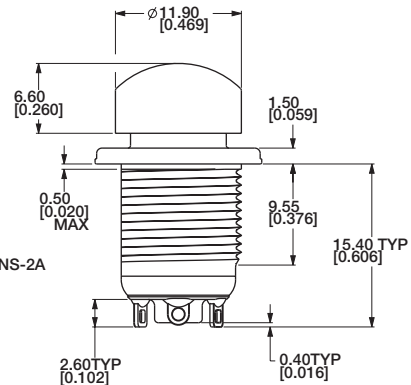
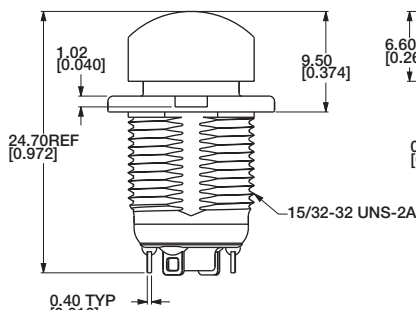
N.O.
(3 & 4)
SCALE 9:1



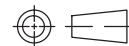
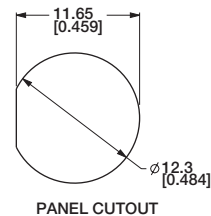
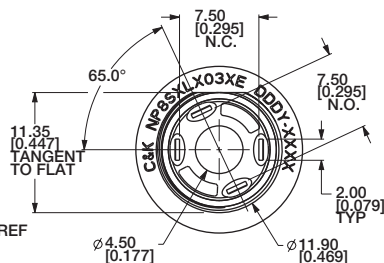
L LONG THREADED MOUNT



PC TERMINALS



PC HOLE PATTERN
BOARD VIEW



Third Angle
Projection

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

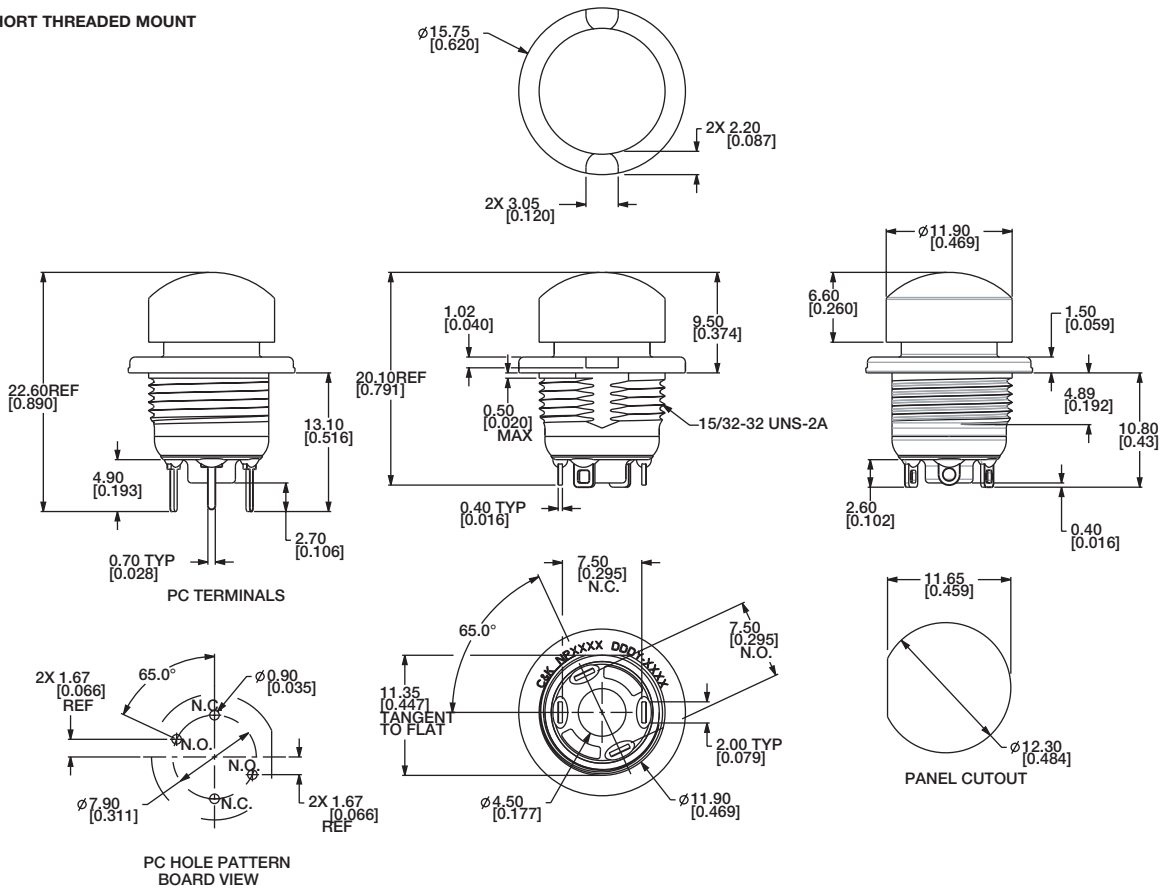
NP Series Sealed Industrial Pushbutton Switch



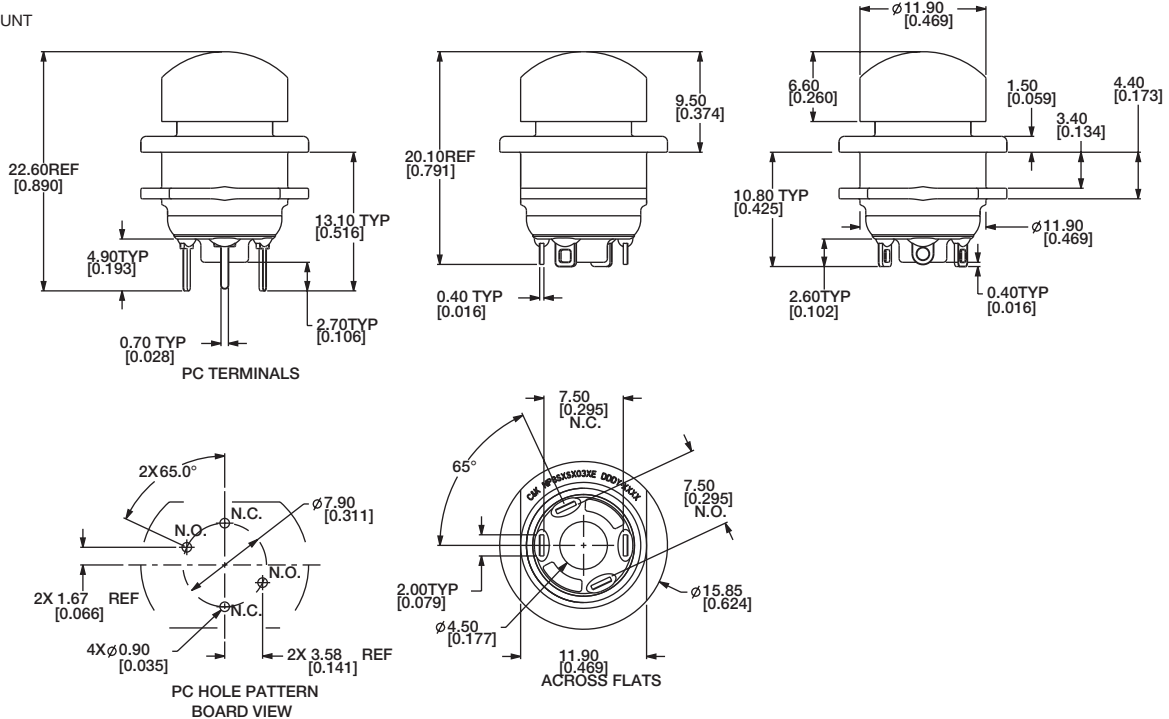
A
Pushbutton

HOUSING STYLE

H SHORT THREADED MOUNT



S SLOT MOUNT



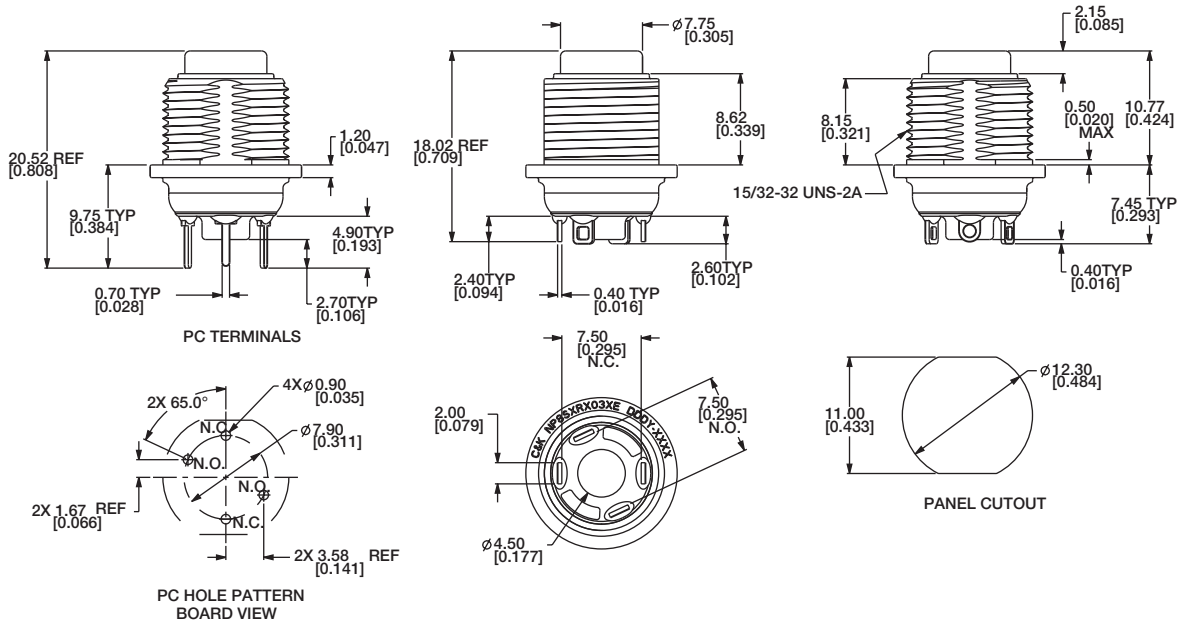
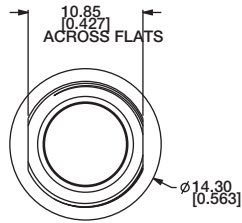
Third Angle
Projection



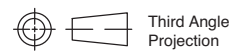
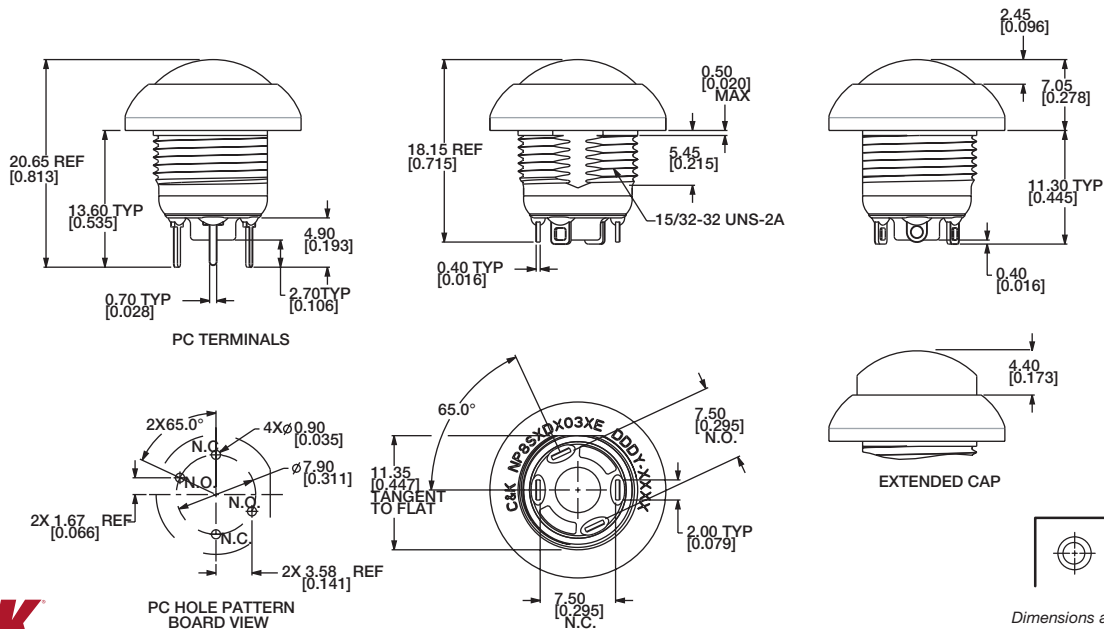
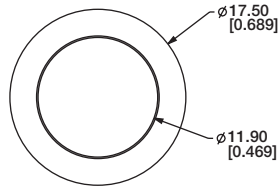
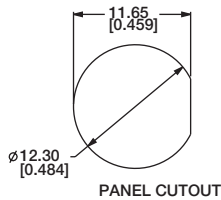
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HOUSING STYLE

R REAR MOUNT



D DOME BEZEL



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

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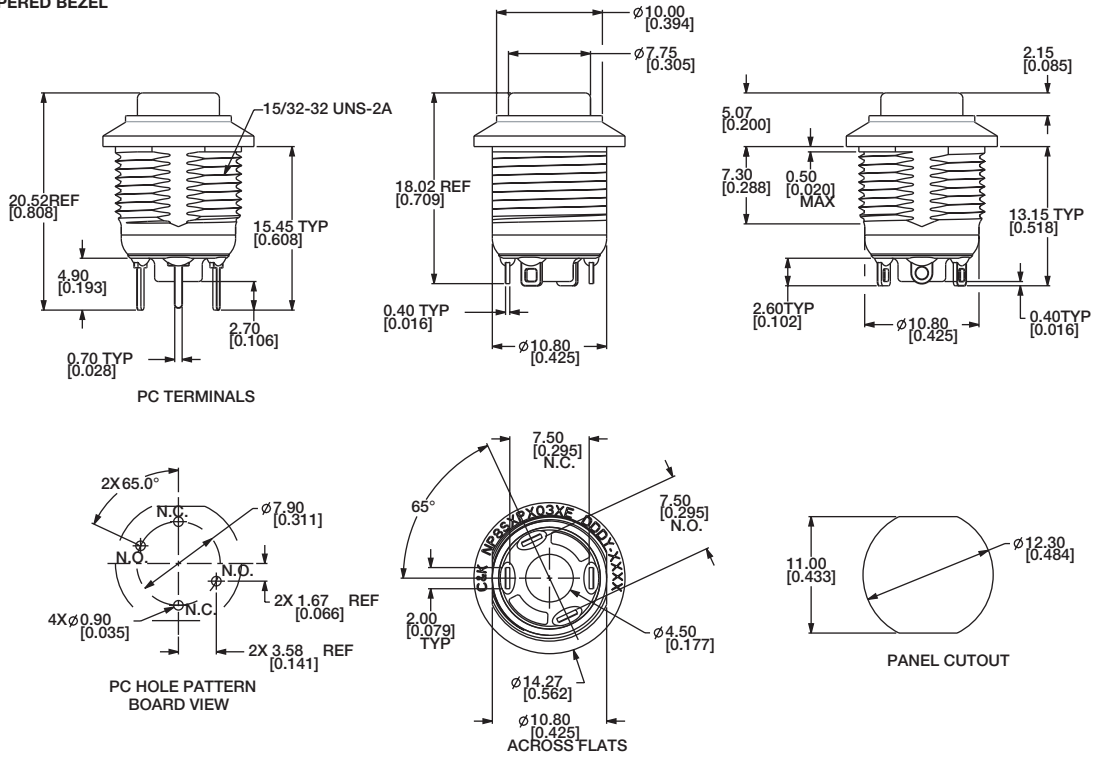
NP Series Sealed Industrial Pushbutton Switch



A
Pushbutton

HOUSING STYLE

P TAPERED BEZEL

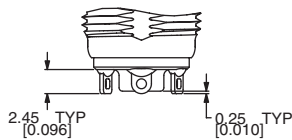


HOUSING ANODIZING COLOR

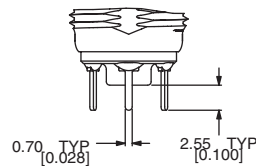
OPTION CODE	ANODIZING COLOR
1	Clear anodized
2	Black anodized (STD)

TERMINATION

03 SOLDER LUG (STD)



02 PC PIN (G CONTACT MATERIAL)



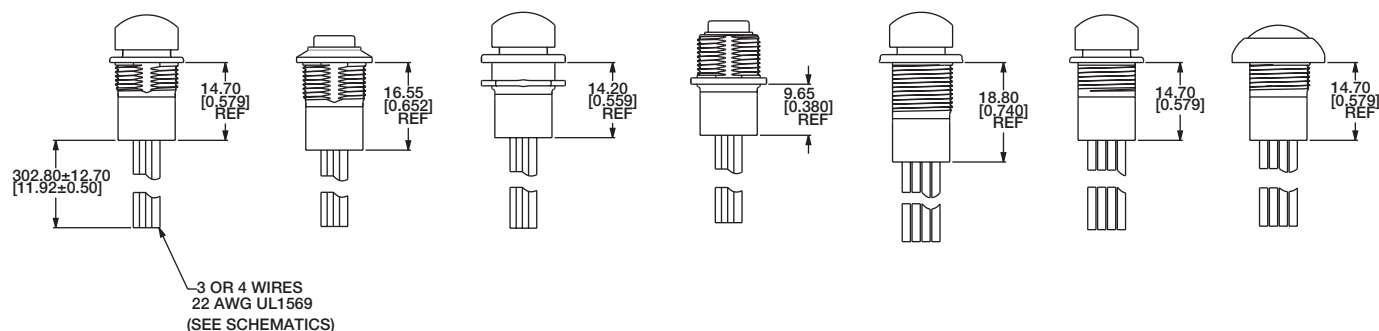


NP Series Sealed Industrial Pushbutton Switch

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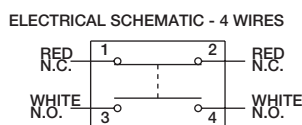
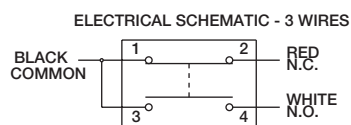
Pushbutton

TERMINATION



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

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



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

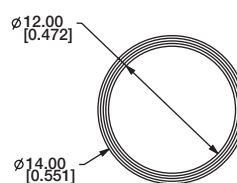
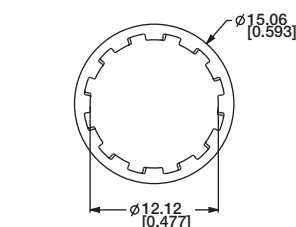
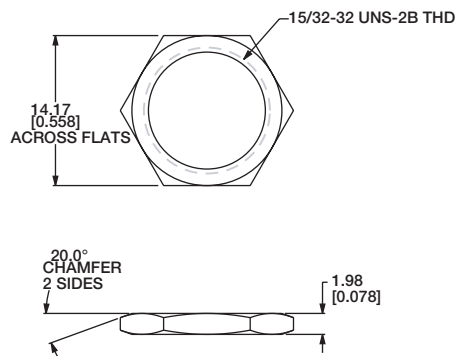
707100201 Nickel-plated

LOCKWASHER

700302202

PANEL GASKET

851D02000



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4 May 20



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

Mouser Electronics

Authorized Distributor

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[NP8E2D203GE](#) [NP8S2R2W3QE](#) [NP8S2D2W3QE](#) [707100A56](#)