APB Series
Backlit Pushbutton Switch

Features/Benefits

- IP67 sealed
- 1,000,000 life cycle
- Illumination
- Threaded or snap-in mounting
- RoHS compliant

Typical Applications

- Harsh environments
- Off-Road
- Industrial
- Medical
- Transportation
- Joystick control modules
- Gaming
- Military

Specifications

FUNCTION: SPST Momentary
CONTACT ARRANGEMENT: N.O.
MOUNTING TYPE:
Snap-in (no panel seal)
Threaded body (hex nut, lock washer, and panel seal gasket provided)
Torque spec for threaded body: Do not exceed 8-9 in-lbs (0.9-1.0 N.m)

Mechanical
OPERATING LIFE: 1,000,000 cycles
TOTAL TRAVEL: 2.1 ± 0.2 mm
OPERATING POINT 1.55 ± 0.25 mm
OVER TRAVEL: 0.6 min.
OPERATING FORCE: 4N ± 1N standard configuration; other force
       option 2N ± 0.5N
VIBRATION: 10-500 Hz 10g Max
SHOCK: 60g 11ms sawtooth wave

Electrical
CONTACT RATING:
    200mA @ 24 V DC resistive (500,000 cycles)
    100mA @ 50 V DC resistive (500,000 cycles)
    400mA @ 32 V AC resistive (500,000 cycles)
    125mA @ 125 V AC resistive (1,000,000 cycles)
DIELECTRIC STRENGTH: 1000 V AC min.
INSULATION RESISTANCE: 1 G Ω @ 500 VDC
INITIAL CONTACT RESISTANCE 50 mΩ max (without wire leads)
BOUNCE TIME: <5 ms

Materials

HOUSING: PBT
BASE: PBT
CAP: Painted polycarbonate
ACTUATOR:
       Illuminated: Clear polycarbonate
       INTERNAL SEAL: Silicone rubber
TERMINALS: Copper alloy, gold over silver plating
MOVABLE CONTACT: Copper alloy, gold over silver plating
TERMINAL SEAL: Epoxy
WIRE LEADS: UL1569 Black 22 AWG

Operating Environment

OPERATING TEMPERATURE: -40℃ to 85℃
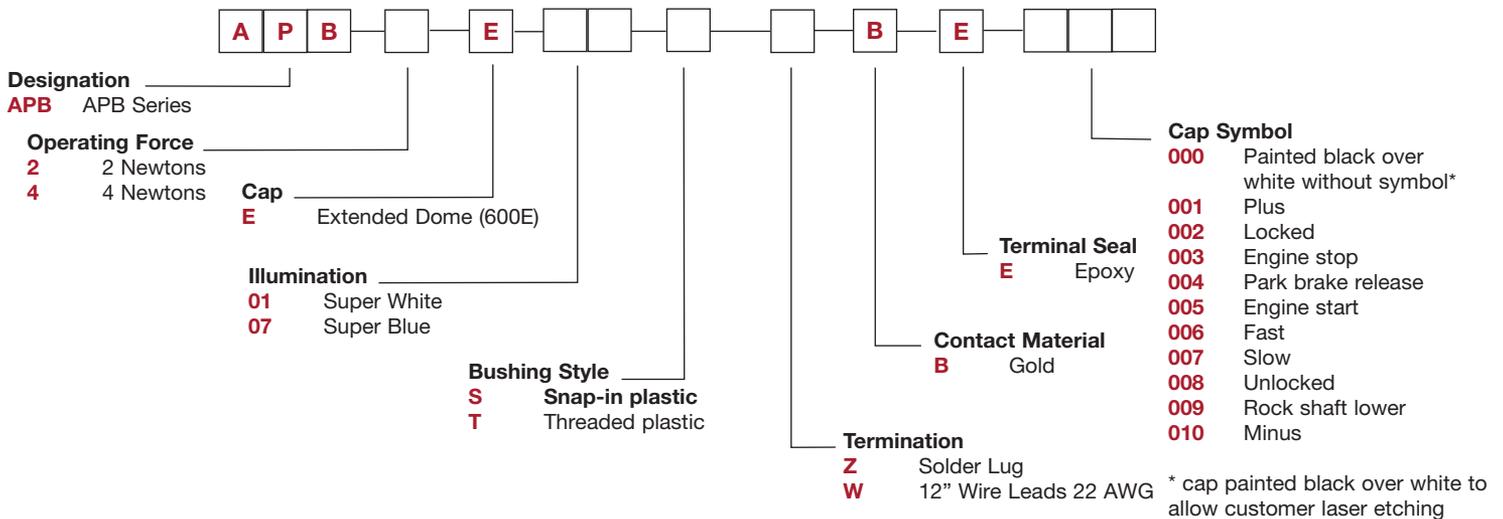ESD PROTECTION: 20 KV min.

Process Environment

SEALING: IP67 for threaded body
          IP65 for snap-in version (no panel seal)

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

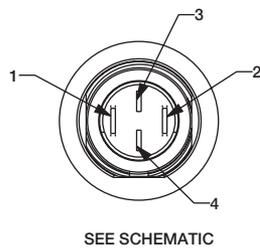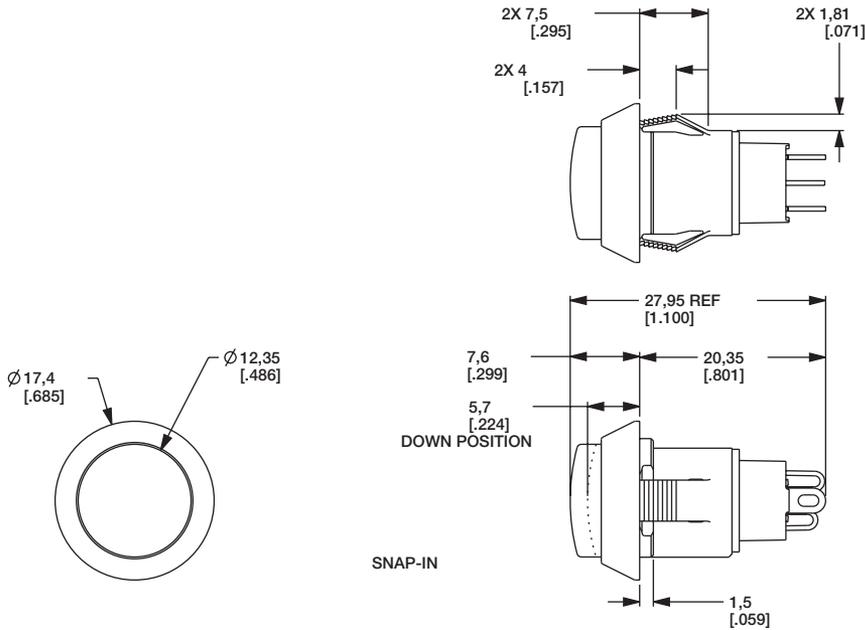To order, simply select desired option from each category and place in the appropriate box.

| A | P | B | | E | | | | | B | E | | | |

Designation
APB   APB Series

Operating Force
2   2 Newtons
4   4 Newtons

Cap
E   Extended Dome (600E)

Illumination
01   Super White
07   Super Blue

Bushing Style
S   **Snap-in plastic**
T   Threaded plastic

Termination
Z   Solder Lug
W   12" Wire Leads 22 AWG

Contact Material
B   Gold

Terminal Seal
E   Epoxy

Cap Symbol
000   Painted black over white without symbol*
001   Plus
002   Locked
003   Engine stop
004   Park brake release
005   Engine start
006   Fast
007   Slow
008   Unlocked
009   Rock shaft lower
010   Minus

* cap painted black over white to allow customer laser etching

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

2X 7,5 [.295]

2X 1,81 [.071]

2X 4 [.157]

Ø 17,4 [.685]

Ø 12,35 [.486]

27,95 REF [1.100]

7,6 [.299]

20,35 [.801]

5,7 [.224]
DOWN POSITION

SNAP-IN

1,5 [.059]

THREADED

M13 X 1.25-6g

0,85 [.033]

SEE SCHEMATIC

ELECTRICAL SCHEMATIC

1   2

SPST-NO-DB

3 ○———▷|———○ 4

PANEL CUTOUT

Ø A

B

PANEL THICKNESS	DIM A (±0.05 MM)	DIM B (±0.05 MM)
1 MM [0.039 IN]	13.70 MM [0.539 IN]	13.00 MM [0.512 IN]
2 MM [0.079 IN]	13.80 MM [0.539 IN]	13.00 MM [0.512 IN]
3 MM [0.118 IN]	13.90 MM [0.547 IN]	13.10 MM [0.516 IN]
THREADED BODY MIN PANEL THICKNESS 1 MM	13.70 MM [0.539 IN]	13.00 MM [0.512 IN]

A 0.1 MM MIN CHAMFER ON THE LEADING EDGE OF MOUNTING HOLE IS
RECOMMENDED FOR SNAP-IN VERSION.

Third Angle
Projection

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

C&K
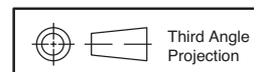
APB Series
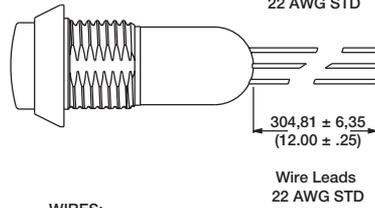# Backlit Pushbutton Switch

TERMINATION

W 12" WIRE LEADS

Z SOLDER LUG

WIRE LEADS WITH POTTED BASE, SNAP-IN ILLUMINATION

34,78 TYP [1.369]
27,04 TYP [1.065]
Ø11,11 [.437]
304,81 ± 6,35 (12.00 ± .25)
Wire Leads 22 AWG STD
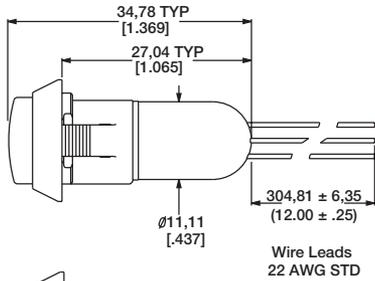
WIRE LEADS WITH POTTED BASE, THREADED ILLUMINATION

304,81 ± 6,35 (12.00 ± .25)
Wire Leads 22 AWG STD

WIRES:
BLACK - TERMINALS
RED - LED (+) POSITIVE
WHITE - LED (-) NEGATIVE

4 [.157]
0,5 TYP [.020]
2,83 TYP [.111]
2,83 TYP [.111]

LED TERMINAL CATHODE (-)
LED TERMINAL ANODE (+)
0,75 TYP [.030]
6,44 TYP [.254]
2,75 [.108]

0,5 TYP [.020]
LED TERMINAL CATHODE (-)
LED TERMINAL ANODE (+)
2,04 TYP [.080]
5,65 TYP [.222]
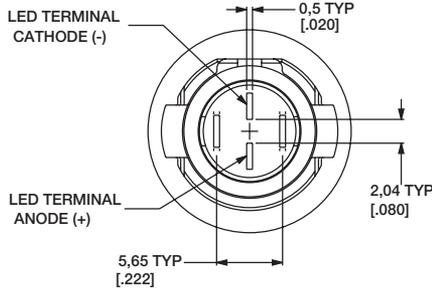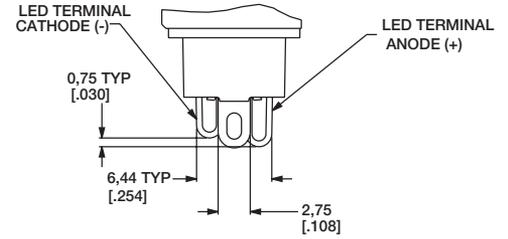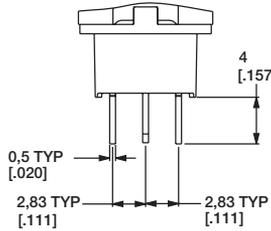
CONTACT MATERIAL

B GOLD

OPTION CODE	CONTACT MATERIAL
B	Gold

TERMINAL SEAL

E EPOXY

All models are epoxy sealed
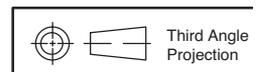
Third Angle Projection

CAP SYMBOLS

	-000		NO SYMBOL
	-001		PLUS
	-002		LOCKED
	-003		ENGINE STOP
	-004		PARK BRAKE RELEASE
	-005		ENGINE START

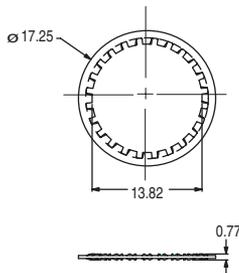|	-006		FAST
	-007		SLOW
	-008		UNLOCKED
	-009		ROCK SHAFT LOWER
	-010		MINUS

PANEL CUTOUT

ØA

B
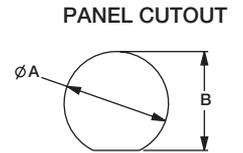
Panel Orientation
Flat indicates bottom
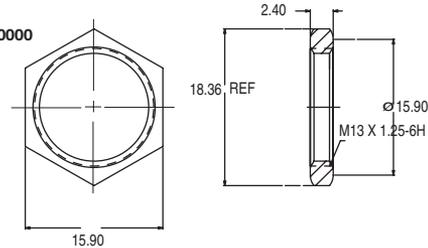
See chart on previous page
for dimensions

NOTES:
1. ALL GRAPHICS MUST BE POSITIONED AS SHOWN, PERPENDICULAR TO ALIGNMENT FEATURE ON UNDERSIDE OF CAP.
2. GRAPHIC MARKING MUST BE ALIGNED WITH THE FLAT FEATURE ON THE UNDERSIDE OF THE CAP AS SHOWN, TOLERANCE ±3°
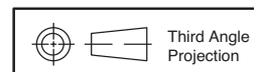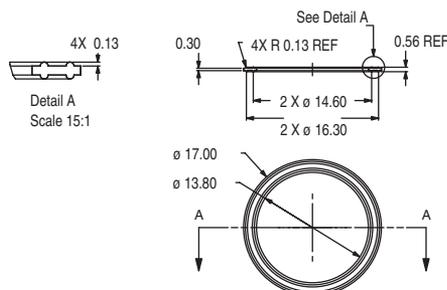
HARDWARE

LOCK WASHER
Part Number 647D00000

Ø 17.25

13.82

0.77

HEX NUT
Part number 515D00000

2.40

18.36 REF

Ø 15.90

M13 X 1.25-6H

15.90

PANEL SEAL
Part Number 655D00000

4X 0.13

Detail A
Scale 15:1

See Detail A

0.30

4X R 0.13 REF

0.56 REF

2 X ø 14.60

2 X ø 16.30

ø 17.00

ø 13.80

A

A

Third Angle Projection

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

C&K

12 Oct 16

A-117

www.ckswitches.com