

audio

automotive

aerospace

communication devices

consumer appliances

consumer electronics

datacom

data storage

handheld devices

industrial

industrial equipment

instrumentation

medical

military

mobile phones

portable tools

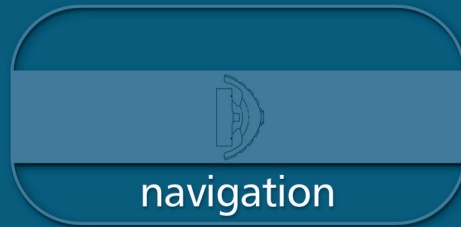
pumps & motors

security alarms

telecom

test equipment




thermostatic controls



# navigation

# Navigation Switches

## Product Selection Guide

Navigation			
Series	SAMXD	CS	THB
Number of directions	2 4	4	Dual axis with center select
Size on PCB L x W (mm)	20.7 x 18 / 26.2 x 26.2	40 x 40	21 x 17
Total Height (mm)	23.65 / 26.3 / 30.4 / 23.9 / 26.8	58	19.45
Actuation Force (N)	5.3 / 6	4,9N	714 ± 204 gf
Contact Type	Silver alloy	NA	NA
Max. Voltage (VDC)	14	12	5
Max. Switching Power (A)	15	0.2	NA
Life Cycles/ per way	30,000	10,000	2,000,000
Sealing	IP5x	Not sealed	Not sealed
Page Number	C-4	C-9	C-10



Navigation

# SAMXD Series Dust Protected Seat Adjustment Switches

New

## Features/Benefits

- Multi-directional 2 & 4 ways
- Power handling for motor direct drive
- IP5x
- THT terminations

## Typical Applications

- Seat adjustment module for passenger cars & commercial vehicles
- Industrial joystick



P/N	Description		Actuator Position	Actuator Shape	Spring Pin	Cycles	Operating Force (N)	Travel (mm)
SAMXDH2LR14SP	SAM XD 2W LR Switch	2 way	Left	Round	Yes	30,000	5.3 ± 1.5	1.3 ± 0.4
SAMXDH2LR10SP	SAM XD 2W LR Switch	2 way	Left	Round	Yes	30,000	6.0 ± 1.75	1.0 ± 0.4
SAMXDH2LR10	SAM XD 2W LR Switch	2 way	Left	Round	No	30,000	6.0 ± 1.75	1.0 ± 0.4
SAMXDH2LS11	SAM XD 2W LS Switch	2 way	Left	Square	No	30,000	6.0 ± 1.75	1.0 ± 0.4
SAMXDH2MR14SP	SAM XD 2W MR Switch	2 way	Middle	Round	Yes	30,000	5.3 ± 1.5	1.3 ± 0.4
SAMXDH2MR10SP	SAM XD 2W MR Switch	2 way	Middle	Round	Yes	30,000	6.0 ± 1.75	1.0 ± 0.4
SAMXDH4MR11SP	SAM XD 4W MR Switch	4 way	Middle	Round	Yes	30,000	6.0 ± 1.75	1.2 ± 0.4
SAMXDH4MS11	SAM XD 4W MR Switch	4 way	Middle	Square	No	30,000	6.0 ± 1.75	1.2 ± 0.4

## Specifications

FUNCTION: Momentary action  
 CONTACT ARRANGEMENT: SPDT per switching circuit  
 SWITCHING MODE: Non-Shorting  
 TERMINALS: THT - Through Hole Terminals

## Electrical

RATING: 15A @ 14V DC  
 INITIAL CONTACT RESISTANCE: <50mΩ per switching circuit  
 JUMP START: 26VDC for 1 minute  
 OVER VOLTAGE: 18VDC for 60 minute at 65°C  
 OVER CURRENT: 30A at 14V for 10 minute  
 BOUNCE TIME: <10ms

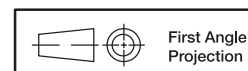
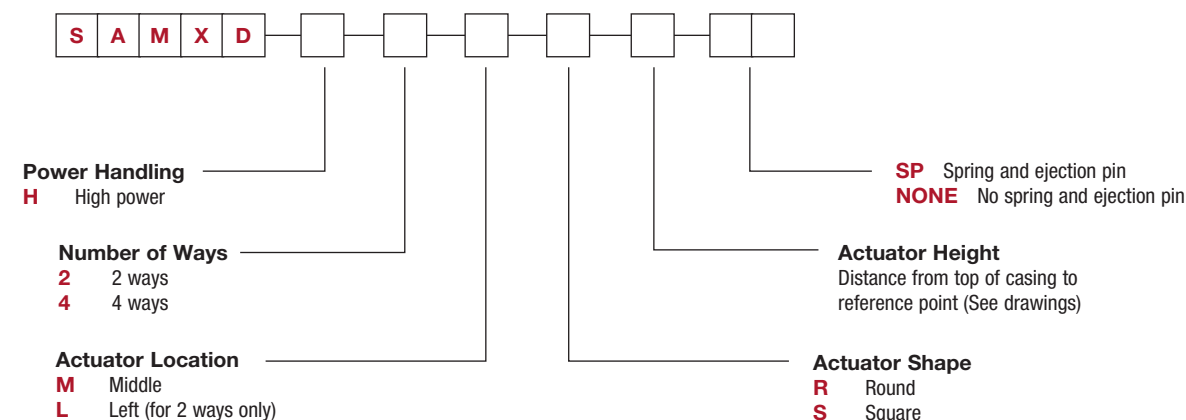
## Environmental

OPERATING TEMPERATURE: -40°C to +85°C  
 SEALING LEVEL: IP5x

## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.

For any part number different from those listed above, please consult your local representative.



First Angle  
Projection

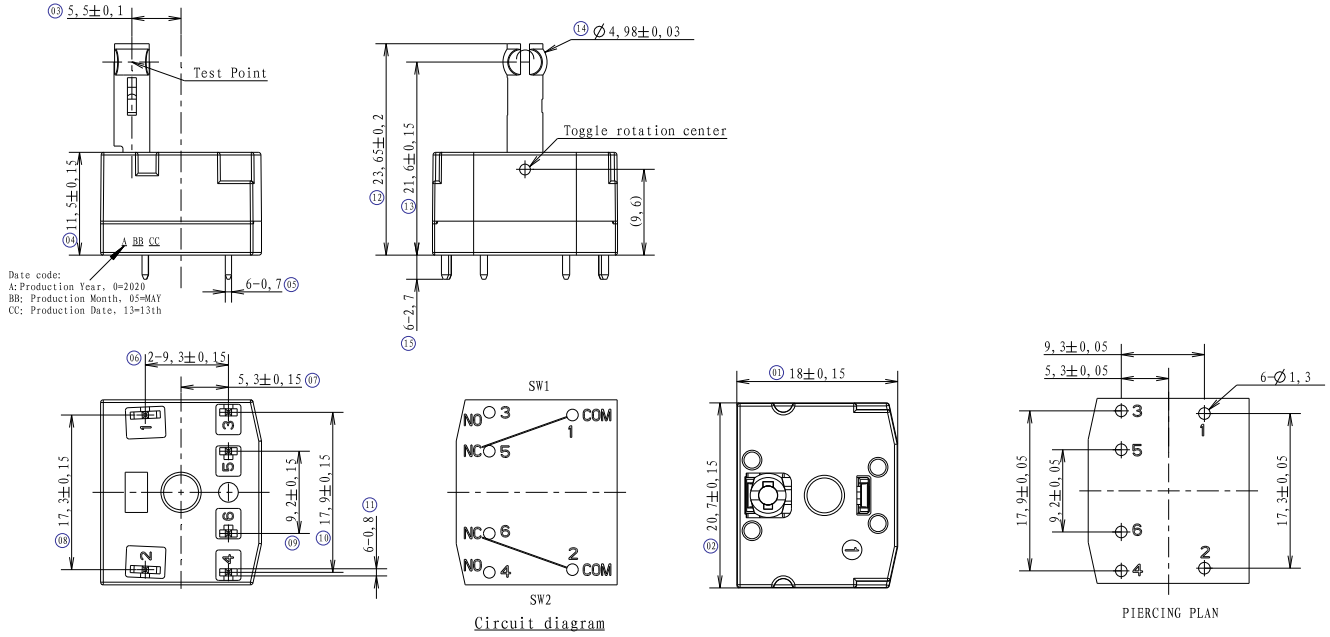
Dimensions are shown: mm  
 Specifications and dimensions subject to change



New

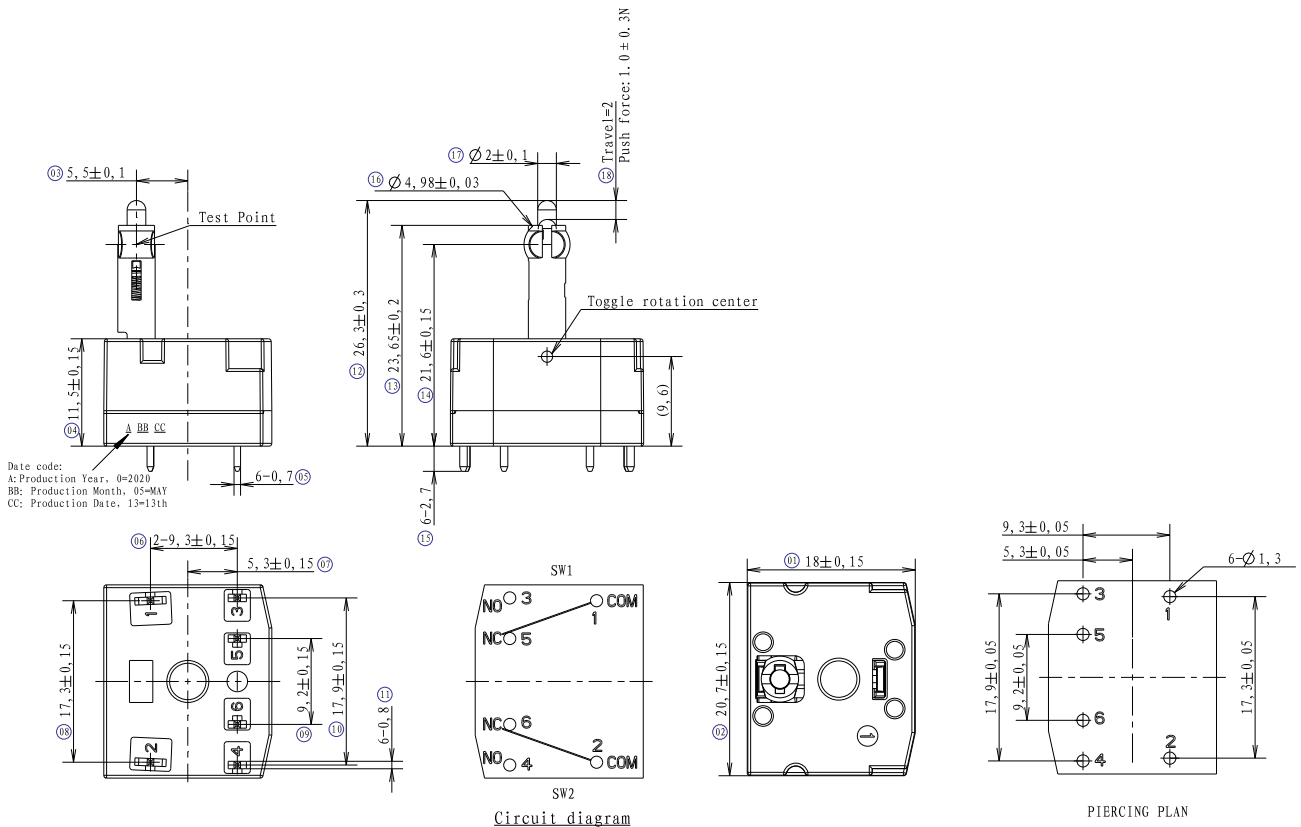
# SAMXD Series Dust Protected Seat Adjustment Switches

## SAMXDH2LR10



Navigation

## SAMXDH2LR10SP



First Angle Projection

Dimensions are shown: mm

Specifications and dimensions subject to change

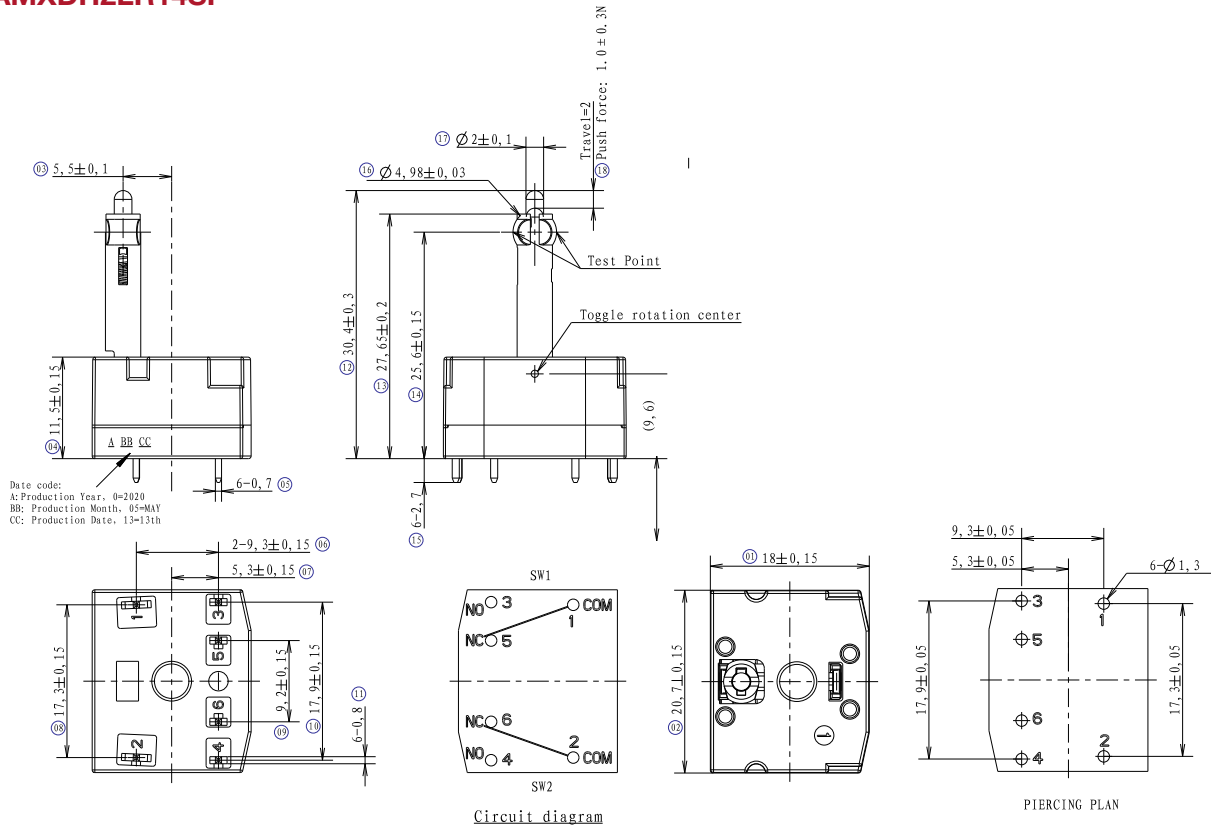


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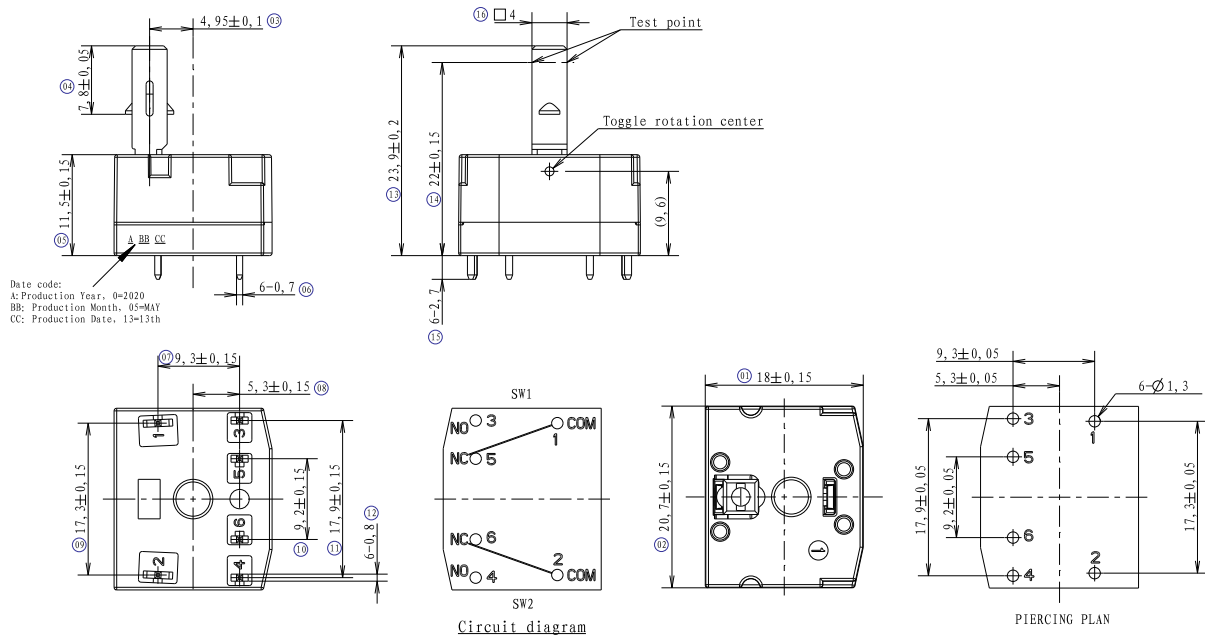
# SAMXD Series Dust Protected Seat Adjustment Switches

New

## SAMXDH2LR14SP



## SAMXDH2LS11



Dimensions are shown: mm  
Specifications and dimensions subject to change

www.ckswitches.com

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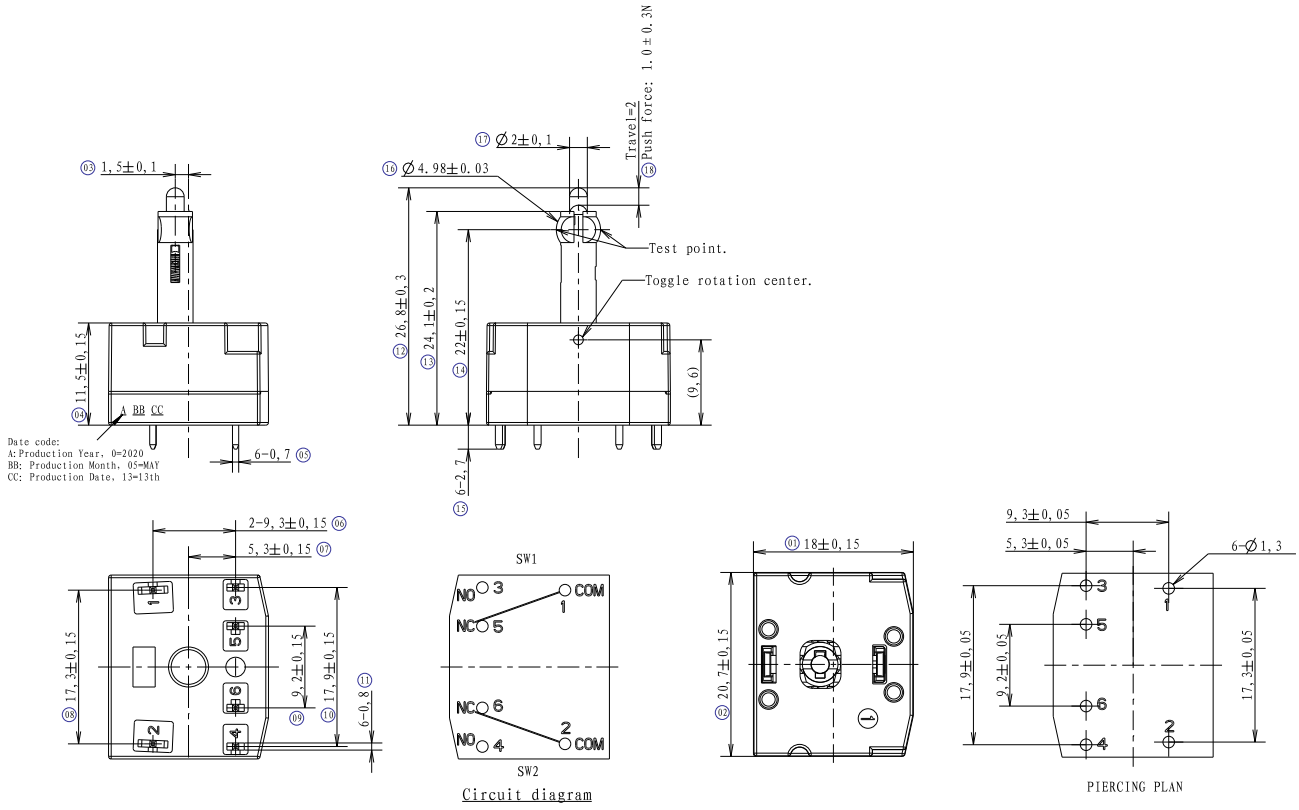
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# SAMXD Series Dust Protected Seat Adjustment Switches

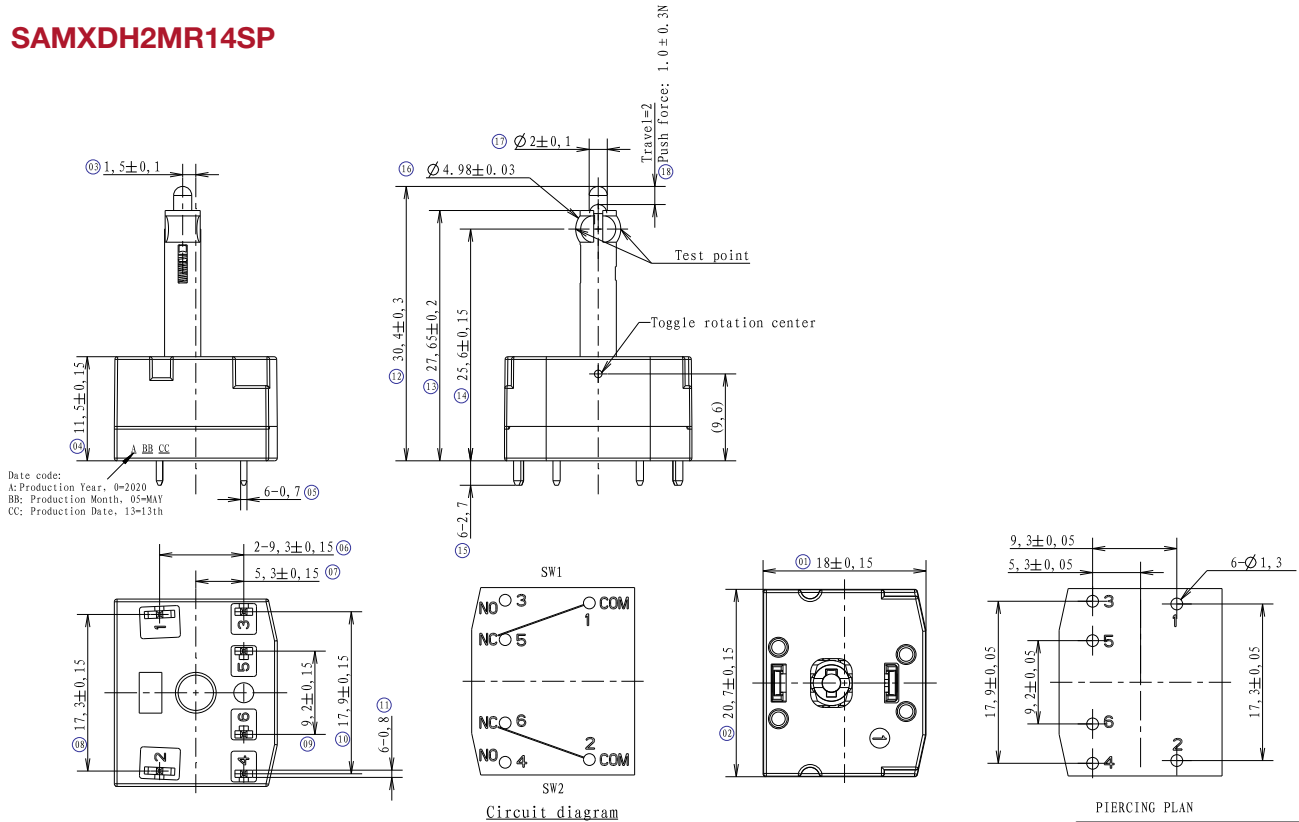


Navigation

## SAMXDH2MR10SP



## SAMXDH2MR14SP

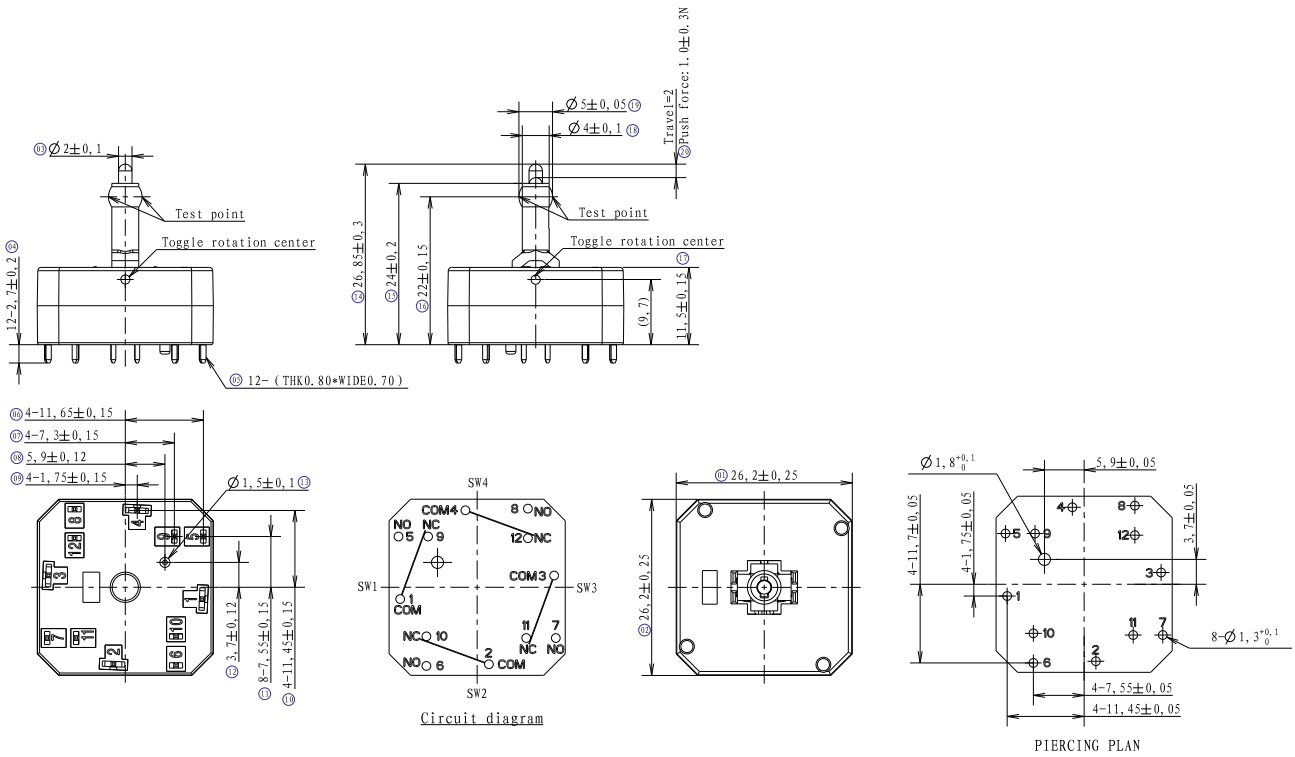


Dimensions are shown: mm  
Specifications and dimensions subject to change

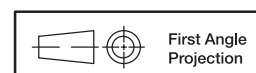
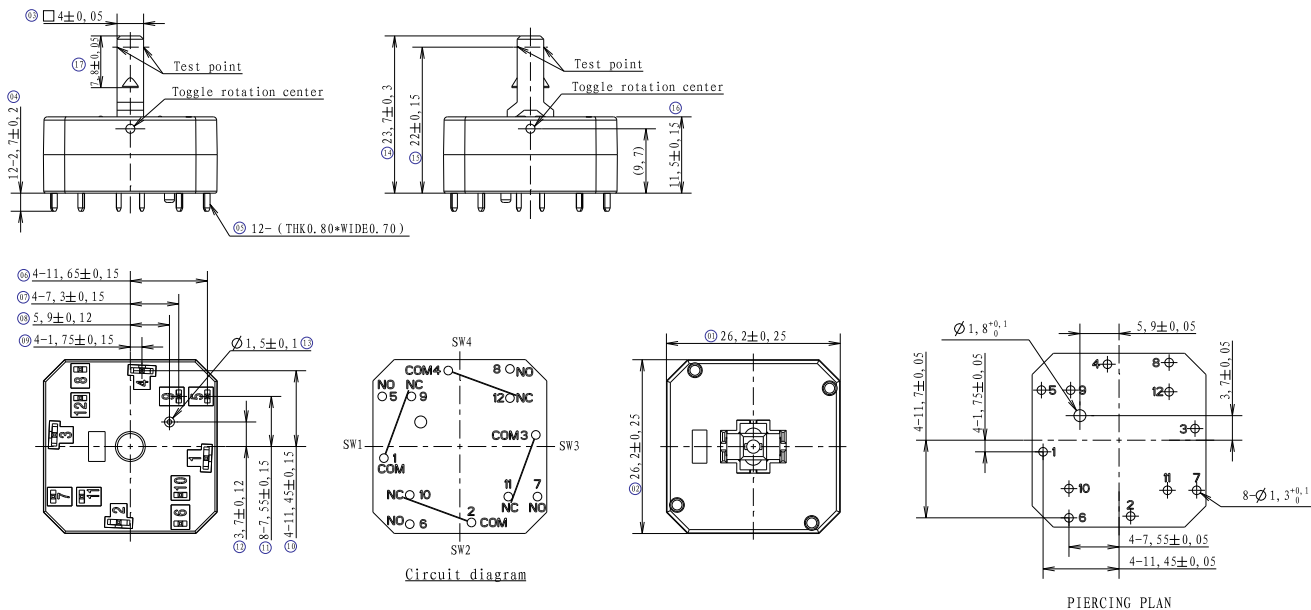
# SAMXD Series Dust Protected Seat Adjustment Switches

New

## SAMXDH4MR11SP



## SAMXDH4MS11



Dimensions are shown: mm  
Specifications and dimensions subject to change

# CS Series 4-way Adjustable Direction Switch



## Features/Benefits

- Designed for mirror control
- Wire harness and connector easy to customize
- 4-way adjustable directions

## Typical Applications

- Automotive
- Industrial

## Specifications

CONTACT RATING: 0.2 A @ 12 VDC  
 OPERATING LIFE: 10,000 cycles  
 INSULATION RESISTANCE: 10 M  $\Omega$  min. @ 500 VDC  
 DIELECTRIC STRENGTH: 500 V AC  
 OPERATING TEMPERATURE: -40°C to +90°C  
 OPERATING FORCE: L- OFF, R-OFF; 200  $\pm$ 100 gf  
 OFF-L, OFF-R; 400  $\pm$  200 gf  
 4 Direction; 500  $\pm$  200 gf

## Materials

KNOB: ABS  
 COVER: ABS  
 TERMINAL: Brass, tin plated

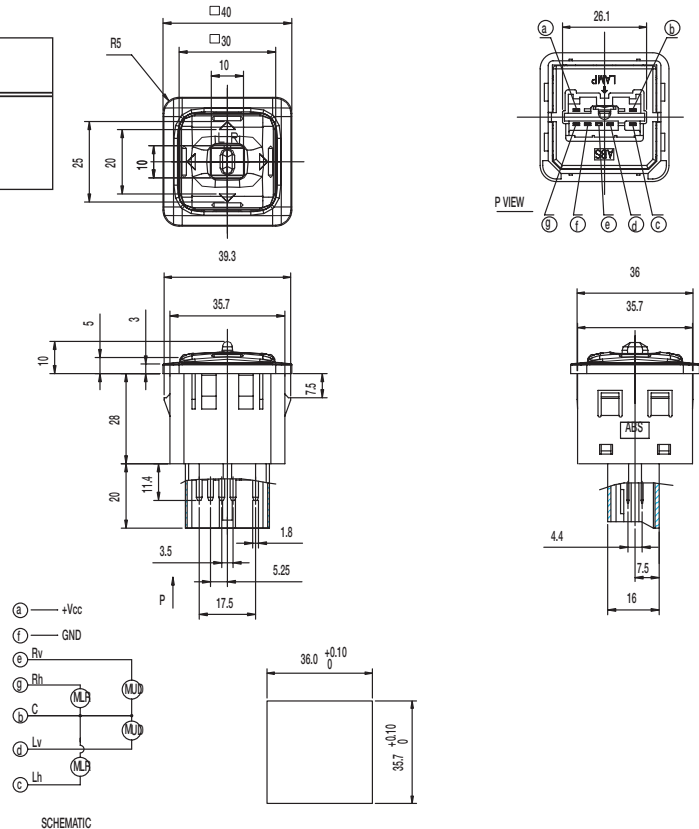
**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

## How To Order

Part number list is shown below.

Part Number (Part Description)	Product Details
CS-41001-E	4 directions switch with selector slide switch

PART NUMBER	PACKAGING
<b>CS-41001-E</b>	256 pieces



Dimensions are shown: mm  
 Specifications and dimensions subject to change



2 Mar 22



## Features/Benefits

- 2 axis, multi-direction operation
- 2,000,000 life cycle for toggle
- Center select momentary switch
- Small package size

## Typical Applications

- Gaming peripherals
- Remote Control Vehicles
- Mini-joystick
- Thumb control
- Navigation control
- Industrial control
- Heavy equipment



## Electrical

TOTAL RESISTANCE (POTENTIOMETERS): 10kΩ ± 20% initial  
Within ± 20% of initial values for 10,000 cycles

RESISTANCE POTENTIOMETERS: Percentage of the voltage of terminal 1-2 to the voltage of terminal 1-3

RATED VOLTAGE: 50 VAC or 5 VDC

RATED POWER: 0.05 A @ 12 VDC

CONTACT NOISE: Noise < 10% of operating voltage

VOLTAGE DIVIDER: 39.6 ~ 60.4%

INSULATION RESISTANCE: > 100 MΩ

WITHSTANDING VOLTAGE: No arcing or breakdown

## Environment

OPERATING TEMPERATURE: -10°C to +70°C

STORAGE TEMPERATURE: -30°C to +80°C

## Mechanical

PATTERN OF ACTUATOR MOVEMENT: Toggle cross-wide and in a circle

FULL STROKE ACTUATION STOP STRENGTH: > 3.1 kgf  
(3 seconds minimum)

PULL STRENGTH OF THE ACTUATOR: > 5.0 kgf  
(3 seconds minimum)

ACTUATION FORCE: 120 +/-50 gf (12 +/- 5mN\*M of Torque)

ACCURACY OF RETURN TO ACTUATOR RELEASE POSITION: ±3°

TOGGLE ANGLE OF OPERATION: 26° max. angle from vertical through full circular range of rotation

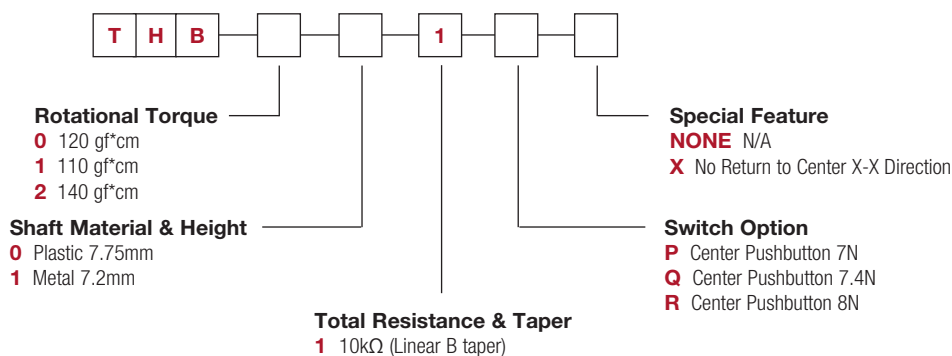
OPERATING LIFE: 1,000,000 cycles minimum (center switch)  
2,000,000 cycles minimum (thumbstick toggle)

## Packaging

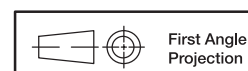
Tray (60 units)

## How To Order

Our easy build-a-switch concept allows you to mix and match options to create the switch you need. To order, select desired option from each category and place it in the appropriate box.



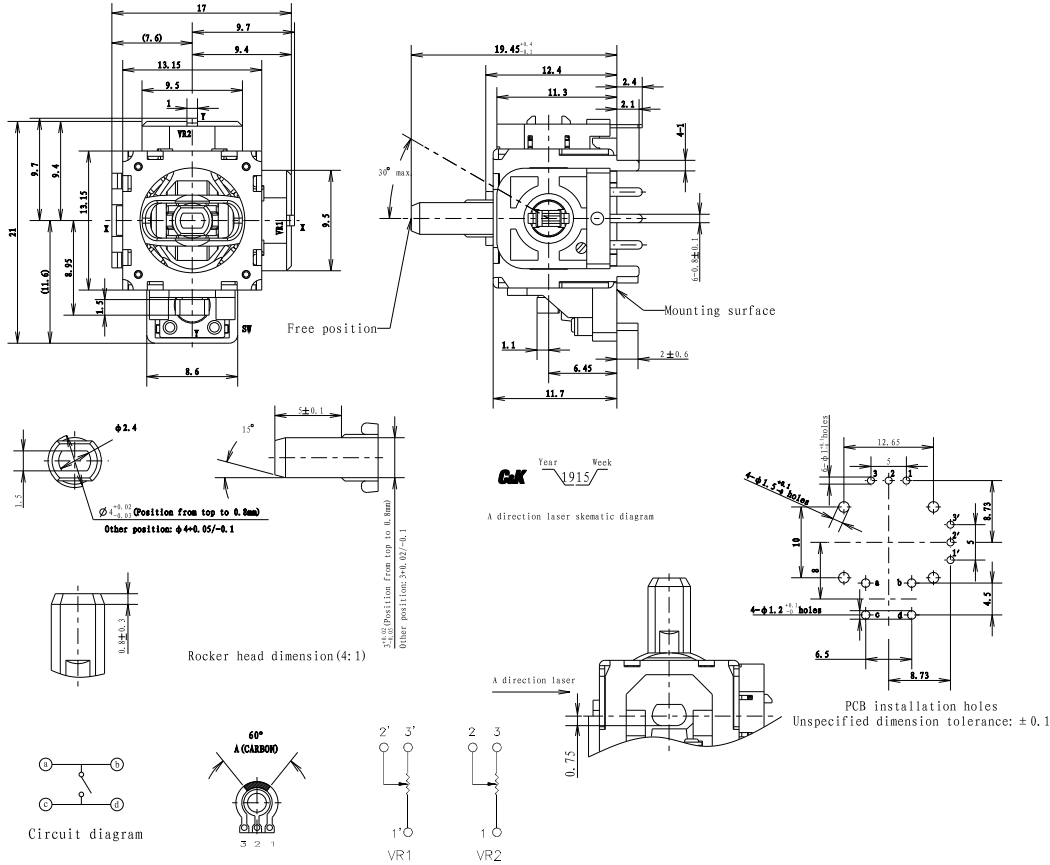
\* Please note some option codes are mutually exclusive. Consult factory if you have any questions



Dimensions are shown: mm  
Specifications and dimensions subject to change

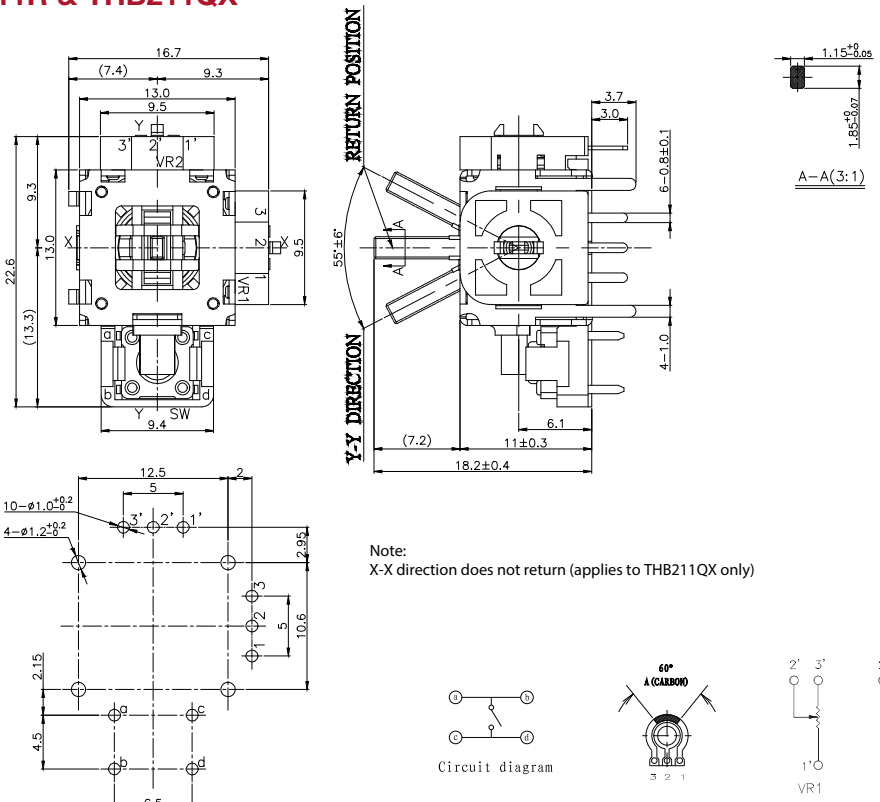
# THB Series Miniature Thumbstick

## THB001P



Navigation

## THB111R & THB211QX



2 Sep 22