

## Features/Benefits

- Excellent tactile feel
- Plunger can be custom designed
- SMT switch adapted for low current
- Only actuate 1 direction at a time
- Provides logic level control

## Typical Applications

- Seat adjustments
- Industrial controls
- Mirror adjustment
- Home entertainment
- Multi-function steering wheel



## Construction

<b>FUNCTION:</b>	QSA2: 2 way switch QSA4: 4 way switch
<b>TYPE OF SWITCH:</b>	QSA2: 2x make contacts QSA4: 4x make contacts
<b>FOOTPRINT:</b>	23 mm x 18 mm, operating direction diagonal
<b>HEIGHT:</b>	Housing: 9 mm, total height: 22,4 mm
<b>PINS:</b>	Solder pins, SMD
<b>ATTACHMENT:</b>	Snap-in pegs provided to help secure and locate switches
<b>ACTUATOR:</b>	ø3,5 mm with button fastener

## Mechanical

<b>OPERATION DIRECTION:</b>	In X-Y direction along the diagonal axis of the switch. Rotation point is 5,5 mm over the PCB surface.
<b>TRAVEL:</b>	Travel of the actuator measured on an axis parallel to and 19 mm above PCB. switch point/stop (4,0 N force) 1,5 ± 0,4 mm / 2,0+0,3 mm
<b>ACTUATION ANGLE:</b>	G8 version To switch point / stop (4,0 N force) 6,5° / 8,5°
<b>ACTUATION FORCE:</b>	3,5 ± 1 N
<b>TACTILE EFFECT:</b>	≥ 15%
<b>LIFE:</b>	100,000 cycles in each direction (≤ 20 N force)

## Mechanical (continued)

<b>RETURN FORCE:</b>	0,8 ± 0,3N
<b>ACTUATION STRENGTH:</b>	>50 N, parallel to PCB >100 N, vertical (push) to PCB >50 N traction (pull) force

## Electrical

<b>SWITCHING POWER MAX:</b>	0,20 VA
<b>MIN / MAX SWITCHING VOLTAGE:</b>	(VDC) 20mV / 30 V
<b>MIN / MAX SWITCHING CURRENT:</b>	1mA / 50mA
<b>BOUNCE:</b>	< 1 ms

## Environmental

<b>OPERATING TEMPERATURE:</b>	-40°C to 85°C
<b>STORAGE TEMPERATURE:</b>	-40°C to 95°C

## Process

**AUTOMATIC SOLDERING:** Reflow compatible per CECC00802

## Other Data

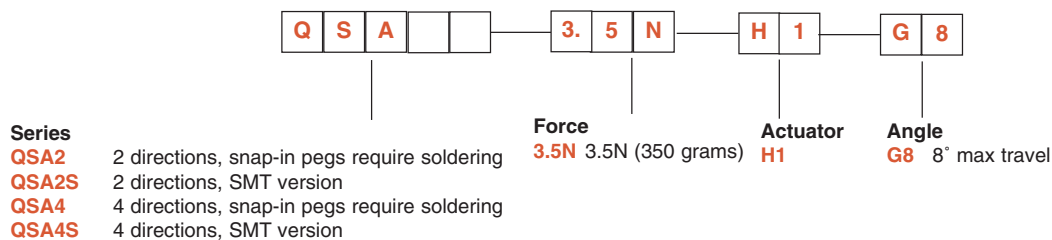
<b>CONTACT MATERIAL:</b>	Au on Ni layer
<b>SOLDERING PINS:</b>	Au flash
<b>HOUSING MATERIAL:</b>	Thermoplastic

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



## 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.



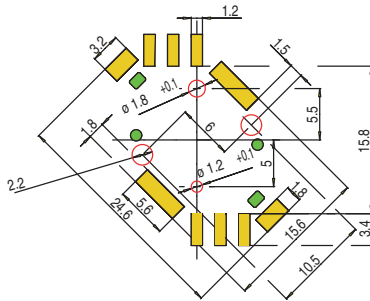
# QSA Series

## QSA2S H1



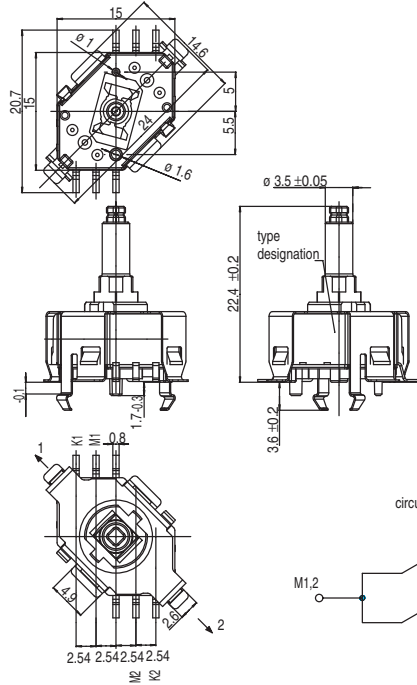
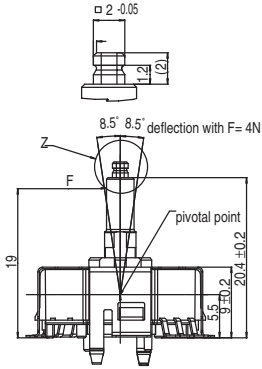
PAD LAYOUT

mounting side

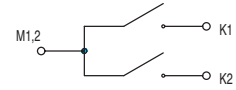


yellow surface: terminals and top plate fixations to be soldered with Infrared process  
 green surface: bearing point -to keep free from PCB lines snap-in pges and positioning pins to get through the PCB but not to be soldered  
 red hole:

VIEW Z



circuit diagram

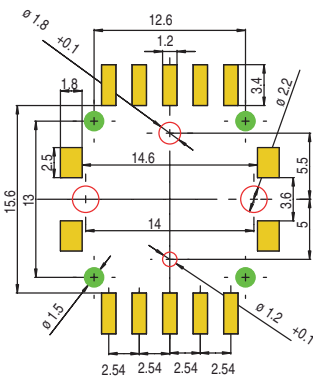


## QSA4S H1



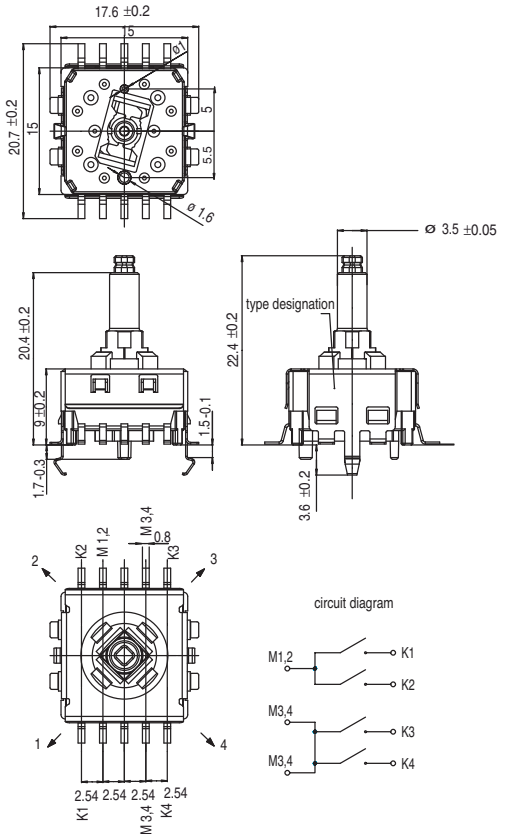
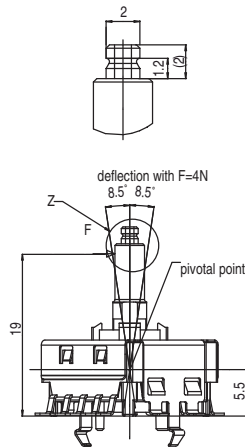
PAD LAYOUT

mounting side



yellow surface: terminals and top plate fixations to be soldered with Infrared process  
 green surface: bearing point -to keep free from PCB lines snap-in pges and positioning pins to get through the PCB but not to be soldered  
 red hole:

VIEW Z



circuit diagram

