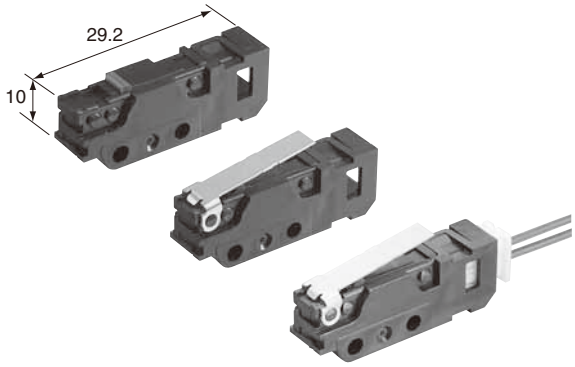
Partly to Be Discontinued:
Agency standard type
Last time buy: September 30, 2016

Subminiature Size Connector Integrated Type

AV6 (CS) SWITCHES



(Unit: mm)

RoHS compliant

FEATURES

- **Easy assembling as this switch is connector integrated.**
- **High contact reliability by simple dust prevension guard and Au-clad double layer contacts**
- **Two types of contact form are available, the SPST-NC and the SPST-NO.**
- **The lever position can be changed. the standard lever position and the backward lever position.**
- **Protection grade: IP40**

TYPICAL APPLICATIONS

- **Vending machine**
- **Copying machine**
- **Printer**
- **Also for all types of equipment required for maintenance and inspections.**

ORDERING INFORMATION

AV 6 □ □ □ □ 64 □

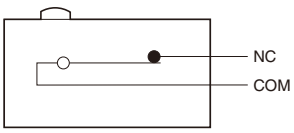
- Actuators
  - 0: Pin plunger
  - 2: Hinge lever
  - 4: Simulated roller lever
  - 5: Roller lever
- Operation load

Actuator	6th digit of part number	
	2	5
Pin plunger	0.50N	1.50N
Hinge lever	0.20N	0.50N
Simulated roller lever	0.20N	0.50N
Roller lever	0.20N	0.50N

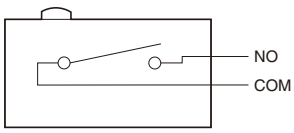
- Contact material
  64: CuNi alloy + Au-clad contact
- Agency standard
  3: UL/C-UL, TÜV
- Contact form
  2: SPST-NC (Plunger color: Red)
  3: SPST-NO (Plunger color: Yellow)
- Lever position
  Nil: Standard
  12: Backward

CONTACT FORM

1) SPST-NC

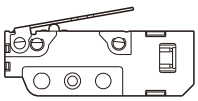


2) SPST-NO

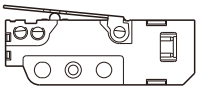


LEVER POSITION

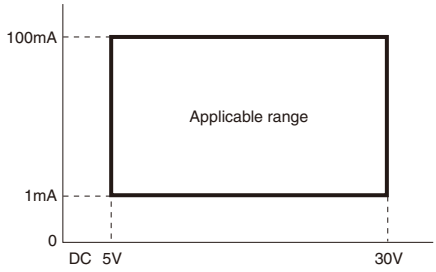
1) Standard



2) Backward



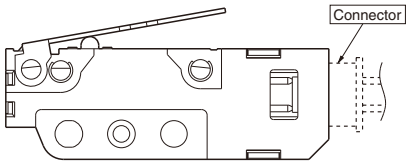
CURRENT CAPACITY (reference)



APPLICABLE CONNECTOR

Easy assembling as this switch is connector integrated.

- Applicable connector: XA connector produced by JST Mfg. Co., Ltd.
  Contact: SXA-001T-P0.6
  Housing: XAP-02V-1



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PRODUCT TYPES

■ Lever position: Standard

Partly to Be Discontinued: Agency standard type

Actuator	Operating Force OF, Max.	Contact form	
		SPST-NC	SPST-NO
Pin plunger	0.50N	AV6202643	AV6302643
	1.50N	AV6205643	AV6305643
Hinge lever	0.20N	AV6222643	AV6322643
	0.50N	AV6225643	AV6325643
Simulated roller lever	0.20N	AV6242643	AV6342643
	0.50N	AV6245643	AV6345643
Roller lever	0.20N	AV6252643	AV6352643
	0.50N	AV6255643	AV6355643

■ Lever position: Backward

Partly to Be Discontinued: Agency standard type

Actuator	Operating Force OF, Max.	Contact form	
		SPST-NC	SPST-NO
Hinge lever	0.35N	AV622212643	AV632212643
	1.00N	AV622512643	AV632512643
Simulated roller lever	0.35N	AV624212643	AV634212643
	1.00N	AV624512643	AV634512643
Roller lever	0.35N	AV625212643	AV635212643
	1.00N	AV625512643	AV635512643

SPECIFICATIONS

■ Contact rating

Contact	Contact voltage	Resistive load (cos $\phi \fallingdotseq 1$)
Au-clad double layer contact	30V DC	0.1A
	5V DC	1mA Low-level circuit rating

■ Characteristics

Item		Specifications
Expected life	Mechanical (OT max.)	Min. 5×10^5 (at 60 cpm)
	Electrical (Rated load OT max.)	Min. 2×10^5 (at 20 cpm)
Insulation resistance		Min. 100MΩ
Dielectric strength	Between non-continuous terminals	1,000 Vrms for 1 min.
	Between each terminal and other exposed metal parts	1,500 Vrms for 1 min.
	Between each terminal and ground	1,500 Vrms for 1 min.
Contact resistance (initial)		100mΩ max. (by voltage drop 0.1A 6 to 8 VDC) Value includes the resistance between the connector and the lead (#AWG28, length: 50 mm)
Viblation resistance (malfunction vibration resistance)		10 to 55 Hz at single amplitude of 0.75mm (Contact opening: max. 1msec.)
Shock resistance (malfunction shock resistance)		Applied shock 1.50N type: Min.300m/s² (Contact opening: Max. 1msec.) 0.50N type: Min.150m/s² (Contact opening: Max. 1msec.)
Connector insertion force		Max. 20N (inserted in removal direction)
Connector holding force		Min. 20N (extracted by static load, in removal direction)
Connector removal operating times		Max. 5 times (in removal direction)
Allowable operating speed (No load)		0.1 to 1,000 mm/s (at pin plunger)
Max. operating cycle rate (No load)		300 cpm
Ambient temperature		–25 to +85°C (No freezing and condensing)
Unit weight		Approx. 2.5g (pin plunger type)
Contact specifications	Contact material	CuNi alloy + Au-clad
Protection grade		IP40

■ Operating characteristics

1) Lever position: Standard

Actuator	Operating Force OF, Max.	Release Force RF, Min.	Pretravel PT, Max.	Movement Differential MD, Max.	Overtravel OT, Min.	Operating Position OP
Pin plunger	0.50N	0.04N	0.6mm	0.1mm	0.4mm	8.4±0.3mm
	1.50N	0.25N				
Hinge lever	0.20N	0.02N	2.6mm	0.8mm	1.2mm	10.0±0.8mm
	0.50N	0.06N				
Simulated roller lever	0.20N	0.02N	2.6mm	0.8mm	1.2mm	12.2±0.8mm
	0.50N	0.06N				
Roller lever	0.20N	0.02N	2.6mm	0.8mm	1.2mm	15.7±0.8mm
	0.50N	0.06N				

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2) Lever position: Backward

Actuator	Operating Force OF, Max.	Release Force RF, Min.	Pretravel PT, Max.	Movement Differential MD, Max.	Overtravel OT, Min.	Operating Position OP
Hinge lever	0.35N	0.03N	1.4mm	0.6mm	0.7mm	9.2±0.6mm
	1.00N	0.10N				
Simulated roller lever	0.35N	0.03N	1.4mm	0.6mm	0.7mm	11.3±0.6mm
	1.00N	0.10N				
Roller lever	0.35N	0.03N	1.4mm	0.6mm	0.7mm	14.9±0.6mm
	1.00N	0.10N				

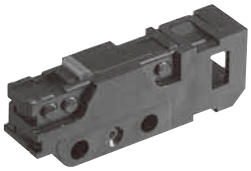
DIMENSIONS

(Unit: mm) General tolerance: ±0.25

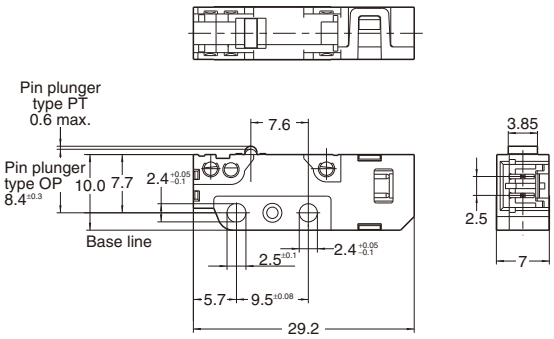
The CAD data of the products with a CAD Data mark can be downloaded from: http://industrial.panasonic.com/ac/e/

■ Pin plunger

CAD Data



External dimensions

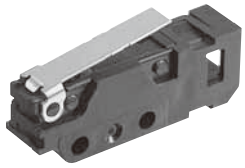


Pretravel PT, Max.		0.6mm
Movement Differential MD, Max.		0.1mm
Overtravel OT, Min.		0.4mm
Operating Position OP	Distance from mounting hole	8.4±0.3mm

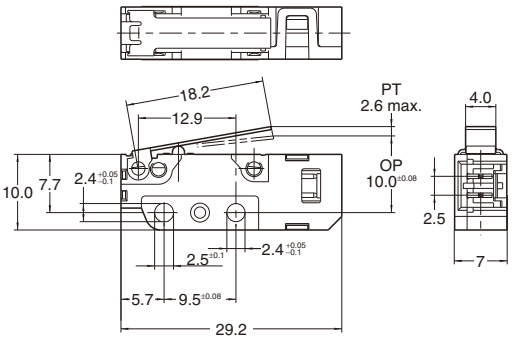
■ Hinge lever

Lever position: Standard

CAD Data



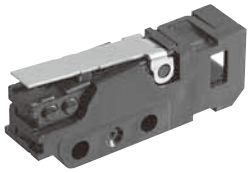
External dimensions



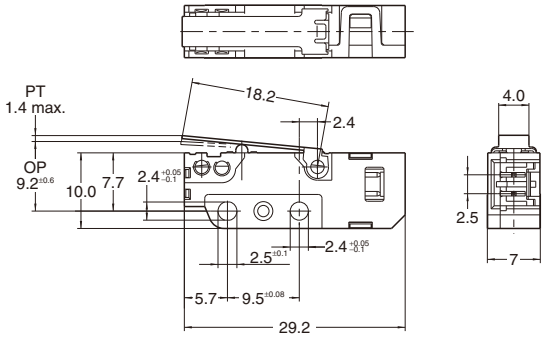
Pretravel PT, Max.		2.6mm
Movement Differential MD, Max.		0.8mm
Overtravel OT, Min.		1.2mm
Operating Position OP	Distance from mounting hole	10.0±0.8mm

Lever position: Backward

CAD Data



External dimensions



Pretravel PT, Max.		1.4mm
Movement Differential MD, Max.		0.6mm
Overtravel OT, Min.		0.7mm
Operating Position OP	Distance from mounting hole	9.2±0.6mm

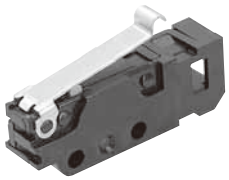
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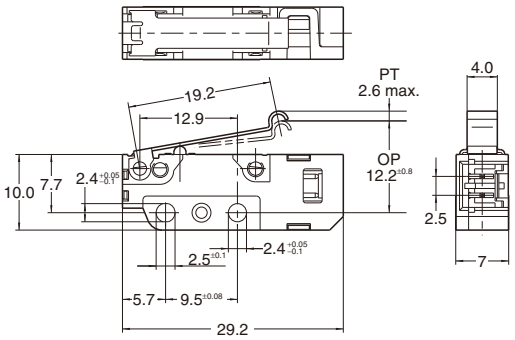
■ Simulated roller lever

Lever position: Standard

CAD Data



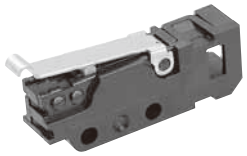
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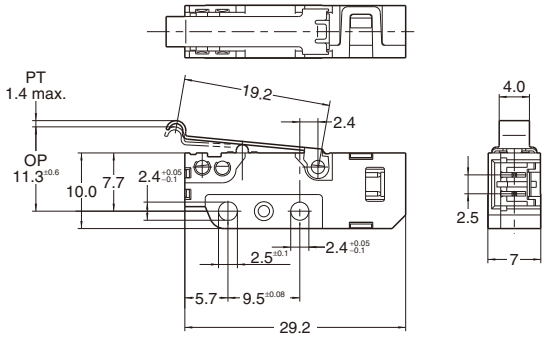
Pretravel PT, Max.		2.6mm
Movement Differential MD, Max.		0.8mm
Overtravel OT, Min.		1.2mm
Operating Position OP	Distance from mounting hole	12.2±0.8mm

Lever position: Backward

CAD Data



External dimensions

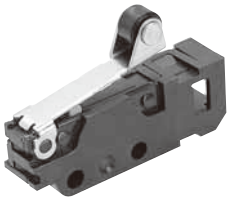


Pretravel PT, Max.		1.4mm
Movement Differential MD, Max.		0.6mm
Overtravel OT, Min.		0.7mm
Operating Position OP	Distance from mounting hole	11.3±0.6mm

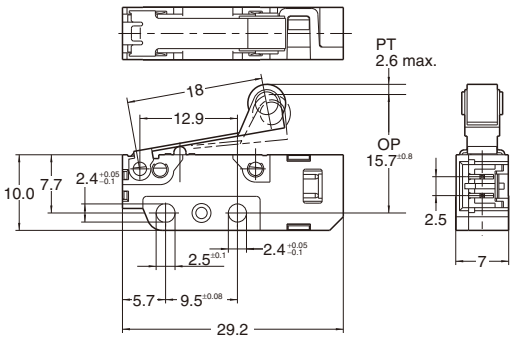
■ Roller lever

Lever position: Standard

CAD Data



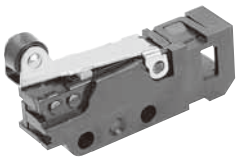
External dimensions



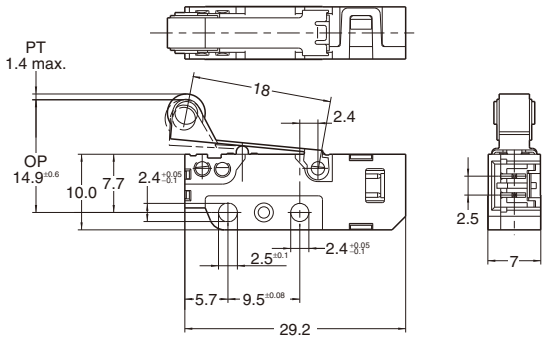
Pretravel PT, Max.		2.6mm
Movement Differential MD, Max.		0.8mm
Overtravel OT, Min.		1.2mm
Operating Position OP	Distance from mounting hole	15.7±0.8mm

Lever position: Backward

CAD Data



External dimensions



Pretravel PT, Max.		1.4mm
Movement Differential MD, Max.		0.6mm
Overtravel OT, Min.		0.7mm
Operating Position OP	Distance from mounting hole	14.9±0.6mm

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CAUTIONS FOR USE

■ Fastening of the switch body

1) To secure the switch, please use an M2.3 screw on a flat surface and tighten using a maximum torque of 0.29 N·m. It is recommended that both flat metal washer and spring washers be used with the screws and adhesive be applied to lock the screws to prevent loosening of the screws.

2) Be sure to maintain adequate insulating clearance between each terminal and ground.

3) When the operation object is in the free position, force should not be applied directly to the actuator or pin plunger. Also force should be applied to the pin plunger from vertical direction to the switch.

4) In setting the movement after operation, the over-travel should be set more than 70% as a standard.

With the lever type, do not apply excessive force in the direction opposite to the movement, or from the horizontal direction.

■ About the connector

1) The connector on the AV6 (CS) switch is designed to fit with the XA connector produced by JST Mfg. Co., Ltd. Do not use any connector other than the specified connector, or solder the terminals directly.

2) Make sure leads are arranged so that no constant force is applied to them when the connectors are mated.

3) Keep the connector straight when inserting it. If it is inserted at an angle, it may snag near the entrance, or it may be inserted too forcefully.

4) Problems thought to be caused by the XA connector, which is specified as conforming to the AV6 (CS) switch connector, are not covered by the warranty. Please contact JST Mfg., Co., Ltd. and request cooperation in resolving the problem.

■ Selection of switch

Please make your selection so that there will be no problems even if the operating characteristics vary up to ±20% from the standard values.

■ Environment

Avoid using and storing these switches in a location where they will be exposed to corrosive gases, silicon, or high dust levels, all of which can have an adverse effect on the contacts.

■ Precautions concerning circuits

The AV6 (CS) switch is designed specifically for low-voltage, low-current loads. Avoid using it at loads that exceed the rating load.

■ Quality check under actual loading conditions

To assure reliability, check the switch under actual loading conditions. Avoid any situation that may adversely affect switching performance.

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