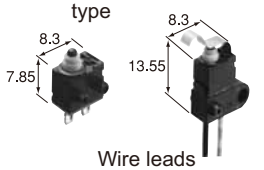
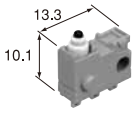
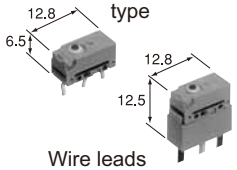
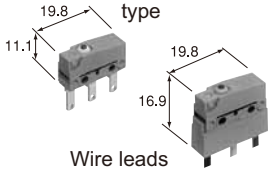
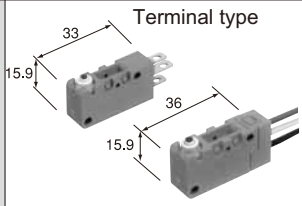
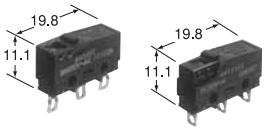
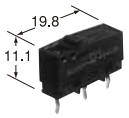
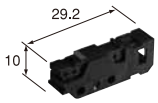
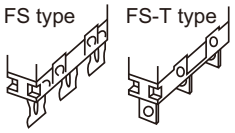
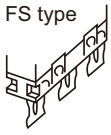
Switches Selector Chart

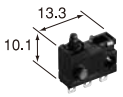
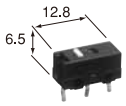
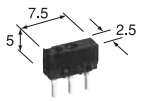
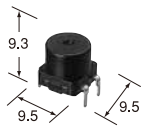
Category	Seal Type Switches			
Product name	Turquoise Stroke Mini Switches	Turquoise Stroke Switches	ABJ (BJ) Turquoise Switches	ABS (BS) Turquoise Switches
Configuration (Unit: mm) Part number	Terminal type  Wire leads type **ASQM**	Terminal type  **ASQ**	Terminal type  Wire leads (bottom type) **ABJ**	Terminal type  Wire leads (bottom type) **ABS**
Features	• Miniaturization achieved with changing from 1 Form C to 1 Form A or 1 Form B contacts. • Handles low-level switching loads • Protection grade: IP67 • Silent operation construction with sliding contact	• Compact size and long stroke • Protection grade: IP67 • Silent operation construction with sliding contact	• J type, High sealing performance sealed switches • Protection grade: IP67 • Elastomer double molding technology contribute to steady sealing quality	• S type, High sealing performance sealed switches • Protection grade: IP67 • Elastomer double molding technology contribute to steady sealing quality • Expansion of low-level circuit type
Rating (Resistive load)	<Ag plating on both sides of sliding contact> 1mA 5V DC to 50mA 16V DC	<Au plating on both sides of sliding contact> 1mA 5V DC to 100mA 30V DC	<AgNi alloy contact> O.F. 1.96N type 2A 125V AC 2A 30V DC O.F. 1.23N 1A 125V AC 1A 30V DC O.F. 2.45N type (Long stroke type) 1A 125V AC 1A 30V DC <AgNi alloy + Au-clad contact> 0.1A 125V AC 0.1A 30V DC (Low-level circuit type) 5mA 6V DC 2mA 12V DC 1mA 24V DC	<AgNi alloy contact> 2A 125V AC 2A 250V AC 2A 30V DC 0.4A 125V DC <Au-clad contact> <Double layer contact: CuNi alloy + Au-clad contact> <Triple layer contact: CuNi alloy + AgNi alloy + Au-clad contact> 0.1A 30V DC 0.1A 125V AC 0.1A 250V AC 0.1A 30V DC (Low-level circuit type) 5mA 6V DC 2mA 12V DC 1mA 24V DC
Operating Force (O.F.) Max.	1.2N (Pin plunger) 1.5N (Simulated leaf lever)	1.5N (Pin plunger and simulated leaf lever) 1.7N (Leaf lever)	1.23N 1.96N 2.45N (Long stroke type)	0.98N 1.47N
Expected life: Mechanical (Pin plunger type)	—	—	Min. 10^6	Min. 5×10^6
Expected life: Electrical	Nominal rating load: Min. 1.5×10^5 Low-level rating load: Min. 3×10^5	Nominal rating load: Min. 2×10^5 Low-level rating load: Min. 5×10^5	AgNi alloy: Min. 3×10^4 Au-clad: Min. 10^5	AgNi alloy: Min. 5×10^4 Au-clad: Min. 2×10^5
Mounting pitch	5.5mm, 8.3mm	8.3mm (M3)	6.5mm (M1.2), 4.8mm (M2.3), 13mm (M3)	All S type products: 9.5mm (M2.3)
Actuator style	●	●	●	●
	—	—	—	—
	—	—	—	—
	—	—	—	—
	—	—	—	●
	—	—	●	●
	—	—	—	●
	—	—	●	●
	—	—	●	●
	● (Simulated leaf lever)	● (Leaf lever, Simulated leaf lever)	●	●
Terminal style	• Solder terminal • Wire leads	• Solder terminal • PC board terminal or PC angle terminal • Wire leads (bottom, right side and left side types)	• Solder terminal • PC board terminal • Wire leads (bottom, right side and left side types)	• Solder terminal • .110 quick-connect terminal • PC board terminal or PC angle terminal • Wire leads (bottom, right side and left side types)
Safety standard	—	—	—	UL/C-UL (CSA standard) ENEC/VDE (EN standard)
Protection grade	IP67	IP67	IP67	IP67
Unit weight	Approx. 0.5 g (terminal type)	Approx. 0.8 g (terminal type)	Approx. 0.5 g (terminal type)	Approx. 2 g (terminal type)
Page	—	—	—	—

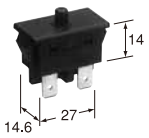
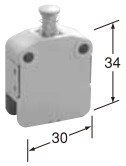
Switches Selector Chart

Category		Seal Type Switches
Product name		ABV (BV) Turquoise Switches
Configuration (Unit: mm)		Terminal type 
Part number		Wire leads **ABV**
Features		• Integral construction of body and cover, sealed switches • Protection grade: IP67 • Plunger section adopts ultrasonic swaging process
Rating (Resistive load)		<AgNi alloy contact> 5A 250V AC (O.F. 1.96N) 3A 250V AC (O.F. 0.98N) <AgNi alloy + Au-clad contact> 3A 250V AC (O.F. 1.96N) 1A 250V AC (O.F. 0.98N) (Low-level circuit type) 5mA 6V DC 2mA 12V DC 1mA 24V DC
Operating Force (O.F.) Max.		0.98N 1.96N
Expected life	Mechanical (Pin plunger type)	Min. 5×10^6
	Electrical	Nominal rating load: Min. 10^5 Low-level rating load: Min. 10^6
Mounting pitch		10.3×22.2mm (M3)
Actuator style		●
		—
		—
		—
		—
		●
		—
		●
		● (Short roller lever, Roller lever)
		—
Terminal style		• .187 quick-connect terminal • Wire leads
Safety standard		UL/C-UL (CSA standard) ENEC/VDE (EN standard)
Protection grade		IP67
Unit weight		Approx. 7 g (terminal type)
Page		—

Category	Non Seal Type Switches			
Product name	AM1 (NZ) Switches	AV3/AVM3/AVT3/AVL3 (FS/FS-T) Switches	AV3 (FS) Switches Contact gap 1 mm Type	AV6 (CS) Switches
Configuration (Unit: mm) Part number	 **AM1**	FS type FS-T type  **AV3 AVM3** **AVT3 AVL3**	 **AV3**	 **AV6**
Features	• High precise operation • Product types abundant at an oil tight type, various actuators, etc.	• Long life version available • Au-clad double layer contacts type for low-level circuit available • There is the direction of terminal of two types.	• S type and door inter-lock switches for secondary circuit of OA equipment • Contact gap of greater than 1mm • Superior operating position precision	• Using a connector for connections significantly improves operation effectiveness • High contact reliability is achieved by simple dust prevention guard • The contact form is available in two types, the SPST-NC and the SPST-NO. • Adoption of Au-clad double layer contacts of high reliability for low-level circuit type
Rating (Resistive load)	• Standard type 10A 125, 250V AC or 1A 480V AC 1/8HP 125V AC 1/4HP 250V AC 1/2A 125V DC 1/4A 250V DC	<Standard version> <Long life version> <AgNi alloy contact> <AgNi alloy contact> 3A 250V AC 5A 250V AC 3A 30V DC 5A 30V DC 0.4A 125V DC 0.4A 125V DC <Double layer contact: CuNi alloy + Au-clad contact> <Triple layer contact: CuNi alloy + AgNi alloy + Au-clad contact> 0.1A 250V AC (Triple layer contact) 0.1A 30V DC (Low-level circuit type) 1 to 100mA, 5 to 30V DC (Double layer contact) 1 to 100mA, 5 to 250V AC (Triple layer contact)	<AgNi alloy contact> 3A 30V DC	<CuNi alloy + Au-clad contact> 0.1A 30V DC
Operating Force (O.F.) Max.	0.69N to 5.30N	<Standard version> 0.25N (Au-clad contact only) 0.49N 0.98N <Long life version> 1.47N	1.47N	0.50N 1.50N
Expected life — Mechanical (Pin plunger type)	Min. 2×10^7	Min. 5×10^5 Long life version: Min. 3×10^7	Min. 5×10^5	Min. 5×10^5
Expected life — Electrical	Min. 5×10^6	AgNi alloy contact: Min. 5×10^4 Au-clad contact: Min. 2×10^5	Min. 10^4	Min. 2×10^5
Mounting pitch	25.4mm (M4)	9.5mm (M2.3)	9.5mm (M2.3)	—
Actuator style	●	●	●	●
	●	—	—	—
	●	—	—	—
	● (Panel mount, Panel mount roller, Panel mount cross roller)	—	—	—
	—	●	●	—
	● (Hinge lever, Flexble leaf lever)	●	●	●
	—	●	●	—
	—	●	●	●
	● (Hinge short roller lever, Hinge roller lever, Flexble roller leaf lever)	●	●	●
	—	—	—	—
Terminal style	• Solder terminal • PC board terminal	• Solder terminal • PC board terminal • .110 quick-connect terminal Direction of terminal FS type FS-T type 	• Solder terminal • Self-standing PC board terminal • .110 quick-connect terminal Direction of terminal FS type 	• Connector connection (XA connector produced by JST Mfg. Co., Ltd.)
Safety standard	UL/C-UL (CSA standard)	UL/C-UL (CSA standard), ENEC/VDE (EN standard)	UL/C-UL (CSA standard), ENEC/VDE (EN standard)	—
Protection grade	IP40	IP40	IP40	IP40
Unit weight	Approx. 45 g	Approx. 2 g	Approx. 2 g	Approx. 2.5 g (Plunger type)
Page	—	—	—	—

Switches Selector Chart

Category		Non Seal Type Switches			Fall Detection Switch
Product name		AEQ (EQ) Switches	AH1 (FJ) Switches	AV4 (FU) Switches	AHF2 (TiP) Switches
Configuration (Unit: mm)					
Part number		**AEQ1**	**AH1**	**AV4**	**AHF2**
Features		• Handles low level load 100 μA at 3 V DC to 100 mA 30 V DC • Same size as J type and long stroke. For pin plunger type, it maintains an O.T. (Over Travel) with over 2.2 mm on the NO side and over 2.5 mm on the NC side. • Contact force does not depend on the operation stroke. • Silent operation construction with sliding contact	• 2.0 mm mounting hole type (with stand off) available General-purpose small screws can be used. • Soldering and flux-resistant construction • Flat terminal shape • Lineup includes 1 Form A and 1 Form B types	• Mechanical long life of 300,000 operations minimum • Lineup includes a type with mounting holes	• Small, highly reliable TiP detection switches containing a photo sensor • The contact form is equivalent to normally closed contacts, which satisfies the PL Act.
Rating (Resistive load)		100μA 3V DC to 100mA 30V DC	<AgNi alloy contact> O.F. 1.47N type 3A 125V AC 2A 30V DC O.F. 0.74N type 1A 125V AC 1A 30V DC <AgNi alloy + Au-clad contact> (Low-level circuit type) 5mA 6V DC 2mA 12V DC 1mA 24V DC	<Ag plated contact> 0.5A 30V DC <Au plated contact> 0.1A 30V DC	Photo transistor (Please refer to the catalog.)
Operating Force (O.F.) Max.		1.2N 1.5N 1.7N	0.74N 1.47N Min. 3×10^4	0.98N	Operation angle: 25 to 60 degrees
Expected life	Mechanical (Pin plunger type)	—	O.F. 0.74N: Min. 10^6 O.F. 1.47N: Min. 5×10^5	Min. 3×10^5	Min. 10^5
	Electrical	3V DC 0.1mA: Min. 2×10^5 30V DC 100mA: Min. 10^5	AgNi alloy contact: Min. 3×10^4 Au-clad contact: Min. 10^5	Ag plated contact: Min. 2×10^4 Au plated contact: Min. 2×10^5	Min. 10^5
Mounting pitch		—	9.5mm (M2)	4mm (M1.4)	—
Actuator style		●	●	●	—
		—	—	—	—
		—	—	—	—
		—	—	—	—
		—	—	—	—
		—	●	●	—
		—	—	—	—
		—	●	●	—
		—	—	—	—
		● (Leaf lever, Simulated leaf lever)	—	—	—
Terminal style		• Solder terminal • PC board terminal	• Solder terminal • Self-standing PC board terminal • PC board angle terminal • Straight PC board terminal	• PC board terminal • Solder terminal	• PC board terminal
Safety standard		—	UL/C-UL (CSA standard)	—	—
Protection grade		IP40	IP40	IP40	IP40
Unit weight		Approx. 0.8 g	Approx. 0.5 g	Approx. 0.2 g (PC board terminal)	Approx. 1 g
Page		—	—	—	—

Category		Interlock Switches	
Product name		AGX (GX) Interlock Switches	AV1 (GW) Interlock Switches
Configuration (Unit: mm) Part number		 **AGX**	 **AV1**
Features		• 14 mm in depth and compact • Contact gap of greater than 4 mm (Conforming to IEC60950-1)	• Insulation distance between contacts: 8mm or more (Snap-in mounting 2 Form A and 3 Form A types) • Safety power switches constructed with dual restoration spring mechanism
Rating (Resistive load)		<AgCuO alloy contact> 10.1A 250V AC	<AgCuO alloy contact> 10.1A 250V AC
Operating Force (O.F.) Max.		1 Form A: 3.92N 2 Form A: 3.92N 3 Form A: 5.88N	1 Form A: 4.90N 1 Form B: 2.94N 1 Form A 1 Form B: 5.88N 2 Form A: 7.85N 3 Form A: 9.81N
Expected life	Mechanical (Pin plunger type)	Min. 10^6	Min. 10^6
	Electrical	Min. 10^5	Min. 5×10^4
Mounting pitch		Snap-in mounting	Screw mounting (M4) Snap-in mounting
Actuator style		●	●
		—	—
		—	—
		—	—
		—	—
		—	—
		—	—
		—	—
		—	—
		—	—
Terminal style		• .250 Quick-connect terminal	• .250 Quick-connect terminal
Safety standard		UL/C-UL (CSA standard), ENEC/VDE (EN standard)	ENEC/VDE (EN standard)
Protection grade		IP40	IP40
Unit weight		Approx. 15 g	Approx. 14 g
Page		—	—