

GENERAL SPECIFICATIONS FOR S1 ~ S29

A
Toggles

Electrical Capacity (Resistive & Inductive Load)

Power Level: Shown in the following tables

Other Ratings

Contact Resistance: 10 milliohms maximum
Insulation Resistance: 1,000 megohms minimum @ 500V DC
Dielectric Strength: 2,000V AC minimum for 1 minute minimum
Mechanical Life: 30,000 operations minimum for S5AW, S8AW, S9AW, S25AW, S28AW, S29AW
 50,000 operations minimum for all other models
Electrical Life: 25,000 operations minimum
Angle of Throw (α): Shown in tables on following pages

Materials & Finishes

Toggle: Brass with chrome plating
Bushing: Brass with chrome plating
Case: Phenolic resin
Case Cover: Steel with zinc plating
Movable Contactor: Copper with silver plating
Movable Contacts: Silver alloy capped on copper with silver plating
Stationary Contacts: Silver alloy capped on copper with silver plating
Terminals: Brass with tin plating

Environmental Data

Operating Temp Range: -30°C through +70°C (-22°F through +158°F) for Splashproof models;
 -10°C through +70°C (+14°F through +158°F) for all other models
Sealing: Splashproof & lever lock panel seal models meet IP67 standard

Installation

Mounting Torque: 1.47Nm (13 lb•in) for single nut on AW & AL models
 2.94Nm (26 lb•in) for double nut on other models
Maximum Panel Thickness: Shown beneath panel cutout in switch dimension drawings
Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

Standards & Certifications

UL: **File No. E44145 - Recognized only when ordered with marking on switch.**
 Add "/U" or "/CUL" to end of part number to order UL recognized switch.
 UL or cULus recognition designated beside part numbers on following pages.
 See Supplement section to find UL or cULus rating details.

CSA: **File No. 023535_0_000 - Certified only when ordered with marking on switch.**
 Add "/C" to end of part number to order CSA certified switch.
 CSA certification designated beside part numbers on following pages.
 See Supplement section to find CSA rating details.

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators



Accessories

Supplement

Toggles
A

SINGLE POLE WITH SOLDER LUG *

* UL, cULus & CSA recognized only when ordered with marking on switch (see General Specs)			Toggle Position/Connected Terminals						Electrical Capacity			
Model	* Approvals			Pole & Throw	Down	Center	Up	Resistive			Inductive	Angle of Throw
	UL	cULus	CSA		Keyway			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	
S1A	✓	✓	✓	SPST	ON 1-3	NONE	OFF —	15A	6A	20A	8A	25°
S2A	✓	✓	✓	SPDT	ON 2-3	NONE	ON 2-1	15A	6A	20A	8A	25°
S3A	✓	✓	✓	SPDT	ON 2-3	OFF	ON 2-1	15A	6A	20A	8A	25°

Throw & Schematics: SPST  INTERNAL CONNECTION SPDT 

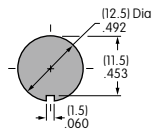
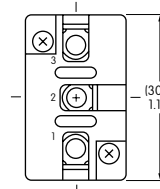
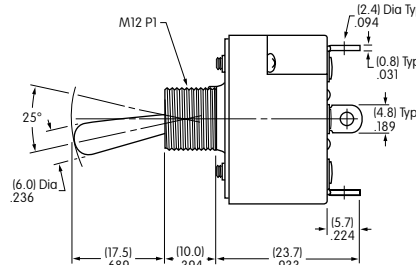
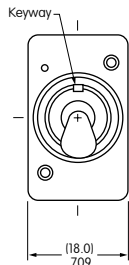
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.
Optional Splashproof Boot Assemblies: AT401 & AT4181 boots plus hex nut & o-ring. See Accessories & Hardware section.

* Wire harness & cable assemblies offered only in Americas.



S2A



Maximum Panel Thickness: .158" (4.0mm)

S1A does not have terminal 2

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch


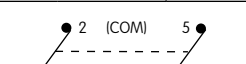
Indicators

Accessories

Supplement

DOUBLE POLE WITH SOLDER LUG *

* UL, cULus & CSA recognized only when ordered with marking on switch (see General Specs)			Toggle Position/Connected Terminals						Electrical Capacity			
Model	* Approvals			Pole & Throw	Down	Center	Up	Resistive			Inductive	$\alpha =$ Angle of Throw
	UL	cULus	CSA		Keyway			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	
S21A	—	—	—	DPST	ON 1-3 4-6	NONE	OFF —	15A	15A	15A	8A	21°
S6A	✓	✓	✓	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	20A	10A	20A	8A	21°
S7A	—	—	✓	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	20A	10A	20A	8A	28°

Throw & Schematics: DPST  INTERNAL CONNECTION DPDT 

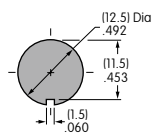
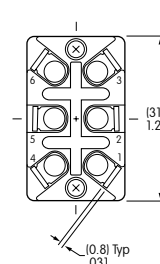
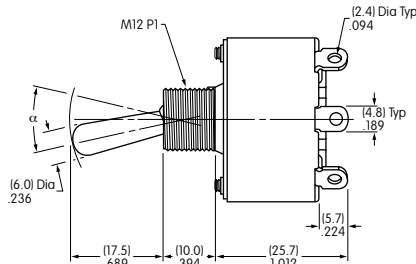
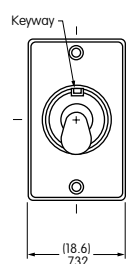
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.
Optional Splashproof Boot Assemblies: AT401 & AT4181 boots plus hex nut & o-ring. See Accessories & Hardware section.

* Wire harness & cables assemblies offered only in Americas.



S6A



Maximum Panel Thickness: .158" (4.0mm)

S21A does not have terminals 2 & 5

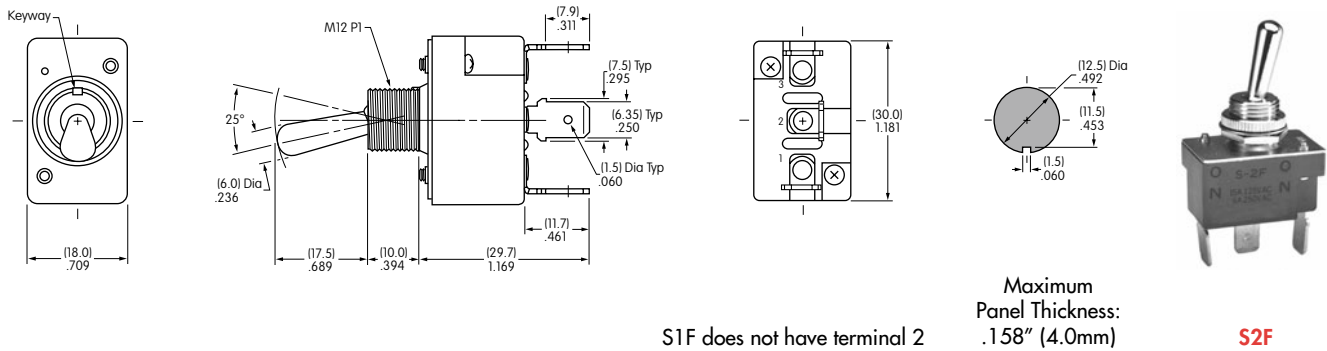
SINGLE POLE WITH QUICK CONNECT

Model	Approvals UL SP		Pole & Throw	Toggle Position/Connected Terminals					Electrical Capacity				Angle of Throw
				Down 	Center 	Up 	Resistive			Inductive			
							AC 125V	AC 250V	DC 30V	AC 125V PF 0.6			
S1F	—	—	SPST	ON 1-3	NONE	OFF —	15A	6A	20A	8A	25°		
S2F	—	—	SPDT	ON 2-3	NONE	ON 2-1	15A	6A	20A	8A	25°		
S3F	—	—	SPDT	ON 2-3	OFF	ON 2-1	15A	6A	20A	8A	25°		

Throw & Schematics: SPST INTERNAL CONNECTION SPDT

Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.
Optional Splashproof Boot Assemblies: AT401 & AT4181 boots plus hex nut & o-ring. See Accessories & Hardware section.



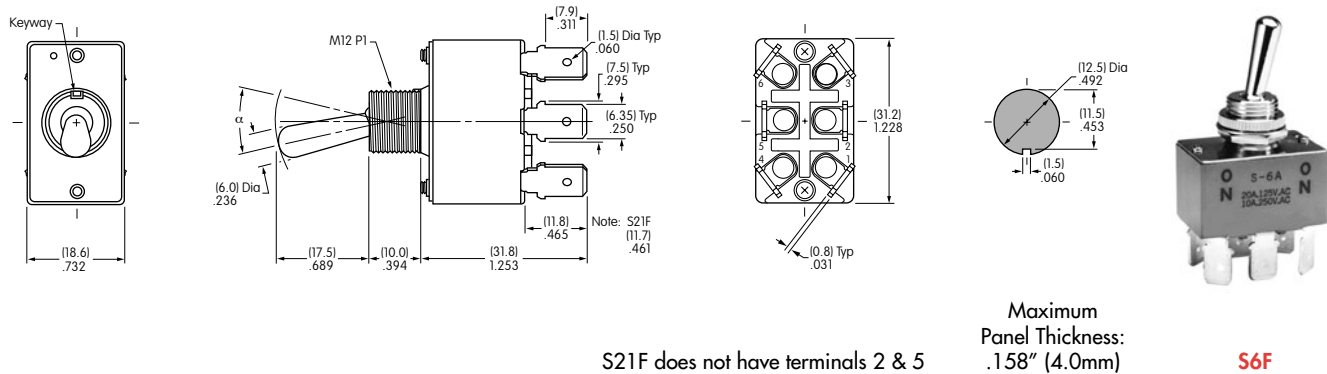
DOUBLE POLE WITH QUICK CONNECT

Model	Approvals UL SP		Pole & Throw	Toggle Position/Connected Terminals					Electrical Capacity				α = Angle of Throw
				Down 	Center 	Up 	Resistive			Inductive			
							AC 125V	AC 250V	DC 30V	AC 125V PF 0.6			
S21F	—	—	DPST	ON 1-3 4-6	NONE	OFF —	15A	15A	15A	8A	21°		
S6F	—	—	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	20A	10A	20A	8A	21°		
S7F	—	—	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	20A	10A	20A	8A	28°		

Throw & Schematics: DPST INTERNAL CONNECTION DPDT

Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.
Optional Splashproof Boot Assemblies: AT401 & AT4181 boots plus hex nut & o-ring. See Accessories & Hardware section.



SINGLE POLE SOLDER LUG WITH PANEL SEAL *

Model	Approvals UL SP	Pole & Throw	Toggle Position/Connected Terminals () = Momentary				Electrical Capacity			α = Angle of Throw
			Down Keyway	Center	Up	Resistive				
						AC 125V	AC 250V	DC 30V		
S1AW	—	SPST	ON 1-3	NONE	OFF —	15A	6A	20A	24°	
S2AW	—	SPDT	ON 2-3	NONE	ON 2-1	15A	6A	20A	24°	
S3AW	—	SPDT	ON 2-3	OFF	ON 2-1	15A	6A	20A	28°	
S5AW	—	SPDT	ON 2-3	NONE	(ON) 2-1	15A	6A	20A	20°	
S8AW	—	SPDT	(ON) 2-3	OFF	(ON) 2-1	15A	6A	20A	24°	
S9AW	—	SPDT	ON 2-3	OFF	(ON) 2-1	15A	6A	20A	24°	

Throw & Schematics: SPST  INTERNAL CONNECTION 

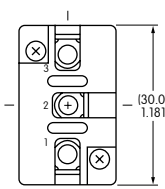
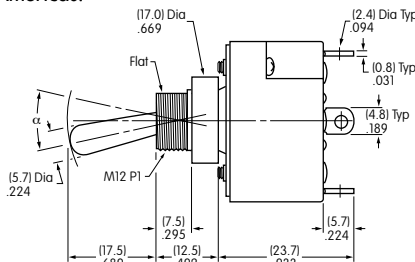
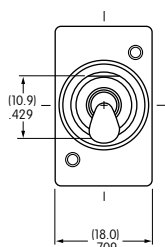
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section. For .250" Quick Connect terminals, add "F" to end of part number. See Quick Connect terminal dimensions on previous page. For further information, contact factory.

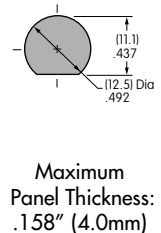
* Wire harness & cable assemblies offered only in Americas.



S2AW

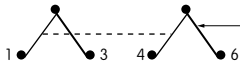
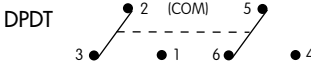


S1AW does not have terminal 2



DOUBLE POLE SOLDER LUG WITH PANEL SEAL *

Model	Approvals UL SP	Pole & Throw	Toggle Position/Connected Terminals () = Momentary				Electrical Capacity			α = Angle of Throw
			Down Keyway	Center	Up	Resistive				
						AC 125V	AC 250V	DC 30V		
S21AW	—	DPST	ON 1-3 4-6	NONE	OFF —	15A	15A	15A	22°	
S6AW	—	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	20A	10A	20A	22°	
S7AW	—	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	20A	10A	20A	28°	
S25AW	—	DPDT	ON 2-3 5-6	NONE	(ON) 2-1 5-4	15A	6A	20A	20°	
S28AW	—	DPDT	(ON) 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	22°	
S29AW	—	DPDT	ON 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	22°	

Throw & Schematics: DPST  INTERNAL CONNECTION 

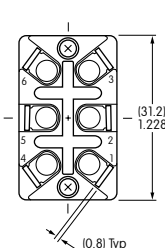
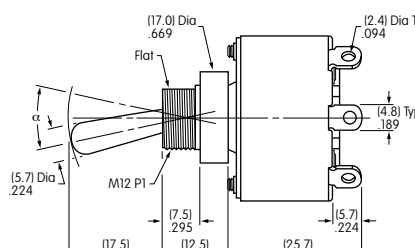
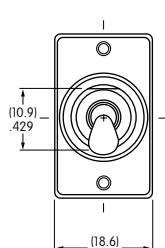
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section. For .250" Quick Connect terminals, add "F" to end of part number. See Quick Connect terminal dimensions on previous page. For further information, contact factory.

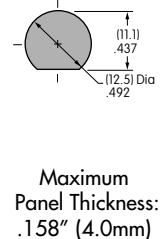
* Wire harness & cable assemblies offered only in Americas.



S6AW



S21AW does not have terminals 2 & 5



SINGLE POLE SOLDER LUG WITH LOCKING LEVER & PANEL SEAL *

Model	Approvals		Pole & Throw	Toggle Position/Connected Terminals				Electrical Capacity				$\alpha =$ Angle of Throw
	UL	cULus		Down Keyway	Center	Up	Resistive			Inductive		
							AC 125V	AC 250V	DC 30V	AC 125V PF 0.6		
S1AL	—	—	SPST	ON 1-3	NONE	OFF —	15A	6A	20A	8A	24°	
S2AL	—	—	SPDT	ON 2-3	NONE	ON 2-1	15A	6A	20A	8A	24°	
S3AL	—	—	SPDT	ON 2-3	OFF	ON 2-1	15A	6A	20A	8A	28°	

Throw & Schematics:

SPST: INTERNAL CONNECTION

SPDT: 2 (COM)

Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section.

* Wire harness & cable assemblies offered only in Americas.



DOUBLE POLE SOLDER LUG WITH LOCKING LEVER & PANEL SEAL *

Model	Approvals		Pole & Throw	Toggle Position/Connected Terminals				Electrical Capacity				$\alpha =$ Angle of Throw
	UL	cULus		Down Keyway	Center	Up	Resistive			Inductive		
							AC 125V	AC 250V	DC 30V	AC 125V PF 0.6		
S21AL	—	—	DPST	ON 1-3 4-6	NONE	OFF —	15A	15A	15A	8A	22°	
S6AL	✓	✓	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	20A	10A	20A	8A	22°	
S7AL	—	—	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	20A	10A	20A	8A	28°	

Throw & Schematics:

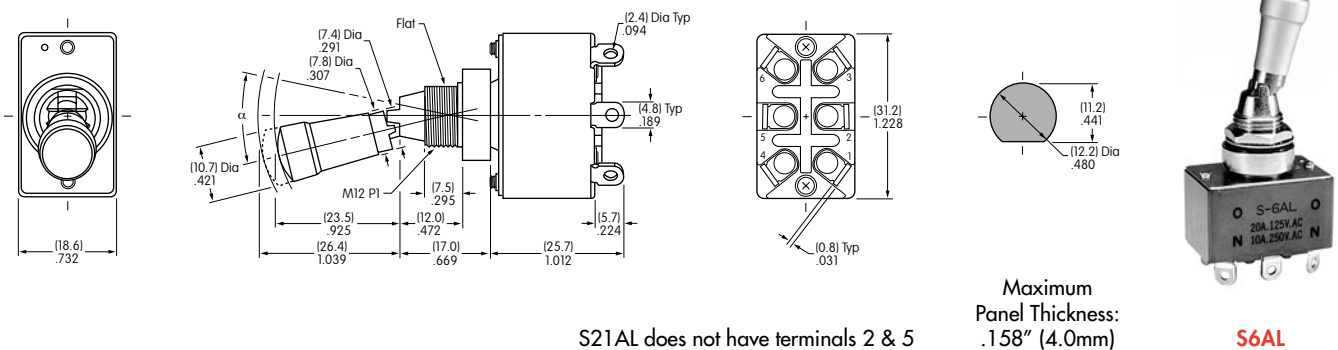
DPST: INTERNAL CONNECTION

DPDT: 2 (COM)

Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section.

* Wire harness & cable assemblies offered only in Americas.



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[NKK Switches:](#)

[S2A-RO](#) [S1A-RO](#) [S1F-RO](#) [S1AW-RO](#)

Данный компонент на территории Российской Федерации

Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: info@moschip.ru

Skype отдела продаж:

moschip.ru

moschip.ru_4

moschip.ru_6

moschip.ru_9