Keylocks Programmable Illuminated PB Pushbuttons

Indicators

Supplement | Accessories

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 2,000V AC minimum for 1 minute minimum **Dielectric Strength:**

Mechanical Life: 30,000 operations minimum for S5AW, S8AW, S9AW, S25AW, S28AW, S29AW

50,000 operations minimum for all other models

GENERAL SPECIFICATIONS FOR S1 ~ S29

Electrical Life: 25,000 operations minimum Angle of Throw (α): Shown in tables on following pages

Materials & Finishes

Brass with chrome plating Toggle: **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 Silver alloy capped on copper with silver plating **Stationary Contacts:**

> 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

1.47Nm (13 lb•in) for single nut on AW & AL models **Mounting Torque:**

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

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.

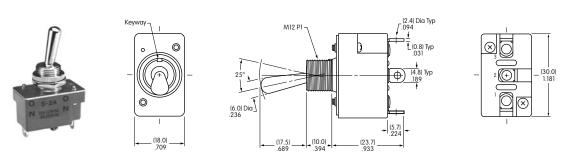
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Supplement | Accessories

SINGLE POLE WITH SOLDER LUG* * UL, cULus & CSA recognized only when ordered **Toggle Position/Connected Terminals Electrical Capacity** with marking on switch (see General Specs) Down Up Resistive Inductive *Approvals Center Pole & AC DC **AC 125V** Angle AC c**FL**°us (B) Model Throw 125V 250V 30V PF 0.6 of Throw S1A SPST ON 1-3 NONE **OFF** 15A 6A 20A 25° 8A S2A **SPDT** ON 2-3 NONE ON 2-1 15A 6A 20A 8A 25° S3A **SPDT** ON 2-3 **OFF** ON 15A 20A A8 25° 2-1 6A 2 (COM) Throw & Note: Terminal numbers are INTERNAL **SPDT Schematics:** 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.



Maximum Panel Thickness: .158" (4.0mm)

Note: Terminal numbers are

actually on the switch

					יע	OUBLE	POLE	WIIH	30LDE	K LUG	•			
* UL, cULus & with mar					d Toggle Position/Connected Terminals									
	* 4	pprove	als		D	own	Center		Up		Resistive		Inductive	α =
Model	lR。	c 911 °us	(1)	Pole & Throw	Ke	yway¬	-	•	_	AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	Angle of Throw
\$21A	_		_	DPST	ON	1-3 4-6	NONE	OFF	_	1 <i>5</i> A	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°

DOLIDIE DOLE WITH COLDED HICH

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.

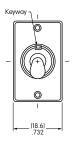


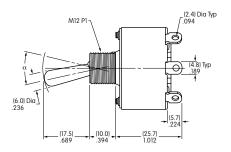
S6A

Throw &

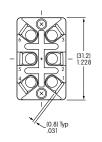
Schematics:

S₂A





www.nkk.com



S1A does not have terminal 2



Maximum Panel Thickness: .158" (4.0mm)





SINGLE POLE WITH QUICK CONNECT

				To	oggle Po	sition/Connected	d Termina	ls		Electrical Capacity					
Approvals				Down		Center	U	р		Resistive		Inductive			
Model	<i>L</i> R。	(1)	Pole & Throw	Keywo	лу ¬	-			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	Angle of Throw		
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°		
	_								DM)						

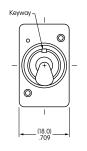
Throw & **Schematics:**

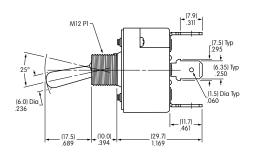


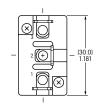
SPDT

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.











Maximum Panel Thickness: .158" (4.0mm)

S2F

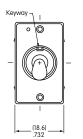
S1F does not have terminal 2 DOLIBLE BOLE WITH OLLICK CONNECT

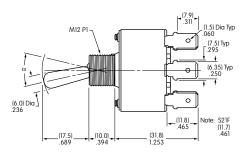
	DOUBLE POLE WITH QUICK CONNECT													
				1	oggle Positio	on/Connec	ted Term	ninals						
	Approvals				Down		Center Up			Resistive		Inductive	α =	
Model	LP.	40	Pole & Throw	Keyway¬		-			AC 125V	AC DC 250V 30V		AC 125V PF 0.6	Angle of Throw	
\$21F	_	_	DPST	ON	1-3 4-6	NONE	OFF	_	15A	15A	15A	8A	21°	
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°	
								-						

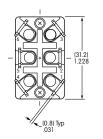
Throw & **Schematics:**

Note: Terminal numbers are actually on the switch

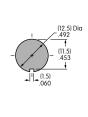
Notes: Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section. Optional Splashproof Boot Assemblies: AT401 & AT4181 boots plus hex nut & o-ring. See Accessories & Hardware section.







S21F does not have terminals 2 & 5





Maximum Panel Thickness: .158" (4.0mm)

S6F



Keylocks | Programmable | Illuminated PB | Pushbuttons

SINGLE POLE SOLDER LUG WITH PANEL SEAL*

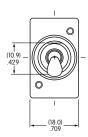
					Toggle Po	osition/Connecte () = Momentar		Ele				
	Appr	ovals	- 1 -	Down		Center	nter Up			α =		
Model	.FU		Keyway ¬		-			AC 125V	AC 250V	DC 30V	Angle of Throw	
\$1AW	_	_	SPST	ON	1-3	NONE	OFF	_	15A	6A	20A	24°
S2AW	—	_	SPDT	ON	2-3	NONE	ON	2-1	15A	6A	20A	24°
S3AW	—	_	SPDT	ON	2-3	OFF	ON	2-1	15A	6A	20A	28°
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 Schemo		- 0.0.		INTERNAL CONNECTION		SPDT	2 (COM)		Note: Terminal numb actually on the			

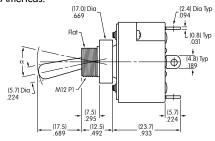
Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section. For .250" Quick Connect terminals, add "F" to end of part number. See Quick Connect terminal dimensions on previous page. For further information, contact factory.

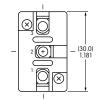
* Wire harness & cable assemblies offered only in Americas.



S2AW









S1AW does not have terminal 2

Maximum Panel Thickness: .158" (4.0mm)

DOUBLE POLE SOLDER LUG WITH PANEL SEAL*

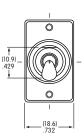
					Toggle Posi (tion/Connect) = Momento		Ele						
	Appr	ovals		C	Oown	Center	Center Up			Resistive				
Model	Model SPU SP Throw				Keyway ¬			-	AC 125V	AC DC 250V 30V		Angle of Throw		
S21AW	_	_	DPST	ON	1-3 4-6	NONE	OFF	_	15A	15A	15A	22°		
S6AW	—	-	DPDT	ON	2-3 5-6	NONE	ON	2-1 5-4	20A	10A	20A	22°		
S7AW	_		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	_	PST 1	3	4.	INTERNAL CONNECTION	DPDT			Note: Terminal num					

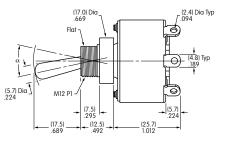
Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section. For .250" Quick Connect terminals, add "F" to end of part number. See Quick Connect terminal dimensions on previous page. For further information, contact factory.

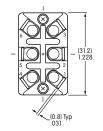
Wire harness & cable assemblies offered only in Americas.



S6AW









Maximum Panel Thickness: .158" (4.0mm)

S21AW does not have terminals 2 & 5



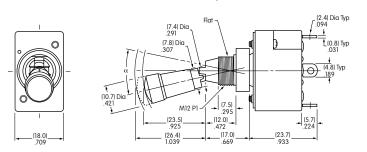
Ė Touch

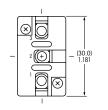
SINGLE POLE SOLDER LUG WITH LOCKING LEVER & PANEL SEAL*

				To	oggle Po	osition/Connecte	ed Termina	ıls					
	Арр	rovals		Dov	٧n	Center	Up			Resistive	Inductive	α =	
Model	lR。	c 711 °us	Pole & Throw	Keyw	ay ¬	-			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	Angle of Throw
S1AL	_		SPST	ON	1-3	NONE	OFF	_	15A	6A	20A	8A	24°
S2AL			SPDT	ON	2-3	NONE	ON	2-1	1 <i>5</i> A	6A	20A	8A	24°
S3AL	_		SPDT	ON	2-3	OFF	ON	2-1	15A	6A	20A	8A	28°
Throw 8		Ç	SPST		INTERI CONN	NAL ECTION	SPDT	· ·	2 (COM)			nal numbers ar lly on the switc	

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

^{*} Wire harness & cable assemblies offered only in Americas.





S1AL does not have terminal 2





Maximum Panel Thickness: .158" (4.0mm)

S2AL

actually on the switch

DOUBLE POLE SOLDER LUG WITH LOCKING LEVER & PANEL SEAL

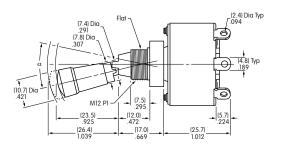
* UL & cUL ordered (se	with ma	gnized or Irking on ral Specs	świtch	Т	oggle Positio	n/Connec	ted Tern	ninals					
	*Approvals				Down yway¬	Center		Up		Resistive	Inductive	α =	
Model	<i>U</i> R.	c '711 ° us	Pole & Throw				•	7	AC 125V	AC DC 250V 30V		AC 125V PF 0.6	Angle of Throw
S21AL	_		DPST	ON	1-3 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 &		DPST \$ INTERNAL DPDT \$ 2 (COM					9 2 (COM)	5 🖢		Note: Termin	al numbers ar	е	

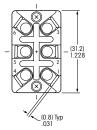
Notes: Standard Hardware: AT503M Face Hex Nut, AT508 Lockwasher, AT537 O-ring. See Accessories & Hardware section.

^{*} Wire harness & cable assemblies offered only in Americas.



Schematics:







Maximum Panel Thickness: .158" (4.0mm)



S6AL

