

GENERAL SPECIFICATIONS FOR S301 ~ S339

Toggles
A

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

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: 50,000 operations minimum
Electrical Life: 6,000 operations minimum for S331F; 15,000 operations minimum for all other S331s; 25,000 operations minimum for all others
Angle of Throw (α): Shown on following tables

Materials & Finishes

Toggle: PBT for flatted lever; brass with chrome plating for all others
Bushing: Brass with chrome plating
Case: Melamine phenol
Case Cover: Steel with zinc plating
Movable Contactor: Copper with silver plating
Movable & Stationary Contacts: Silver alloy capped on copper with silver plating
Terminals: Brass with tin plating

Environmental Data

Operating Temperature Range: $-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$ ($+14^{\circ}\text{F} \sim +158^{\circ}\text{F}$)

Installation

Mounting Torque: 2.94Nm (26 lb•in) for double nut; 1.47Nm (13 lb•in) for single nut
Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

Standards & Certifications

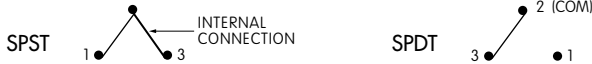
UL: File No. E44145
 UL or cULus recognition designated beside part numbers on following pages.
 Add "/U" to end of part number to order UL mark on switch.
 Add "/CUL" to end of part number to order cULus mark on switch.

CSA: File No. 023535_0_000
 CSA certification designated beside part numbers on following pages.
 Add "/C" to end of part number to order CSA mark on switch.

SINGLE POLE WITH SOLDER LUG *

Model	* Approvals UL US CS			Pole & Throw	Toggle Position/Connected Terminals () = Momentary				Electrical Capacity				Angle of Throw
					Down Keyway	Center	Up	Resistive			Inductive		
								AC 125V	AC 250V	DC 30V	AC 125V PF 0.6		
S301	✓	✓	✓	SPST	ON 1-3	NONE	OFF —	15A	6A	20A	10A	32°	
S302	✓	✓	✓	SPDT	ON 2-3	NONE	ON 2-1	15A	6A	20A	10A	32°	
S303	✓	✓	✓	SPDT	ON 2-3	OFF	ON 2-1	15A	6A	20A	10A	32°	
S305	—	—	✓	SPDT	ON 2-3	NONE	(ON) 2-1	15A	6A	20A	8A	32°	
S308	—	—	✓	SPDT	(ON) 2-3	OFF	(ON) 2-1	15A	6A	20A	8A	32°	
S309	—	—	✓	SPDT	ON 2-3	OFF	(ON) 2-1	15A	6A	20A	8A	32°	

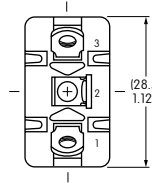
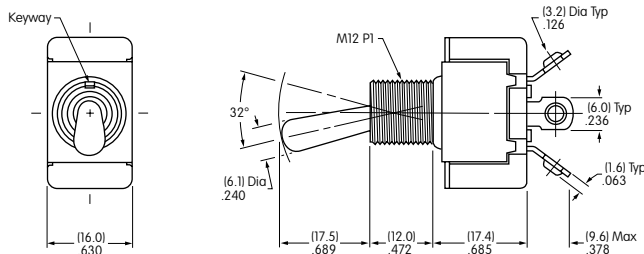
Throw & Schematics:



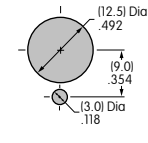
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.

- * See General Specifications page for approval marking.
- * Wire harness & cable assemblies offered only in Americas.



S301 does not have terminal 2



Maximum Panel Thickness: .185" (4.7mm)



S301

DOUBLE POLE WITH SOLDER LUG *

Model	* Approvals UL US CS			Pole & Throw	Toggle Position/Connected Terminals () = Momentary				Electrical Capacity				α = Angle of Throw
					Down Keyway	Center	Up	Resistive			Inductive		
								AC 125V	AC 250V	DC 30V	AC 125V PF 0.6		
S331	✓	✓	✓	DPST	ON 1-3 4-6	NONE	OFF —	25A	25A	25A	10A	25°	
S332	✓	✓	✓	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	25A	15A	25A	10A	25°	
S333	✓	✓	✓	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	25A	15A	25A	10A	30°	
S335	✓	✓	✓	DPDT	ON 2-3 5-6	NONE	(ON) 2-1 5-4	15A	6A	20A	8A	25°	
S338	✓	✓	—	DPDT	(ON) 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	8A	25°	
S339	✓	✓	—	DPDT	ON 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	8A	25°	

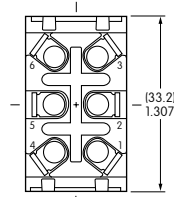
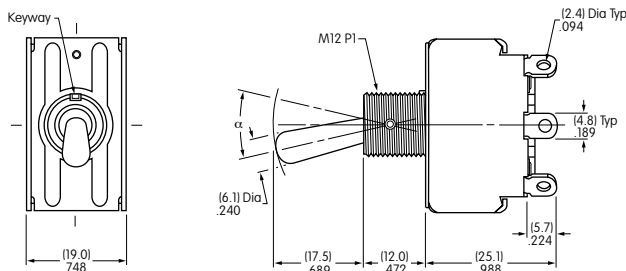
Throw & Schematics:



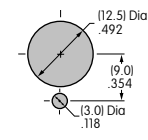
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.

- * See General Specifications page for approval marking.
- * Wire harness & cable assemblies offered only in Americas.



S331 does not have terminals 2 & 5






Maximum Panel Thickness: .185" (4.7mm)



S331

DOUBLE POLE WITH SOLDER LUG & FLATTED LEVER *

Model	* Approvals			Pole & Throw	Toggle Position/Connected Terminals () = Momentary					Electrical Capacity				α = Angle of Throw
	UL	cULus	CS		Down 	Center 	Up 	Resistive			Inductive AC 125V PF 0.6			
								AC 125V	AC 250V	DC 30V				
S331R	✓	✓	—	DPST	ON 1-3 4-6	NONE	OFF —	25A	25A	25A	10A	25°		
S332R	✓	✓	—	DPDT	2-3 5-6	NONE	ON 2-1 5-4	25A	15A	25A	10A	25°		
S333R	✓	✓	—	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	25A	15A	25A	10A	30°		
S338R	✓	✓	—	DPDT	(ON) 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	8A	25°		
S339R	✓	✓	—	DPDT	ON 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	8A	25°		

Throw & Schematics:



Note: Terminal numbers are actually on the switch

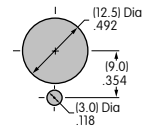
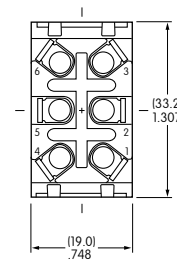
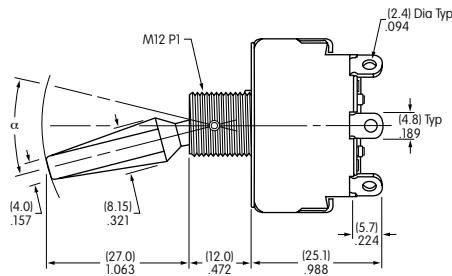
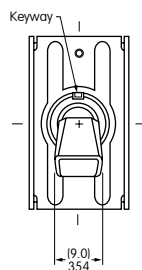
Notes: Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section.

* See General Specifications page for approval marking.

* Wire harness & cable assemblies offered only in Americas.






S331R





S331R does not have terminals 2 & 5

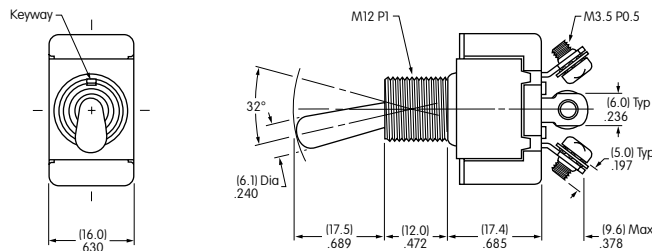
Maximum Panel Thickness: .220" (5.6mm)

SINGLE POLE WITH SCREW LUG

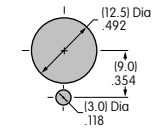
Model	*Approvals UL cULus CE			Pole & Throw	Toggle Position/Connected Terminals () = Momentary			Electrical Capacity				α = Angle of Throw
					Down 	Center 	Up 	Resistive			Inductive	
								AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	
S301T	✓	✓	✓	SPST	ON 1-3	NONE	OFF —	15A	6A	20A	10A	32°
S302T	✓	✓	✓	SPDT	ON 2-3	NONE	ON 2-1	15A	6A	20A	10A	32°
S303T	✓	✓	✓	SPDT	ON 2-3	OFF	ON 2-1	15A	6A	20A	10A	32°
S305T	—	—	✓	SPDT	ON 2-3	NONE	(ON) 2-1	15A	6A	20A	8A	32°
S308T	—	—	✓	SPDT	(ON) 2-3	OFF	(ON) 2-1	15A	6A	20A	8A	32°
S309T	—	—	✓	SPDT	ON 2-3	OFF	(ON) 2-1	15A	6A	20A	8A	32°

Throw & Schematics: SPST  INTERNAL CONNECTION  Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.
 * See General Specifications page for approval marking.



S301T does not have terminal 2






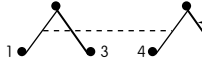

Maximum Panel Thickness: .185" (4.7mm)



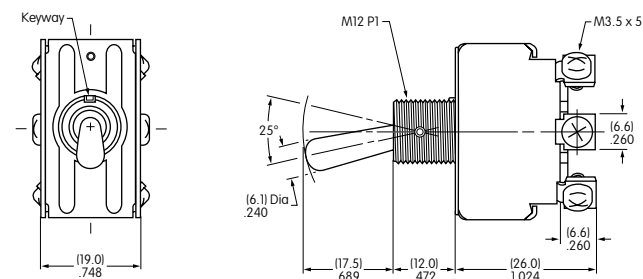
S301T

DOUBLE POLE WITH SCREW LUG

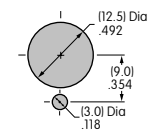
Model	*Approvals UL cULus CE			Pole & Throw	Toggle Position/Connected Terminals () = Momentary			Electrical Capacity				α = Angle of Throw
					Down 	Center 	Up 	Resistive			Inductive	
								AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	
S331T	✓	✓	—	DPST	ON 1-3 4-6	NONE	OFF —	15A	15A	15A	10A	25°
S332T	✓	✓	—	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	15A	15A	15A	10A	25°
S333T	✓	✓	—	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	15A	15A	15A	10A	30°
S335T	✓	✓	—	DPDT	ON 2-3 5-6	NONE	(ON) 2-1 5-4	15A	6A	20A	8A	25°
S338T	✓	✓	—	DPDT	(ON) 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	8A	25°
S339T	✓	✓	—	DPDT	ON 2-3 5-6	OFF	(ON) 2-1 5-4	15A	6A	20A	8A	25°

Throw & Schematics: DPST  INTERNAL CONNECTION  Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.
 * See General Specifications page for approval marking.



S331T does not have terminals 2 & 5



Maximum Panel Thickness: .185" (4.7mm)



S331T

Toggles
A

Rockers

Pushbuttons

Illuminated PB

Programmable PB

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

SINGLE POLE WITH QUICK CONNECT

Model	* Approvals			Pole & Throw	Toggle Position/Connected Terminals				Electrical Capacity				$\alpha =$ Angle of Throw
	UL	cULus	SE		Down	Center	Up	Resistive			Inductive		
					Keyway	Keyway	Keyway	AC 125V	AC 250V	DC 30V	AC 125V PF 0.6		
S301F	✓	✓	✓	SPST	ON 1-3	NONE	OFF -	15A	6A	20A	10A	32°	

Throw & Schematics:

SPST



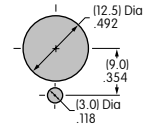
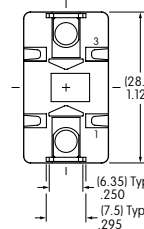
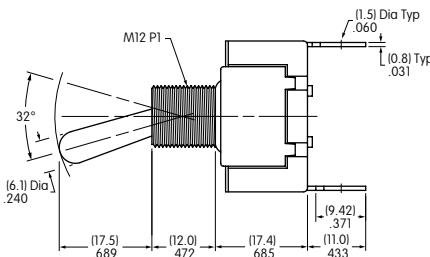
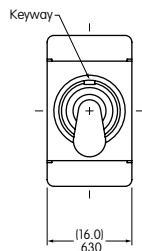
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.

* See General Specifications page for approval marking.



S301F



Maximum Panel Thickness: .185" (4.7mm)

DOUBLE POLE WITH QUICK CONNECT

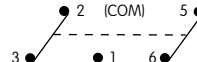
Model	* Approvals			Pole & Throw	Toggle Position/Connected Terminals () = Momentary				Electrical Capacity				$\alpha =$ Angle of Throw
	UL	cULus	SE		Down	Center	Up	Resistive			Inductive		
					Keyway	Keyway	Keyway	AC 125V	AC 250V	DC 30V	AC 125V PF 0.6		
S331F	✓	✓	—	DPST	ON 1-3 4-6	NONE	OFF -	25A	25A	25A	10A	25°	
S332F	✓	✓	—	DPDT	ON 2-3 5-6	NONE	ON 2-1 5-4	25A	15A	25A	10A	25°	
S333F	✓	✓	—	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4	25A	15A	25A	10A	30°	
S335F	✓	✓	—	DPDT	ON 2-3 5-6	NONE	(ON) 2-1 5-4	15A	6A	20A	8A	25°	

Throw & Schematics:

DPST



DPDT



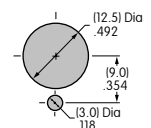
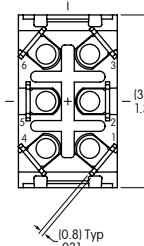
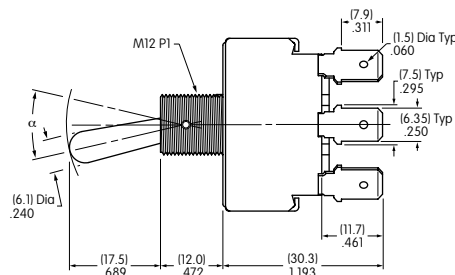
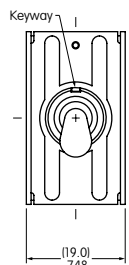
Note: Terminal numbers are actually on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.

* See General Specifications page for approval marking.



S332F



Maximum Panel Thickness: .185" (4.7mm)

S331F does not have terminals 2 & 5

GENERAL SPECIFICATIONS FOR S31 ~ S49

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: 50,000 operations minimum
Electrical Life: 25,000 operations minimum
Angle of Throw (α): Shown on following tables

Materials & Finishes

Toggle: PBT resin for flatted lever; brass with chrome plating for all others
Bushing: Brass with chrome plating
Case: Phenolic resin
Case Cover: Steel with chromate plating over 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: -10°C through +70°C (+14°F through +158°F)

Installation

Mounting Torque: 2.94Nm (26 lb•in) for double nut
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
 UL or cULus recognition designated beside part numbers on following pages.
 See Supplement section to find UL or cULus rating details.
 Add "/U" to end of part number to order UL mark on switch.
 Add "/CUL" to end of part number to order cULus mark on switch.
CSA: File No. 023535_0_000
 CSA certification designated beside part numbers on following pages.
 See Supplement section to find CSA rating details.
 Add "/C" to end of part number to order CSA mark on switch.

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

Toggles **A**

THREE POLE WITH SOLDER LUG *

Model	*Approvals			Pole & Throw	Toggle Position/Connected Terminals () = Momentary						Electrical Capacity				α = Angle of Throw
	UL	cULus	CS		Down	Center	Up	Resistive			Inductive				
					Keyway			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6				
S31	✓	✓	✓	3PST	ON	1-3 4-6 7-9	NONE	OFF	—	25A	9A	20A	10A	25°	
S32	✓	✓	✓	3PDT	ON	2-3 5-6 8-9	NONE	ON	2-1 5-4 8-7	25A	9A	20A	10A	25°	
S33	✓	✓	✓	3PDT	ON	2-3 5-6 8-9	OFF	ON	2-1 5-4 8-7	25A	9A	20A	10A	30°	
S35	✓	✓	✓	3PDT	ON	2-3 5-6 8-9	NONE	(ON)	2-1 5-4 8-7	15A	6A	20A	8A	25°	
S38	✓	✓	✓	3PDT	(ON)	2-3 5-6 8-9	OFF	(ON)	2-1 5-4 8-7	15A	6A	15A	8A	25°	
S39	✓	✓	✓	3PDT	ON	2-3 5-6 8-9	OFF	(ON)	2-1 5-4 8-7	15A	6A	15A	8A	25°	

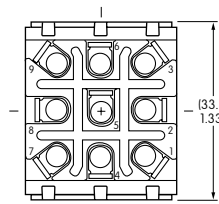
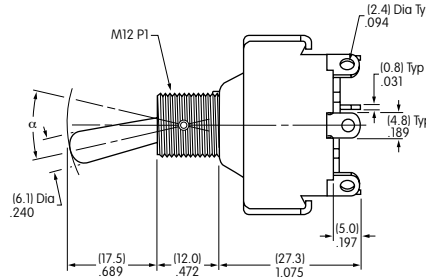
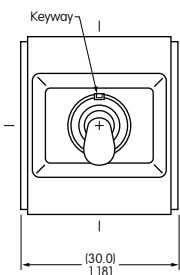
Throw & Schematics:



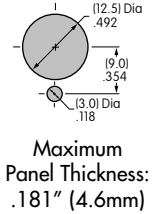
Note: Terminal numbers are on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.



S31 does not have terminals 2, 5, & 8



FOUR POLE WITH SOLDER LUG *

Model Suffix R = Flatted Lever	*Approvals			Pole & Throw	Toggle Position/Connected Terminals () = Momentary						Electrical Capacity				α = Angle of Throw
	UL	cULus	CS		Down	Center	Up	Resistive			Inductive				
					Keyway			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6				
S41/S41R	✓	✓	✓	4PST	ON	1-3 4-6 7-9 10-12	NONE	OFF	—	25A	9A	20A	10A	25°	
S42/S42R	✓	✓	✓	4PDT	ON	2-3 5-6 8-9 11-12	NONE	ON	2-1 5-4 8-7 11-10	25A	9A	20A	10A	25°	
S43/S43R	✓	✓	✓	4PDT	ON	2-3 5-6 8-9 11-12	OFF	ON	2-1 5-4 8-7 11-10	25A	9A	20A	10A	30°	
S45	—	✓	—	4PDT	ON	2-3 5-6 8-9 11-12	NONE	(ON)	2-1 5-4 8-7 11-10	15A	6A	20A	8A	25°	
S48/S48R	✓	✓	—	4PDT	(ON)	2-3 5-6 8-9 11-12	OFF	(ON)	2-1 5-4 8-7 11-10	15A	6A	20A	8A	25°	
S49/S49R	✓	✓	—	4PDT	ON	2-3 5-6 8-9 11-12	OFF	(ON)	2-1 5-4 8-7 11-10	15A	6A	20A	8A	25°	

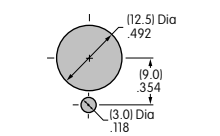
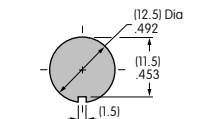
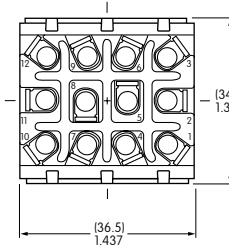
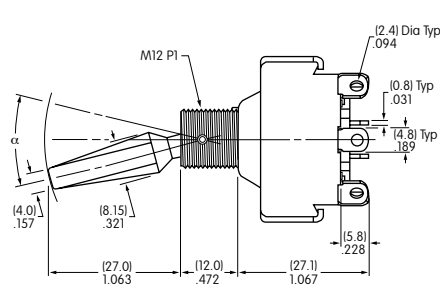
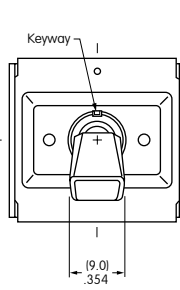
Throw & Schematics:



Note: Terminal numbers are on the switch

Notes: Standard Hardware for **Bat Lever**: AT503M Face Hex Nut, AT506M Locking Ring, AT508 Lockwasher, AT527M Backup Hex Nut; for **Flatted Lever (R)**: AT504M Knurled Face Nut, AT508 Lockwasher, AT527M Backup Hex Nut. See Accessories & Hardware section. Optional Splashproof Boot Assemblies (only for bat lever models): AT401 & AT4181 boots plus hex nut and o-ring. See Accessories & Hardware section.

* Wire harness & cable assemblies offered only in Americas.



Bat lever dimensions are same as on S30 models above. S41 and S41R do not have terminals 2, 5, 8, & 11.

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch




Indicators

Accessories

Supplement

THREE POLE WITH SCREW LUG

*See Supplement section for CSA detail & General Specs. page for approval marks

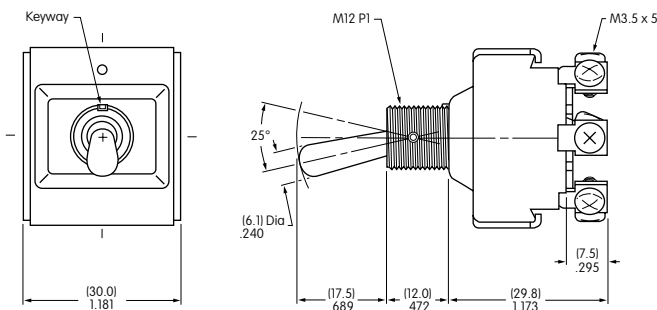
Model	*Approvals			Pole & Throw	Toggle Position/Connected Terminals			Electrical Capacity					$\alpha =$ Angle of Throw		
	UL	cULus	CSA		Down 	Center 	Up 	Resistive			Inductive				
								AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	AC 250V PF 0.6			
S31T	✓	✓	✓	3PST	ON	1-3 4-6 7-9	NONE	OFF	—	25A	9A	20A	10A	5A	25°
S32T	✓	✓	✓	3PDT	ON	2-3 5-6 8-9	NONE	ON	2-1 5-4 8-7	25A	9A	20A	10A	5A	25°
S33T	✓	✓	✓	3PDT	ON	2-3 5-6 8-9	OFF	ON	2-1 5-4 8-7	25A	9A	20A	10A	5A	30°

Throw & Schematics:



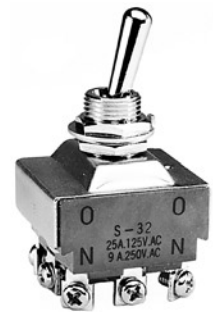
Note: Terminal numbers are on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.



S31T does not have terminals 2, 5, & 8




Maximum Panel Thickness: .181" (4.6mm)



S32T

FOUR POLE WITH SCREW LUG

*See Supplement section for CSA detail & General Specs. page for approval marks

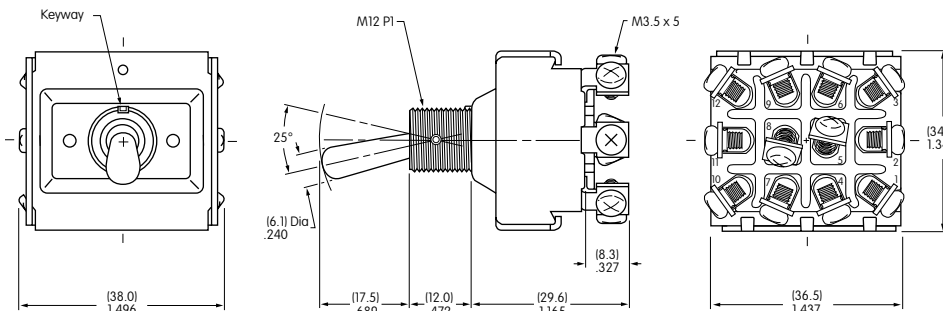
Model	*Approvals			Pole & Throw	Toggle Position/Connected Terminals			Electrical Capacity					$\alpha =$ Angle of Throw		
	UL	cULus	CSA		Down 	Center 	Up 	Resistive			Inductive				
								AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	AC 250V PF 0.6			
S41T	✓	✓	✓	4PST	ON	1-3 4-6 7-9 10-12	NONE	OFF	—	25A	9A	20A	10A	5A	25°
S42T	✓	✓	✓	4PDT	ON	2-3 5-6 8-9 11-12	NONE	ON	2-1 5-4 8-7 11-10	25A	9A	20A	10A	5A	25°
S43T	✓	✓	✓	4PDT	ON	2-3 5-6 8-9 11-12	OFF	ON	2-1 5-4 8-7 11-10	25A	9A	20A	10A	5A	30°

Throw & Schematics:



Note: Terminal numbers are on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.



S41T does not have terminals 2, 5, 8, & 11

Maximum Panel Thickness: .181" (4.6mm)






S42T

Toggles **A**

THREE POLE WITH QUICK CONNECT

*See Supplement section for UL detail & General Specs. page for approval marks

Model	*Approvals			Pole & Throw	Toggle Position/Connected Terminals			Electrical Capacity				$\alpha =$ Angle of Throw
	UL	cULus	CS		Down	Center	Up	Resistive			Inductive	
					Keyway 			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	
S31F	✓	✓	✓	3PST	ON 1-3 4-6 7-9	NONE	OFF —	25A	9A	20A	10A	25°
S32F	✓	✓	✓	3PDT	ON 2-3 5-6 8-9	NONE	ON 2-1 5-4 8-7	25A	9A	20A	10A	25°
S33F	✓	✓	✓	3PDT	ON 2-3 5-6 8-9	OFF	ON 2-1 5-4 8-7	25A	9A	20A	10A	30°

Throw & Schematics:

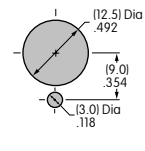
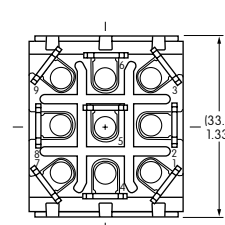
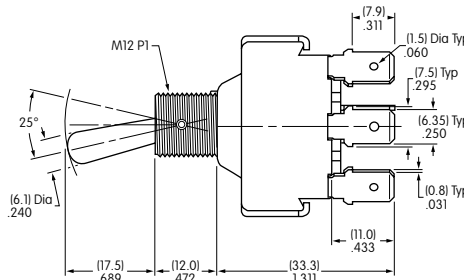
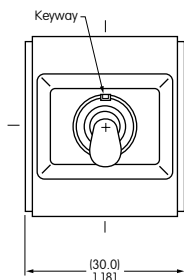


Note: Terminal numbers are on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.



S32F






Maximum Panel Thickness: .181" (4.6mm)

S31F does not have terminals 2, 5, & 8

FOUR POLE WITH QUICK CONNECT

*See Supplement section for UL detail & General Specs. page for approval marks

Model	*Approvals			Pole & Throw	Toggle Position/Connected Terminals			Electrical Capacity				$\alpha =$ Angle of Throw
	UL	cULus	CS		Down	Center	Up	Resistive			Inductive	
					Keyway 			AC 125V	AC 250V	DC 30V	AC 125V PF 0.6	
S41F	✓	✓	✓	4PST	ON 1-3 4-6 7-9 10-12	NONE	OFF —	25A	9A	20A	10A	25°
S42F	✓	✓	✓	4PDT	ON 2-3 5-6 8-9 11-12	NONE	ON 2-1 5-4 8-7 11-10	25A	9A	20A	10A	25°
S43F	✓	✓	✓	4PDT	ON 2-3 5-6 8-9 11-12	OFF	ON 2-1 5-4 8-7 11-10	25A	9A	20A	10A	30°

Throw & Schematics:

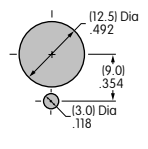
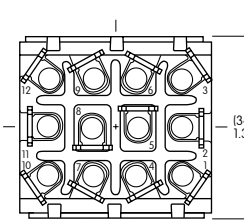
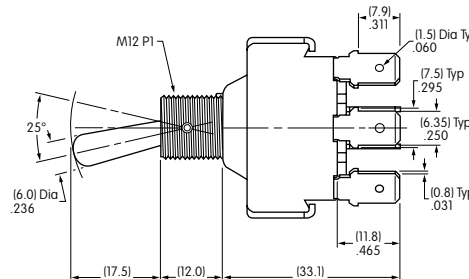
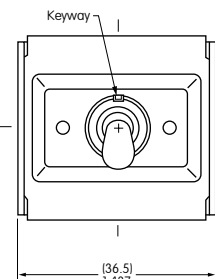


Note: Terminal numbers are on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.



S42F



Maximum Panel Thickness: .181" (4.6mm)

S41F does not have terminals 2, 5, 8, & 11

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement

GENERAL SPECIFICATIONS FOR S421 ~ S429

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: 50,000 operations minimum
Electrical Life: 15,000 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: Melamine phenol
Case Cover: Steel with chromate plating over 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: -10°C through +70°C (+14°F through +158°F)

Installation

Mounting Torque: 2.94Nm (26 lb·in) for double nut
Maximum Panel Thickness: Shown beneath panel cutout in switch dimension drawings
Soldering Time & Temperature: Manual Soldering: See Profile A in Supplement section.

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch




Indicators


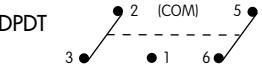
Accessories

Supplement

Toggles
A

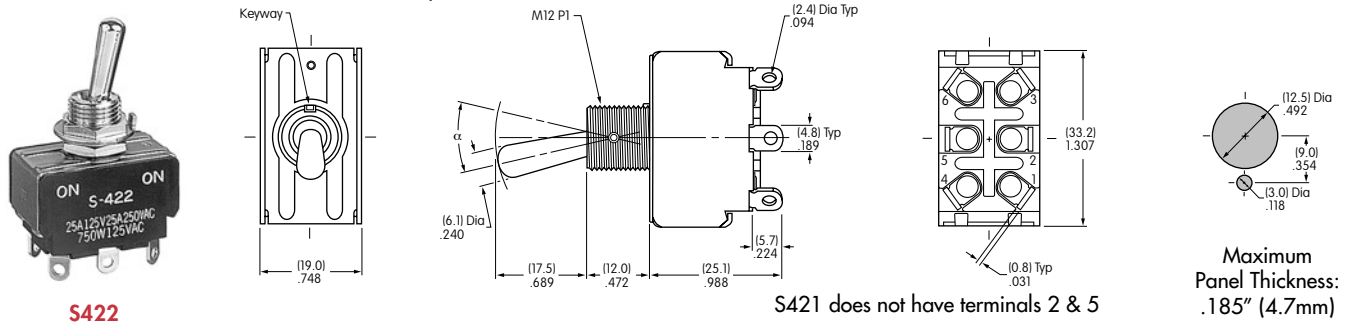
DOUBLE POLE WITH SOLDER LUG *

Model	Approvals		Pole & Throw	Toggle Position/Connected Terminals () = Momentary					Electrical Capacity				Motor Load AC 125V	α = Angle of Throw
	UL	CSA		Down 	Center 	Up 	Resistive		Inductive					
							AC 125V	AC 250V	PF 0.75 - 0.8 AC 125V	AC 250V				
S421	—	—	DPST	ON	1-3 4-6	NONE	OFF	—	25A	25A	25A	25A	750W	24°
S422	—	—	DPDT	ON	2-3 5-6	NONE	ON	2-1 5-4	25A	25A	25A	25A	750W	24°
S423	—	—	DPDT	ON	2-3 5-6	OFF	ON	2-1 5-4	25A	25A	25A	25A	750W	28°
S425	—	—	DPDT	ON	2-3 5-6	NONE	(ON)	2-1 5-4	15A	15A	15A	15A	400W	24°
S428	—	—	DPDT	(ON)	2-3 5-6	OFF	(ON)	2-1 5-4	15A	15A	15A	15A	400W	24°
S429	—	—	DPDT	ON	2-3 5-6	OFF	(ON)	2-1 5-4	15A	15A	15A	15A	400W	24°

Throw & Schematics: DPST  INTERNAL CONNECTION  Note: Terminal numbers are on the switch




Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.

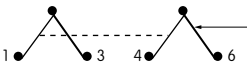
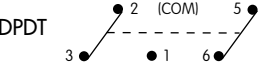
* Wire harness & cable assemblies offered only in Americas.



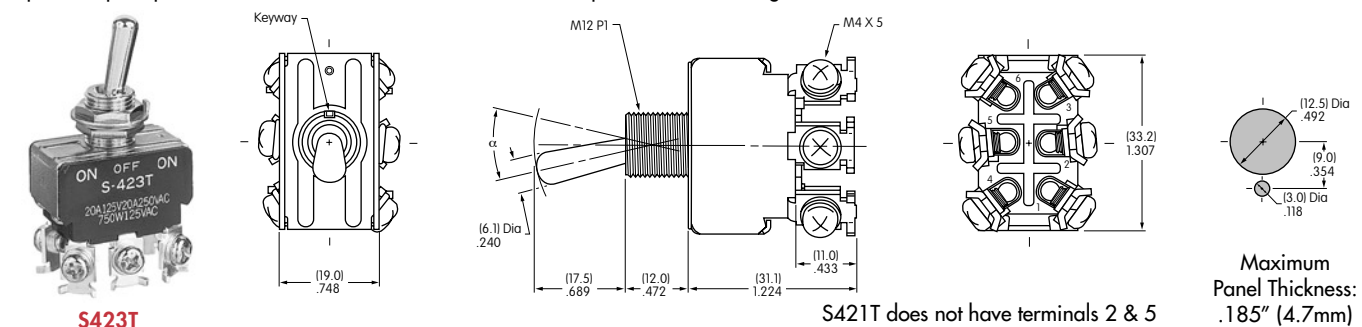
S422

DOUBLE POLE WITH SCREW LUG

Model	Approvals		Pole & Throw	Toggle Position/Connected Terminals () = Momentary					Electrical Capacity				Motor Load AC 125V	α = Angle of Throw
	UL	CSA		Down 	Center 	Up 	Resistive		Inductive					
							AC 125V	AC 250V	PF 0.75 - 0.8 AC 125V	AC 250V				
S421T	—	—	DPST	ON	1-3 4-6	NONE	OFF	—	20A	20A	20A	20A	750W	24°
S422T	—	—	DPDT	ON	2-3 5-6	NONE	ON	2-1 5-4	20A	20A	20A	20A	750W	24°
S423T	—	—	DPDT	ON	2-3 5-6	OFF	ON	2-1 5-4	20A	20A	20A	20A	750W	28°
S425T	—	—	DPDT	ON	2-3 5-6	NONE	(ON)	2-1 5-4	15A	15A	15A	15A	400W	24°
S428T	—	—	DPDT	(ON)	2-3 5-6	OFF	(ON)	2-1 5-4	15A	15A	15A	15A	400W	24°
S429T	—	—	DPDT	ON	2-3 5-6	OFF	(ON)	2-1 5-4	15A	15A	15A	15A	400W	24°

Throw & Schematics: DPST  INTERNAL CONNECTION  Note: Terminal numbers are on the switch

Notes: Standard Hardware: AT503M Face Hex Nut, AT506M Locking Ring, 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.



S423T

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

Supplement