

A



T101SHZQE



T201MH9ABE



T101MH9AVBE



T201MH9V3BE

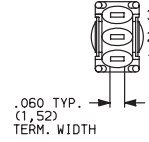
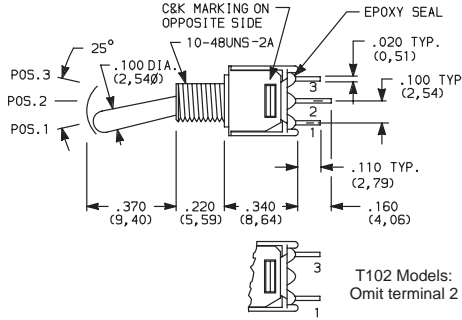
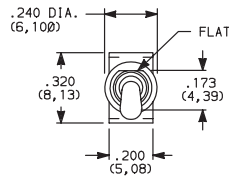
models available, see page A-55.

### Easy Build-A-Switch

Below is a complete listing of available options for T SERIES TINY TOGGLE SWITCHES. Build-A-Switch allows you to mix and match options to create the switch you need—simply select desired option from each category. Switches with standard options are shown on page A-55; all available options are shown and described on pages A-55 thru A-60. When building a part number, some ordering format boxes may not be filled. Dashes, hyphens or spaces in the part number are not significant and are shown for clarity only. Complete HOW TO ORDER information is at the end of this section, page A-60. Hardware and accessories are available separately, see section K. All models have epoxy terminal seal, and are compatible with 'bottom-wash' PC board cleaning methods.

SWITCH FUNCTION	ACTUATOR	BUSHING	TERMINATIONS	CONTACT MATERIAL	SEAL	ACTUATOR FINISH
				Silver	Epoxy	Chrome
[ ] [ ] [ ] [ ]	[ ] [ ]	[ ] [ ]	[ ] [ ]	[ ]	[ ]	[ ]
T101	K	CF	A	B	E	(NONE)
T102	K1	D9	AV	G		2
T103	L	H	C	K		3
T105	L1	H9	V3	L		7
T107	M	K9	W	M		
T108	M1	T	Z	Q		
T201	P3	T9				
T203	S	TD				
T205	S1	TK				
T207		Y				
T208		Y9				
T211						

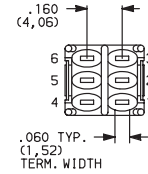
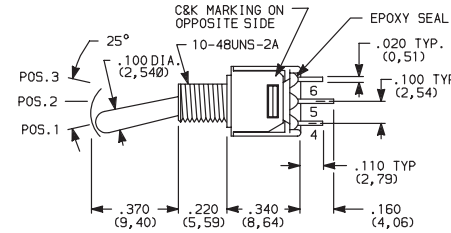
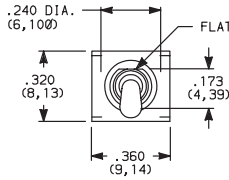
## SWITCHES WITH STANDARD OPTIONS



Terminal Nos.  
For Reference Only

SPST and SPDT Models

Part No. Shown: T101SHZQE



Terminal Nos.  
For Reference Only

DPDT Model

Part No. Shown: T201SHZQE

## SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
SP	T101	ON	NONE	ON	2-3	OPEN	2-1	
	T103	ON	OFF	ON				
	T105	MOM.	OFF	MOM.				
	T107	ON	OFF	MOM.				
	T108	ON	NONE	MOM.				
	T102	OFF	NONE	ON	OPEN	N/A	3-1	
DP	T201	ON	NONE	ON	2-3,5-6	OPEN	2-1,5-4	
	T203	ON	OFF	ON				
	T205	MOM.	OFF	MOM.				
	T207	ON	OFF	MOM.				
	T208	ON	NONE	MOM.				
	T211*	ON	ON	ON	2-3,5-6	2-3,5-4	2-1,5-4	DPDT

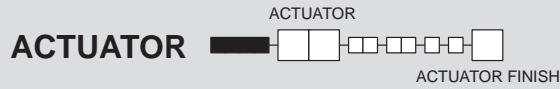
MOM. = Momentary

\* Wiring for 3-way switch, see page X.

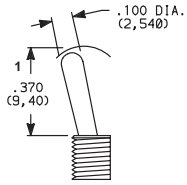
All models with all options when ordered with G, L, M or Q contact material.

See AGENCY APPROVALS, page VIII.

A

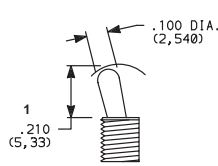


**S**



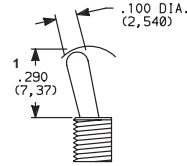
Standard with Z, C or W terminations.

**M**

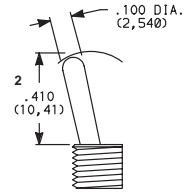


Standard with A, AV or V3 terminations.

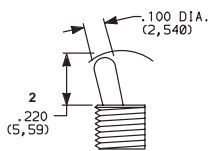
**L**



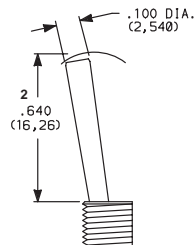
**S1**



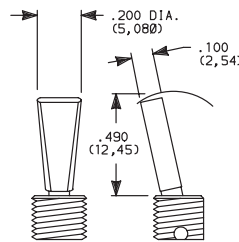
**M1**



**L1**



**P3 ANTI-ROTATION**



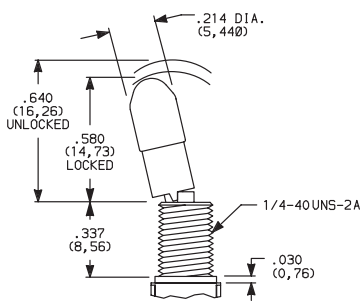
<sup>1</sup> Actuator shown with standard H bushing. Subtract .040 (1,02) for TD and D9 bushings, subtract .090 (2,29) for T, T9, TK, K9 & CF bushings.

<sup>2</sup> Actuators shown with T, TK & CF bushings, add .050 (1,27) for TD and D9 bushings, add .090 (2,29) for H, H9, Y & Y9 bushings.

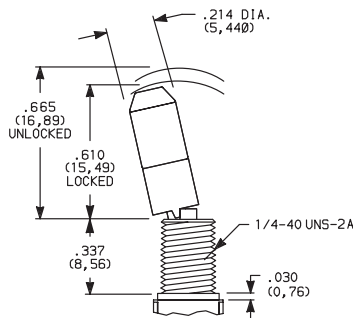
Available with T & T9 bushings only. Dress nut P/N 709901201 supplied standard with threaded bushing.

**NOTE:** All actuators have chrome finish (except K & K1). No finish selection required.

**K** LOCKING LEVER



**K1** LOCKING LEVER



**K & K1 ACTUATOR CAP FINISH**

OPTION CODE	FINISH
(NONE)	NATURAL AL. (Std.)
2	BLACK ANODIZED AL.
3	RED ANODIZED AL.
7	BLUE ANODIZED AL.

**Locking Positions**



-01 & -02 Models  
2 Position lock



-03 & -11 Models  
3 Position lock



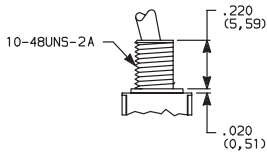
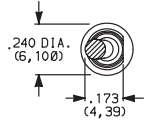
-08 Models  
1 Position lock

**NOTE:** Keyway on right side. To prevent accidental actuation, toggles must be lifted before being actuated. When released, toggles again lock in place. Overtightening mounting nut may cause actuator to bind.

Bushing option code not required. Not available with TX05 & TX07 models.

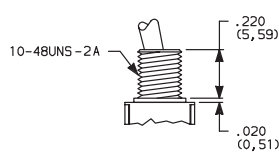
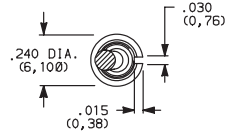
## BUSHING

**H**  
**H9** UNTHREADED

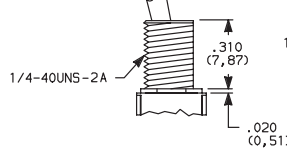
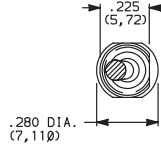


H standard with C, W & Z terminations.  
H9 standard with A, AV & V3 terminations.

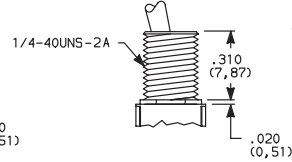
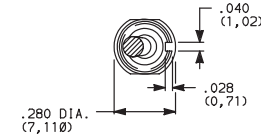
**Y**  
**Y9** UNTHREADED



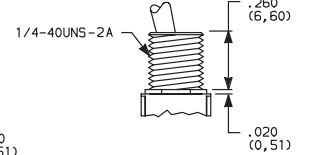
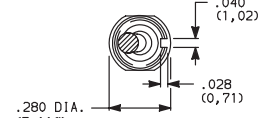
**T**  
**T9** UNTHREADED



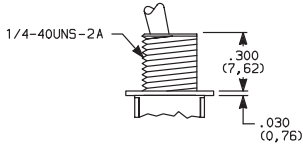
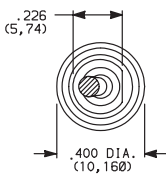
**TK**  
**K9** UNTHREADED



**TD**  
**D9** UNTHREADED



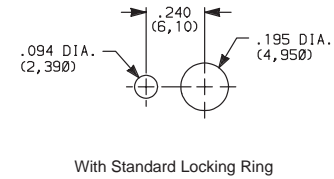
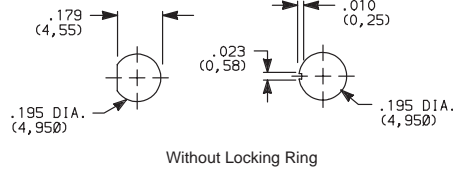
**CF** SPLASHPROOF



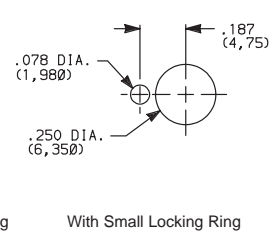
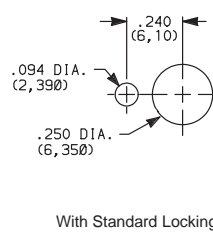
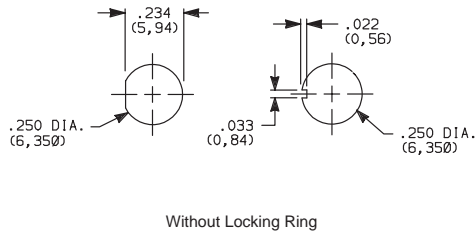
Internal o-ring actuator seal and external bushing seal washer standard.

## PANEL MOUNTING

10-48 BUSHING

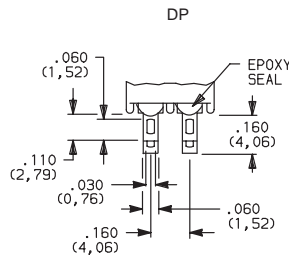
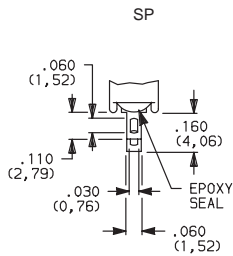


1/4 IN. BUSHING



## TERMINATIONS

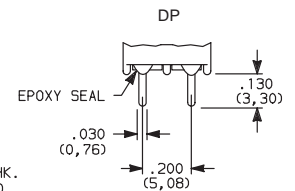
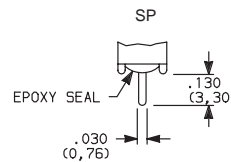
**Z** (STD.)



.020 THK. (0, 51)

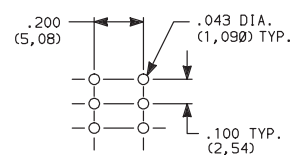
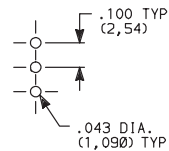
NOTE: Q contact material standard.  
Not available with K, L or M contact materials.

**C**



.020 THK. (0, 51)

PC MOUNTING



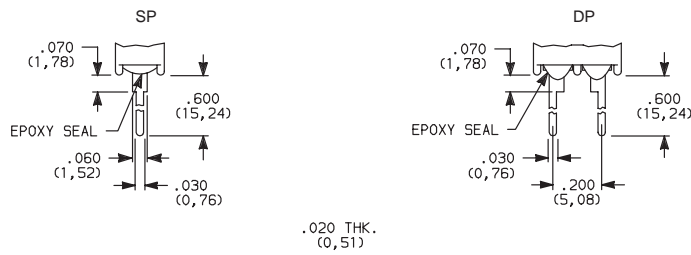
T102 - omit center hole.

NOTE: Q contact material standard.

A

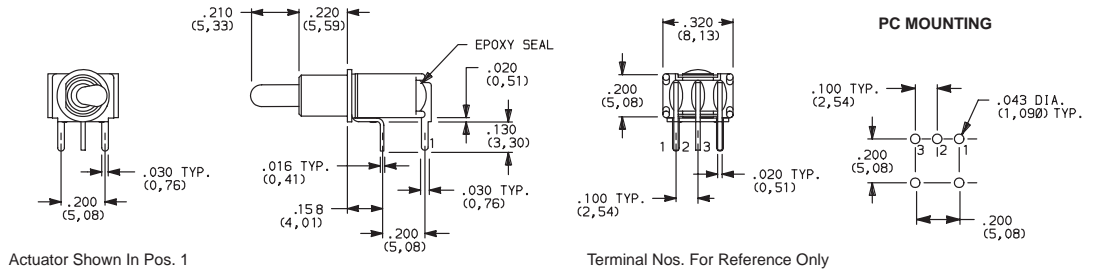
## TERMINATIONS

**W** WIRE WRAP



**NOTE:** B contact material standard.

**A**



Actuator Shown In Pos. 1

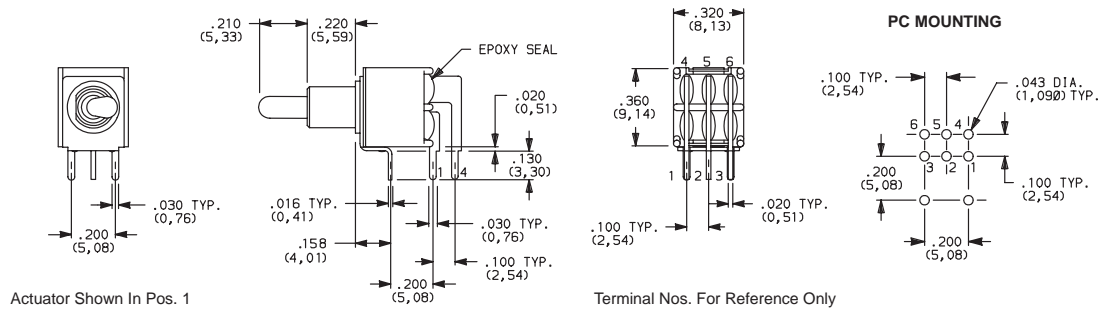
Terminal Nos. For Reference Only

**NOTE:** B contact material standard. Not available with T102 model.

**SPDT Model**

Part No. Shown: T101MH9ABE

**A**



Actuator Shown In Pos. 1

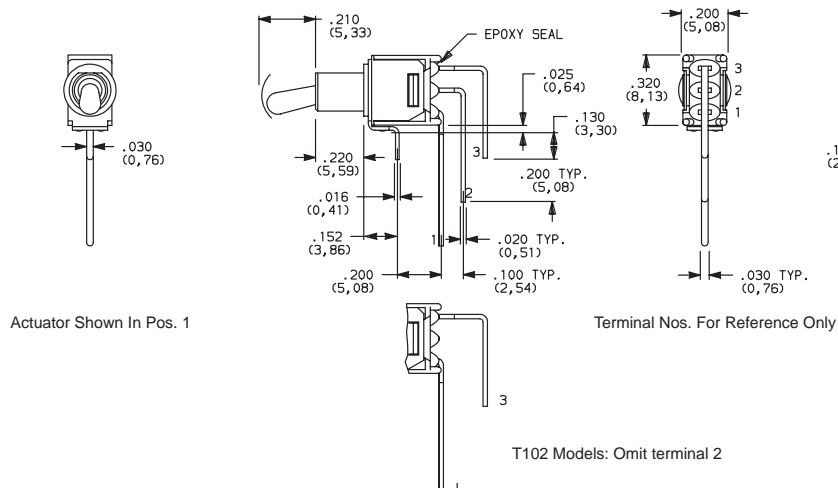
Terminal Nos. For Reference Only

**NOTE:** B contact material standard.

**DPDT Model**

Part No. Shown: T201MH9ABE

**AV**



Actuator Shown In Pos. 1

Terminal Nos. For Reference Only

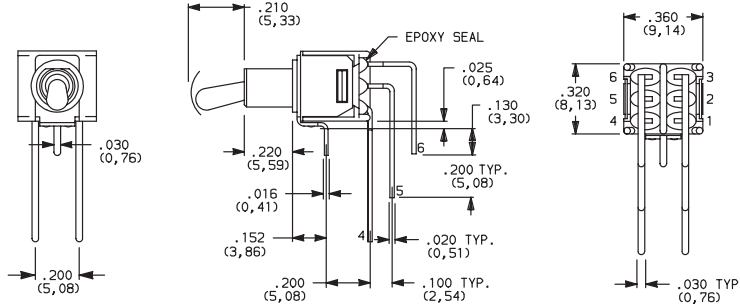
**NOTE:** Terminal radii and lead-in manufacturing option. B contact material standard.

**SPST and SPDT Models**

Part No. Shown: T101MH9AVBE

## TERMINATIONS

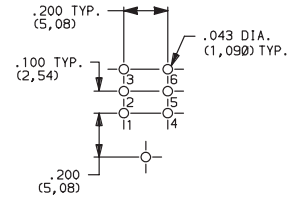
### AV



Actuator Shown In Pos. 1

Terminal Nos. For Reference Only

### PC MOUNTING

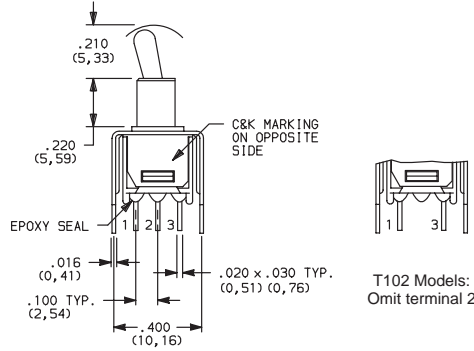


### DPDT Model

Part No. Shown: T201MH9AVBE

**NOTE:** Terminal bend radii and lead-in manufacturing option. B contact material standard.

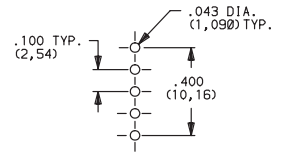
### V3



Actuator Shown In Pos. 1

Terminal Nos. For Reference Only

### PC MOUNTING



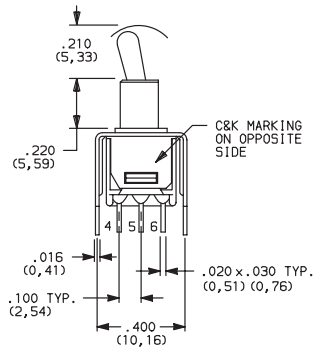
T102 Models: Omit center hole.

### SPST and SPDT Models

Part No. Shown: T101MH9V3BE

**NOTE:** B contact material standard.

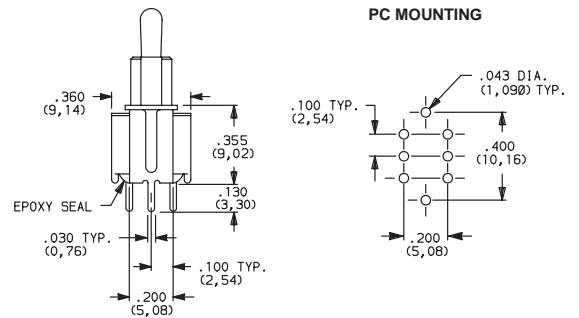
### V3



Actuator Shown In Pos. 1

Terminal Nos. For Reference Only

### PC MOUNTING



### DPDT Model

Part No. Shown: T201MH9V3BE

**NOTE:** B contact material standard.

## CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
<b>B</b>	GOLD <sup>1</sup>	GOLD <sup>1</sup>	LOW LEVEL / DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
<b>K</b>		TIN-LEAD <sup>6</sup>		
<b>Q</b>	SILVER <sup>4,5</sup>	SILVER <sup>5</sup>	POWER	TX01 MODELS: 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 2 AMPS @ 120 V AC OR 28 V DC.
<b>M</b>		TIN-LEAD <sup>6</sup>		
<b>G</b>	GOLD OVER SILVER <sup>2,3</sup>	GOLD <sup>3</sup>	LOW LEVEL / DRY CIRCUIT OR POWER	TX01 MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 2 AMPS @ 120 V AC OR 28 V DC.
<b>L</b>		TIN-LEAD <sup>6</sup>		

CONTACT MATERIAL / APPLICATION RECOMMENDATIONS – SEE CHART, PAGE X.

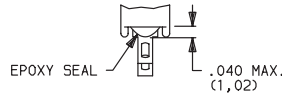
- <sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
- <sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.
- <sup>3</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.
- <sup>4</sup> END CONTACTS: Coin silver, silver plated.
- <sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.
- <sup>6</sup> TERMINALS: Copper alloy, with tin-lead alloy over nickel plate.

All models with all options when ordered with G, L, M or Q contact material.  
See AGENCY APPROVALS, page VIII.

B contact material standard with A, AV, V3 & W terminations.  
Q contact material standard with C & Z terminations.

## SEAL

**E** (STD.)



### HOW TO ORDER

All available T SERIES TINY TOGGLE SWITCH options are listed on page A-54 and are described on pages A-55 thru A-60. Switches with standard options are shown on page A-55. When selecting options and building a part number, some ordering format boxes may not be filled. Dashes, hyphens or spaces in the part number are not significant, and are shown for clarity only. All models have epoxy terminal seal and are compatible with 'bottom-wash' PC board cleaning methods. Hardware and accessories are available separately, see section K.

### SPECIFICATIONS

- CONTACT RATING: TX01 models: 3 AMPS @ 120 V AC or 28 V DC. All other models: 2 AMPS @ 120 V AC or 28 V DC (Q contact material).
- ELECTRICAL LIFE: TX01 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.
- CONTACT RESISTANCE: Below 20 milliohms typ. initial @ 2–4 V DC, 100 mA, for both silver and gold plated contacts.
- INSULATION RESISTANCE: 10<sup>9</sup> ohms min.
- DIELECTRIC STRENGTH: 1000 V RMS min. @ sea level.
- OPERATING TEMPERATURE: –30°C to 85°C.
- SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

### MATERIALS

- CASE: Glass filled nylon 6/6, flame retardant, heat stabilized or diallyl phthalate (DAP), (UL 94V-0).
- ACTUATOR: Brass, chrome plated.
- BUSHING: Brass, nickel plated.
- HOUSING: Stainless steel.
- SWITCH SUPPORT: Brass, tin plated.
- END CONTACTS: Coin silver, silver plated (Q contact material).
- CENTER CONTACTS & TERMINALS: Copper alloy, silver plated (Q contact material).
- TERMINAL SEAL: Epoxy.
- HARDWARE: Nut & Locking Ring: Brass, nickel plated.  
Lockwasher: Steel, nickel plated.

**NOTE:** Specifications and materials listed above are general specifications for switches with standard options. For information on specific and custom switches, consult factory.