



Quick Reference Guide Gemini Series Switches

The TE Connectivity extensive Gemini A and Gemini AE Series offer one and two poles with multi-circuit configurations, including: momentary function, locking toggle to avoid unwanted switching as well as bat and flat toggles in different lengths. The Gemini AE Series meets IP67 requirements. Terminals are epoxy sealed to prevent the entry of flux, solvent and other contaminants. Gemini A & Gemini AE Switches are available with solder lug, PC, wire wrap, vertical, bracketed and angle-mount PC terminal choices.

The Gemini series offers engineers many different combinations of toggle or rocker switches for their applications.

FEATURES

Toggles

- Gold, gold over silver or silver contacts
- Epoxy sealed terminals
- Stainless steel frame with brass tin plated solder support
- Hardware included
- Boot seals available
- AE meets IP67 requirements

Rockers

- Multiple actuator colors available
- G and Q contacts UL recognition
- AE meets IP67 requirements

APPLICATIONS

These devices are well suited for designs requiring human interface via toggle or rocker-style switch, including:

- Industrial equipment
- Audio-visual equipment
- Outdoor concert and lighting equipment
- Medical
- Instrumentation
- Communication equipment

Typical Performance Characteristics

Contact Configuration : 1, 2, 3, and 4 pole
Contact Timing : Break before make
Contact Rating Max. :
Gold : 0.4VA @20V AC or DC
Gold over Silver : 5A @ 125VAC or 28VDC resistive
0.4VA @ 20V AC or DC or
2A @ 250VAC resistive
Silver : 5A @ 125VAC or 28VDC resistive
Electrical Life : 6000 cycles
Contact Resistance, Initial : 10 mOhms max. at 2-4 VDC 100 mA
Insulation Resistance : 1,000 MOhms
Dielectric Strength : 1,000 Vrms @ sea level
Actuator Travel : 22° for D and E function
18° for F and G function

Environmental Specification

Operating Temperature : -30 to +85°C
Storage Temperature : -30 to +85°C
Solder Heat Resistance : Wave solder capable to 265°C
Terminal Seal : Single pole: epoxy

Material Specifications

Contacts :
Contacts B : Copper alloy finish gold over nickel
Contacts G : Copper alloy finish gold over silver
Contacts Q : Copper alloy finish silver
Actuator : Brass alloy finish nickel
Terminals :
Contacts B : Copper alloy finish gold over nickel
Contacts G : Copper alloy finish gold over silver
Contacts Q : Copper alloy finish silver
Case : Thermoplastic
Bushing : Brass alloy finish nickel
Internal Actuator : Phenolic
Spring : Music wire
Support Bracket : Brass tin plated
Seal : Epoxy



Gemini A Toggle Product Key

Typical Product Key				A	1	01	P3		Z	Q	04				
Type															
A		Gemini A Series Toggles													
Number of Poles															
1		Single pole		2		Double pole									
Function															
Single and double pole				Double pole only											
01		ON-ON		07		ON-OFF-(ON)		11		ON-ON-ON					
03		ON-OFF-ON		08		ON-(ON)		13		ON-ON-(ON)					
05		(ON)-OFF-(ON)						15		(ON)-ON-(ON)					
Toggles															
S		Bat long		M		Bat short		T		Large toggle & bushing (15/32)					
K		Locking		P3		Flatted (with bushing code Y only)		T1		Large toggle & bushing (15/32)					
K1		Locking						L		Lever					
								L1		Lever					
								L2		Lever					
Bushing															
blank		Toggles K1 &/ P3: 1/4-40 threaded .35 (8.9) long				D		1/4-40 threaded .28 (7.1) long		Y		1/4-40 threaded .35 (8.9) long			
		Toggles K, T, T1: unthreaded .28 (7.1) long				D9		unthreaded .28 (7.1) long		Y9		unthreaded .35 (8.9) long			
CW		1/4-40 threaded .37 (9.4) long, environmental seals (toggles codes S & M only)				H		1/4-40 threaded .3 (7.6) long							
Terminations															
A		Right angle		C		Printed circuit		V40		Vertical support		W4		Wire wrap	
AV2		Vertical right angle		V30		Vertical support		W		Wire wrap		Z		Wire lug	
Contacts															
B		Gold		G		Gold over silver		Q		Silver					
Material															
04		RoHS Compliant													

GEMINI A SERIES TOGGLES								
Product Key	Poles	Function	Toggles	Bushing	Terminations	Contacts	Material	Part Number
A101KZQ04	1	ON-ON	Locking	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	1825136-7
A101MD9AB04	1	ON-ON	Bat Short	Unthreaded .28 (7.1)	Right Angle	Gold	RoHS Compliant	1-1825136-2
A101MD9AQ04	1	ON-ON	Bat Short	Unthreaded .28 (7.1)	Right Angle	Silver	RoHS Compliant	1-1825136-4
A101MD9AV2B04	1	ON-ON	Bat Short	Unthreaded .28 (7.1)	Vertical Right Angle	Gold	RoHS Compliant	1-1825136-5
A101MDZQ04	1	ON-ON	Bat Short	1/4-40 Threaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	2-1825136-2
A101MYZQ04	1	ON-ON	Bat Short	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	2-1825136-4
A101SCWZQ04	1	ON-ON	Bat Long	1/4-40 threaded .37 (9.4)	Wire Lug	Silver	RoHS Compliant	3-1825136-1
A101SD9AB04	1	ON-ON	Bat Long	Unthreaded .28 (7.1)	Right Angle	Gold	RoHS Compliant	3-1825136-2
A101SD9V30B04	1	ON-ON	Bat Long	Unthreaded .28 (7.1)	Vertical Support	Gold	RoHS Compliant	3-1825136-6
A101SHZQ04	1	ON-ON	Bat Long	1/4-40 threaded .3 (7.6)	Wire Lug	Silver	RoHS Compliant	4-1825136-0
A101SYCB04	1	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Gold	RoHS Compliant	4-1825136-4
A101SYCQ04	1	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	4-1825136-5
A101SYZB04	1	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Gold	RoHS Compliant	4-1825136-8
A101SYZQ04	1	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	4-1825136-9
A101TCQ04	1	ON-ON	Lg. Tgl. & Bushing	Unthreaded .28 (7.1)	Printed Circuit	Silver	RoHS Compliant	5-1825136-4
A101TZQ04	1	ON-ON	Lg. Tgl. & Bushing	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	5-1825136-5
A103KZQ04	1	ON-OFF-ON	Locking	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	1825137-1
A103MD9AV2B04	1	ON-OFF-ON	Bat Short	Unthreaded .28 (7.1)	Vertical Right Angle	Gold	RoHS Compliant	1825137-5
A103SYCQ04	1	ON-OFF-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	1-1825137-6
A103SYWB04	1	ON-OFF-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Wrap	Gold	RoHS Compliant	1-1825137-7
A103SYWQ04	1	ON-OFF-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Right Angle	Silver	RoHS Compliant	1-1825137-8
A103SYZB04	1	ON-OFF-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Gold	RoHS Compliant	1-1825137-9
A105MD9AB04	1	(ON)-OFF-(ON)	Bat Short	Unthreaded .28 (7.1)	Right Angle	Gold	RoHS Compliant	2-1825137-4
A105SYCQ04	1	(ON)-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	3-1825137-7
A105SYZQ04	1	(ON)-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	3-1825137-9
A105TZQ04	1	(ON)-OFF-(ON)	Lg. Tgl. & Bushing	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	4-1825137-2
A107SYCQ04	1	ON-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	5-1825137-1
A107SYZQ04	1	ON-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	5-1825137-2
A108SYZQ04	1	ON-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	6-1825136-4
A201KAB04	2	ON-ON	Locking	Unthreaded .28 (7.1)	Right Angle	Gold	RoHS Compliant	1825138-1
A201KZQ04	2	ON-ON	Locking	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	1825138-3
A201MD9AB04	2	ON-ON	Bat Short	Unthreaded .28 (7.1)	Right Angle	Gold	RoHS Compliant	1825138-6
A201MD9AQ04	2	ON-ON	Bat Short	Unthreaded .28 (7.1)	Right Angle	Silver	RoHS Compliant	1825138-7
A201MD9AV2Q04	2	ON-ON	Bat Short	Unthreaded .28 (7.1)	Vertical Right Angle	Silver	RoHS Compliant	1825138-9
A201SYCB04	2	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Gold	RoHS Compliant	2-1825138-4
A201SYCQ04	2	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	2-1825138-5
A201SYZB04	2	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Gold	RoHS Compliant	2-1825138-7
A201SYZQ04	2	ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	2-1825138-8
A201TZQ04	2	ON-ON	Lg. Tgl. & Bushing	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	3-1825138-1
A203KZQ04	2	ON-OFF-ON	Locking	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	1825139-1
A203MD9AB04	2	ON-OFF-ON	Bat Short	Unthreaded .28 (7.1)	Right Angle	Gold	RoHS Compliant	1825139-2
A203SYCQ04	2	ON-OFF-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	1825139-9
A203SYZQ04	2	ON-OFF-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	1-1825139-0
A203TZQ04	2	ON-OFF-ON	Lg. Tgl. & Bushing	Unthreaded .28 (7.1)	Wire Lug	Silver	RoHS Compliant	1-1825139-2
A205SYCQ04	2	(ON)-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Printed Circuit	Silver	RoHS Compliant	1-1825139-7
A205SYZQ04	2	(ON)-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	1-1825139-8
A207SYZQ04	2	ON-OFF-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	2-1825139-4
A208SYZQ04	2	ON-(ON)	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	3-1825138-8
A211SYZQ04	2	ON-ON-ON	Bat Long	1/4-40 Threaded .35 (8.9)	Wire Lug	Silver	RoHS Compliant	3-1825139-9

Gemini AE Toggle Product Key

Type		Typical Product Key				AE	1	01	S	D1	C	Q	04	
AE	Gemini AE Series Toggle													
Number of Poles														
1	Single pole		2	Double pole										
Function														
Single and double pole				Double pole only										
01	ON-ON		07	ON-OFF-(ON)		11	ON-ON-ON							
03	ON-OFF-ON		08	ON-(ON)		13	ON-ON-(ON)							
05	(ON)-OFF-(ON)					15	(ON)-ON-(ON)							
Toggles														
S	Bat long		M	Bat short										
Bushing														
D1	Unthreaded													
Terminations														
A	Right angle		C	Printed circuit		V40	Vertical support		W4	Wire wrap				
AV2	Vertical right angle		V30	Vertical support		W	Wire wrap		Z	Wire lug				
Contacts														
B	Gold		G	Gold over silver		Q	silver							
Material														
04	RoHS Compliant													

GEMINI AE SERIES TOGGLES

Product Key	Poles	Function	Toggles	Bushing	Terminations	Contacts	Material	Part Number
AE101MD1AB04	1	ON-ON	Bat Short	Unthreaded	Right Angle	Gold	RoHS Compliant	1825142-1
AE101MD1AQ04	1	ON-ON	Bat Short	Unthreaded	Right Angle	Gold over Silver	RoHS Compliant	1825142-4
AE101MD1AV2B04	1	ON-ON	Bat Short	Unthreaded	Vertical Right Angle	Gold	RoHS Compliant	1825142-5
AE101MD1CB04	1	ON-ON	Bat Short	Unthreaded	Printed Circuit	Gold	RoHS Compliant	1825142-8
AE101SD1AB04	1	ON-ON	Bat Long	Unthreaded	Right Angle	Gold	RoHS Compliant	1-1825142-5
AE101SD1CB04	1	ON-ON	Bat Long	Unthreaded	Printed Circuit	Gold	RoHS Compliant	2-1825142-0
AE103MD1AV2B04	1	ON-OFF-ON	Bat Short	Unthreaded	Vertical Right Angle	Gold	RoHS Compliant	2-1825142-5
AE103SD1CB04	1	ON-OFF-ON	Bat Long	Unthreaded	Printed Circuit	Gold	RoHS Compliant	3-1825142-0
AE105SD1CB04	1	ON-OFF-ON	Bat Long	Unthreaded	Printed Circuit	Gold	RoHS Compliant	3-1825142-9
AE201SD1AV2B04	2	ON-ON	Bat Long	Unthreaded	Vertical Right Angle	Gold	RoHS Compliant	1825143-9
AE201SD1CB04	2	ON-ON	Bat Long	Unthreaded	Printed Circuit	Gold	RoHS Compliant	1-1825143-0
AE201SD1CQ04	2	ON-ON	Bat Long	Unthreaded	Printed Circuit	Silver	RoHS Compliant	1-1825143-1
AE203SD1AV2B04	2	ON-OFF-ON	Bat Long	Unthreaded	Vertical Right Angle	Gold	RoHS Compliant	1-1825143-7
AE203SD1AV2Q04	2	ON-OFF-ON	Bat Long	Unthreaded	Vertical Right Angle	Silver	RoHS Compliant	1-1825143-8
AE203SD1CB04	2	ON-OFF-ON	Bat Long	Unthreaded	Printed Circuit	Gold	RoHS Compliant	1-1825143-9

Gemini A Rocker Paddle Product Key

Type				Typical Product Key				A	1	01	J1	A	Q	0		04				
A				Rocker/Paddle Switch																
Number of Poles																				
1		Single pole		2		Double pole														
Function																				
01		ON-ON		05		(ON)-OFF-(ON)		08		ON-(ON)		13		ON-ON-(ON)						
03		ON-OFF-ON		07		ON-OFF-(ON)		11		ON-ON-ON										
Actuator																				
Rocker				Rocker				Paddle				Paddle								
J1		Small		J51		Snap-in w/beveled frame		J2		Small		J61		Snap-in w/beveled frame						
J3		Large		J52		Snap-in w/beveled frame & LED		J4		Large		J62		Snap-in w/beveled frame & LED						
J50		Snap-in						J60		Snap-in										
Terminals																				
A		Right angle		C		Printed circuit		Z		Wire lug										
AV2		Vertical right angle		V3		Vertical with support bracket .620 (15.75)		Z3		Quick connect										
Contacts																				
B		Gold		G		Gold over silver		Q		silver										
Actuator color																				
0		Black (std.)		2		Red		4		Yellow		6		Blue		9		White		
1		Brown		3		Orange		5		Green		8		Gray						
Beveled frame color																				
0		Black (std.)		2		Red		4		Yellow		6		Blue		9		White		
1		Brown		3		Orange		5		Green		8		Gray						
Material																				
04		RoHS Compliant																		

GEMINI A SERIES ROCKER/PADDLE									
Product Key	Poles	Function	Actuator	Terminals	Contacts	Act. Color	Fr. Color	Material	Part Number
A101J1AV2Q004	1	ON-ON	Small	Vertical Right Angle	Silver	Black	N/A	RoHS Compliant	1-1571986-1
A101J1ZQ004	1	ON-ON	Small	Wire Lug	Silver	Black	N/A	RoHS Compliant	1-1571986-7
A101J51ZQ004	1	ON-ON	Snap-in	Wire Lug	Silver	Black	Black	RoHS Compliant	3-1571986-4
A103J51ZQ004	1	ON-OFF-ON	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	4-1571986-5
A105J1ZQ004	1	(ON)-OFF-(ON)	Small	Wire Lug	Silver	Black	N/A	RoHS Compliant	5-1571986-3
A105J3ZQ004	1	(ON)-OFF-(ON)	Large	Wire Lug	Silver	Black	N/A	RoHS Compliant	5-1571986-9
A105J51ZQ004	1	(ON)-OFF-(ON)	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	6-1571986-1
A107J51ZQ004	1	ON-OFF-(ON)	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	6-1571986-5
A108J51ZQ004	1	ON-(ON)	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	6-1571986-9
A201J1AQ004	2	ON-ON	Small	Right Angle	Silver	Black	N/A	RoHS Compliant	1571987-2
A201J1AV2Q004	2	ON-ON	Small	Vertical Right Angle	Silver	Black	N/A	RoHS Compliant	1571987-4
A201J50ZQ004	2	ON-ON	Snap-in	Wire Lug	Silver	Black	N/A	RoHS Compliant	1-1571987-4
A201J51ZQ004	2	ON-ON	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	1-1571987-5
A201J61ZQ004	2	ON-ON	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	1-1571987-9
A203J51ZQ004	2	ON-OFF-ON	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	2-1571987-6
A203J61ZQ004	2	ON-OFF-ON	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	2-1571987-7
A205J51ZQ004	2	(ON)-OFF-(ON)	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	3-1571987-3
A205J61ZQ004	2	(ON)-OFF-(ON)	Snap-in, Frame	Wire Lug	Silver	Black	Black	RoHS Compliant	3-1571987-4

Gemini AE Rocker Paddle Product Key

Typical Product Key				AE	1	01	J1	A	Q	0	04	
Type												
AE	Rocker/Paddle Switch											
Number of Poles												
1	Single pole				2	Double pole						
Function												
01	ON-ON				07	ON-OFF-(ON)						
05	(ON)-OFF-(ON)				08	ON-(ON)						
Actuator												
Rocker												
J1	Standard				Paddle							
J50	Small				J2	Standard						
					J60	Small						
Terminals												
A	Right angle				V3	Vertical with support bracket				W4	Wire wrap	
AV2	Vertical right angle				V4	Vertical with support bracket				Z	Wire lug	
C	Printed circuit				W	Wire wrap				Z3	Quick connect	
Contacts												
B	Gold				G	Gold over silver				Q	Silver	
Actuator color												
0	Black (std.)				2	Red						
Material												
04	RoHS Compliant											

GEMINI AE SERIES ROCKER/PADDLE								
Product Key	Poles	Function	Actuator	Terminals	Contacts	Act. Color	Material	Part Number
AE101J1AQ004	1	ON-ON	Standard	Right Angle	Silver	Black	RoHS Compliant	1571988-2
AE101J1AV2Q004	1	ON-ON	Standard	Vertical Right Angle	Silver	Black	RoHS Compliant	1571988-4
AE101J1V3B004	1	ON-ON	Standard	Br. .620 (15.75)	Gold	Black	RoHS Compliant	1571988-5
AE105J1V3B004	1	(ON)-OFF-(ON)	Standard	Br. .620 (15.75)	Gold	Black	RoHS Compliant	1-1571988-0
AE201J1AV2Q004	2	ON-ON	Standard	Vertical Right Angle	Silver	Black	RoHS Compliant	1571989-2
AE201J1V3B004	2	ON-ON	Standard	Br. .620 (15.75)	Gold	Black	RoHS Compliant	1571989-3

How to Specify a Switch

Electrical Considerations

Voltage of Applications: _____ Current of Application: _____

Circuitry Configuration: Number of Poles: _____ Number of Throws: _____

Number of Operations anticipated: _____

Agency Approvals or Listings Desired: _____

Mechanical Considerations

Type of Switch (Actuator Type): _____ Toggle _____ Pushbutton _____ Rotary _____ Rocker _____ Other

Switch Function (On/Off/On): _____ On/Off: _____ Momentary: _____

Termination: _____ Thru-Hole (PC) _____ Surface Mount _____ Wire Lug _____ Quick Connect _____ Other

Sealing Contamination Requirements: _____

Product Processing Considerations

Anticipated Soldering Process: _____ Hand _____ Wave _____ SMT _____ Other

FOR MORE INFORMATION

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Part numbers in this brochure are RoHS Compliant*, unless marked otherwise.

*as defined www.te.com/leadfree

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