Toggle Switches, AE Series, Process Sealed, Part Number Matrix

"AE" SERIES DESIGN FEATURES

- MIL-STD-202 Method 112C Leak Test
- Toggle – Machined brass, heavy nickel plated.
- Bushing & Cover - Nylon, ultrasonically welded to case, with integral "O-ring", UL94VO.
- Fixed Contact – Welded construction.
- Terminal Seal – Epoxy sealing of terminals is standard.
- Termination – Precious metal (gold or silver)/brass or copper strip with welded contact area.

MATERIAL SPECIFICATIONS:

Process Sealing .....“O-ring” seals will withstand wave soldering and various subsequent cleaning operations. Meets MIL-STD-202, Method 112C, Test Condition A & D, 85ºC.

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature.....-4°F to + 185°F (-20°C to + 85°C)
Storage Temperature.....-49°F to + 212°F (-45°C to + 100°C)
Solder Heat Resistance .....See page M3-4

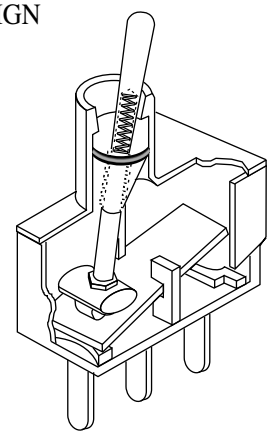
TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating .....Silver: 2 A @ 250 VAC or 5 A @ 125 VAC
Silver: 2 A @ 30 VDC
Gold: 0.4 VA @ 20 VAC/DC
Contact Resistance .....30 Milliohms max. initial
Insulation Resistance .....1,000 Megohms min. @ 500 VDC.
Dielectric Strength .....1,000 Volts RMS @ sea level initial
Static Withstanding.....15 KV per IEC 801-2
Electrical Life .....Up to 30,000 Cycles

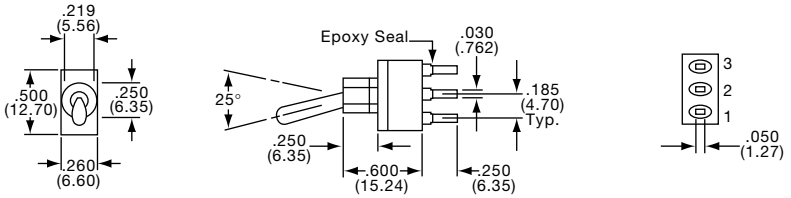
C

Gemini Series

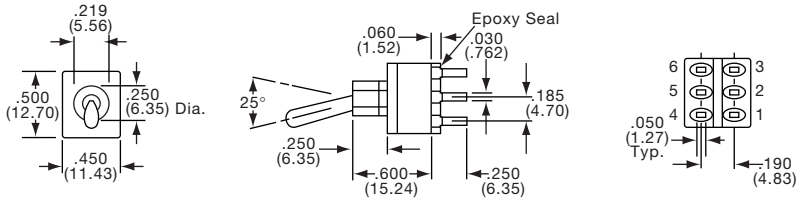
“O-RING” DESIGN



SINGLE POLE



(TYPICAL DIMENSIONS)



DOUBLE POLE

PART NUMBERING

Model

- **AE1** Single Pole
- **AE2** Double Pole

Function

- **01** On-On
- **03** On-Off-On
- **05** (On)-Off-(On)
- **07** On-Off-(On)
- **08** On-(On)
- **11** On-On-On
- **13** On-On-(On)
- **15** (On)-On-(On)

Double Pole case only

Toggle

- **S** Bat. Long
- **L** Lever
- **L1** Lever
- **L2** Lever
- **M** Bat. Short

Bushing

D1

Unthreaded

Terminal

- **A** Right Angle
- **AV2** Vertical Right Angle
- **C** Printed Circuit
- **V30** Vertical Support Bracket
- **W** Wire Wrap
- **Z3** Quick Connect
- **Z** Wire Lug

Contact

- **B** Gold
- **Q** Silver
- **G** Gold over Silver

Option

U.L. (Q or G contact only)

Application Note: For surface mount termination, use the “TST” series, Page C5

Other Options

N Black finish toggle, add “N” to end of part number, but before U.L. option.

See page C36 for SP3T wiring diagram.

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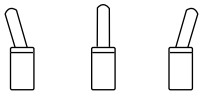
Dimensions are shown for reference purposes only. Specifications subject to change.

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Toggle Switches, AE Series, Process Sealed, Options

FUNCTIONS

The following functions available in SP or DP.



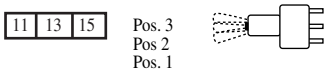
			On	None	On
01	2 Positions	None indicates no mechanical position	On	None	On
03	3 Positions	Off indicates a mechanical position with no electrical connection.	On	Off	On
05	3 Positions	(On) indicates momentary action.	(On)	Off	(On)
07	3 Positions		(On)	Off	On
08	2 Positions		(On)	None	On
		SPDT, connected terminals:	1—2	—	2—3
		DPDT, connected terminals:	1—2 4—5	— —	2—3 5—6

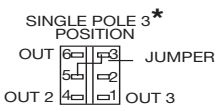
Functions available in DP case only:

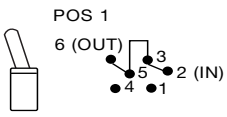
11	3 Positions		On	On	On
13	3 Positions		(On)	On	On
15	3 Positions		(On)	On	(On)
		DP3T Connect terminals:	1—2 4—5	2—3 4—5	2—3 5—6

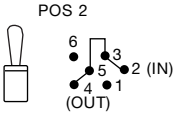
*** SP3T Functions achieved with external jumper installed by customer**

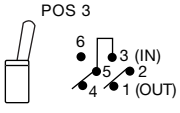
WIRING DIAGRAM FOR FUNCTIONS





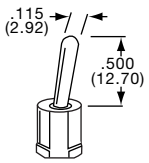




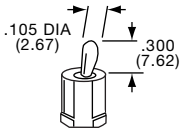


TOGGLES

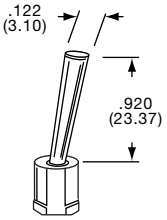
S Standard



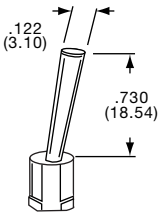
M Short



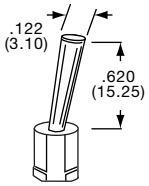
L Lever



L1 Lever

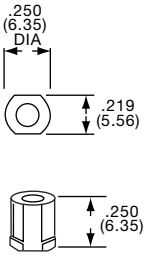


L2 Lever



Bushing

D1



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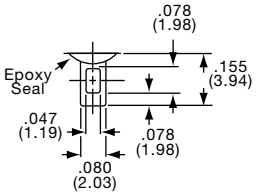
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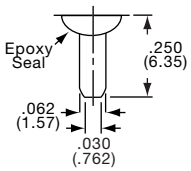
Toggle Switches, AE Series, Process Sealed, Options

TERMINALS

Z — **Wire Lug**

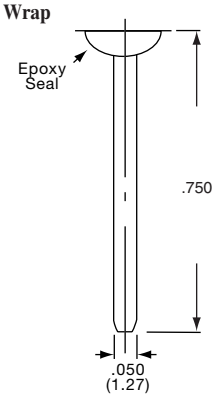


Z3 — **Quick Connect**

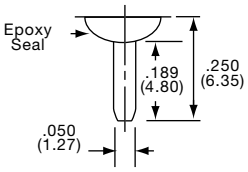


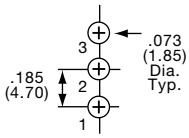
Mates with Tyco 61454 or 60900.

W — **Wire Wrap**

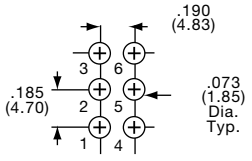


C — **Printed Circuit**
PC Hole Pattern



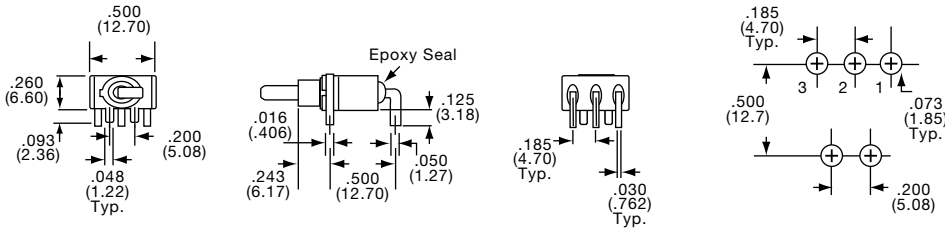


Single Pole



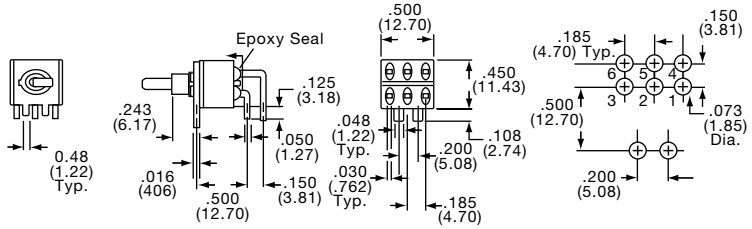
Double Pole

A — **Right Angle Single Pole**



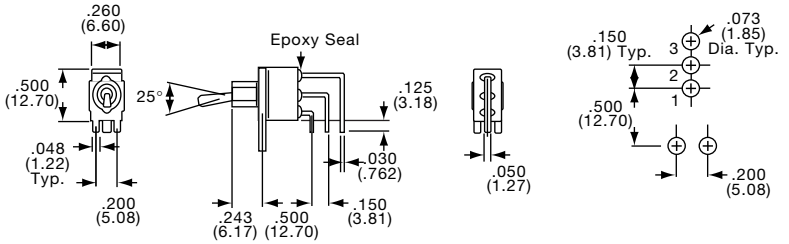
Note: Terminal numbers viewed from top of P.C. board

A — **Right Angle Double Pole**



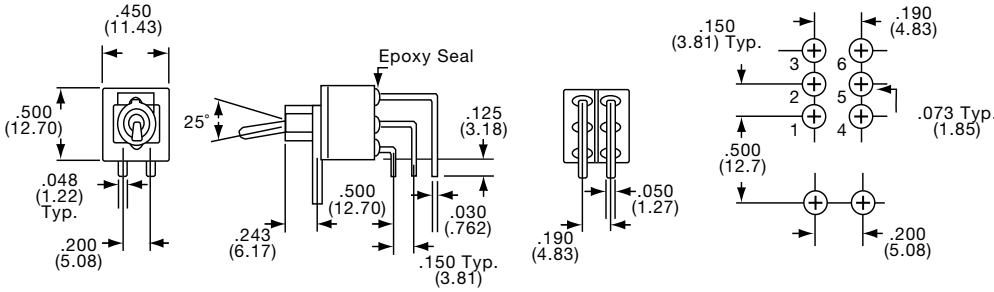
Note: Terminal numbers viewed from top of P.C. board

AV2 — **Vertical Right Angle Single Pole**



Note: Terminal numbers viewed from top of P.C. board

AV2 — **Vertical Right Angle Double Pole**



Note: Terminal numbers viewed from top of P.C. board

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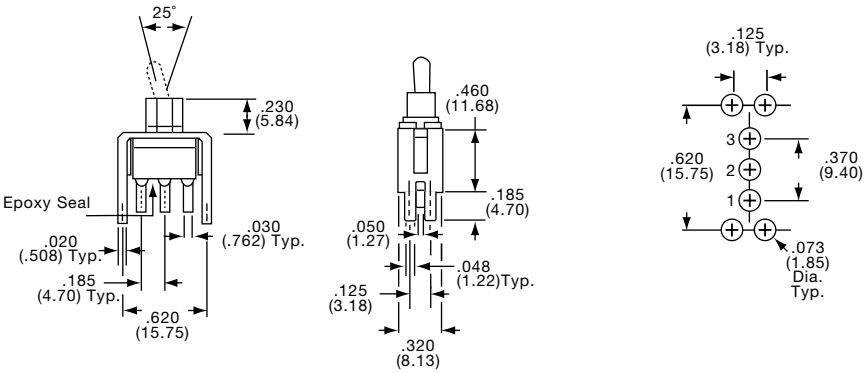
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Toggle Switches, AE Series, Process Sealed, Options

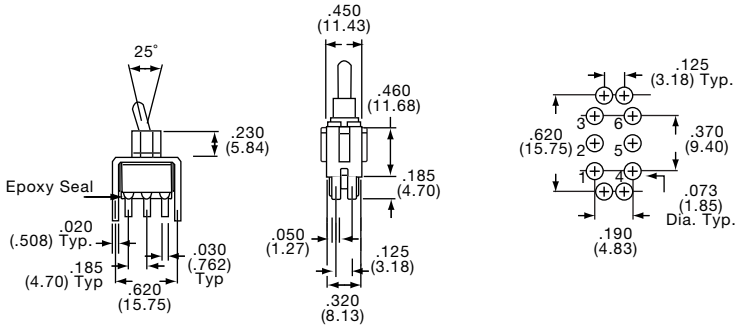
V30

Vertical Support Bracket
Single Pole



V30

Vertical Support Bracket
Double Pole



CONTACTS

B CONTACTS: Copper alloy with gold plate, welded button.

TERMINALS: Copper alloy with gold plate.

ELECTRICAL RATING: 0.4 VA @ 20 VAC/DC.

Q CONTACTS: Copper alloy with silver, welded button.

TERMINALS: Copper with silver/ lead plate.

ELECTRICAL RATING: 5 A @ 125 VAC, 2 amps @ 250 VAC, 2 A @ 30 VDC.

UL/CSA RATING: 5A @ 125 VAC, 3 @ 250 VAC.
(Specify "UL" option code)

G CONTACTS: Copper alloy with gold plate over silver, welded button.

TERMINALS: Copper alloy, with gold plate.

ELECTRICAL RATING: O.4 VA @ 20 VAC/DC or 5 A @ 125 VAC, 2 A @ 250 VAC, 2 A @ 30 VDC.

Note: This contact option can be used for low-level or power switching. If level is above 0.4 VA @ 20 VAC/DC, the switch is rendered usable only for power switching due to arc-removal of gold plate.

UL/CSA RATING: 5A @ 125 VAC, 3A @ 250 VAC
(Specify "UL" option code)

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Toggle Switches, AE Series, Process Sealed, Vertical, Long Bat Actuator

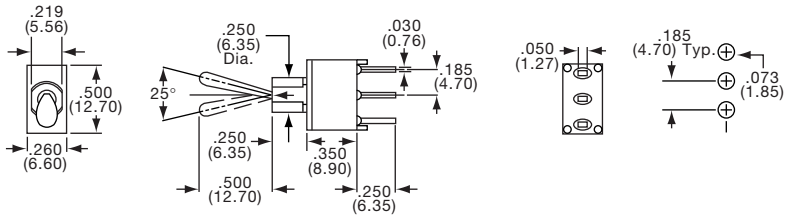
*** Refer to Pages C35-C38 for Additional Options ***

SEE PAGE C35 FOR PRODUCT SPECIFICATIONS

SPDT



AE101SD1CQ

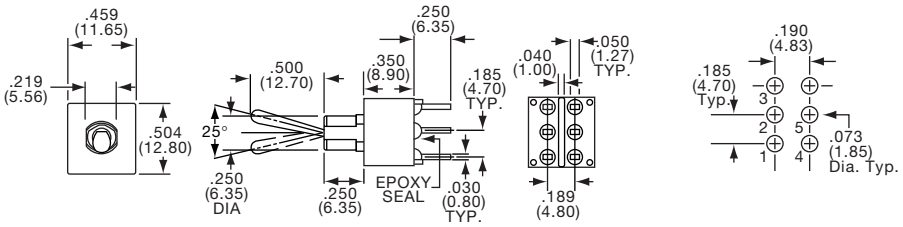


Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5 ↘ ⊥ ↙
Silver Contacts		**Gold Contacts**			
2-1437556-8	AE101SD1CQ	2-1437556-7	AE101SD1CB	SPDT	1 On None On
3-1437556-8	AE103SD1CQ	3-1437556-7	AE103SD1CB	SPDT	5 On Off On
	AE105SD1CQ	4-1437556-6	AE105SD1CB	SPDT	5 (On) Off (On)
	AE107SD1CQ	5-1437556-3	AE107SD1CB	SPDT	5 On Off (On)
6-1437556-1	AE108SD1CQ		AE108SD1CB	SPDT	1 On None (On)

DPDT



AE201SD1CQ



Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5 ↘ ⊥ ↙
Silver Contacts		**Gold Contacts**			
7-1437556-5	AE201SD1CQ	7-1437556-4	AE201SD1CB	DPDT	2 On None On
	AE203SD1CQ	8-1437556-2	AE203SD1CB	DPDT	6 On Off On
8-1437556-5	AE205SD1CQ		AE205SD1CB	DPDT	6 (On) Off (On)
	AE207SD1CQ		AE207SD1CB	DPDT	6 On Off (On)
	AE208SD1CQ		AE208SD1CB	DPDT	2 On None (On)
	AE211SD1CQ		AE211SD1CB	DPDT	11 On On On
	AE215SD1CQ		AE215SD1CB	DPDT	11 (On) On (On)

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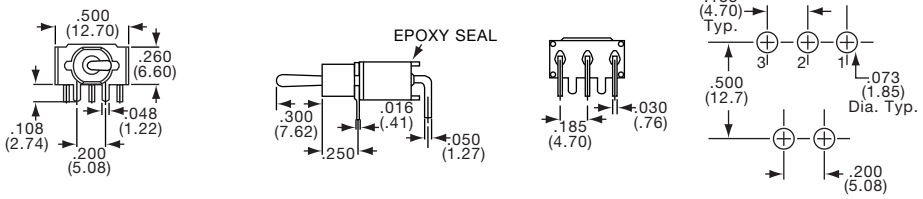
South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Toggle Switches, AE Series, Process Sealed, Right Angle, Short Bat Actuator

*** Refer to Pages C35-C38 for Additional Options ***

SEE PAGE C35 FOR PRODUCT SPECIFICATIONS

SPDT

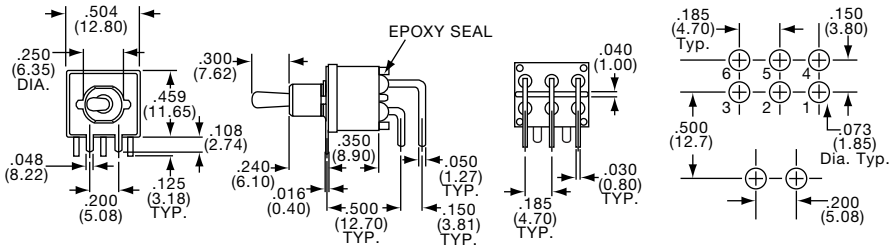




AE101MD1AQ
Horizontal Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
1-1437556-1	AE101MD1AQ	1437556-8	AE101MD1AB	SPDT	1	On	None	On
	AE103MD1AQ	3-1437556-1	AE103MD1AB	SPDT	5	On	Off	On
5-1437556-7	AE108MD1AQ		AE108MD1AB	SPDT	1	On	None	(On)

DPDT

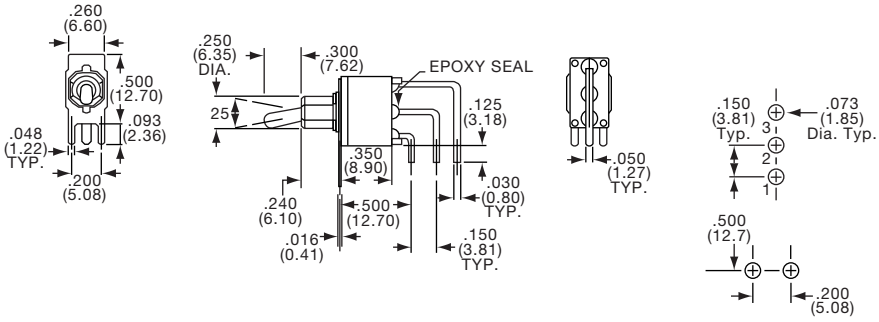




AE201MD1AQ
Horizontal Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
6-1437556-6	AE201MD1AQ	6-1437556-5	AE201MD1AB	DPDT	2	On	None	On
3-1437592-1	AE203MD1AQ	7-1437556-7	AE203MD1AB	DPDT	6	On	Off	On
	AE208MD1AQ		AE208MD1AB	DPDT	2	On	None	(On)

SPDT





AE101MD1AV2Q
Vertical Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
1-1437556-3	AE101MD1AV2Q	1-1437556-2	AE101MD1AV2B	SPDT	1	On	None	On
	AE103MD1AV2Q	3-1437556-2	AE103MD1AV2B	SPDT	5	On	Off	On
1447331-4	AE108MD1AV2Q	5-1437556-8	AE108MD1AV2B	SPDT	1	On	None	(On)

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Toggle Switches, AE Series, Process Sealed, Short Bat Actuator

*** Refer to Pages C35-C38 for Additional Options ***

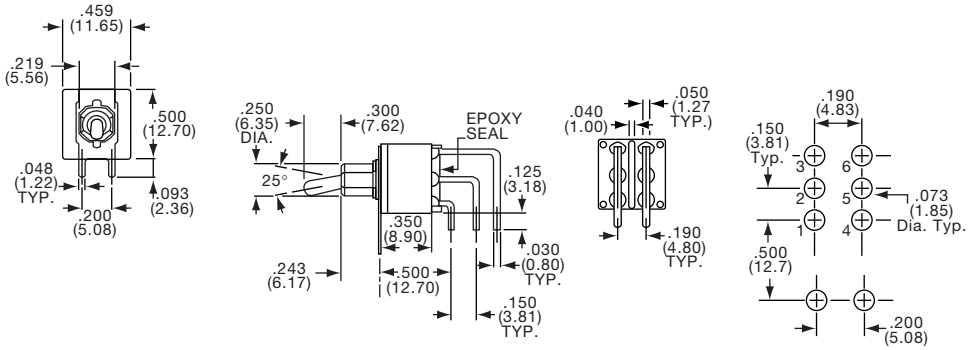
SEE PAGE C35 FOR PRODUCT SPECIFICATIONS

DPDT



AE201MD1AV2Q

Vertical
Actuation

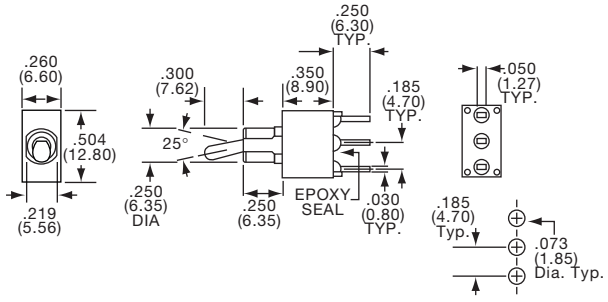


Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘ ⊥ ↙
Silver Contacts		**Gold Contacts**				
1571537-1	AE201MD1AV2Q	6-1437556-7	AE201MD1AV2B	DPDT	2	On None On
	AE203MD1AV2Q	7-1437556-8	AE203MD1AV2B	DPDT	6	On Off On
	AE208MD1AV2Q		AE208MD1AV2B	DPDT	2	On None (On)

SPDT



AE101MD1CQ

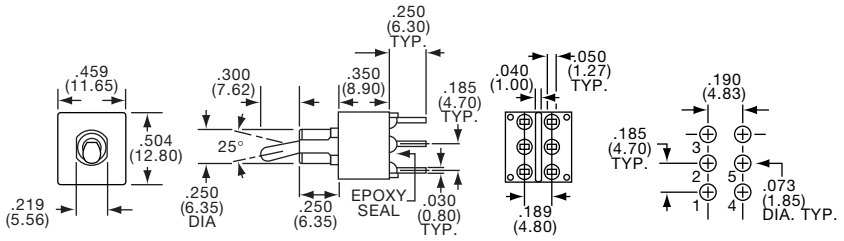


Tyco Electronics	Alcoswitch	Type	Act. Code P.M5	↘ ⊥ ↙
Silver Contacts				
1-1437556-7	AE101MD1CQ	SPDT	1	On None On
	AE103MD1CQ	SPDT	5	On Off On
	AE105MD1CQ	SPDT	5	(On) Off (On)
	AE107MD1CQ	SPDT	5	On Off (On)
	AE108MD1CQ	SPDT	1	On None (On)
Gold Contacts				
1-1437556-5	AE101MD1CB	SPDT	1	On None On
3-1437556-3	AE103MD1CB	SPDT	5	On Off On
	AE105MD1CB	SPDT	5	(On) Off (On)
	AE107MD1CB	SPDT	5	On Off (On)
	AE108MD1CB	SPDT	1	On None (On)

DPDT



AE201MD1CQ



Tyco Electronics	Alcoswitch	Type	Act. Code P.M5	↘ ⊥ ↙	Tyco Electronics	Alcoswitch	Type	Act. Code P.M5	↘ ⊥ ↙
Silver Contacts					**Gold Contacts**				
6-1437556-9	AE201MD1CQ	DPDT	2	On None On	6-1437556-8	AE201MD1CB	DPDT	2	On None On
	AE203MD1CQ	DPDT	6	On Off On		AE203MD1CB	DPDT	6	On Off On
	AE205MD1CQ	DPDT	6	(On) Off (On)		AE205MD1CB	DPDT	6	(On) Off (On)
	AE207MD1CQ	DPDT	6	On Off (On)		AE207MD1CB	DPDT	6	On Off (On)
	AE208MD1CQ	DPDT	2	On None (On)		AE208MD1CB	DPDT	2	On None (On)
	AE211MD1CQ	SP3T	11	On On On	8-1437556-9	AE211MD1CB	SP3T	11	On On On
	AE215MD1CQ	SP3T	11	(On) On (On)		AE215MD1CB	SP3T	11	(On) On (On)

Catalog 1308390
Issued 9-04

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Dimensions are in inches and millimeters unless otherwise specified. Values in parentheses or brackets are metric equivalents.

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USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-5-729-0425

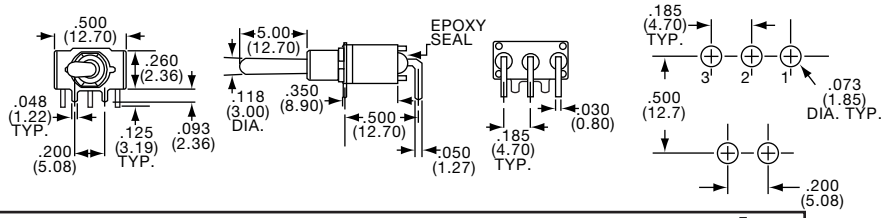
South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967

Toggle Switches, AE Series, Process Sealed, Right Angle, Long Bat Actuator

*** Refer to Pages C35-C38 for Additional Options ***

SEE PAGE C35 FOR PRODUCT SPECIFICATIONS

SPDT

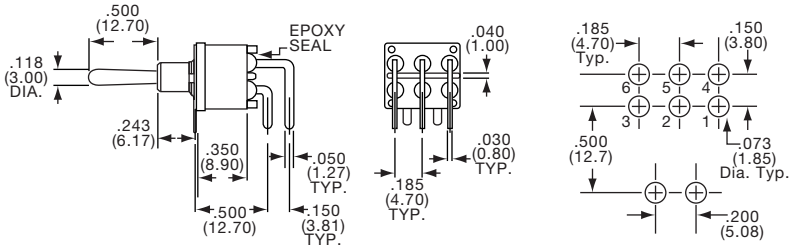




AE101SD1AQ
Horizontal Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
6-1437556-0	AE101SD1AQ	2-1437556-2	AE101SD1AB	SPDT	1	On	None	On
	AE103SD1AQ		AE103SD1AB	SPDT	5	On	Off	On
2-1437556-3	AE108SD1AQ	5-1437556-9	AE108SD1AB	SPDT	5	(On)	Off	(On)

DPDT

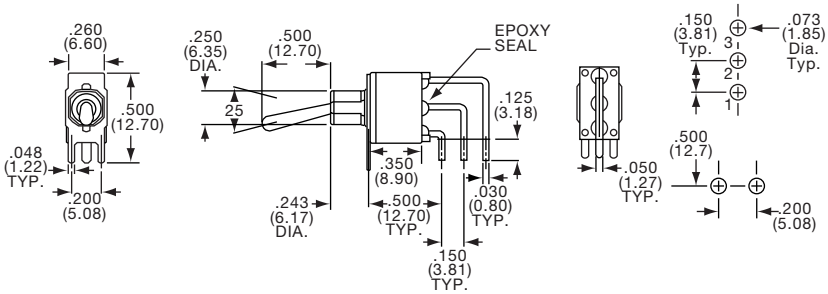




AE201SD1AB
Horizontal Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
	AE201SD1AQ	7-1437556-1	AE201SD1AB	DPDT	2	On	None	On
	AE203SD1AQ		AE203SD1AB	DPDT	6	On	Off	On
	AE208SD1AQ	7-1437556-9	AE208SD1AB	DPDT	6	(On)	Off	(On)

SPDT

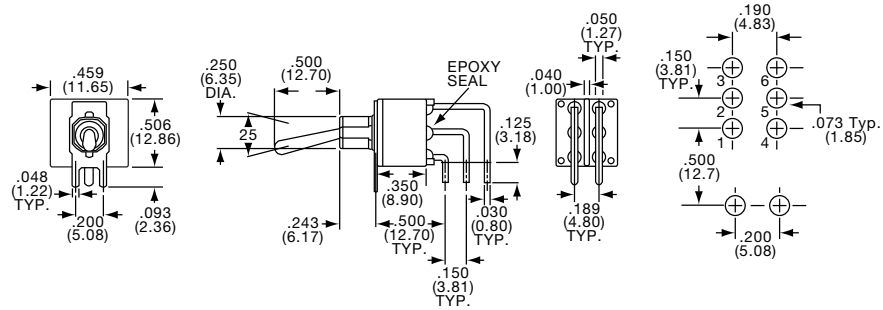




AE101SD1AV2B
Vertical Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
2-1437556-6	AE101SD1AV2Q	2-1437556-5	AE101SD1AV2B	SPDT	1	On	None	On
	AE103SD1AV2Q	3-1437556-6	AE103SD1AV2B	SPDT	5	On	Off	On
	AE108SD1AV2Q		AE108SD1AV2B	SPDT	5	(On)	Off	(On)

DPDT





AE201SD1AV2Q
Vertical Actuation

Tyco Electronics	Alcoswitch	Tyco Electronics	Alcoswitch	Type	Act. Code P. M5	↘	⊥	↙
Silver Contacts		**Gold Contacts**						
	AE201SD1AV2Q	7-1437556-3	AE201SD1AV2B	DPDT	2	On	None	On
8-1437556-1	AE203SD1AV2Q	8-1437556-0	AE203SD1AV2B	DPDT	6	On	Off	On
	AE208SD1AV2Q		AE208SD1AV2B	DPDT	6	(On)	Off	(On)

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