

Rockers

Product Selection Guide

Rocker							
Series	7000	E	ET	T	9000	DA	D
Switch Type	Miniature	Miniature	Subminiature	Subminiature	Power Rocker & Lever Handle	Miniature Power	Miniature Power
Poles/Throws	SPDT, DPDT, 3PDT, 4PDT	SPDT, DPDT, 3PDT	SPST, SPDT, DPDT	SPST, SPDT, DPDT	DPDT	SPST, SPDT	SPST, SPDT, DPST, DPDT
Max. Current	5 Amps	7.5 Amps	3 Amps	3 Amps	10 Amps	16 Amps 10 Amps	4 Amps 10 Amps
Washable		•	•				
Illuminated						•	•
Panel Mount Options							
Front Mount	•	•		•	•	Snap-in	Snap-in
Rear Mount	•	•		•	•		
PCB Mount Options							
Vertical	•	•	•	•	•	•	•
Right Angle	•	•	•	•	•	•	•
Surface Mount			•				
Page No.	H-4	H-26	H-40	H-46	H-52	H-57	H-61

Rocker							
Series	DT	DM	DM	DF	CR	CG	CL
Switch Type	Miniature Power Rocker	Miniature 2 Pole Power	Miniature Illuminated Power	Power	Round	Power	Power
Poles/Throws	SPST, DPST	DPST, DPDT	SPST, DPST	SPST, SPDT, DPST	SPST, SPDT	SPST, SPDT	SPST, SPDT
Max. Current	8 Amps, 10 Amps	3 Amps, 10 Amps	3 Amps, 10 Amps	16 Amps	10 Amps, 6 Amps	16 Amps, 10 Amps	16 Amps, 10 Amps
Washable							
Illuminated			•		•	•	•
Panel Mount Options							
Front Mount	Snap-in	Snap-in	Snap-in	Snap-in	Snap-in	Snap-in	Snap-in
Rear Mount				•			
PCB Mount Options							
Vertical							
Right Angle				•			
Surface Mount							
Page No.	H-66	H-70	H-74	H-78	H-82	H-86	H-90

E Series

Sealed Miniature Rocker and Lever Handle Switches

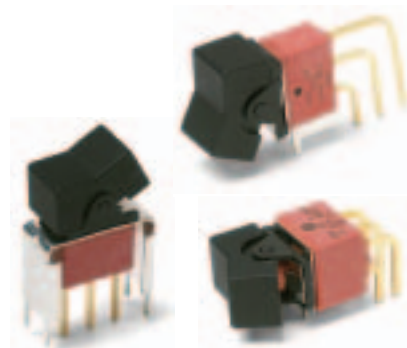
Features/Benefits

- Sealed against solder and cleaning process contaminants
- ESD Resistance—all actuator options
- Rocker, case & bushing UL 94V-0
- RoHS compliant



Typical Applications

- Telecommunications
- Instrumentation
- Computers & peripherals



Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material (E1XX & E2XX Models): 7.5 AMPS @125 V AC or 28 V DC; 3 AMPS @ 250 V AC. (E3XX Models): 5 AMPS @ 125 V AC or 28 V DC; 2 AMPS @ 250 V AC. See page H-37 for additional ratings.

ELECTRICAL LIFE: E1XX and E2XX models: 40,000 make-and-break cycles at full load. E3XX models: 30,000 cycles.

CONTACT RESISTANCE: Below 10 m Ω typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: $10^9 \Omega$ min.

ELECTROSTATIC DISCHARGE (ESD) OPTION: All actuator options: 15,000 V DC max. @ sea level, actuator to terminals.

DIELECTRIC STRENGTH: 1000 Vrms 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 & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0).

ACTUATOR: Nylon, black standard, internal o-ring seal standard with all actuators.

FRAME: Spring steel, black standard.

SWITCH SUPPORT: Brass or steel, matte-tin plated.

ACTUATOR PIVOT & MOUNTING BRACKET: Nylon.

ACTUATOR PIVOT RETAINER: Stainless steel.

CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page H-37 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut, Screw & Lockwasher: Stainless steel. Standoff: Nylon standard, aluminum available, consult Customer Service Center.

NOTE: Any models supplied with Q, B, G, S, P & R contact material are RoHS compliant.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

Build-A-Switch

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages H-27 through H-39. For additional options not shown in catalog, consult Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.



Switch Function

- E101** SP On-None-On
- E103** SP On-Off-On
- E105** SP Mom.-Off-Mom.
- E107** SP On-Off-Mom.
- E108** SP On-None-Mom.
- E201** DP On-None-On
- E203** DP On-Off-On
- E205** DP Mom.-Off-Mom.
- E207** DP On-Off-Mom.
- E208** DP On-None-Mom.
- E211** DP On-On-On
- E213** DP On-On-Mom.
- E215** DP Mom.-On-Mom.
- E301** 3P On-None-On

Actuator

- J1** .531 long rocker
- J2** Lever
- J3** .906" long rocker
- J11** Rocker with frame
- J21** Lever with frame
- J50** .362" long rocker
- J60** Lever
- J90** Lever

Terminations

- A** Right angle, PC thru-hole
- AV2** Vertical right angle, PC thru-hole
- C** PC Thru-hole
- Z** Solder lug
- A3** Right angle, snap-in, PC thru-hole
- AV3** Vertical right angle, snap-in, PC thru-hole
- V3** .460" high, V-bracket
- V4** .630" high, V-bracket
- V5** Vertical right angle, PC thru-hole
- V6** .460" high, V-bracket
- V7** .630" high, V-bracket
- V8** .953" high, V-bracket
- V21** .555" high, V-bracket, snap-in
- V31** .460" high, V-bracket, snap-in

Contact Material

- B** Gold
- P** Gold, matte tin
- Q** Silver
- S** Silver, matte-tin
- G** Gold over silver
- R** Gold over silver, matte-tin

Seal

- E** Epoxy

Actuator Color

- 2** Black
- 3** Red

Frame Color

- 2** Black
- NONE** No frame color required

Metal Frame Color

- (J11, J21 Actuators)
- 2** Black

Rocker



H



Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

E Series Sealed Miniature Rocker and Lever Handle Switches

SWITCH FUNCTION



NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
		C&K marking on opposite side			C&K marking on opposite side			
SP	E101	ON	NONE	ON	2-3	N/A	2-1	
	E103	ON	OFF	ON				
	E105	MOM.	OFF	MOM.				
	E107	ON	OFF	MOM.				
	E108	ON	NONE	MOM.				
SPDT								

SPDT

Part number shown: E101J1ZBE2

DP	E201	ON	NONE	ON	2-3,5-6	N/A	2-1,5-4	
	E203	ON	OFF	ON				
	E205	MOM.	OFF	MOM.				
	E207	ON	OFF	MOM.				
	E208	ON	NONE	MOM.				
	E211**	ON	ON	ON				
	E213**	ON	ON	MOM.				
	E215**	MOM.	ON	MOM.				
DPDT								

DPDT

Part number shown: E201J1ZBE2

MOM. = Momentary

** Wiring for 3-way switch, Hardware available separately, see Technical Data section of this catalog.

All models with all options when ordered with G, Q, R or S contact material.

C&K

Third Angle Projection

Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

Rocker



H

E Series

Sealed Miniature Rocker and Lever Handle Switches

SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
		C&K marking on opposite side			C&K marking on opposite side			
3P	E301	ON	NONE	ON	2-3,5-6,8-9	N/A	2-1,5-4,8-7	
3PDT								

3PDT

25°

POS 3

POS 2

POS 1

.059 (1,50)

EPOXY SEAL

.030 TYP. (0,76)

.185 TYP. (4,70)

C&K MARKING OPPOSITE SIDE

.078 (1,98)

.131 (3,33)

.155 (3,96)

.482 (12,24)

.642 (16,31)

.345 (8,76)

9 (12,70)

.500 (12,70)

.937 (23,80)

3

6

1

2

1.156 (29,36)

.190 TYP. (4,83)

.094 DIA. (2,390) TYP.

Terminal Nos. For Reference Only

Part number shown: E301J1ZBE2

MOM. = Momentary

All models with all options when ordered with G, Q, R and S contact material.

** Wiring for 3-way switch, see Technical Data section of this catalog.

ACTUATOR-PANEL REAR MOUNT

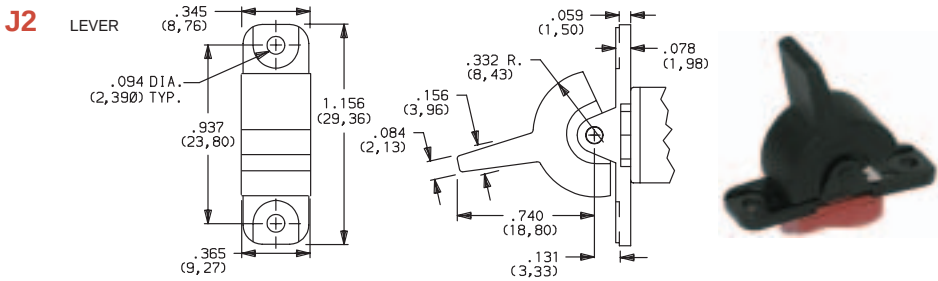
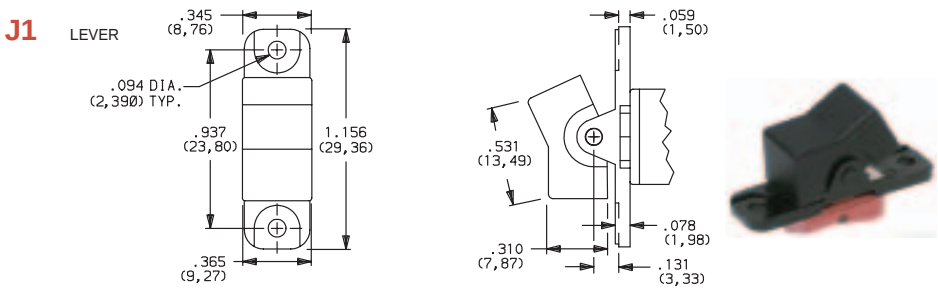
ACTUATOR

ACTUATOR COLOR

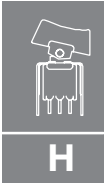
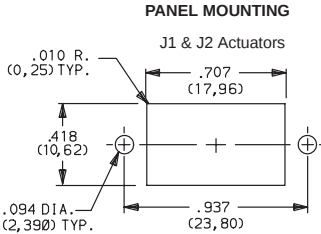
OPTION CODE	ACTUATOR COLOR
2	BLACK
3	RED

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on switches with panel mounting bracket. Internal o-ring actuator seal standard. Actuators available separately, see page H-37. Hardware available separately, see Technical Data section of this catalog. J1, J2 actuators available with C, Z or Z3 terminations.



Rocker



Third Angle Projection

Dimensions are shown: Inch (mm)

Specifications and dimensions subject to change

E Series Sealed Miniature Rocker and Lever Handle Switches

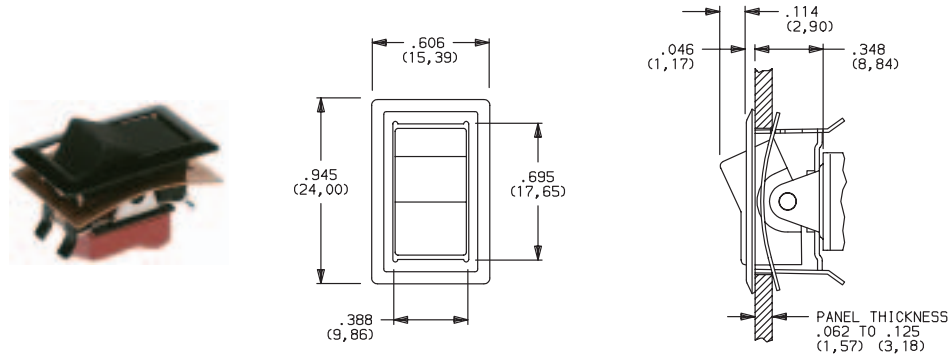
ACTUATOR-REAR MOUNT

ACTUATOR

ACTUATOR COLOR

FRAME COLOR

J11 ROCKER WITH FRAME

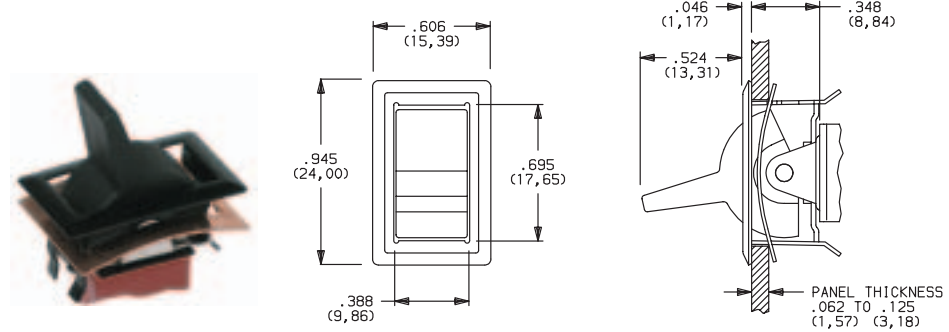


NOTE: This option has reduced anti-static capability.

OPTION CODE	ACTUATOR COLOR
2	BLACK
3	RED

OPTION CODE	FRAME COLOR
2	BLACK

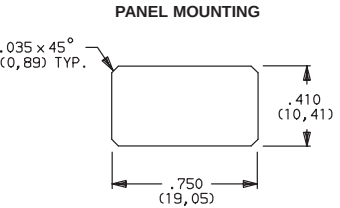
J21 LEVER WITH FRAME



NOTE: This option has reduced anti-static capability.

Actuator finish: Matte, frame finish: gloss. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Internal o-ring actuator seal standard. Actuators & frames available separately, see page H-37. Hardware available separately, see Technical Data section of this catalog. N. J11 & J21 actuators available with C, Z & Z3 terminations.

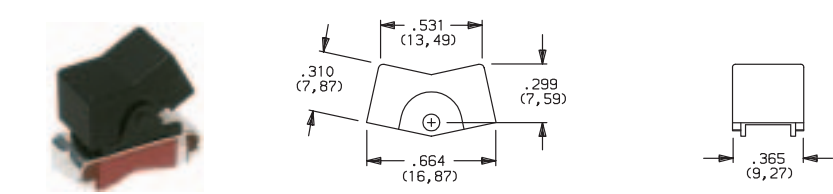


ACTUATOR-PC MOUNT

ACTUATOR

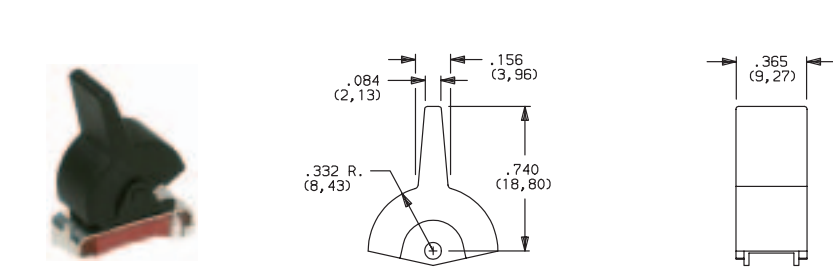
ACTUATOR COLOR

J1 ROCKER



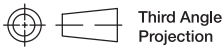
OPTION CODE	ACTUATOR COLOR
2	BLACK
3	RED

J2 LEVER



Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on switches with panel mounting bracket. Internal o-ring actuator seal standard. Actuators available separately, see page H-37. Hardware available separately, see Technical Data section of this catalog. J1, J2 actuators available with A, A3, AV2, AV3, V2-V61 terminations.



Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change



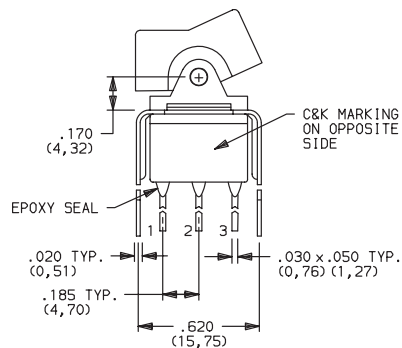
E Series

Sealed Miniature Rocker and Lever Handle Switches

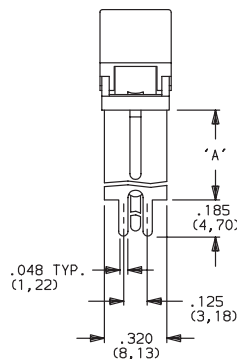
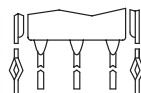
TERMINATIONS

V3, V4 VERTICAL MOUNT, V-BRACKET

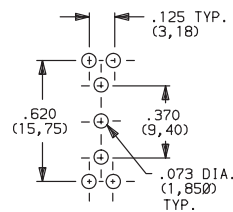
V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1



PC MOUNTING



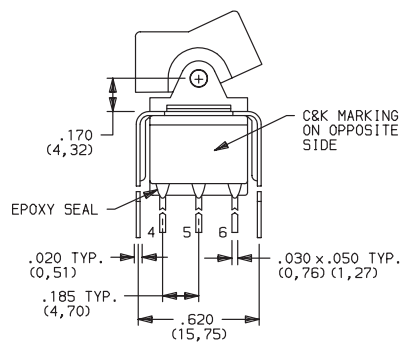
E101J1_BE2
3PDT

OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4	.630 (16,00)

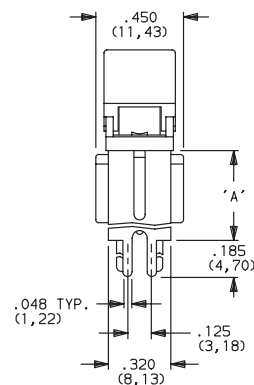
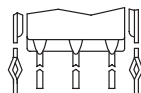
NOTE: Available actuators, see pages H-28 and H-30.

V3, V4 VERTICAL MOUNT, V-BRACKET

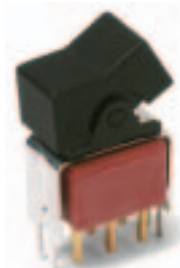
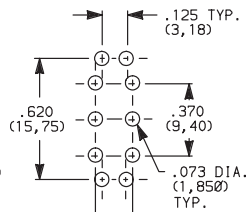
V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1



PC MOUNTING



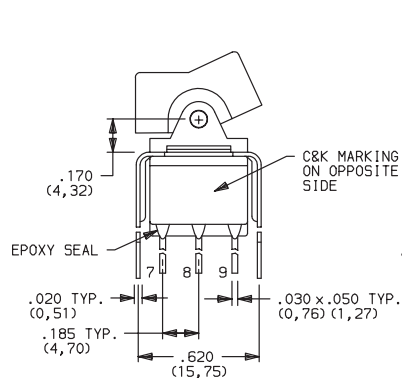
E201J1_BE2
6PDT

OPTION CODE	DIM 'A'
V3, V31	.460 (11,68)
V4	.630 (16,00)

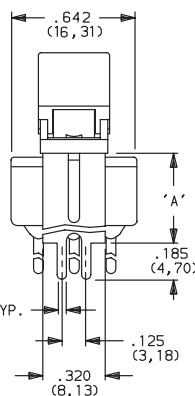
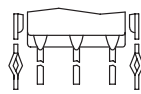
NOTE: Available actuators, see pages H-28 and H-30.

V4 VERTICAL MOUNT, V-BRACKET

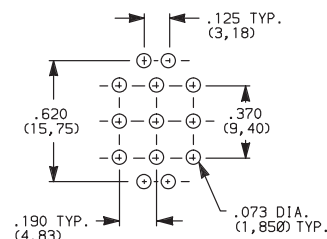
VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1



PC MOUNTING



E301J1_BE2
9PDT

OPTION CODE	DIM 'A'
V41	.630 (16,00)

NOTE: Available actuators, see pages H-28 and H-30.

Rocker



H

C&K



Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

E Series Sealed Miniature Rocker and Lever Handle Switches

CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B	GOLD ¹	GOLD ¹	LOW LEVEL/ DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
P		MATTE-TIN ⁷		
Q	SILVER ^{4,5}	SILVER ⁵	POWER	E1XX & E2XX MODELS: 7.5 AMPS @125 V AC OR 28 V DC; 3 AMPS @250 V AC. E3XX MODELS: 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
S		MATTE-TIN ⁶		
G	GOLD OVER SILVER ^{2,3}	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	E1XX AND E2XX MODELS: 0.4 VA MAX @20 V AC OR DC MAX. OR 7.5 AMPS @125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. DC E3XX MODELS: 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
R		MATTE-TIN ⁶		

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

¹ CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

² END CONTACTS: Coin silver, with gold plate over nickel plate.

³ CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

⁴ END CONTACTS: Coin silver, silver plated.

⁵ CENTER CONTACT & ALL TERMINALS: Copper alloy, with gold flash over silver plate. Or copper alloy, silver plated.

⁶ TERMINALS: Copper alloy, with matte-tin over nickel plate.

NOTE: Any models supplied with Q, B, G, S P & R contact material are RoHS compliant.

All models  with all options when ordered with G, L, M, Q, S & R contact material. B contact material standard with all terminations.

K, L and M options represent Non RoHS tin lead product and are not recommended for new designs. For additional information please contact Customer Service.

P R & S contact materials not available with Z terminations.

SEAL

E EPOXY SEAL



AVAILABLE HARDWARE

J2, J21 Actuators



PART NO.
760502263 BLACK
760503000 RED
Material: Nylon
Finish: Matte

J3 Actuator



PART NO.
766602263 BLACK
766603000 RED
Material: Nylon
Finish: Matte

J1, J11 Actuators



PART NO.
776A02263 BLACK
776A03000 RED
Material: Nylon
Finish: Matte

J50 Actuator



PART NO.
775A02263 BLACK
775A03000 RED
Material: Nylon
Finish: Matte

J60 Actuator



PART NO.
613802263 BLACK
598103000 RED
Material: Nylon
Finish: Matte

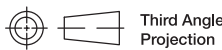
J90 Actuator



PART NO.
598002263 BLACK
598003000 RED
Material: Nylon
Finish: Matte

NOTE: Additional nuts, screws and lockwashers available separately, see Technical Data section of this catalog. Other colors available, consult Customer Service Center.

C&K



Dimensions are shown: Inch (mm)
Specifications and dimensions subject to change

Rocker



H