

# Rocker Switch TRD Series

For Additional Options Refer to Page E4-E6

## MATERIAL SPECIFICATIONS:

Contacts ..... Gold over nickel or silver plate  
 Case Material ..... Polyamide, black matte finish  
 Actuator Material ..... Polyamide  
 Terminals/Fixed Contacts ..... Copper alloy with gold or silver plate  
 Terminal Seal ..... Epoxy

## ENVIRONMENTAL SPECIFICATIONS:

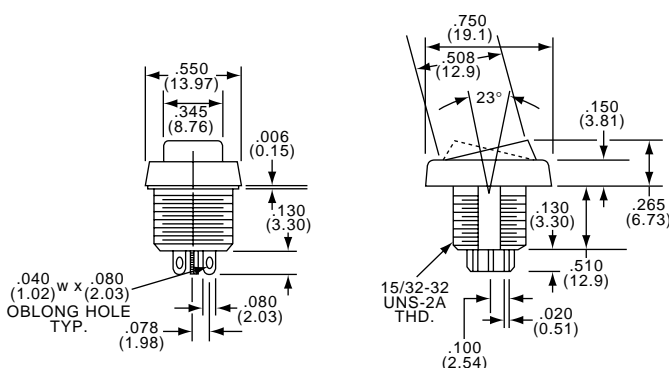
Operating Temperature ..... -4°F to +176°F (-20°C to +80°C)  
 Storage Temperature ..... -49°F to +199°F (-45°C to +93°C)

## TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating ..... 0.4 VA Max. @ 20 VDC or peak AC  
 3 A @ 125 VAC or 28 VDC (2 pos.) 2A  
 Initial Contact Resistance ..... 20 Milliohms max.  
 Contact Timing ..... Break-before-make  
 Insulation Resistance ..... 1,000 Megohms min.  
 Dielectric Strength ..... 500 Volts RMS @ sea level  
 Actuator Travel ..... 23°  
 Life Expectancy ..... 2 Pos. - 100,000 actuations  
 3 Pos. - 50,000 actuations  
 UL recognized under the Component Program of Underwriters  
 Laboratories Inc. File #E46765

**NOTE:** Part numbering sequence page E4

**NOTE:** When hand soldering, solder with switch in closed position.  
 Solder temperature 550-600°F less than 5 seconds.



DPDT



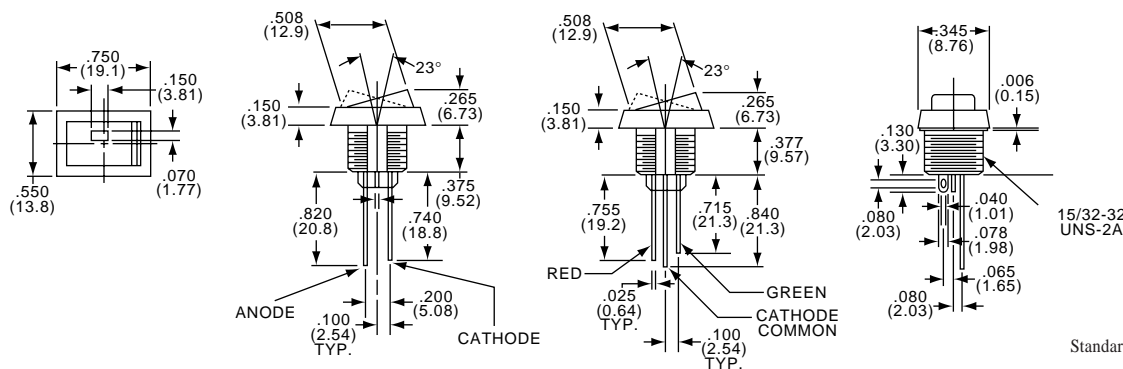
TRD21N10WL

Standard Body Color - (Black)

E

Model	Type	Function	Act. Code Pg. M8	Contact	Terminal	Model	Type	Function	Act. Code Pg. M8	Contact	Terminal
TRD11D1(*)WL	SPDT	On None On	1	Gold	Wire Lug	TRD13D1(*)WL	SPDT	On None On	1	Silver	Wire Lug
TRD11E1(*)WL	SPDT	On Off On	5	Gold	Wire Lug	TRD13E1(*)WL	SPDT	On Off On	5	Silver	Wire Lug
TRD11F1(*)WL	SPDT	On None (On)	1	Gold	Wire Lug	TRD13F1(*)WL	SPDT	On None (On)	1	Silver	Wire Lug
TRD21N1(*)WL	DPDT	On None On	2	Gold	Wire Lug	TRD23N1(*)WL	DPDT	On None On	2	Silver	Wire Lug
TRD21P1(*)WL	DP3T	On Off On	6	Gold	Wire Lug	TRD23P1(*)WL	DP3T	On Off On	6	Silver	Wire Lug
TRD21R1(*)WL	DPDT	On None (On)	2	Gold	Wire Lug	TRD23R1(*)WL	DPDT	On None (On)	2	Silver	Wire Lug

(\*) Specify rocker color by adding suffix number: (0) Black (2) Red, (6) Blue (9) Yellow.  
 (On) indicates momentary position.



SPDT



TRD11D10WLLR

Standard Body and Rocker Color - (Black)

Model	Type	Function	Act. Code Pg. M8	Contact	Terminal	Model	Type	Function	Act. Code Pg. M8	Contact	Terminal
TRD11D10WLLR(*)	SPDT	On None On	1	Gold	Wire Lug	TRD13D10WLLR(*)	SPDT	On None On	1	Gold	Wire Lug
TRD11E10WLLR(*)	SP3T	On Off On	5	Gold	Wire Lug	TRD13E10WLLR(*)	SP3T	On Off On	5	Gold	Wire Lug
TRD11F10WLLR(*)	SPDT	On None (On)	1	Gold	Wire Lug	TRD13F10WLLR(*)	SPDT	On None (On)	1	Gold	Wire Lug

(\*) Specify LED color by adding suffix number: (2) Red, (4) Yellow, (5) Green, (25) Red/Green - Bi-color  
 (On) indicates momentary position.

**Need more technical information?**

Consult your local Augat sales office listed on the back cover

AUGAT Inc.  
 452 John L. Dietsch Blvd.  
 Attleboro Falls, MA 02763 USA  
 (508) 699-9800 FAX (800) 533-2526

# TRD Series *Rocker/Paddle • How To Order*

## MATERIAL SPECIFICATIONS:

Movable Contacts ..... Copper alloy w/silver inlay contact or gold plate  
 Terminals/Fixed Contacts ..... Copper alloy w/silver inlay contact or gold plate  
 Terminal Seal ..... Epoxy  
 Housing/Beveled Frame ..... Polyamide, black matte finish

## ENVIRONMENTAL SPECIFICATIONS:

Operating Temperature ..... -4°F to +176°F (-20°C to +80°C)  
 Storage Temperature ..... -49°F to +199°F (-45°C to +93°C)  
 Solder Heat Resistance ..... Meets MIL-STD-202, method 210

## TYPICAL PERFORMANCE CHARACTERISTICS:

Contact Rating ..... Silver: 3A max. @ 125 VAC, option 3  
 Gold: 0.4VA max. @ 20 VDC, option 1  
 Initial Contact Resistance ..... 20 Milliohms max.  
 Static Withstanding ..... 15KV, per IEC 801-2  
 Insulation Resistance ..... 1,000 Megohms min. @ 500 VDC  
 Dielectric Strength ..... 500 Volts RMS @ sea level  
 Electrical Life ..... 2 Pos. 20K cycles @ full rated 3A load, 80K @ 0.4VA, 3 pos. 10K cycles @ full rated 3A load, 60K @ 0.4VA

**\*NOTICE:** Caution should be used when hand-soldering. Solder heat Resistance -550°-600°F for less than 5 seconds. Solder with the switch in the closed position.

UL recognized under the Component Program of Underwriters Laboratories Inc. File #E46765

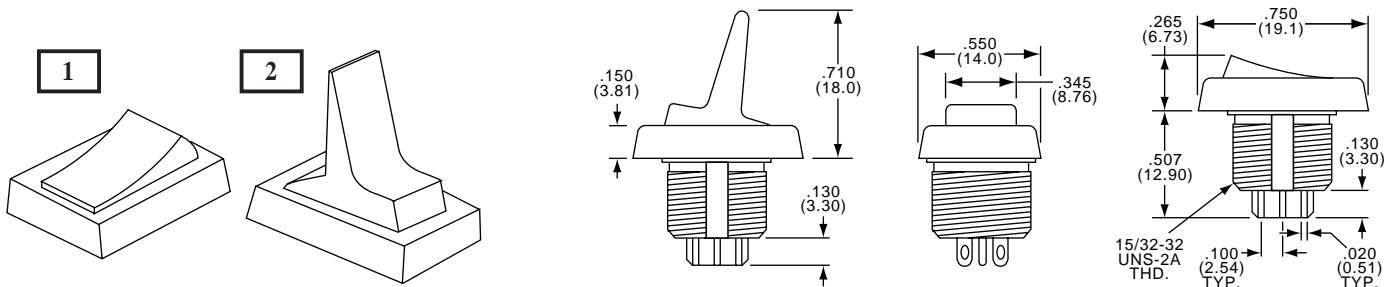
## HOW TO ORDER

See pages M2-M4 for application specific indexing.

E

Model	Contact Rating	Function	Actuator	Actuator Color	Terminal	Mount	L.E.D. Illumin.	L.E.D. Color	*UL
<b>TRD1</b>		Single Pole	<b>1</b> Rocker		<b>WL</b> Wire Lug	<b>L</b> Beveled frame adaptor		<input type="checkbox"/> None	
		<b>D</b> on-on			<b>WW</b> Wire Wrap			<b>2</b> red	
		<b>E</b> on-off-on	<b>2</b> Paddle		<b>QC</b> Quick Connect	<b>LR</b> Integral w/rocker (TRD 1 only)		<b>4</b> yellow	
<b>TRD2</b>		Double Pole		<b>0</b> black	<b>PC</b> Printed Circuit			<b>5</b> green	
	<b>1</b> Gold 0.4VA	<b>N</b> on-on		<b>2</b> red				<b>25</b> bi-color red/green	
	<b>3</b> Silver 3A	<b>P</b> on-off-on		<b>6</b> blue	<input type="checkbox"/> 15/32" round hole				Functions: Silver only D, F, N, & R
		<b>R</b> on-(on)		<b>9</b> yellow	<b>5</b> 1/2" square hole				Terminations Functions only WL, WW or QC only
		<b>S</b> (on)-off-(on)							
		<b>T</b> on-off-(on)							

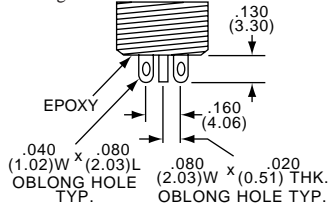
## ACTUATORS



## TERMINATIONS (Epoxy seal standard)

**WL**

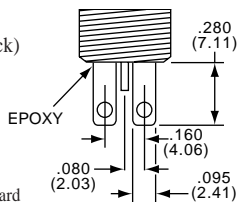
Wire Lug



**QC**

Quick Connect  
.110" (.020 thick)

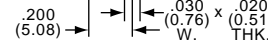
Mates with standard  
.110" female connectors



**WW**

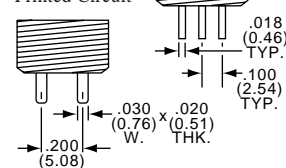
Wire Wrap

EPOXY



**PC**

Printed Circuit

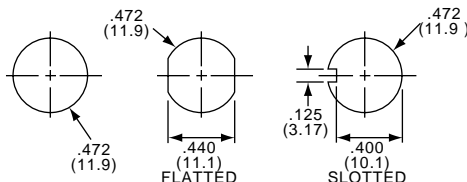


## 15/32" HOLE STANDARD

Standard TRD bushing will mount in any hole shown below.

Recommended panel thickness:  
.030" to .250"

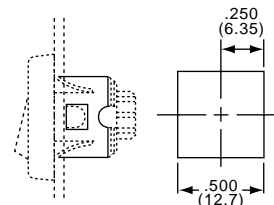
One hex nut, one internal tooth lock-washer supplied.



## 5 1/2" SQUARE CUTOUT SNAP-IN ADAPTOR

Recommended panel thickness:  
.030" to .125"

Material: bright stainless steel  
To specify adaptor separately, use P/N TRD10793



## CONTACTS/RATING/UL RECOGNITION

**1**

0.4VA Max. @ 20 VDC

Movable Contact: Copper alloy, gold plate  
Fixed Contact/Terminal: Copper alloy, gold plate

**3**

3A Max. @ 125 VAC

Movable Contact: Copper alloy, silver inlay  
Fixed Contact/Terminal: Copper alloy, silver inlay

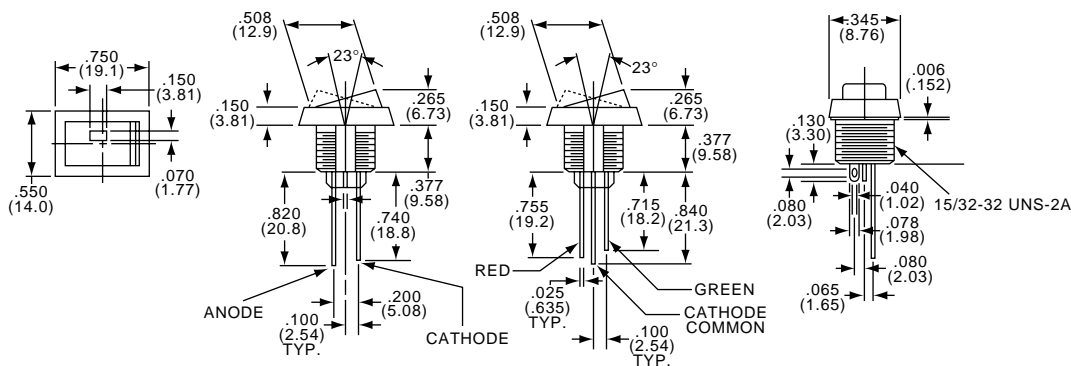
**UL**

For contact option 3  
Rating: 3A, 120 VAC(Resistive)  
File: E46765  
Underwriters Laboratories, Inc. marking stamped under beveled frame.

## L.E.D. ILLUMINATION - SINGLE AND BI-COLOR

**LR**

L.E.D. Integral  
(Rocker Actuator)  
All SPDT functions



Standard mounting dimensions apply, L.E.D. supplied in **2** red, **4** yellow, **5** green, or **25** red/green.

L.E.D. Specifications: Max Voltage: 2.8 VDC

Max. Forward Current: red-20mA, Yellow-25 mA, green-25 mA, red/green-40 mA.

Need more technical information?

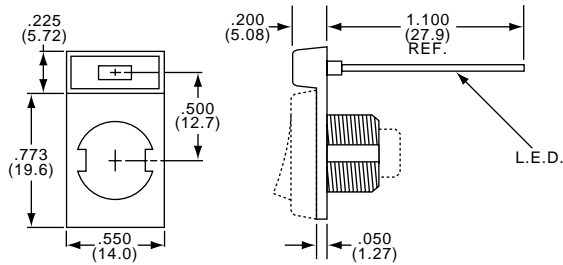
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E5

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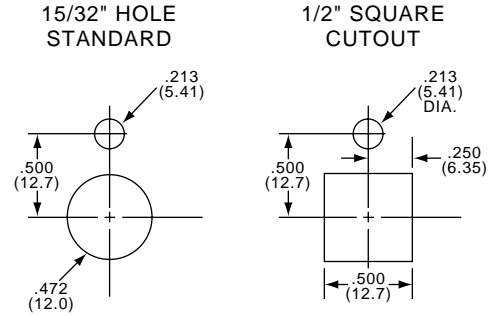
# TRD Series *Rocker/Paddle • How To Order*

## L L.E.D. BEVELE FRAME ADAPTOR (Accepts rectangular L.E.D.)



**Material:** Nylon 6/6  
**Color/Finish:** Black, matte

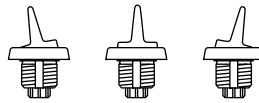
### MOUNTING



**Recommended Panel Thickness:** .030 to .220"

**Recommended Panel Thickness:** .030 to .095"

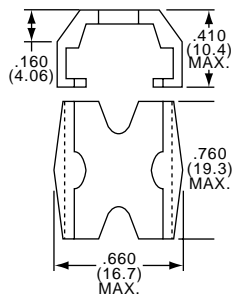
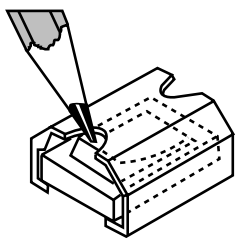
## E FUNCTIONS



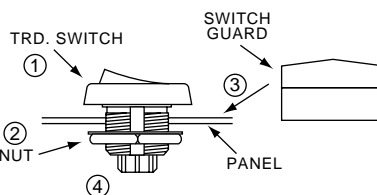
Single Pole	Double Pole	123 456	123 456	123 456
D	N	On	None	On
E	P	On	Off	On
F	R	On	None	(On)
G	S	(On)	Off	(On)
H	T	On	Off	(On)
SPDT Terminals Connected		2-3	---	1-2
DPDT Terminals Connected		2-3 5-6	---	1-2 4-5

- None** No mechanical position
- Off** Mechanical position, no electrical connection
- (On)** Momentary mechanical position, electrical connection

### SWITCH GUARD



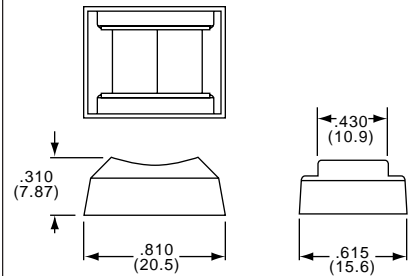
1. Insert switch in panel.
2. Attach lockwasher and hexnut.
3. Snap switch guard onto switch.
4. Tighten hex nut.



**Recommended Panel Thickness:**  
 15/32" hole standard - .030 to .220  
 15/32" square cutout - .030 to .095

**Material:** Nylon 6/6 **Color/Finish:** Black matte, Specify separately, P/N TRD10979

### ROCKER BOOT SEAL



To specify boot seal use P/N TRD11494