

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:

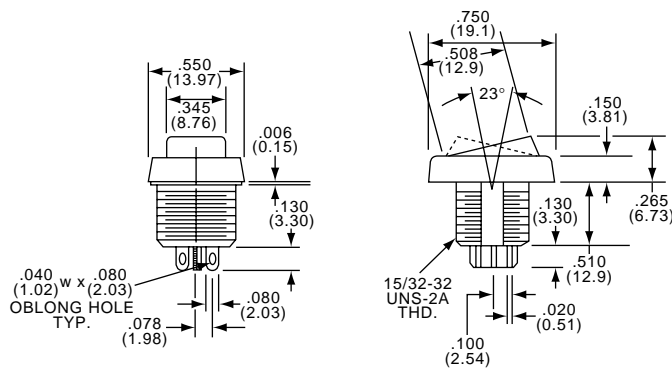
Operating Temperature -4°F to +176°F (-20°C to +80°C)
 Storage Temperature -49°F to +199°F (-45°C to +93°C)

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



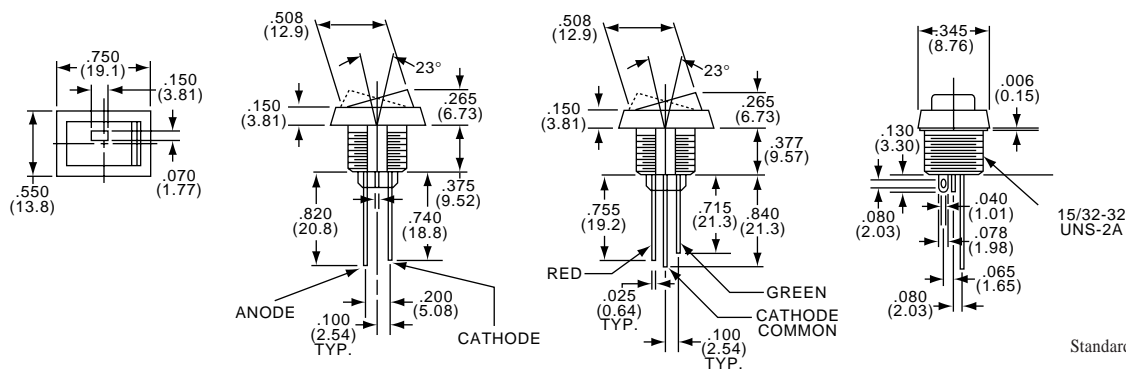
TRD21N10WL

Standard Body Color - (Black)



| 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

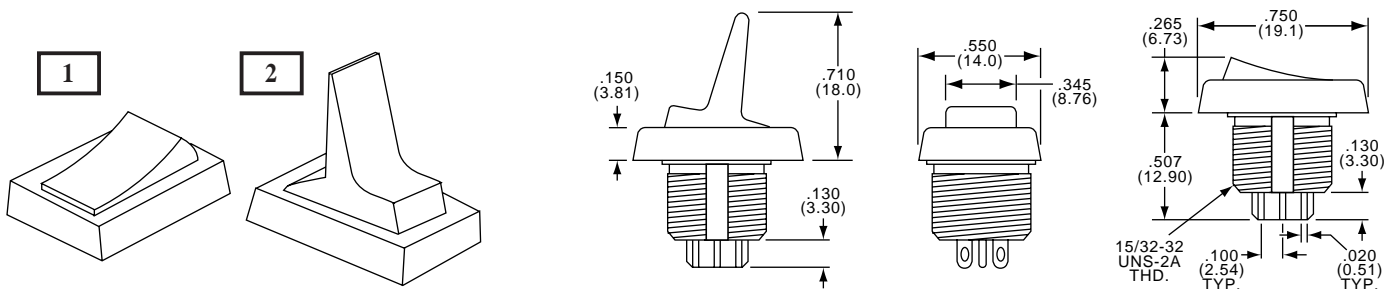
See pages M2-M4 for application specific indexing.

E

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

Functions: Silver only, D, F, N, & R
 Terminations Functions only, WL, WW or QC only

ACTUATORS

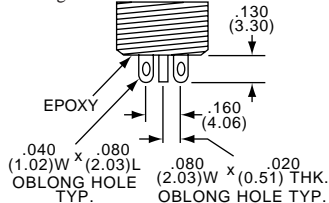


How To Order • Rocker/Paddle TRD Series

TERMINATIONS (Epoxy seal standard)

WL

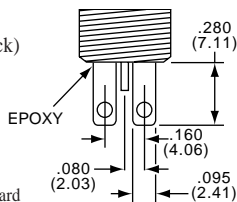
Wire Lug



QC

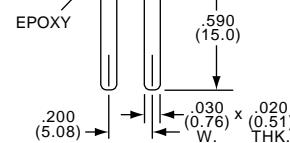
Quick Connect
.110" (.020 thick)

Mates with standard
.110" female connectors



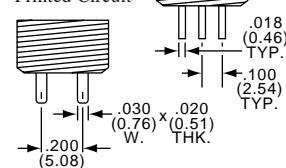
WW

Wire Wrap



PC

Printed Circuit

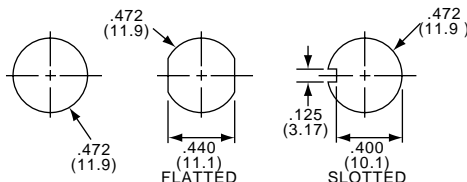


15/32" HOLE STANDARD

Standard TRD bushing will mount in any hole shown below.

Recommended panel thickness:
.030" to .250"

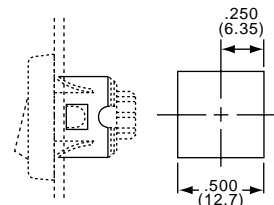
One hex nut, one internal tooth lock-washer supplied.



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

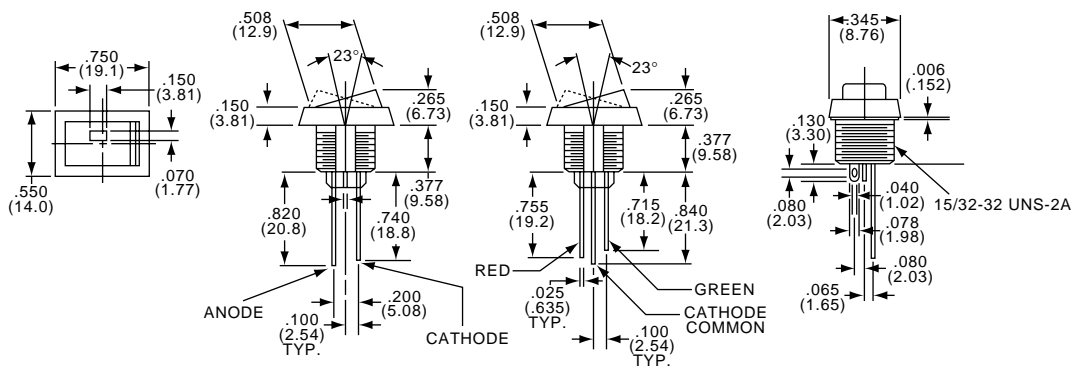
UL

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?

Consult your local Augat sales office listed on the back cover

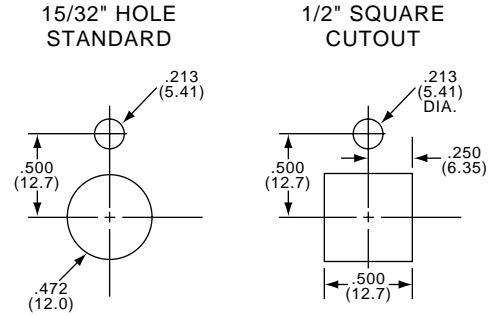
TRD Series *Rocker/Paddle • How To Order*

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



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

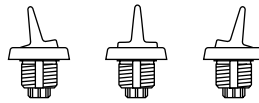
MOUNTING



Recommended Panel Thickness: .030 to .220:

Recommended Panel Thickness: .030 to .095"

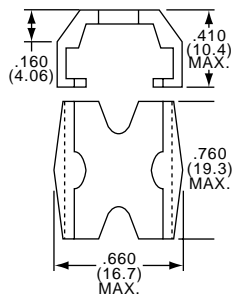
E FUNCTIONS



| 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



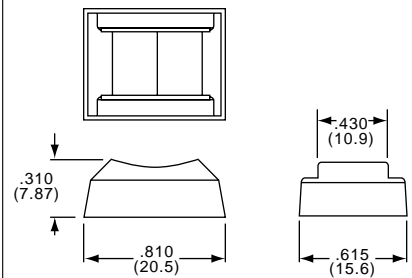
1. Insert switch in panel.
2. Attach lockwasher and hexnut.
3. Snap switch guard onto switch.
4. Tighten hex nut.



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