

Trim Switches



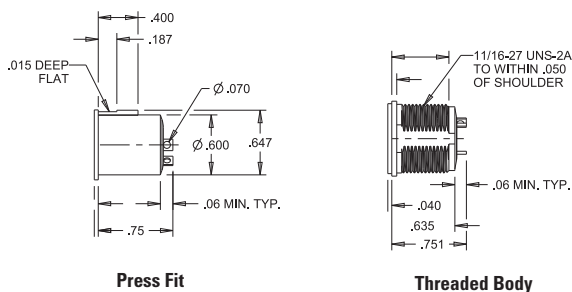
SERIES	FEATURE	ACTUATION	MAX RATING (Resistive)	SEAL RATING	MOUNTING	CIRCUITRY
MT T1 (mini)	Quiet Operation, Center Pushbutton Option	Momentary	10mA @ 5VDC (low level)	IP64, IP68S Watertight per MIL-PRF-8805 Design 3	11/16" dia. Threaded or Press Fit	SPST (x2)
MT T4 (mini)	Quiet Operation	Momentary	10mA @ 5VDC (low level)	IP64, IP68S Watertight per MIL-PRF-8805 Design 3	11/16" dia. Threaded or Press Fit	SPST (x4)
MT T4-T (mini)	Tactile Feedback	Momentary with Tactile Feel	2A @ 28VDC	Water Resistant per MIL-STD-810F, Method 506.4 Procedure 3 (Drip)	Press Fit	SPST (x4)
MT T5 (mini)	Quiet Operation, Center Pushbutton	Momentary, Lenient Option	10mA @ 5VDC (low level)	IP64, IP68S Watertight per MIL-PRF-8805 Design 3	11/16" dia. Threaded or Press Fit	SPST (x5)
MT T8 (mini)	Quiet Operation	Momentary	10mA @ 5VDC (low level)	IP64, IP68S Watertight per MIL-PRF-8805 Design 3	11/16" dia. Threaded	SPST (x8)
SPT (split trim)	Two Trim Switches	Momentary with Tactile Feel	0.6mA @ 15VDC (low level)	Water Resistant per MIL-STD-810F, Method 506.4 Procedure 3 (Drip)	3/4" dia. Threaded	Two SPST
T2 (large)	2-Way, Center Pushbutton Option	Momentary with Tactile Feel	10A @ 28VDC	MIL-PRF-8805 - Dusttight per Design 2, Resilient per Design 4	Threaded or Press Fit	SPST, DPST Double Break
T4 (large)	4-Way	Center Maintained, Momentary with Tactile Feel	5A @ 30VDC	MIL-PRF-8805 - Dusttight per Design 2, Resilient per Design 4	Threaded or Press Fit	SPST (x4) Multi-Pole Option
T5 (large)	4-Way plus Center Pushbutton	Center Maintained, Momentary with Tactile Feel	2A @ 28VDC	MIL-PRF-8805 - Dusttight per Design 2	Threaded or Press Fit	SPST (x4) Multi-Pole Option

2-WAY MINI TRIM, COMMERCIAL & MILITARY GRADES

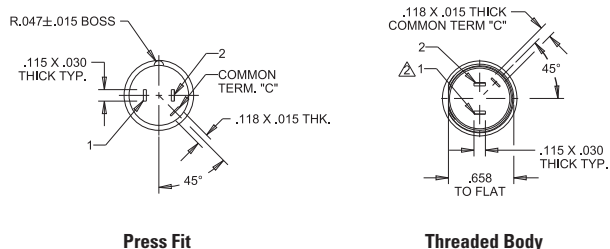
OTTO Mini Trims are toggle switches available in 2-way, 4-way, 4-way plus pushbutton, and 8-way versions. The T1 Mini Trim is a single pole, double throw, center off, momentary contact (self return to center off) switch. Numerous button styles are available on both the Commercial and Military grade switch versions. Mini Trims are typically press fit into control grips or panel mounted using versions with an 11/16" threaded case. Mini Trims are also available with multiple sealing levels to fit all applications.



Typical Dimensions



T1



Standard Characteristics/Ratings:

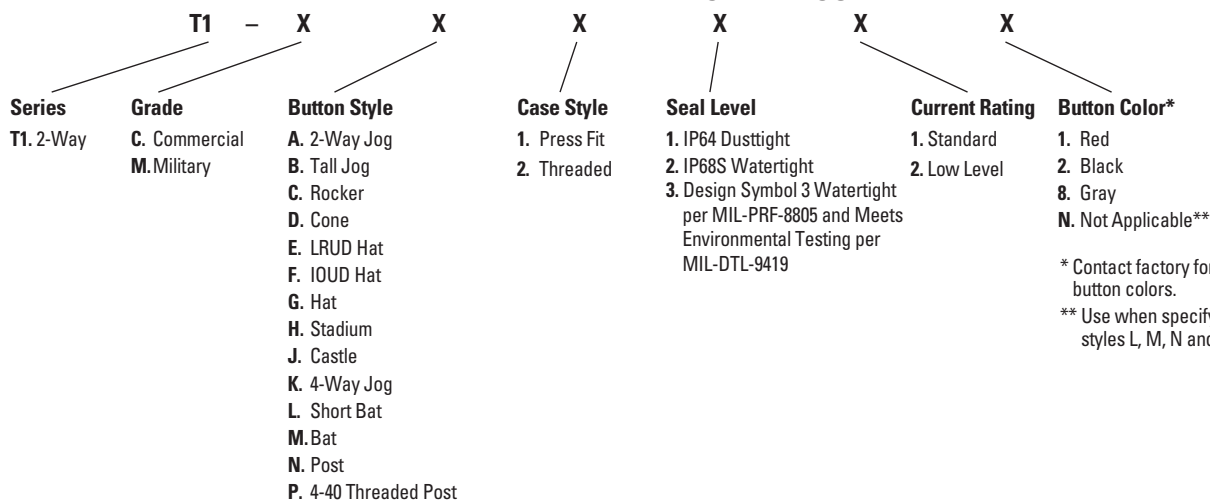
ELECTRICAL RATINGS:

Load	Rating
Resistive	10mA @ 5VDC (low level)
Inductive	1A @ 28VDC
DWV	1050Vrms
Low Level	10mA Resistive @ 5VDC
Electrical Life:	100,000 cycles 1A Inductive @ 28VDC
Lever Travel:	15° max from center OFF
Seal:	IP64 or IP68S or MIL-PRF-8805 Design 3
Operating Temp Range:	-55°C to +85°C
Operating Force:	16 oz +/- 6 oz
Lever Pivot & Stop Strength:	Switch is capable of withstanding a force of 25.0 lbs. applied to the actuating button. The button also withstands 15.0 lbs. minimum pull force.

MATERIALS:

Case:	Aluminum alloy or thermoplastic
Button:	Thermoplastic
Terminals:	Silver over brass Gold over silver over brass for low level
Terminal Hardware:	None provided
Mounting Hardware:	Hex nut and tooth lockwasher

T1 MINI TRIM PART NUMBER CODE

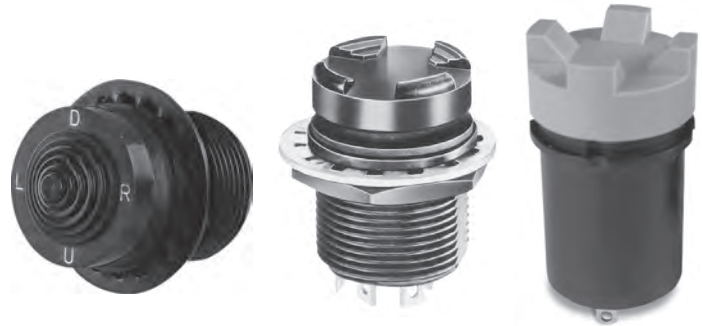


T4 MINI TRIM SWITCHES

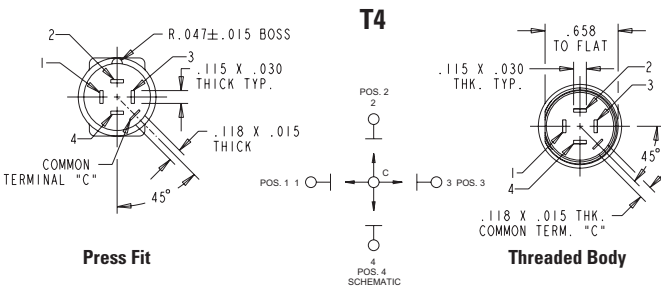
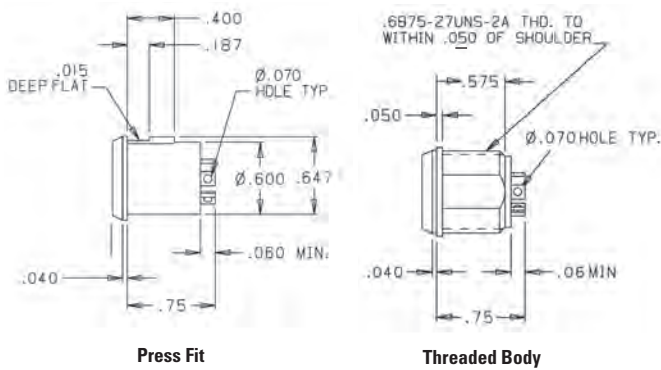
MT
T4 MINI TRIM SWITCHES

4-WAY MINI TRIM, COMMERCIAL & MILITARY GRADES

OTTO Mini Trims are toggle switches available in 2-way, 4-way, 4-way plus pushbutton, and 8-way versions. The T4 Mini Trim is a single pole, 4 throw, center off, momentary contact (self return to center off). Numerous button styles are available on both the Commercial and Military grade switch versions. Mini Trims are typically press fit into control grips or panel mounted using versions with an 11/16" threaded case. Mini Trims are also available with multiple sealing levels to fit all applications.



Typical Dimensions



Standard Characteristics/Ratings:

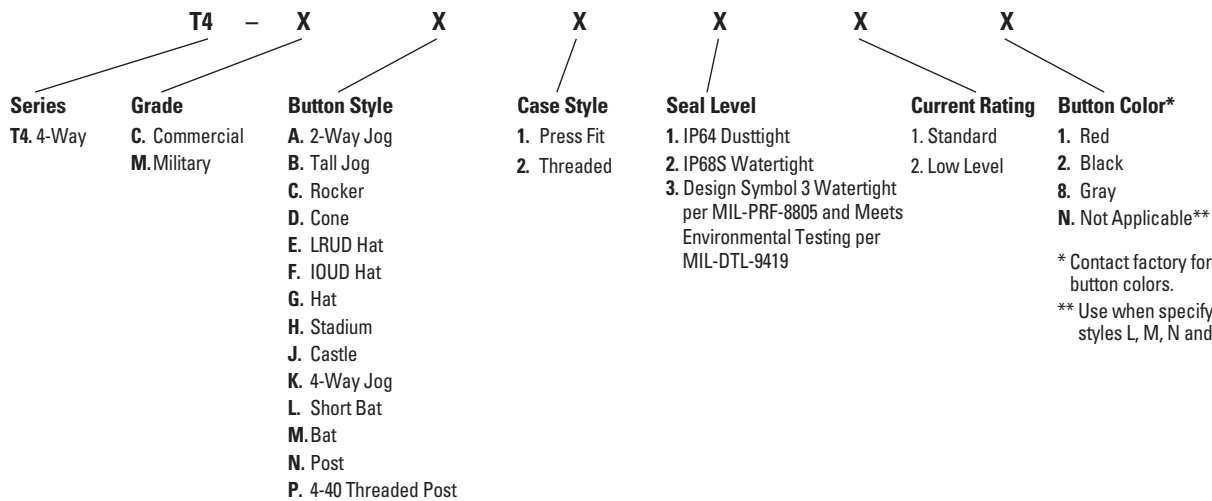
ELECTRICAL RATINGS:

Load	Rating
Resistive	10mA @ 5VDC (low level)
Inductive	1A @ 28VDC
DWV	1050Vrms
Low Level	10mA Resistive @ 5VDC
Electrical Life:	100,000 cycles 1A Inductive @ 28VDC
Lever Travel:	15° max from center OFF
Seal:	IP64 or IP68S or MIL-PRF-8805 Design 3
Operating Temp Range:	-55°C to +85°C
Operating Force:	16 oz +/- 6 oz
Lever Pivot & Stop Strength:	Switch is capable of withstanding a force of 25.0 lbs. applied to the actuating button. The button also withstands 15.0 lbs. minimum pull force.

MATERIALS:

Case:	Aluminum alloy or thermoplastic
Button:	Thermoplastic
Terminals:	Silver over brass Brass with gold over silver for low level
Terminal Hardware:	None provided
Mounting Hardware:	Hex nut, tooth lockwasher, panel seal gasket where applicable

T4 MINI TRIM PART NUMBER CODE



4-WAY MOMENTARY TOGGLE WITH TACTILE RESPONSE

Tactile switches remain a favorite among design engineers because the positive detent indicates circuit transfer to the operator. The T4-T toggle switch provides a 4-way momentary toggle action with detent providing a positive click action. The T4-T series provides Commercial and Military grade switching with a positive click action, ideal for grip applications in aircraft and off-road equipment.

Features:

- **Positive detent**
- **4-way momentary toggle action**
- **Positive click action**
- **Low level switching**
- **Water resistant per MIL-STD-810F; method 506.4, procedure 3 (drip)**
- **Available in Commercial & Military grades**
- **Variety of button styles & colors available**
- **RoHS/WEEE/Reach compliant**

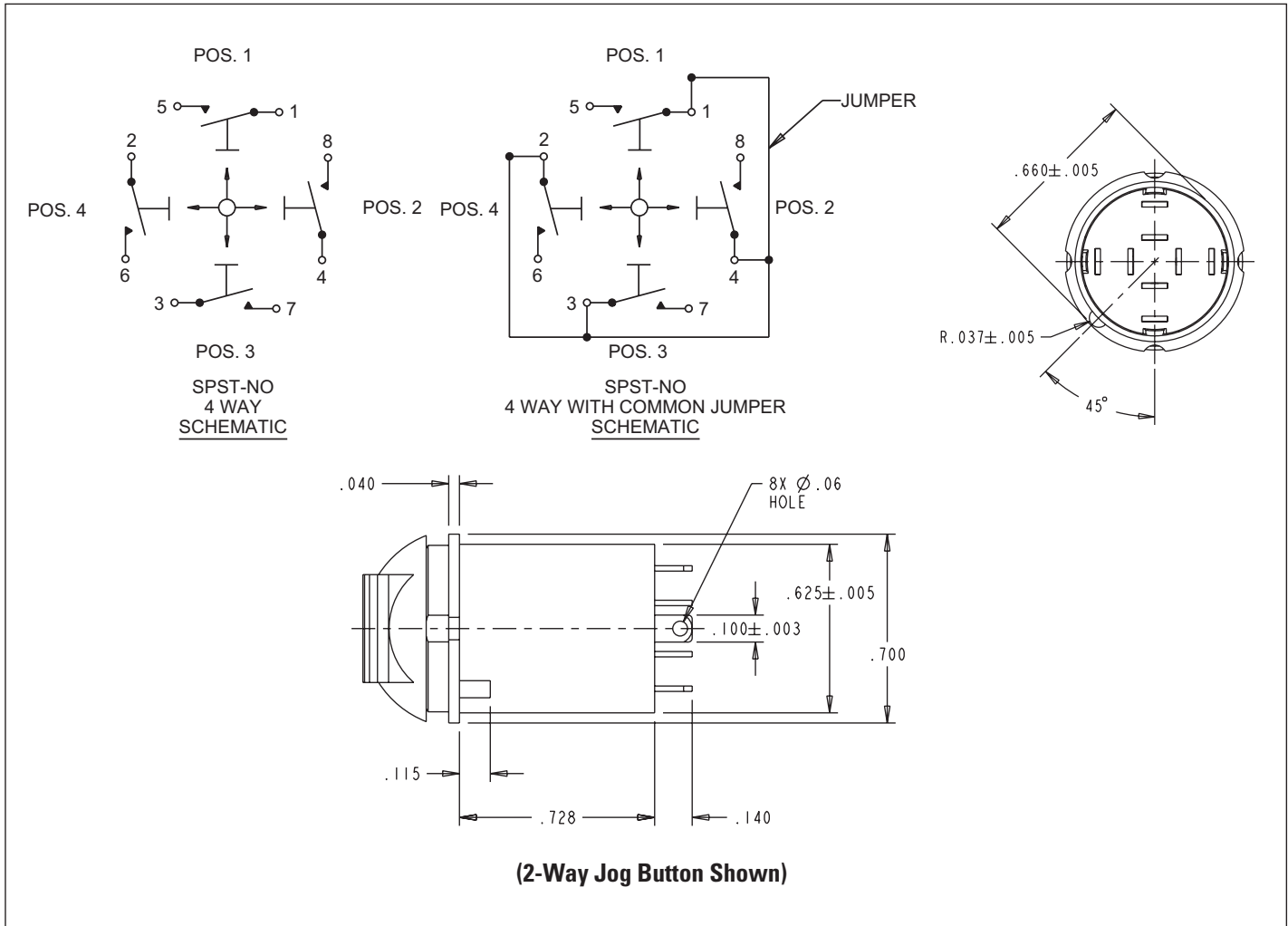


Standard Characteristics/Ratings:	
ELECTRICAL RATINGS:	
Load	Sea Level @ 28VDC
Resistive	2A
Inductive	1A
DWV	1050Vrms
Low Level	10mA @ 30mV
Electrical Life:	100,000 cycles
Mechanical Life:	500,000 cycles
Seal:	Water resistant per MIL-STD-810F, method 506.4, procedure 3 (drip)
Operating Temp Range:	-55°C to +85°C
Operating Force:	0.75 lb. +/- 0.25 lb.
Overtravel:	1.5° min
Pretravel:	9.5° max
Return Point:	4° min
MATERIALS:	
Case:	Thermoplastic
Button:	Thermoplastic
Terminals:	Beryllium copper or brass Gold over silver for low level
Mounting Hardware:	None provided

T4-T TACTILE MINI TRIM

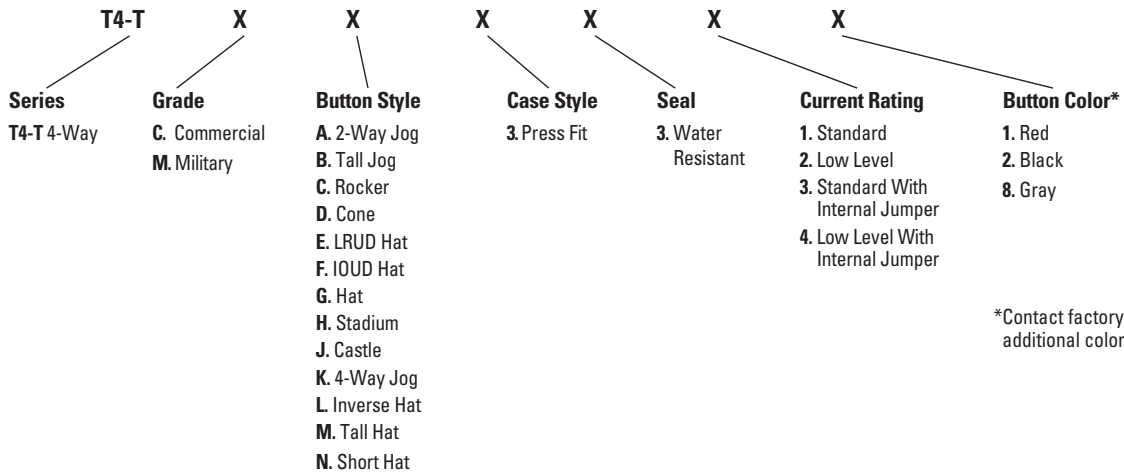
MT
T4-T TACTILE
MINI TRIM

4-WAY MOMENTARY TOGGLE WITH TACTILE RESPONSE



TRIM SWITCHES

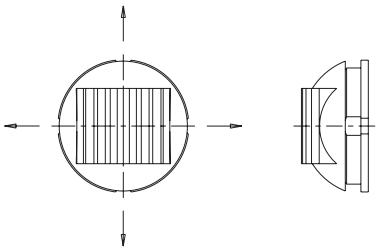
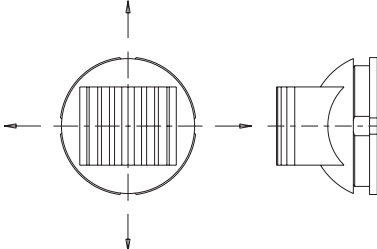
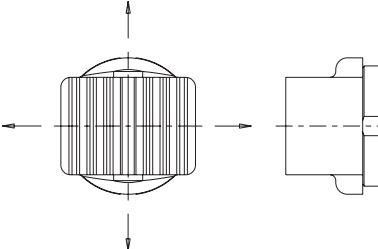
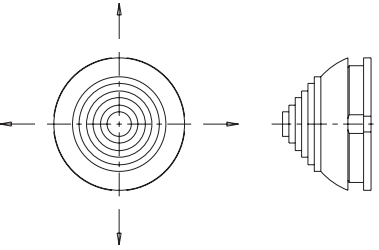
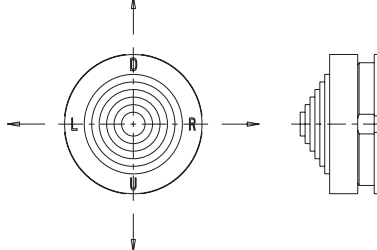
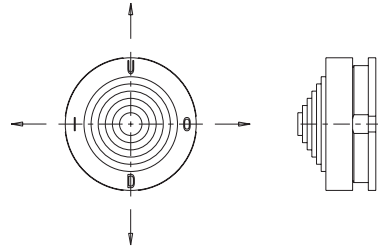
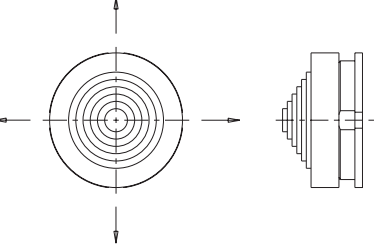
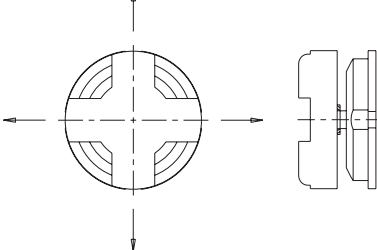
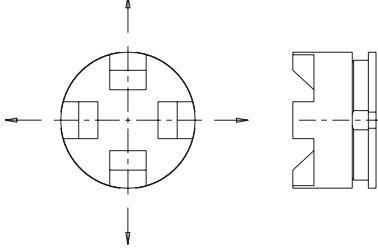
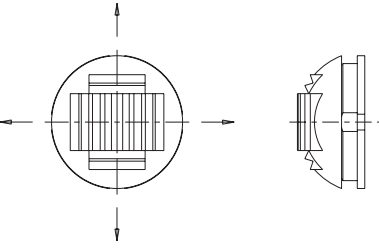
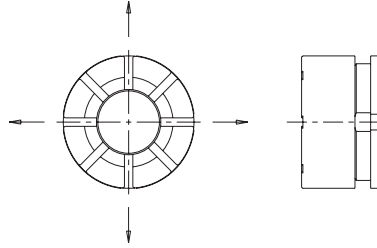
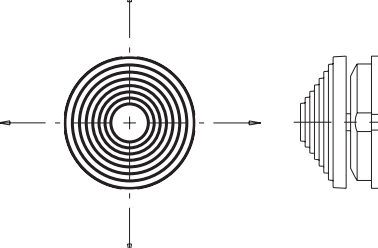
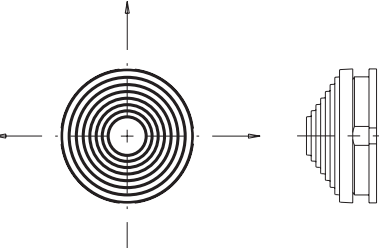
T4-T PART NUMBER CODE



*Contact factory for additional colors.

T4-T TACTILE BUTTON STYLES

4-WAY MOMENTARY TOGGLE WITH TACTILE RESPONSE

<p>A - 2-WAY JOG</p> 	<p>B - TALL JOG</p> 	<p>C - ROCKER</p> 
<p>D - CONE</p> 	<p>E - LRUD HAT</p> 	<p>F - IOUD HAT</p> 
<p>G - HAT</p> 	<p>H - STADIUM</p> 	<p>J - CASTLE</p> 
<p>K - JOG</p> 	<p>L - INVERSE HAT</p> 	<p>M - 4-WAY TALL HAT</p> 
<p>N - 4-WAY SHORT HAT</p> 		

T5 MINI TRIM SWITCHES

MT
T5 MINI TRIM SWITCHES

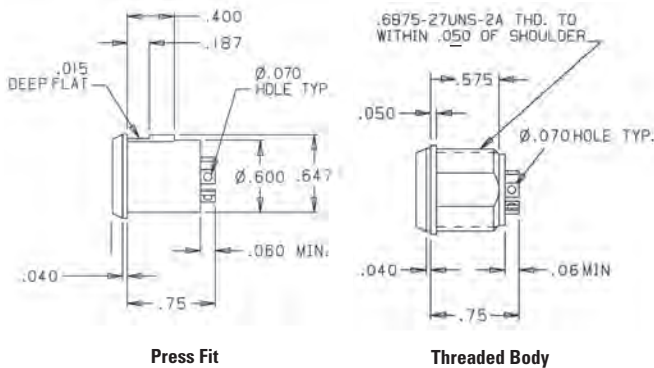
4-WAY PLUS CENTER PUSHBUTTON MINI TRIM, COMMERCIAL & MILITARY GRADES

OTTO Mini Trims are toggle switches available in 2-way, 4-way, 4-way plus pushbutton, and 8-way versions. The T5 Mini Trim is a single pole, 5 throw Center off momentary contact (self return to center off) switch. Numerous button styles are available on both the Commercial and Military grade switch versions. Mini Trims are typically press fit into control grips or panel mounted using versions with an 11/16" threaded case. Mini Trims are also available with multiple sealing levels to fit all applications.

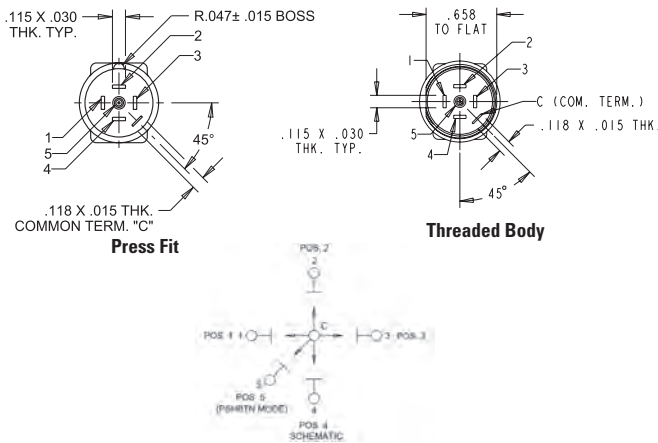


TRIM SWITCHES

Typical Dimensions



T5



Standard Characteristics/Ratings:

ELECTRICAL RATINGS:

Load	Rating
Resistive	10mA @ 5VDC (low level)
Inductive	1A @ 28VDC
DWV	1050Vrms
Low Level	10mA Resistive @ 5VDC

Electrical Life: 100,000 cycles 1A Inductive @ 28VDC

Lever Travel: Toggle: 15° max from center OFF
Pushbutton: 0.020 inches min

Seal: IP64 or IP68S or MIL-PRF-8805 Design 3

Operating Temp Range: -55°C to +85°C

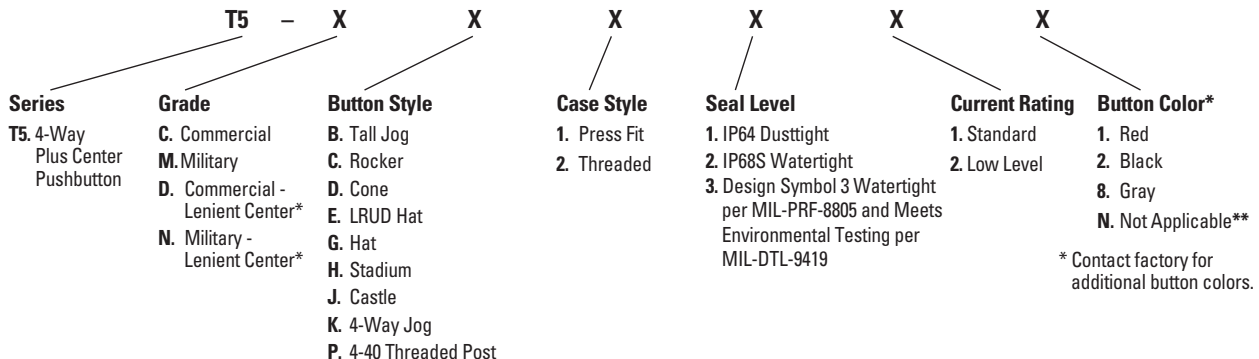
Operating Force: Toggle: 16 oz +/- 6 oz
Pushbutton: 5.0 lbs. max

Lever Pivot & Stop Strength: Switch is capable of withstanding a force of 25.0 lbs. applied to the actuating button. The button also withstands 15.0 lbs. minimum pull force.

MATERIALS:

Case:	Aluminum alloy or thermoplastic
Button:	Thermoplastic
Terminals:	Silver over brass Brass with gold over silver for low level
Terminal Hardware:	None provided
Mounting Hardware:	Hex nut, tooth lockwasher, panel seal gasket where applicable

T5 MINI TRIM PART NUMBER CODE



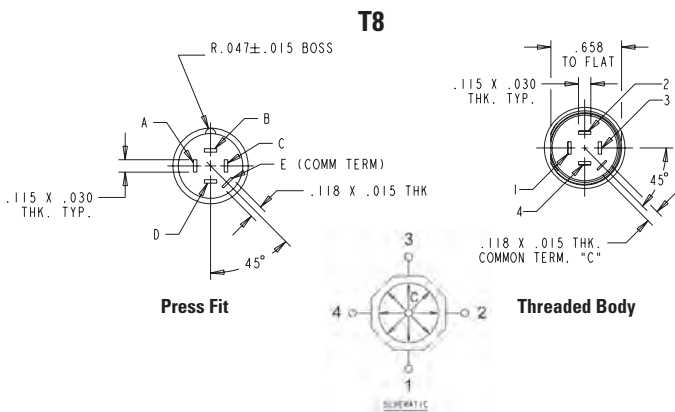
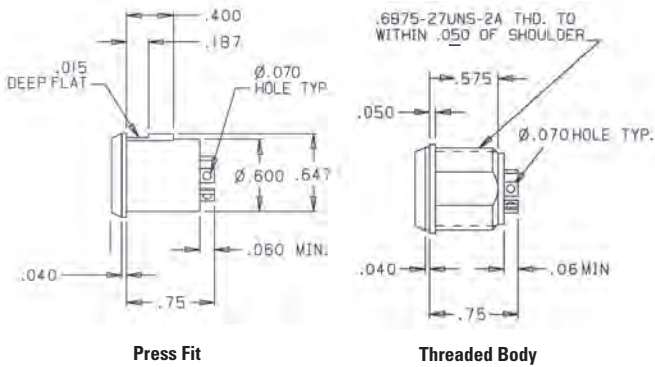
T8 MINI TRIM SWITCHES

8-WAY MINI TRIM, COMMERCIAL & MILITARY GRADES

OTTO Mini Trims are toggle switches available in 2-way, 4-way, 4-way plus pushbutton, and 8-way versions. The T8 Mini Trim is a single pole, 8 throw, center off momentary contact (self return to center off) switch. Numerous button styles are available on both the Commercial and Military grade switch versions. Mini Trims are typically press fit into control grips or panel mounted using versions with an 11/16" threaded case. Mini Trims are also available with multiple sealing levels to fit all applications.



Typical Dimensions



Standard Characteristics/Ratings:

ELECTRICAL RATINGS:

Load	Rating
Resistive	10mA @ 5VDC (low level)
Inductive	1A @ 28VDC
DWV	1050Vrms
Low Level	10mA Resistive @ 5VDC

Electrical Life: 100,000 cycles 1A Inductive @ 28VDC

Lever Travel: Toggle: 15° max from center OFF

Seal: IP64 or IP68S or MIL-PRF-8805 Design 3

Operating Temp Range: -55°C to +85°C

Operating Force: Toggle: 16 oz +/- 6 oz

Lever Pivot & Stop Strength: Switch is capable of withstanding a force of 25.0 lbs. applied to the actuating button. The button also withstands 15.0 lbs. minimum pull force.

MATERIALS:

Case: Aluminum alloy or thermoplastic

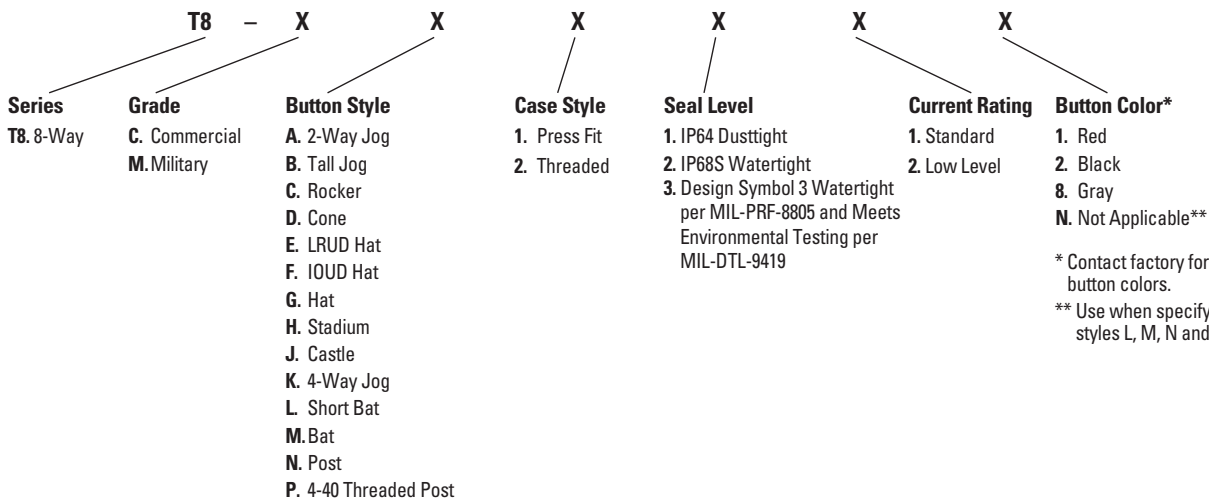
Button: Thermoplastic

Terminals: Silver over brass
Brass with gold over silver for low level

Terminal Hardware: None provided

Mounting Hardware: Hex nut, tooth lockwasher, panel seal gasket where applicable

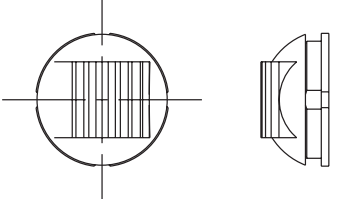
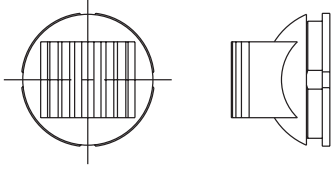
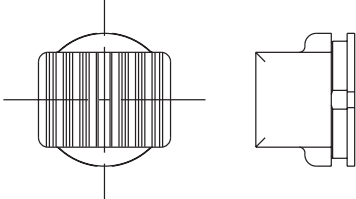
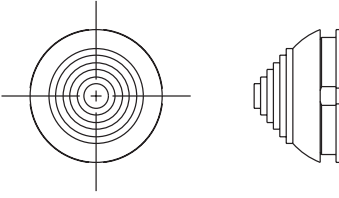
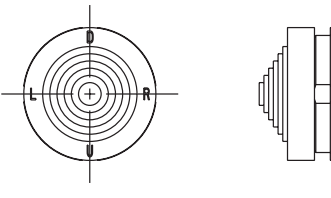
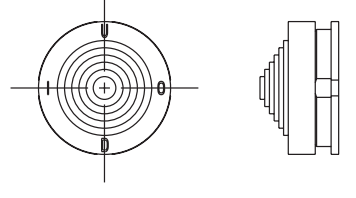
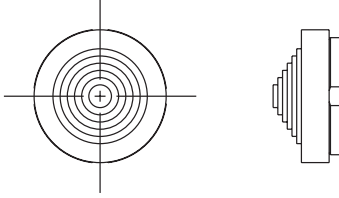
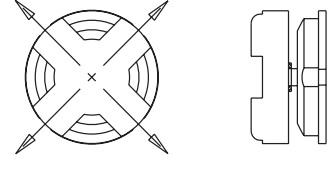
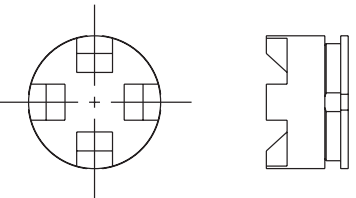
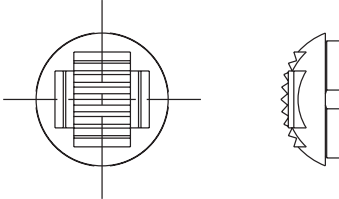
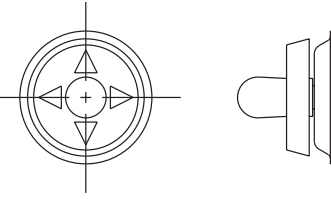
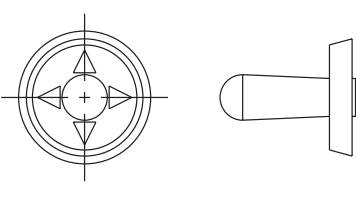
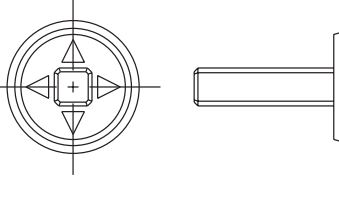
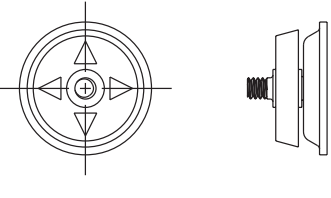
T8 MINI TRIM PART NUMBER CODE



MINI TRIM BUTTON STYLES

MT
MINI TRIM
BUTTON STYLES

MINI TRIM BUTTON STYLES

<p>A - 2-WAY JOG</p> 	<p>B - TALL JOG</p> 	<p>C - ROCKER</p> 
<p>D - CONE</p> 	<p>E - LRUD HAT</p> 	<p>F - IOUD HAT</p> 
<p>G - HAT</p> 	<p>H - STADIUM</p> 	<p>J - CASTLE</p> 
<p>K - 4-WAY JOG</p> 	<p>L - SHORT BAT</p> 	<p>M - LONG BAT</p> 
<p>N - POST</p> 	<p>P - 4-40 THREADED POST</p> 	

TRIM SWITCHES

TWO-WAY MOMENTARY TRIMS WITH TACTILE RESPONSE



OTTO's Split Trim switch uses 2 single-pole-single-throw momentary toggles with detent providing a positive click action. Each two-way switch can operate independently or simultaneously. OTTO's Split Trim switches are available in both commercial and military grades and are most ideal for applications in aircraft, but can also be used in medical, unmanned vehicle, construction and agricultural equipment.

Features:

- Tactile Feedback
- 2-way momentary actuation of each switch
- Low level switching option
- Water resistant per MIL-STD-810F; method 506.4, procedure 3 (drip)
- Available in Commercial & Military grades
- Choice of button colors
- Choice of case styles
- RoHS/WEEE/Reach compliant

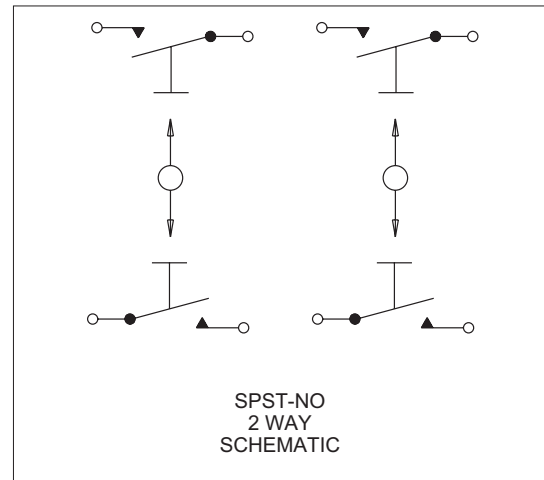
Standard Characteristics/Ratings:

ELECTRICAL RATINGS:

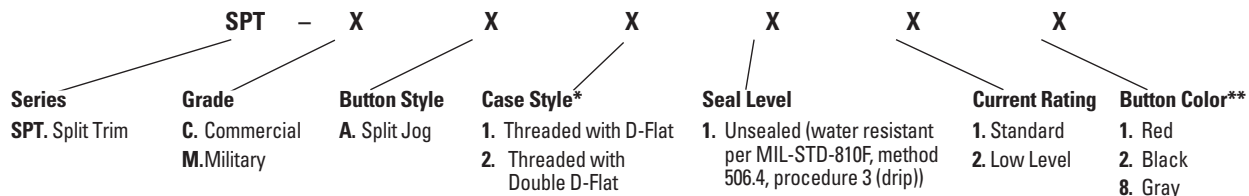
Load	Sea Level @ 28VDC
Resistive	2A
Inductive	1A
DVV	1050Vrms
Electrical Life:	150,000 cycles commercial, 100,000 cycles military
Mechanical Life:	200,000 cycles
Seal:	Water resistant per MIL-STD-810F, method 506.4 procedure 3 (drip)
Operating Temp Range:	-40°C to +85°C
Operating Force:	0.75 +/- 0.25 lbs.
Return Point:	4° minimum
Pretravel:	9.5° maximum
Overtravel:	1.5° minimum

MATERIALS:

Case:	Black Anodized Aluminum
Button:	Delrin
Terminals:	Beryllium copper or brass Gold over silver for low level
Terminal Hardware:	None provided
Mounting Hardware:	Hex nut and lockwasher



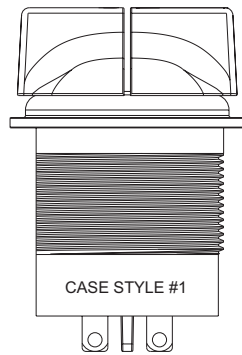
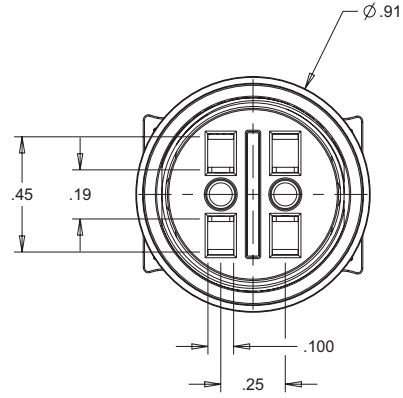
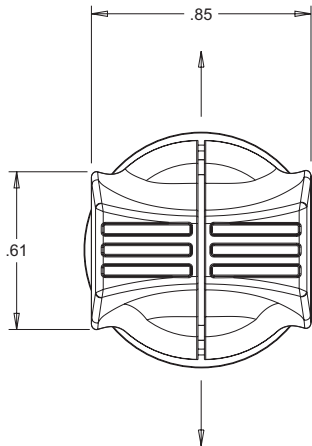
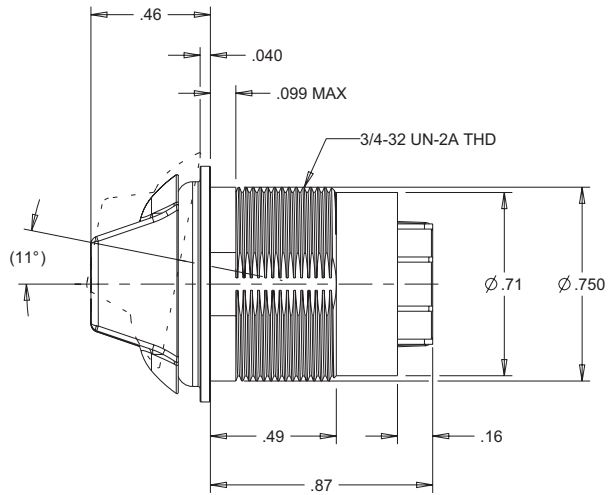
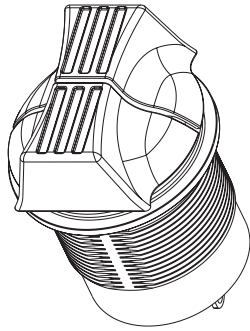
SPLIT TRIM PART NUMBER CODE



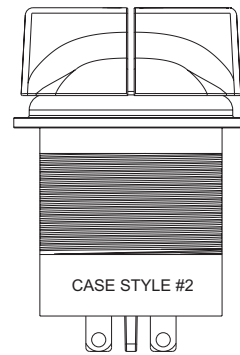
*Contact factory for press fit case.

**Additional button colors are available.

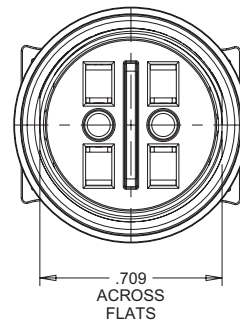
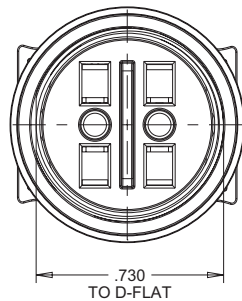
TWO-WAY MOMENTARY TRIMS WITH TACTILE RESPONSE



Single D-Flat



Double D-Flat



MULTI-POSITION TOGGLE PLUS PUSHBUTTON, COMMERCIAL & MILITARY GRADES

The T2 series provides two functions in one compact switch: toggle and pushbutton action. Features toggle lockout when pushbutton mode is actuated and pushbutton lockout when in toggle mode. A resilient seal in the plunger provides splashproof and dusttight seal.

T2-0004

Operating Force: 24 +/- 10 oz
Circuit: DPDT-NO, ON-OFF-ON
 No pushbutton function
Rating: 5 amps Resistive
 3 amps Inductive
 1 amp Lamp
 Low Level: 2mA @ 15VDC
Mechanical Life: 100,000 cycles
Electrical Life: 100,000 cycles
Seal: Enclosure Design 4, resilient per MIL-PRF-8805
Button: Gray thermoplastic
Case: Black anodized aluminum



T2-0034

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: SPNO double break
Rating: 1A to 50mA Resistive @ 4-28VDC
Electrical Life: 100,000 cycles
Seal: Enclosure Design 2, dusttight per MIL-PRF-8805
Button: Gray nylon
Case: Black anodized aluminum alloy



T2-0008

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO double break
Rating: Toggle: 10 amps Resistive / 5 amps Inductive
 Pushbutton: 10 amps Resistive / 3 amps Inductive
Electrical Life: 50,000 cycles
Button: Black nylon
Case: Black anodized aluminum



T2-0018

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO double break
Rating: 1 amp Resistive
 0.5 amp Inductive
Electrical Life: 50,000 cycles
Seal: Enclosure Design 4, resilient per MIL-PRF-8805
Button: Black nylon
Case: Black anodized aluminum alloy



T2-0009

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO double break
Rating: Toggle: 10 amps Resistive / 5 amps Inductive
 Pushbutton: 10 amps Resistive / 3 amps Inductive
Electrical Life: 50,000 cycles
Seal: Enclosure Design 4, resilient per MIL-PRF-8805
Button: Black nylon
Case: Black anodized aluminum alloy



T2-0047

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO double break
Rating: 0.1mA to 500mA Resistive @ 5-32VDC
 0.1mA to 500mA Inductive @ 5-32VDC
Electrical Life: 50,000 cycles
Seal: Enclosure Design 4, resilient per MIL-PRF-8805
Button: Black nylon
Case: Dry black chrome plated aluminum alloy



T2-0015

Operating Force: Toggle: 5.0 lbs.
 Pushbutton: 4.0 lbs.
Circuit: Toggle: SPST-NO, 4-position, center OFF, momentary
 Pushbutton: DPST-NO
Rating: 2 amps Resistive
 2 amps Inductive
Electrical Life: 50,000 cycles
Seal: Enclosure Design 4, resilient per MIL-PRF-8805
Button: Black nylon
Case: Black anodized aluminum alloy



T2-0044

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 3.75 lbs.
Circuit: Toggle: DPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO double break
Rating: 0.1mA to 500mA Resistive @ 5-32VDC
 0.1mA to 500mA Inductive @ 5-32VDC
Electrical Life: 50,000 cycles
Seal: Enclosure Design 2, dusttight per MIL-PRF-8805
Button: Black nylon
Case: Dry black chrome plated aluminum alloy



T2-0016

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO
Rating: 1mA to 250mA Resistive @ 12-28VDC
Electrical Life: 50,000 cycles
Seal: Enclosure Design 4, resilient per MIL-PRF-8805
Button: Black nylon
Case: Black anodized aluminum alloy



T2-0045

Operating Force: Toggle: 2.5 lbs.
 Pushbutton: 4.5 lbs.
Circuit: Toggle: SPST-NO, ON-OFF-ON
 Pushbutton: DPST-NO double break
Rating: 1mA to 250mA Resistive @ 12-28VDC
Electrical Life: 50,000 cycles
Seal: Enclosure Design 4, resilient per MIL-S-8805
Button: Black nylon
Case: Black anodized aluminum alloy



LARGE TRIM SWITCHES, 4 & 5-WAY

T4/T5
4-WAY
TOGGLES

4-WAY TOGGLE SWITCHES WITH OR WITHOUT CENTER PUSHBUTTON

TRIM SWITCHES

T4-0010

Actuation: Center position maintained, all other positions momentary
Rating: 5 amps Resistive @ 30VDC sea level
 3 amps Inductive @ 30VDC sea level
 DWV: 1050Vrms @ sea level
 400Vrms @ 70,000 feet
Electrical Life: 100,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Black thermoplastic
Case: Black anodized aluminum alloy



T5-0004

Actuation: Toggle & Pushbutton: center position maintained, all other positions momentary
Rating: 2 amps Resistive @ 28VDC or 115VAC/60Hz
 DWV: 1050Vrms
Electrical Life: 50,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Black thermoplastic
Case: Anodized aluminum alloy



T4-0065

Actuation: Center position maintained, all other positions momentary
Rating: 5 amps Resistive @ 30VDC sea level
 2.5 amps Resistive @ 70,000 feet
 3 amps Inductive @ 30VDC sea level
 1.5 amps Inductive @ 70,000 feet
 DWV: 1050Vrms @ sea level
 400Vrms @ 70,000 feet
Electrical Life: 100,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Black thermoplastic
Case: Black anodized aluminum alloy



T5-0015

Actuation: Toggle & Pushbutton: center position maintained, all other positions momentary
Rating: 2 amps Resistive @ 28VDC or 115VAC/60Hz
 DWV: 1050Vrms
Electrical Life: 50,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Gray thermoplastic



T4-0082

Actuation: Toggle: center position maintained, all other positions momentary
Rating: 5 amps Resistive @ 30VDC sea level
 3 amps Inductive @ 30VDC sea level
 DWV: 1050Vrms @ sea level
Electrical Life: 50,000 cycles
Enclosure: Resilient per MIL-PRF-8805 Design 4
Button: Black thermoplastic
Case: Aluminum alloy



T5-0018

Actuation: Toggle & Pushbutton: center position maintained, all other positions momentary
Rating: 2 amps Resistive @ 28VDC or 115VAC/60Hz
 DWV: 1050Vrms
Electrical Life: 50,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Black thermoplastic



T4-0111

Actuation: Toggle: center position maintained, all other positions momentary
Rating: 2 amps Resistive @ 28 VDC sea level
 .5 amps Inductive @ 28 VDC sea level
 DWV: 1050Vrms @ sea level
Electrical Life: 100,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Black Nylon
Case: Aluminum alloy



T5-0028

Actuation: Toggle & Pushbutton: center position maintained, all other positions momentary
Rating: 2 amps Resistive @ 28VDC or 115VAC/60Hz
 DWV: 1050Vrms
Electrical Life: 50,000 cycles
Enclosure: Dusttight per MIL-PRF-8805 Design 2
Button: Black thermoplastic
Case: Anodized aluminum alloy



NOTE: Contact factory for additional configurations.