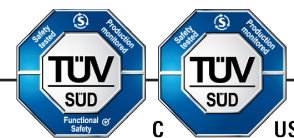















## Operating Instructions: Volt Free Non Illuminating & Illuminating Switches



Core Elements

Description	TUB	TUR	TUG	TUW	TUY	TUZ
<p>1 Normally Open (N/O) Switch for machine control.</p> <ul style="list-style-type: none"> <li>Volt Free Contacts.</li> <li>Each switch uses 2 output pins.</li> </ul> 						
Description	TU1	TU2	TU3	TU6	TU7	
<p>1 Normally Open (N/O) Illuminated Switch for machine control.</p> <ul style="list-style-type: none"> <li>Volt Free Contacts.</li> <li>Each switch uses 1 input and 2 output pins.</li> <li>Inputs to the tGard stack are always assigned before outputs.</li> </ul>						
<p><b>Laser Engraving Information</b> Engraving for each button is 2 lines of 8 characters</p>						

Technical Specifications	Pushbuttons	Illuminated Pushbuttons
Housing Materials	Painted die cast aluminium	Painted die cast aluminium
Colour	Dark Grey	Dark Grey
Ingress Protection	IP65*	IP65*
Mechanical Life	1,000,000 Operations	1,000,000 Operations
Electrical Life	1,000,000 Operations	1,000,000 Operations
LED Life	N/A	100,000 hours on time
Maximum Frequency of Ops	1 per second	N/A
Ambient Temperature	-25°C to 40°C (-13°F to 104°F)	-25°C to 40°C (-13°F to 104°F)
Environment	Indoor use only	Indoor use only
Switching Contact Element	1 output	1 output
Switching Current	1mA MIN / 100mA MAX	1mA MIN / 100mA MAX
Switching Voltage	24V	24V
Contact Material	Gold	Gold

\*IP protection is to the tGard stack that this module attaches to, when correctly fitted according to installation and maintenance instructions.

Safety Related Data	
Standards	EN60957-5-5 (Low-voltage switchgear and control gear).
Approvals	TÜV SÜD for Europe, Canada & USA

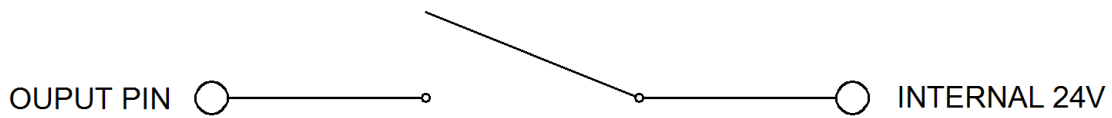
tGard Pushbutton Electrical Guidance			
Inputs	Outputs	Module operates on the safety circuits	Order of pin assignment from base to head
0	2	No	-

tGard Illuminated Pushbutton Electrical Guidance			
Inputs	Outputs	Module operates on the safety circuits	Order of pin assignment from base to head
1	2	No	Input (LED) assigned first

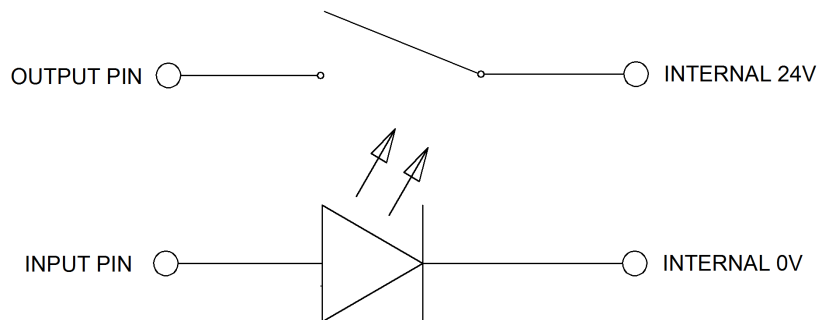
# Operating Instructions: Volt Free Non Illuminating & Illuminating Switches

Part Number Options	
Description	Part No.
Pushbutton - Black	TUB
Pushbutton - Red	TUR
Pushbutton - Green	TUG
Pushbutton - White	TUW
Pushbutton - Yellow	TUY
Pushbutton - Blue	TUZ
Illuminated Pushbutton - Red	TU1
Illuminated Pushbutton - Yellow	TU2
Illuminated Pushbutton - Green	TU3
Illuminated Pushbutton - Blue	TU6
Illuminated Pushbutton - White	TU7

**Figure 1: Wiring Diagram - Pushbutton**



**Figure 2: Wiring Diagram - Illuminated Pushbutton**



# Operating Instructions: Volt Free Non Illuminating & Illuminating Switches

Figure 3: Dimensional Drawing - TUB, TUR, TUG, TUW, TUY, TUZ, TU1, TU2, TU3, TU6, TU7

