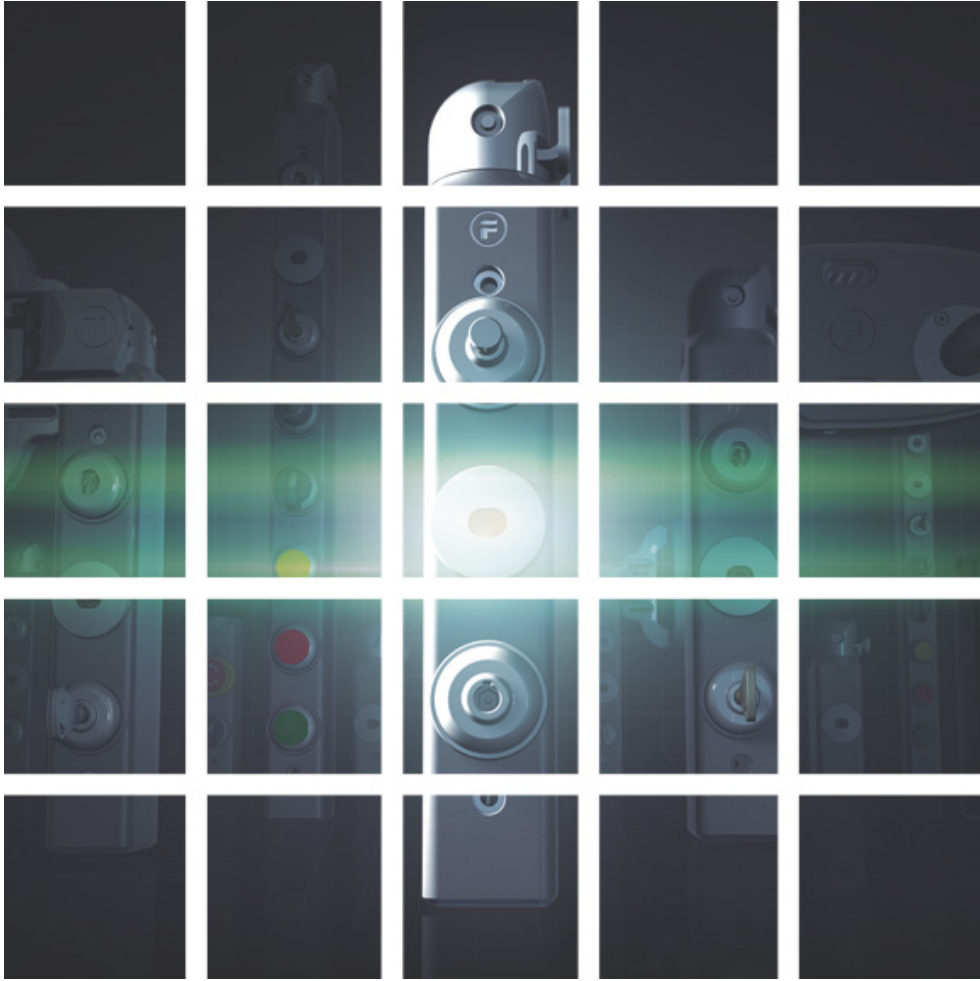


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tGard Part Number Configurator



An Innovative Platform for Machine Safety

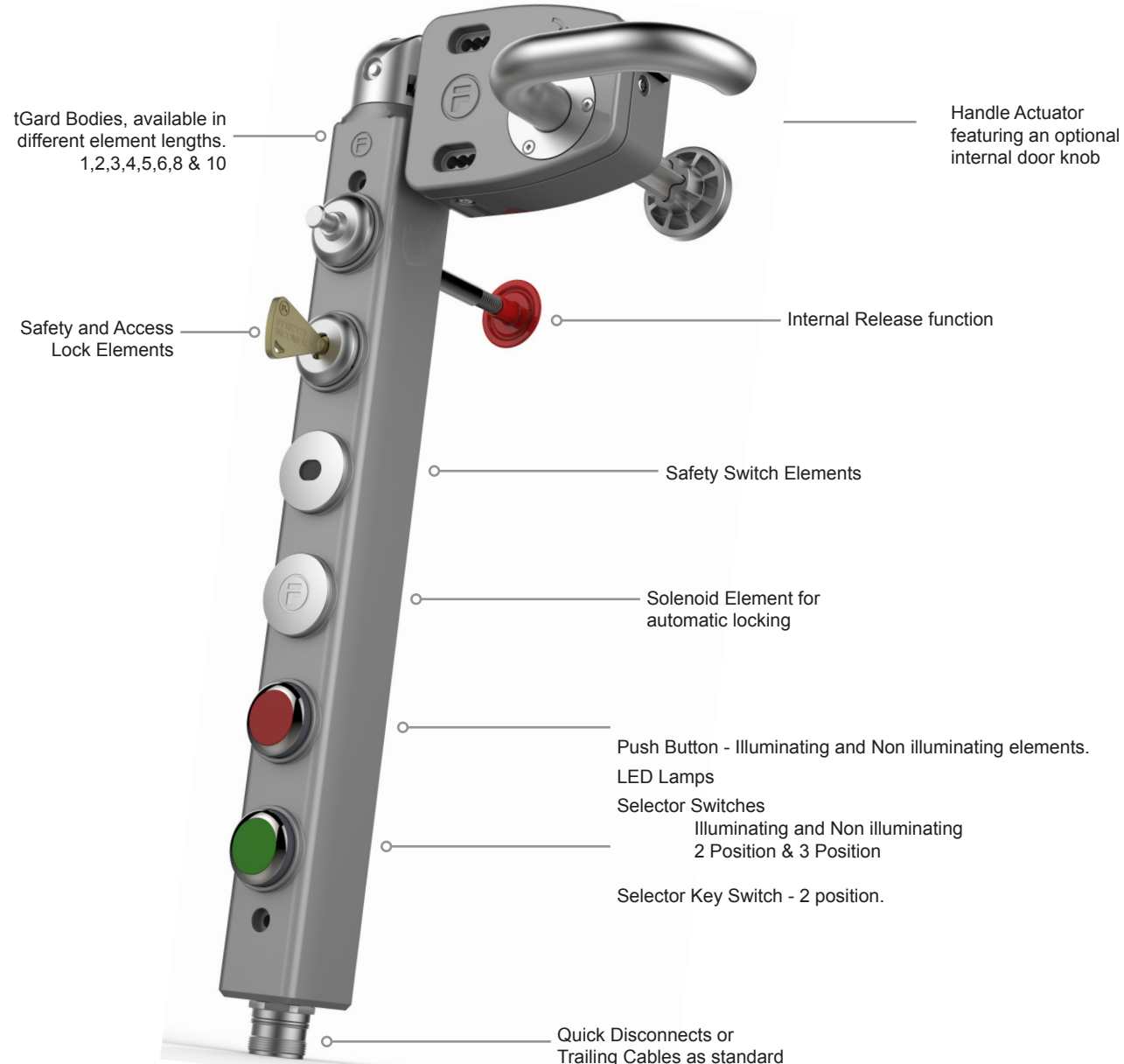
tGard is the new innovative approach to controlling access to hazardous machinery and equipment. It is a compact metal bodied system that enables the configuration of various safety products including electrical safety gate switches (with or without guard locking), mechanical trapped key interlocks, and electrical operator controls, either as separate devices or integrated into one device.

tGard offers “a customised safety solution, as standard” and is defined by a range of **tGard** elements, including selector switches, safety switches (solenoid and non solenoid), personnel keys, emergency release, push buttons, estops, indicator lamps and a choice of operating handles for both hinged and sliding guard doors. These elements are simply selected and then assembled into a robust housing, suitable for mounting onto machine guarding, providing the user with an exact configuration specific to the application.

tGard is quick and easy to install and can be mounted directly onto a flat surface, doors or extruded aluminium profiles without the need for mounting plates or brackets. It is IP65 as standard and has been designed to be fully compliant with the new machinery safety standards.

Customised Safety Solutions as Standard

- Simply Robust
- Customisable
- Future proof for future element expansion
- Easy to Install
- Quick Disconnects as standard
- Standards compliant
- Trailing Cables as standard
- Safety Gate Switches
- Trapped Key Interlocks
- Operator Control





Part Number: THHSNSSEUECP2Q9

This configurator book will take you through the process of selecting your desired tGard elements.

At each step you will be able to make informed choices on your selection and at the end of the process will provide you with a finished part number.

Order of Stack

1. Actuator
2. Head
3. Internal Release
4. Safety Locks
5. Access Locks
6. Safety Switch / Solenoid
7. e-stop
8. Re-start button
9. Control (any order)
10. QD / Cable / Selfwire

At the end of the selection process, the part numbers drop their "T", except the first item.

E.g. THH + TSN + TSSEU + TEC + TP2 + TQ9 = THHSNSSEUECP2Q9

Maximum number of core elements in body = 10.





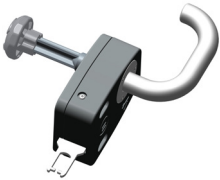
Finished part number = **THHSNSSEUECP2Q9**


When creating a tGard stack, the wiring of connections follows these rules:


1. Safety circuits are in fixed positions on each connector and comprise of volt free circuits.
2. Inputs/outputs are allocated from the bottom of the stack, ascending.
3. On any one element, the input is assigned first, then the output(s).
4. Outputs are +24v, taken from the +24v supply.
5. Selection of the connector depends upon the wiring requirements for inputs / outputs / safety circuit of the total stack.


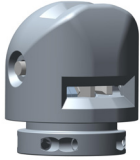
Step 1: Choose the Actuators


Actuators

TAF		TAH		TAS		TEN		TEH	
									
Part No.	TAF	Part No.	TAH	Part No.	TAS	Part No.	TEN	Part No.	TEH
Description	Fixed Actuator	Description	Handle Actuator - Hinged Door	Description	Handle Actuator - Sliding Door	Description	Handle Actuator - (no internal knob)	Description	Handle Actuator
Features & Benefits		Features & Benefits		Features & Benefits		Features & Benefits		Features & Benefits	
<ul style="list-style-type: none"> • Fixed Actuator suitable for mounting on either sliding or hinged doors. • Padlock through tongue. • 2500N Retention force. 		<ul style="list-style-type: none"> • Handle actuators suitable for bracketless mounting to hinged doors. • 4mm misalignment feature. • TAH actuator can be converted to a TAS actuator on site (special tool required). • Padlock through tongue. • 2500N Retention force. • Quick bolt to Aluminium extrude (no brackets). 		<ul style="list-style-type: none"> • Handle actuators suitable for bracketless mounting to sliding doors. • 4mm misalignment feature. • TAS actuator can be converted to a TAH actuator on site (special tool required). • Padlock through tongue. • 2500N Retention force. • Quick bolt to Aluminium extrude (no brackets). 		<ul style="list-style-type: none"> • Intuitive handle actuator giving latching feature on hinged doors. • 4mm misalignment feature. • Lock out feature. • Handing can be changed on site. • Prevents force of door slamming against interlock. • 2500N Retention force. • Quick bolt to Aluminium extrude. 		<ul style="list-style-type: none"> • Intuitive handle actuator giving latching feature on hinged doors. • 4mm misalignment feature. • Lock out feature. • Handing can be changed on site. • Prevents force of door slamming against interlock. • 2500N Retention force. • Quick bolt to Aluminium extrude. • Internal knob allows actuator to be retracted but not extended. 	

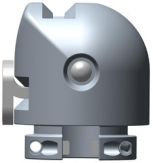





All Actuators to be used in combination with a THM head module.


Note: The internal knob on TEH handle does not override the solenoid or lock. A TRX/Z (internal release element) must be used to deliver that functionality.

THC		THM	
			
Part No.	THC	Part No.	THM
Description	Cap Element	Description	Actuator Head Element
Features & Benefits		Features & Benefits	
<ul style="list-style-type: none"> Used to terminate all non door lock or gate switch configurations. Used in mechanical exchange box, machine control or key switch configurations. 		<ul style="list-style-type: none"> Ideally suited for authorised access only, or linked access to other machinery. 5 orientations (left, right, front, back and top). Can be used to lock door when used with keys or solenoid or just as driver for safety switches. Rotatable through 90° (remove screws). 2500N retention force. Metal construction with no extra fixing required. 	



You can combine a actuator with a head to generate a single part number

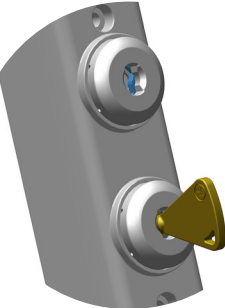

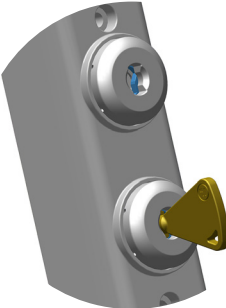

Head + Actuator Combined Part Number Options									
THF		THH		THS		THE		THN	
									
Part No.	THM + TAF = THF	Part No.	THM + TAH = THH	Part No.	THM + TAS = THS	Part No.	THM + TEH = THE	Part No.	THM + TEN = THN
Description	Head module including fixed actuator	Description	Head module including hinged actuator	Description	Head module including sliding actuator	Description	Head module including handle actuator	Description	Head module including handle actuator (no internal knob)

Core Elements

TRX		TRZ	
Part No.	TRX	Part No.	TRZ
Description	Standard 60mm Internal Release	Description	Variable length Internal Release
Features & Benefits			
<ul style="list-style-type: none"> • Element allows emergency exit even if unit is locked by keys and or solenoid. • Unit automatically breaks safety circuits and holds them open until unit is reset. • When present, the push IR always occupies the top element. • TRX works through wall thickness upto 60mm. • TRZ allows customer to customise length of emergency release. • Post should be supported if not going through aluminum extrude. 			


Extended version available (TRZ) - any length possible

Step 4: Safety & Access Lock Element

TSN		TGN		TAB		TQB	
							
Part No.	TSN	Part No.	TAB	Part No.	TGN	Part No.	TQB
Description	Standard Safety Lock (no key)*	Description	Standard Access Lock (no key)*	Description	Master Safety Lock (no key)*	Description	Master Access Lock (no key)*
Features & Benefits				Features & Benefits			
<ul style="list-style-type: none"> • Prevent closure of door and start up until key returned. • Safety Lock must be directly under head / cap (or under internal release element if one is fitted). • Robust radial disc tumbler lock. • >3000 combinations. • 10 mastered combinations (can be used with all 3000 individual combinations). • The key is laser marked with the Fortress key code. • No key included. *Keys Ordered Separately. • Max. No. of mechanical locks = 10. 				<ul style="list-style-type: none"> • Only allow access with correct key. • Access keys must be directly under safety locks (or under head or internal release if no safety locks). • Robust radial disc tumbler lock. • >3000 combinations. • 10 mastered combinations (can be used with all 3000 individual combinations). • The key is laser marked with the Fortress key code. • No key included. *Keys Ordered Separately. • Max. No. of mechanical locks = 10. 			





TSM		TSS	
			
Part No.	TSM	Part No.	TSS
Description	Safety Switch	Description	Safety Switch - No N/O monitor contact
Features & Benefits		Features & Benefits	
<ul style="list-style-type: none"> • Can be driven by either the operation of the head element (removal of actuator) or a mechanical lock. • Operates on dual safety circuits. • 2 positively driven force break NC contacts (uses none of the I/O pins). • IP65. • 1 Normally Open (N/O) contact giving 24V signal on I/O pin. • Red LED illumination to show door open. • First element after all mechanical elements (Head, Internal Release and Locks). 		<ul style="list-style-type: none"> • Can be driven by either the operation of the head element (removal of actuator) or a mechanical lock. • Operates on dual safety circuits. • 2 positively driven force break NC contacts (uses none of the I/O pins). • IP65. • First element after all mechanical elements (Head, Internal Release and Locks). • No monitor contact & no LED. • Uses 4 pins for safety circuits (no power required). *Works with TQ1 (5 Pin QD). 	
Number of Safety Circuits	2	Number of Safety Circuits	2
Number of Control I/O	1	Number of Control I/O	0



Location of safety switch in stack is first element after all mechanical elements (Head, Internal Release and Locks).

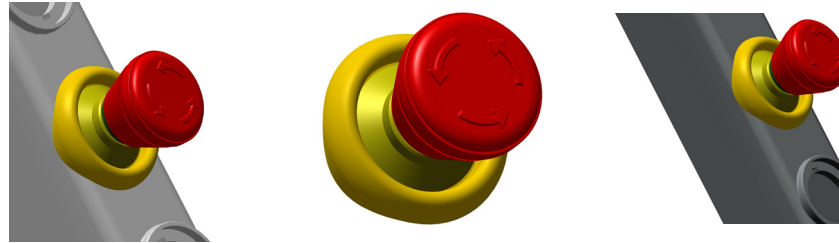
Step 6: Solenoid Controlled Lock & Safety Switch Elements - Power to Un-Lock / Power to Lock

	TSMDU/L	TSMEU/L	TSMFU/L	TSSEU/L
	 <p>Power to Un-lock</p>		 <p>Power to Lock</p>	
	<ul style="list-style-type: none"> • 1 input used to energise solenoid. • Power to Lock and Power to Unlock options available. • Solenoid override key provided with power to unlock units. • First element after all mechanical elements (Head, Internal Release and Locks). 			
Part No.	TSMDU / TSMDL	TSMEU / TSMEL	TSMFU / TSMFL	TSSEU / TSSEL
Description	Head & solenoid safety in series TSMDU (Power to Un-lock) TSMDL (Power to Lock)	Safety on head element only TSMEU (Power to Un-lock) TSMEL (Power to Lock)	Four safety circuits TSMFU (Power to Un-lock) TSMFL (Power to Lock)	Safety on head element only (no monitoring contact on head) TSSEU (Power to Un-lock) TSSEL (Power to Lock)
Features & Benefits	<ul style="list-style-type: none"> • 2500N retention force. • 2 X Normally closed safety circuits run through head safety switches and solenoid safety switches. • Non safety monitor circuit on head gives 24V when door opened. • Non safety monitor circuit on solenoid gives 24V when unlocked. • LED sequence: *Green = Door closed & locked *Green & Red = Door closed but unlocked *Red = Door open 	<ul style="list-style-type: none"> • 2500N retention force. • 2 X Normally closed safety contacts driven by head only (not solenoid). • Non safety monitor circuit on head gives 24V when door opened. • Non safety monitor circuit on solenoid gives 24V when locked. • LED sequence: *Green = Door closed & locked *Green & Red = Door closed but unlocked *Red = Door open 	<ul style="list-style-type: none"> • 2500N retention force. • Four safety circuits - 2 independent NC circuits for the head and 2 independent NC circuits for the solenoid. • Non safety monitor circuit on head gives 24V when door opened. • Non safety monitor circuit on solenoid gives 24V when unlocked. • LED sequence: *Green = Door closed & locked *Green & Red = Door closed but unlocked *Red = Door open 	<ul style="list-style-type: none"> • 2500N retention force. • 2 X Normally closed safety contacts driven by head only (not solenoid). • Non safety monitor circuit on solenoid gives 24V when locked. • LED sequence: *Nothing = Door closed & locked *Red = Door unlocked
Number of Safety Circuits	2	2	4	2
Number of Control I/O	3	3	3	2

ti
90% of customers select TSMDU

ti
Location of safety switch in stack is first element after all mechanical elements (Head, Internal Release and Locks).

TEC, TED, TEW, TEV, TET, TEM, TEP, TEI



Features & Benefits


- Emergency stop element, version available with a monitoring contact or illumination.
- 2 positively driven force break N/C Safety contacts.
- Monitored version also has 1 output signal and this uses 1 output pin.
- Illuminated version also has 1 input signal and this uses 1 input pin (it is illuminated by the controlling PLC, not by the action of pressing the e-stop).
- e-Stop is always mounted at the top of any control elements, but below solenoid / head / safety switches / locks.
- TEM & TEI e-stops can also be positioned at the bottom of the stack.
- TED/C/W/V safety contacts are wired in series with another element in the stack e.g. TSS, to reduce pin requirements.
- TET/MP/I safety contacts are wired separately to all other elements in the stack.

Part No.	TEC	TEW	TED	TEV	TET	TEP	TEM	TEI
Reset Type	Twist	Pull	Twist	Twist	Twist	Pull	Twist	Twist
Extra Features	-	-	Additional 1xNO Contact	Illuminated	-	-	Additional 1xNO Contact	Illuminated
Number of Control I/O	0	0	1	1	0	0	1	1
Number of Safety Circuits	0 - wired in series with TSS or TSM unit				2 - independently wired			

e-Stop is always mounted at the top of any control elements, but below solenoid / head / safety switches / locks. TEM & TEI e-stops can also be positioned at the bottom of the stack.

TSR



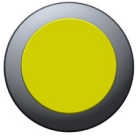






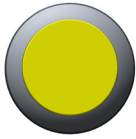









Part No.	TSR
Description	Start Re-start Switch - Blue
Features & Benefits	<ul style="list-style-type: none"> • Blue Re-start switch operating on 1 Normally Open (N/O) and 1 Normally Closed (N/C). • For Safety relay reset. • Works on own separate dual safety circuit. • Volt free contacts. • Safety circuit 1 opens on button depression. • Highest control element after e-Stop's. • Must be wired independently to all other safety switches (head / solenoid / e-stop). <p>Laser Engraving Information: Engraving for each button is 2 lines of 10 characters.</p> 
Number of Control I/O	0
Number of Safety Circuits	2



Location of Start Re-Start Switch in stack is highest control element after e-Stop's.

Step 9: Illuminating Switches - Push, Selector

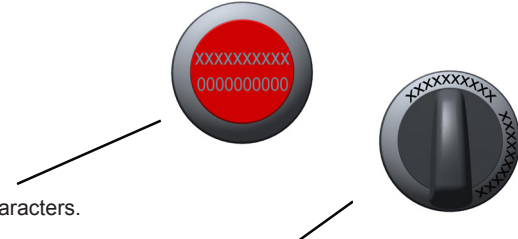
Core Elements	Illuminated Pushbuttons	TP1		TP2		TP3		TP6		TP7					
															
		Part No.	TP1		Part No.	TP2		Part No.	TP3		Part No.	TP6		Part No.	TP7
	Description	Illuminated Push Button - Red		Description	Illuminated Push Button - Yellow		Description	Illuminated Push Button - Green		Description	Illuminated Push Button - Blue		Description	Illuminated Push Button - White	
	Illuminated Pushbuttons - Protruding	TG1		TG3		TG5		TG6		TG7					
															
	Part No.	TG1		Part No.	TG3		Part No.	TG5		Part No.	TG6		Part No.	TG7	
	Description	Protruding Illuminated Push Button - Red		Description	Protruding Illuminated Push Button - Green		Description	Protruding Illuminated Push Button - Yellow		Description	Protruding Illuminated Push Button - Blue		Description	Protruding Illuminated Push Button - White	
2 Position Illuminated Selector Switch	T2E		T2F		Features & Benefits										
					<p>1 Normally Open (N/O) Illuminated Switch for machine control.</p> <ul style="list-style-type: none"> • Each switch uses 1 input and 1 output pin. • Inputs to the tGard stack are always assigned before outputs. • High input will illuminate the lamp, irrespective of selector. • Range of options: <ul style="list-style-type: none"> • Push Button • Protruding Push Button • 2 Position Selector Switches <ul style="list-style-type: none"> • Latching • Momentary <p>Laser Engraving Information: Engraving for each button is 2 lines of 10 characters.</p> <p>Engraving available for 2 position selector switch is 10 characters at each switch position.</p>										
	Part No.	T2E		Part No.								T2F			
	Description	2 Position Illuminated Selector Switch - Latching		Description								2 Position Illuminated Selector Switch - Momentary			
															

Step 10: Non-Illuminating Switches - Push, Selector & Key Selector



Core Elements






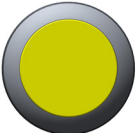
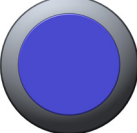

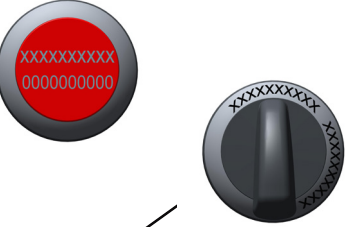
Pushbuttons	TPB		TPR		TPG		TPW		TPY		TPZ	
												
	Part No.	TPB	Part No.	TPR	Part No.	TPG	Part No.	TPW	Part No.	TPY	Part No.	TPZ
	Description	Push Button - Black	Description	Push Button - Red	Description	Push Button - Green	Description	Push Button - White	Description	Push Button - Yellow	Description	Push Button - Blue
Pushbuttons - Protruding	TGB		TGR		TGG		TGW		TGY		TGZ	
												
	Part No.	TGB	Part No.	TGR	Part No.	TGG	Part No.	TGW	Part No.	TGY	Part No.	TGZ
	Description	Push Button Protruding - Black	Description	Push Button Protruding - Red	Description	Push Button Protruding - Green	Description	Push Button Protruding - White	Description	Push Button Protruding - Yellow	Description	Push Button Protruding - Blue
2 Position Selector Switch	T2A		T2D		Features & Benefits 1 N/O Switch for machine control. • Each switch uses 1 output pin. • Range of options: <ul style="list-style-type: none"> • Push Button • Protruding Push Button • 2 Position Selector Switches <ul style="list-style-type: none"> • Latching • Momentary • Key Latching • Key Momentary 							
												
	Part No.	T2A	Part No.	T2D								
	Description	2 Position Selector Switch - Latching	Description	2 Position Selector Switch - Momentary								
2 Position Selector Key Switch	TK5		TK6		Laser Engraving Information: Engraving for each button is 2 lines of 10 characters. Engraving available for 2 position selector switch is 10 characters at each switch position.							
												
	Part No.	TK5	Part No.	TK6								
	Description	2 Position Selector Key Switch - Latching	Description	2 Position Selector Key Switch - Momentary								







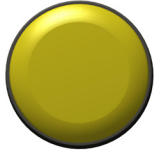
Step 10b: Non-Illuminating Switches - 1 N/O & 1 N/C contacts



Core Elements

Pushbuttons	TXB		TXR		TXG		TXW		TXY		TXZ	
												
	Part No.	TXB	Part No.	TXR	Part No.	TXG	Part No.	TXW	Part No.	TXY	Part No.	TXZ
	Description	Push Button - Black	Description	Push Button - Red	Description	Push Button - Green	Description	Push Button - White	Description	Push Button - Yellow	Description	Push Button - Blue
2 Position Selector Key Switch	Features & Benefits											
	T2V		<p>1 N/O Switch & 1 N/C Switch for machine control.</p> <ul style="list-style-type: none"> • Each switch uses 2 output pin. • Contacts are <u>not</u> volt free. <p>Laser Engraving Information:</p> <p>Engraving for each button is 2 lines of 10 characters.</p> <p>Engraving available for 2 position selector switch is 10 characters at each switch position.</p>									
	Part No.	T2V										
	Description	2 Position Selector Key Switch - Latching										

Core Elements

	TLB	TLG	TLR	TLW	TLY
					
Part No.	TLB	TLG	TLR	TLW	TLY
Description	LED Lamp Element - Blue	LED Lamp Element - Green	LED Lamp Element - Red	LED Lamp Element - White	LED Lamp Element - Yellow

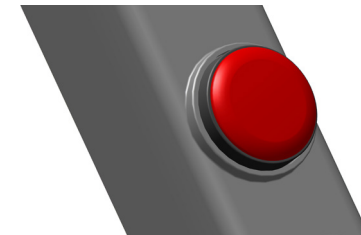
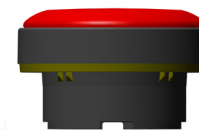
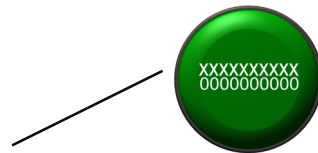
Features & Benefits

Lamp element for status indication can be configured to indicate machine status.

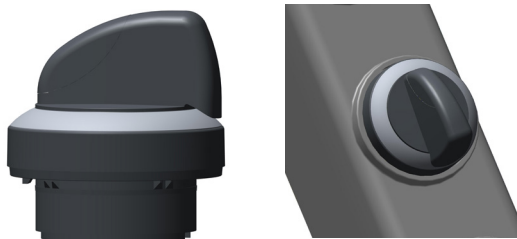
- LED status indicator.
- Each lamp uses 1 input pin.

Laser Engraving Information:

Engraving for each lamp is 2 lines of 10 characters.



T3A, T3D, T3E, T3F



Part No.	T3A	T3D	T3E	T3F
Description	Latching (Both Sides)	Momentary	Latching (Both Sides) Illuminated	Momentary Illuminated

Features & Benefits

Each 3 position selector switch uses 2 output pins.

- Clockwise operation sets the lower assigned output High.
- Middle position - output pins Low.
- Anti-clockwise sets higher assigned output High.
- Non-latching - spring return to original position.
- Illumination (when selected) uses an additional 1 input pin.


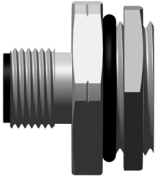
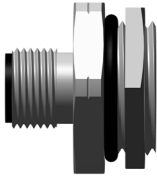
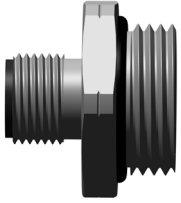
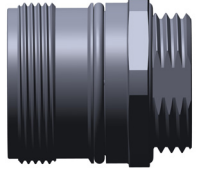
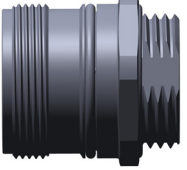
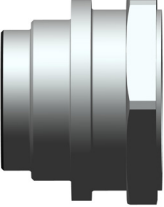
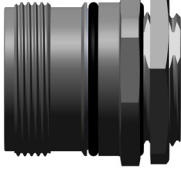
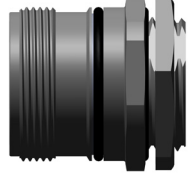


Laser Engraving Information:

Engraving available for 3 position selector switch is 10 characters at each switch position.

Step 13: Foot Safety & Control Connectors

Base Elements

	TBF	TQ1	TQ2	TQ3	TQ4
					
Part No.	TBF	TQ1	TQ2	TQ3	TQ4
Description	Foot - For terminating purely mechanical configurations (no wiring).	5 Pin M12 QD	8 Pin M12 QD	8 Pin M12 QD	12 Pin M23 QD
Number of Control I/O	0	0	5	1	9
Number of Safety Circuits	0	2	0	2	0
	TQ5	TQ7	TQ8	TQ9	
					
Part No.	TQ5	TQ7	TQ8	TQ9	
Description	12 Pin M23 QD	14 Pin 7/8 UN2 QD	19 Pin M23 QD	19 Pin M23 QD	
Number of Control I/O	5	7	12	8	
Number of Safety Circuits	2	2	2	4	

Step 14: Mating Cables for Quick Disconnect Connectors




Base Elements

Quick Disconnect Mating Cable											Part No.	Pin Heads	Connector Type	Cable Length	Cable Part Number			
Part No.	Cable_M-TQ1			Cable_M-TQ2 / TQ3			Cable_M-TQ4 / TQ5			Cable_M-TQ7						Cable_M-TQ8 / TQ9		
No. Pins	5			8			12			14		19						
Connector	M12			M12			M23			MIN SIZE I		M23						
Pin #	Wire Colour		TQ1 Function	Wire Colour		TQ2 Function	TQ3 Function	Wire Colour		TQ4 Function	TQ5 Function	Wire Colour		TQ6 Function	Wire Colour		TQ8 Function	TQ9 Function
1	Brown		SC1 in	White		I/O 0	SC1 in	Brown		+24v	+24v	Grey / Pink		I/O 3	Violet		SC1 in	SC1 in
2	White		SC2 in	Brown		+24v	+24v	Brown/White		I/O 0	SC1 in	White / Green		I/O 2	Red		SC2 in	SC2 in
3	Blue		SC1 out	Green		Earth	Earth	Blue		0v	0v	White / Yellow		I/O 1	Grey		SC1 out	SC1 out
4	Black		SC2 out	Yellow		I/O 1	SC2 in	White		I/O 1	SC2 in	Brown		+24v	Red/Blue		SC2 out	SC2 out
5	Grey		Earth	Grey		I/O 2	SC1 out	Green		I/O 2	SC1 out	Brown / Yellow		SC2 in	Green		I/O 0	I/O 0
6				Pink		I/O 3	SC2 out	Yellow		I/O 3	SC2 out	Blue		0v	Blue		0v	0v
7				Blue		0v	0v	Grey		I/O 4	I/O 0	Yellow		I/O 6	Grey/Pink		I/O 1	I/O 1
8				Red		I/O 4	I/O 0	Pink		I/O 5	I/O 1	Green		I/O 5	White/Green		I/O 2	I/O 2
9								Red		I/O 6	I/O 2	Pink		I/O 4	White/Yellow		I/O 3	I/O 3
10								Black		I/O 7	I/O 3	White		SC1 in	White/Grey		I/O 4	I/O 4
11								Violet		I/O 8	I/O 4	Red / Blue		I/O 0	Black		I/O 5	I/O 5
12								Green/ Yellow		Earth	Earth	Brown / Green		SC2 out	Green/ Yellow		Earth	Earth
13												Grey		SC1 out	Yellow/ Brown		I/O 6	I/O 6
14												Red		Earth	Brown/ Green		I/O 7	I/O 7
15															White		I/O 8	SC3 in
16															Yellow		I/O 9	SC4 in
17															Pink		I/O 10	SC3 out
18															Grey/ Brown		I/O 11	SC4 out
19															Brown		+24v	+24V

Part No.	Pin Heads	Connector Type	Cable Length	Cable Part Number
Cable_M-TQ1		TQ1	2M	Cable-2M-TQ1
			5M	Cable-5M-TQ1
			10M	Cable-10M-TQ1
Cable_M-TQ2 / TQ3		TQ2	2M	Cable-2M-TQ2
			5M	Cable-5M-TQ2
			10M	Cable-10M-TQ2
Cable_M-TQ4 / TQ5		TQ3	2M	Cable-2M-TQ3
			5M	Cable-5M-TQ3
			10M	Cable-10M-TQ3
Cable_M-TQ7		TQ4	2M	Cable-2M-TQ4
			5M	Cable-5M-TQ4
			10M	Cable-10M-TQ4
Cable_M-TQ8 / TQ9		TQ5	2M	Cable-2M-TQ5
			5M	Cable-5M-TQ5
			10M	Cable-10M-TQ5
Cable_M-TQ2 / TQ3		TQ7	2M	Cable-2M-TQ7
			5M	Cable-5M-TQ7
			10M	Cable-10M-TQ7
Cable_M-TQ7		TQ8	2M	Cable-2M-TQ8
			5M	Cable-5M-TQ8
			10M	Cable-10M-TQ8
Cable_M-TQ8 / TQ9		TQ9	2M	Cable-2M-TQ9
			5M	Cable-5M-TQ9
			10M	Cable-10M-TQ9
			20M	Cable-20M-TQ9


Base Elements

	TW1	TW2	TW3
			
Part No.	TW1	TW2	TW3
Description	12 Terminals	12 Terminals	24 Terminals
Number of Control I/O	6	10	14
Number of Safety Circuits	2	0	4
Features & Benefits			
<ul style="list-style-type: none"> • For applications where the customer wishes to make their own connections. • Push fit terminals. • Cable size 26-14 AWG. • Available with 12 or 24 connections. • Control only and Safety and Control versions available. • M20 gland thread. • Requires no additional mounting to frame. • Large opening for easy wiring. 			

Base Elements

	TC2	TC3	TC4	TC5	TC8	TC9
Part No.	TC2	TC3	TC4	TC5	TC8	TC9
Description	8 Core	8 Core	12 Core	12 Core	19 Core	19 Core
Number of Control I/O	5	1	9	5	12	8
Number of Safety Circuits	0	2	0	2	2	4
Features & Benefits						
<ul style="list-style-type: none"> • For lowest possible installed cost. • 8/12/19 core, depending on requirement. • 2m cable length for direct wiring to local junction / terminal box. 						

Accessories

TKS		TKM
		
Part No.	TKS	TKM
Description	Standard Key	Master Key
Features & Benefits		
<ul style="list-style-type: none"> • 8 discs giving >3000 combinations. • 10 master combinations. • The key is laser marked with the Fortress key code. 		