



Product Service

# CERTIFICATE

No. Z10 080346 0007 Rev. 03

**Holder of Certificate:** **Fortress Interlocks Ltd**  
2 Inverclyde Drive  
Wolverhampton, West Midlands WV4 6FB  
UNITED KINGDOM

**Certification Mark:**



**Product:** **Safety components**  
**Safety Interlocks**

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: [www.tuvsud.com/ps-cert](http://www.tuvsud.com/ps-cert)

**Test report no.:** FW86384T

**Valid until:** 2027-09-21

**Date,** 2022-09-22

( Jiayi Dong )

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**Parameters:**

Ambient Temperature: -25°C to +40°C (solenoids)  
-25°C to +60°C (switches and bodies)  
Maximum Relative Humidity: 93(+/-3)% without any dew on the device  
Ingress Protection: IP65  
Safety Parameters: Cat 4, PI e with RFID Module  
Cat 3, PI d all other models

**Tested  
according to:**

EN ISO 13849-1:2015  
EN ISO 13849-2:2012  
ISO 14119:2013

**Model(s):****tGard Series**

For nomenclature see next page

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## Nomenclature of tGard Series

TAx/ TEx	Hx	Rx	SN/ GN/ AB/ QB	Sx	SxxU/ SxxL	EB	Ex	Dx	Sx	SZ/ V4	Px/ Gx/ Jx/ Xx	Ux/ 2x	Zx	Px/ Gx/ Xx/
1	2	3	4	5	6	7	8	8a	9	10	11a	11b		12a

Ux/ 2x/ Kx/ MB/ PS	Lx	3x/ K7	Nx	BF/ Qx	Qx	Wx	EBBx	KS/KM/WL
12b	13	14	15	16	17	18	19	20

With:

### 1: Actuators

<b>TAF</b>	Fixed Actuator
<b>TAH</b>	Handle Actuator – Hinged Door
<b>TAS</b>	Handle Actuator – Sliding Door
<b>THB</b>	Blank Handle
<b>TEN</b>	Handle Actuator – (no internal knob)
<b>TEH</b>	Handle Actuator
<b>TNH</b>	RF Actuator

### 2: Head Modules

<b>THC</b>	Cap Element
<b>THM</b>	Actuator Head Element
<b>THF</b>	<b>THM + TAF = THF</b> / Head module including fixed actuator
<b>THH</b>	<b>THM + TAH = THH</b> / Head module including hinged actuator
<b>THS</b>	<b>THM + TAS = THS</b> / Head module including sliding actuator
<b>THE</b>	<b>THM + TEH = THE</b> / Head module including handle actuator
<b>THN</b>	<b>THM + TEN = THN</b> / Head module including handle actuator (no internal knob)

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## 3: Internal Release

TRX	Standard 60 mm Internal Release
TRZ	Variable length Internal Release

## 4: Safety & Access Lock Element

TSN	Standard Safety Lock (no key)
TGN	Master Safety Lock (no key)
TAB	Standard Access Lock (no key)
TQB	Master Access Lock (no key)

## 5: Safety Switches

TSM	Safety Switch
TSP	Safety Switch
TSS	Safety Switch – No N/O monitor contact
TZS	Safety Switch – Monitored -Equivalent to TSS

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

TSMDU / TSMDL	Head & solenoid safety in series (TSMDU – Power to Un-lock / TSMDL – Power to Lock)
TSMEU / TSMEI	Safety on head element only (TSMEU – Power to Un-lock / TSMEI – Power to Lock)
TSMFU / TSMFL	Four safety circuits (TSMFU – Power to Un-lock / TSMFL – Power to Lock)
TSSEU / TSSEL	Safety on head element only (no monitoring contact on head) (TSSEU – Power to Un-lock / TSSEL – Power to Lock)

## 7: Extension Blank

TEB	Blank
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## 8: Emergency Stop Element

TEC	Twist	0 – wired in series with TSS or TSM unit
TED	Pull	
TEW	Twist / Additional 1xNO Contact	
TEV	Twist / Illuminated	
TET	Twist	2 – independently wired

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TEM	Pull	
TEP	Twist / Additional 1xNO Contact	
TEI	Twist / Illuminated	
TEY	Twist / Illuminated	
TEA	Pull	
TES	Black Twist	

## 8a: Emergency Stop Element with shroud

TDC	Twist with shroud	0 – wired in series with TSS or TSM unit
TDD	Pull with shroud	
TDW	Twist / Additional 1xNO Contact with shroud	
TDV	Twist / Illuminated with shroud	
TDT	Twist with shroud	2 – independently wired
TDM	Pull	
TDP	Twist / Additional 1xNO Contact	
TDI	Twist / Illuminated	
TDS	Black Twist with shroud	

## 9: Start Re-Start Switch

TSR	Start Re-start Switch - Blue
TS3	Start Re-start Switch - Green
TST	Start Re-start Switch - Black
TSK	Start Re-start Switch – Black Mushroom

## 10: Blue Independently Wired Switch & Potentiometer

TSZ	Blue Independently Wired Change Over Switch
TV4	Potentiometer 10K

## 11a: Illuminating Switches

TP1	Illuminated Push Button – Red
TP2	Illuminated Push Button – Yellow
TP3	Illuminated Push Button – Green
TP6	Illuminated Push Button – Blue
TP7	Illuminated Push Button - White
TG1	Protruding Illuminated Push Button – Red

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TG3	Protruding Illuminated Push Button - Green
TG5	Protruding Illuminated Push Button – Yellow
TG6	Protruding Illuminated Push Button – Blue
TG7	Protruding Illuminated Push Button – White
TP9	Recessed Illuminated Push Button - White
TJ1	1 N/O Illuminated Push Button (Latching) – Red
TJ2	1 N/O Illuminated Push Button (Latching) – Yellow
TJ3	1 N/O Illuminated Push Button (Latching) – Green
TJ6	1 N/O Illuminated Push Button (Latching) – Blue
TJ7	1 N/O Illuminated Push Button (Latching) – White
TX1	1 N/O & 1N/C Illuminated Push Button - Red
TX2	1 N/O & 1N/C Illuminated Push Button - Yellow
TX3	1 N/O & 1N/C Illuminated Push Button - Green
TX6	1 N/O & 1N/C Illuminated Push Button - Blue
TX7	1 N/O & 1N/C Illuminated Push Button - White
TY1	1 N/O & 1N/C Protruding Illuminated Push Button - Red
T4Y	2 N/O Illuminated Push Button - Green
T4Z	2 N/O Illuminated Push Button - Blue

## 11b: Illuminating Switches

TU1	Volt Free Contacts Illuminated Push Button - Red
TU2	Volt Free Contacts Illuminated Push Button - Green
TU3	Volt Free Contacts Illuminated Push Button - Yellow
TU6	Volt Free Contacts Illuminated Push Button - Blue
TU7	Volt Free Contacts Illuminated Push Button - White
T2E	2 Position Illuminated Selector Switch - Latching
T2F	2 Position Illuminated Selector Switch - Momentary
TTY	Volt Free Contacts Push Button – Yellow -1N/O 1N/C
TT3	Volt Free Contacts Push Button- Green-1N/O 1N/C
TT6	Volt Free Contacts Push Button- Blue-1N/O 1N/C
TT7	Volt Free Contacts Push Button- White-1N/O 1N/C

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## 11c: Touch Sensor/LED Indicator

TZB	2 Colour Touch Sensor
TZL	3 Colour Indicator
TZ1	Red Colour Touch Sensor
TZ3	Green Colour Touch Sensor
TOT	2 Colour Touch Sensor Gen 2, Momentary Output

## 12a: Non-Illuminating Switches

TPB	1 N/O Non- Illuminated Push Button – Black
TPR	1 N/O Non- Illuminated Push Button - Red
TPG	1 N/O Non- Illuminated Push Button – Green
TPW	1 N/O Non- Illuminated Push Button – White
TPY	1 N/O Non- Illuminated Push Button – Yellow
TPZ	1 N/O Non- Illuminated Push Button – Blue
TGB	Protruding 1 N/O Non- Illuminated Push Button Protruding – Black
TGR	Protruding 1 N/O Non- Illuminated Push Button Protruding - Red
TGG	Protruding 1 N/O Non- Illuminated Push Button Protruding – Green
TGW	Protruding 1 N/O Non- Illuminated Push Button Protruding – White
TGY	Protruding 1 N/O Non- Illuminated Push Button Protruding – Yellow
TGZ	Protruding 1 N/O Non- Illuminated Push Button Protruding – Blue
TYR	Protruding 1 N/O & 1 N/C Non- Illuminated Push Button Protruding - Red
TPL	1 N/O Non- Illuminated Recessed Push Button – White
TXB	1 N/O & 1 N/C Non- Illuminated Push Button - Black
TXR	1 N/O & 1 N/C Non- Illuminated Push Button - Red
TXG	1 N/O & 1 N/C Non- Illuminated Push Button - Green
TXW	1 N/O & 1 N/C Non- Illuminated Push Button - White
TXY	1 N/O & 1 N/C Non- Illuminated Push Button - Yellow
TXZ	1 N/O & 1 N/C Non- Illuminated Push Button - Blue
TDK	1 N/O & 1 N/C Non- Illuminated Push Button with Mushroom head - Black
TSB	2 N/C Non- Illuminated Push Button – Black

## 12b: Non-Illuminating Switches

TUB	Volt Free Contacts Non-Illuminated Push Button - Black
TUR	Volt Free Contacts Non-Illuminated Push Button - Red
TUG	Volt Free Contacts Non-Illuminated Push Button - Green

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TUW	Volt Free Contacts Non-Illuminated Push Button - White
TUY	Volt Free Contacts Non-Illuminated Push Button - Yellow
TUZ	Volt Free Contacts Non-Illuminated Push Button - Blue
T2A	2 Position Non-Illuminated Selector Switch - Latching
T2D	2 Position Non-Illuminated Selector Switch - Momentary
T2V	2 Position Non-Illuminated Selector Switch – 1 N/O & 1 N/C
TK5	2 Position Non-Illuminated Selector Key Switch - Latching
TK6	2 Position Non-Illuminated Selector Key Switch - Momentary
TMB	1 N/O Non-Illuminated Mushroom Push Button - Black
TPS	1 N/O Non-Illuminated Push Button (Latching) - Black
TTY	Volt Free Contacts Push Button – Yellow -1N/O 1N/C
TT3	Volt Free Contacts Push Button- Green-1N/O 1N/C
TT6	Volt Free Contacts Push Button- Blue-1N/O 1N/C
TT7	Volt Free Contacts Push Button- White-1N/O 1N/C
T5Z	Volt Free Contacts Non-Illuminated Push Button – 2 N/O Blue
T5G	Volt Free Contacts Non-Illuminated Push Button – 2 N/O Green

## 13: LED Lamp Element

TLB	LED Lamp Element - Blue
TLG	LED Lamp Element - Green
TLR	LED Lamp Element - Red
TLW	LED Lamp Element - White
TLY	LED Lamp Element - Yellow

## 14: Position Selector Switches – Latching & Momentary

T3A	Latching (Both Sides)
T3D	Momentary
T3E	Latching (Both Sides) Illuminated
T3F	Momentary Illuminated
T3H	Momentary / Latching
TK7	Key Latching (Both Sides)
T3J	3 Position. Anti-Clock = Latching, Clock = Momentary.
T3K	3 Position Anti-Clock = Latching, Clock = Momentary. Illuminated
T3L	3 Position Anti-Clock = Latching NC, Clock = Momentary. NO, Illuminated
TK7	Key Latching (Both Sides)



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TK8	3 Position Key Switch, Momentary
TK9	Key Latching (Both Sides) 1 NO ,1NC
TKA	2 Position Momentary Key Selector Switch
TK0	2 Position Latching Key Selector Switch
TKY	2 Position Latching Key Selector Switch
TKX	2 Position Momentary Key Selector Switch
T3B	3 Position Momentary Illuminated Switch

## 15: RF Module

TNA	RF SSR and Monitor
TNB	RF OSSD and Monitor
TNC	RF OSSD with Inputs and Monitor
TNR	RF SSR without Monitor
TNS	RF OSSD without Monitor
TNT	RF OSSD with Inputs and no Monitor

## 16: Foot Safety & Control Connectors

TBF	Foot – For terminating purely mechanical configurations (no wiring)
TQ1	5 Pin M12 QD
TQ2	8 Pin M12 QD
TQA	5 Pin M12 QD
TQC	5 Pin M12 QD
TQ3	8 Pin M12 QD
TQP	8 PIN M12 QD
TQD	8 PIN M12 QD
TQS	8 PIN M12 QD
TQR	8 PIN M12 QD
TQY	8 PIN M12 QD
TQT	10 PIN M12 QD
TQL	12 Pin M12 QD
TQM	12 Pin M12 QD
TQ4	12 Pin M23 QD
TQ5	12 Pin M23 QD
TQK	12 Pin M23 QD
TQ7	14 Pin 7/8" UN2 QD

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TQE	14 Pin 7/8" UN2 QD
TQ8	19 Pin M23 QD
TQ9	19 Pin M23 QD
TB9	19 Pin M23 QD
TQG	8 Pin M12 QD for OSSD
TQO	12 Pin M12 QD for OSSD
TQH	12 Pin M23 QD for OSSD
TQI	14 Pin 7/8" UN2 QD for OSSD
TQJ	19 Pin M23 QD for OSSD
TQQ	19 Pin M23 QD for OSSD

## 17: Mating Cables for Quick Disconnect Connectors

TQ1	5 Pin Connector
TQ2	8 Pin Connector
TQ3	8 Pin Connector
TQ4	12 Pin Connector
TQ5	12 Pin Connector
TQ7	14 Pin Connector
TQ8	19 Pin Connector
TQ9	19 Pin Connector
TQG	8 Pin Connector
TQO	12 Pin Connector
TQH	12 Pin Connector
TQI	14 Pin Connector
TQJ	19 Pin Connector
TQQ	19 Pin Connector

## 18: Self Wire Connectors

TW1	12 Terminals / 6 Control I/O / 2 Safety Circuits
TW3	24 Terminals / 14 Control I/O / 4 Safety Circuits
TW4	24 Terminals / 10 Control I/O / 6 Safety Circuits
TW7	12 Terminals / 8 Control I/O / 2 Safety Circuits for OSSD
TW8	24 Terminals / 16 Control I/O / 4 Safety Circuits for OSSD
TW9	24 Terminals / 12 Control I/O / 6 Safety Circuits for OSSD
TWP	12 Terminals Monitor and Safety

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TWK	12 Terminals Monitor ,Safety and Drive
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## 19: AS-interface

TEBB4	Up to 2 AS-i nodes
TEBB8	Up to 4 AS-i nodes
TEBB6	1 AS-I Safety node

## 20: Accessories

TKS	Standard Key
TKM	Master Key
TWL	White Legend Plate
TNH	RF Actuator
TNX	RF Teach Token
TWA	Upward Facing Legend Plate
TWB	Right Facing Legend Plate
TWC	Bottom Facing Legend Plate
TWD	Left Facing Legend Plate
TWE	Bottom Facing Legend Plate
TWF	Left Facing Legend Plate
TWG	Top Facing Legend Plate
TWH	Right Facing Legend Plate
TYL	Yellow Legend Plate