

# **TX3700 Series**

## **Ex d Connectors**



# TX3700 Series Data Sheet

## Ex d Connectors

**Robust explosion-proof multi-pin connectors for heavy-duty and hazardous area applications**

**Environments:** Oil and gas offshore • Mining • Tunnelling • Marine applications  
Steel processing • Process plants • Portable equipment • Mobile machinery

### Features

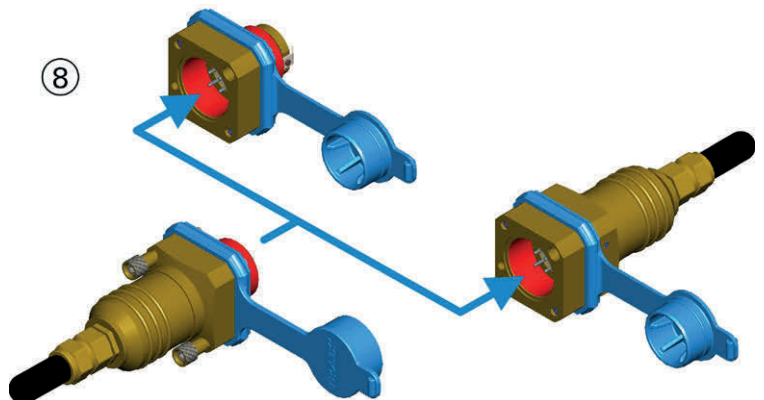
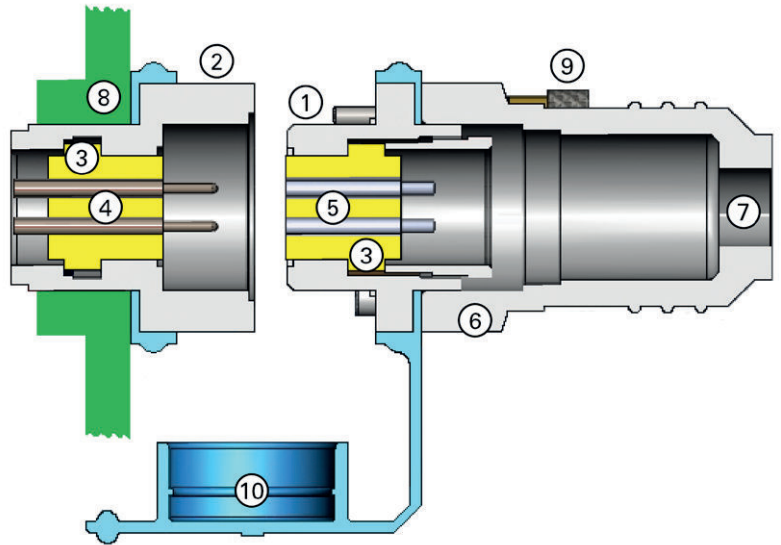
- Fast and convenient interconnection of control circuits and power connections in hazardous areas
- Machined brass construction with built-in shock protecting fenders for maximum impact resistance in extreme working environments
- Extremely tough, moulded urethane weather caps permanently attached and ready to hand, incorporating shock fenders and IP67 captive ingress seals
- Linear, multi-contact connectors give exceptionally low insertion force and long term reliability
- Two body sizes with a choice of contacts from 3 up to 37
- Available with 12.5 mm or 25 mm flame paths dependent upon application
- Group I & Group IIB hazardous areas with Ex d component acceptance certification to simplify system design and approval
- Simple to mate, no special tools required - two large easily accessible screw fasteners unite the connectors in seconds
- Utilises standard low cost Ex d cable glands with a choice of cable entry format
- Easy to disassemble - quick access by releasing two large cover shell screws



# TX3700 Series Data Sheet

## Features - continued

1. Machined metal plug unit with engagement plug forming the flame path (12.5 mm or 25 mm)
2. Machined metal receptacle unit with engagement receptacle forming the flame path
3. High grade co-polymer contact insert carrying slide-in contact pins and sockets
4. Silver plated contact pins suitable for solder or crimp connections
5. Silver plated contact tubes with longitudinal multi-contact springs for high reliability and low insertion force, providing exceptionally low contact resistance
6. Machined metal cover shell for terminating the incoming cable utilizing standard Ex d cable glands of choice
7. Choice of cable gland entry thread to specification
8. Ex d or e enclosure. Mounting with basic receptacle unit fitted or cable line-connector
9. Two large, hand operated, mating screws to quickly unite the connector with complete security



# TX3700 Series Data Sheet

## Benefits

### Design Simplicity

Simple design and extraordinarily strong, the TX3700 series connectors are suitable for day-to-day use in extreme operating conditions. Solid machined metal housings with high tolerance fit to eliminate binding and jamming. Two body sizes, 70mm & 80mm accommodate up to 37 contacts with ingress seals and protective caps integrated into the compact design.

The flame path at the plug/receptacle interface is available with a 12.5 mm or 25 mm length dependent upon the application

### Superior Connectivity

The contact springs are arranged longitudinally along the axis of insertion, resulting in exceptionally low insertion force. This dramatically reduces the damaging wear and tear imposed by conventional lateral spring contacts and guarantees absolute vibration safety. Multi-point contact springs lie along the full length of the contact pins resulting in the lowest possible contact resistance and higher current carrying capacity. Linear expansion of the contact as a result of any temperature rise will increase the contact pressure.

### Ease of Connection

Pins and sockets are freely removable during and after assembly of the connector. Conductors can be soldered or crimped directly to the contact without the need for vulnerable time consuming secondary connecting devices. Available also with a 'short pin' circuit for automatic pilot circuit isolation.

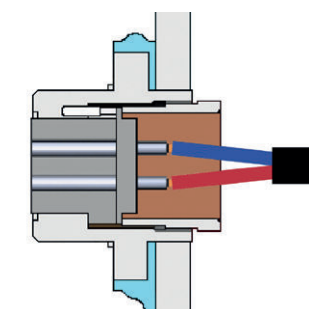
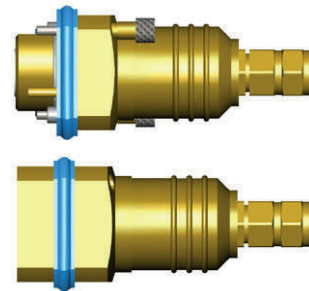
### Security Coding

Up to five coding positions can be user-configured to prevent non-valid mating.

### Increased Safety Version - Ex e

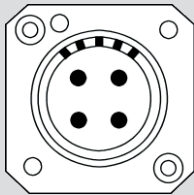
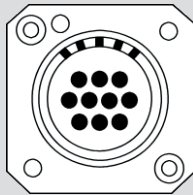
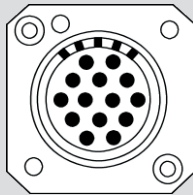
A special version of the connectors can be provided with resin encapsulated connections for use as an Ex d to Ex e interface. The encapsulation ensures that the Ex e side of the connector complies with Ex e clearance requirements.

The cable type and length will be specific to customer requirements, contact [sales@trolex.com](mailto:sales@trolex.com) for further details.



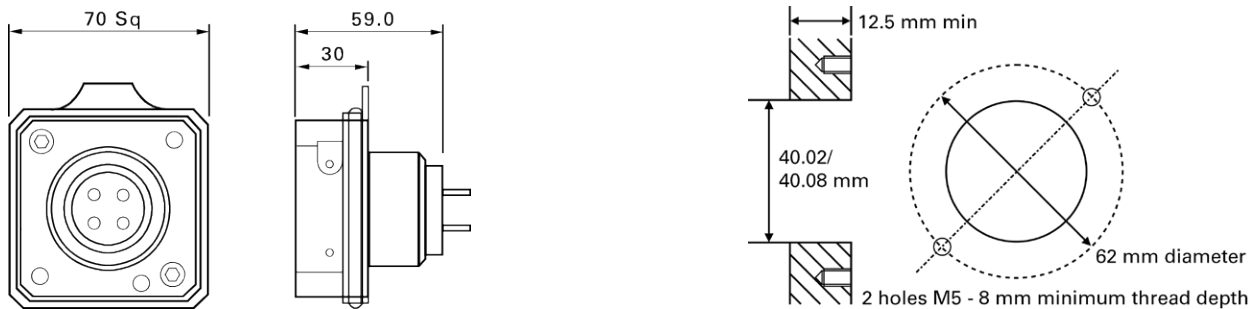
# **TX3700 Series Data Sheet**

## **Technical Information - TX3700**

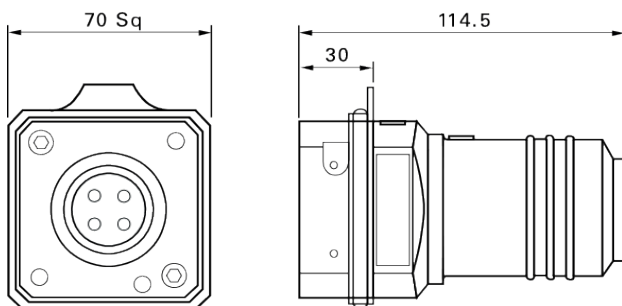
<b>Body Size: 70mm</b> <b>Flame Path: 12.5mm</b> <b>Body Material: Brass</b>	4 contacts	10 contacts	14 contacts	
				
	Maximum current per pin:	25 A	25 A	20 A
	Maximum total current:	100 A	100 A	100 A
Contact resistance:	400 μ ohms	400 μ ohms	400 μ ohms	
Contact diameter:	2.3 mm	2.3 mm	2.0 mm	
Maximum conductor size:	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.0 mm <sup>2</sup>	
Maximum insulation diameter:	3.5 mm	3.5 mm	3.0 mm	
Maximum voltage:	240 V ac/300 V dc			
Test voltage:	2000 V			
Termination:	The contacts are suitable for both solder or 8 point crimp termination			
Contact material:	Silver plated brass			
Contact insulator:	Acetal co-polymer			
Ingress protection:	Dust and water proof to IP67			
Maximum temperature:	-20 °C to +55 °C			
Certification (refer to User Manual for full details):	ATEX/IECEX Group I and II			

## **Dimensions - TX3700**

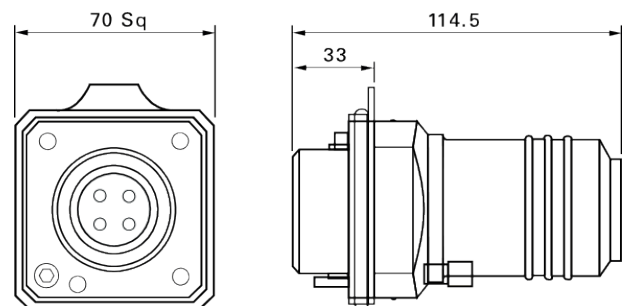
TX3700.S Basic Receptacle Unit - for mounting on to explosion proof enclosures



TX3700.SS Receptacle Unit - with cover shell

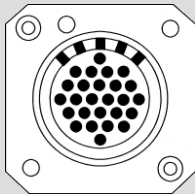
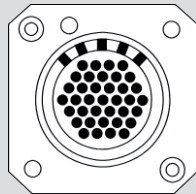
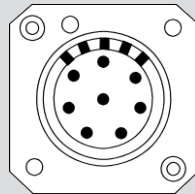
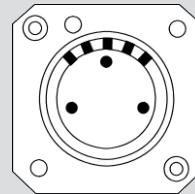


TX3700.PS Plug Unit - with cover shell



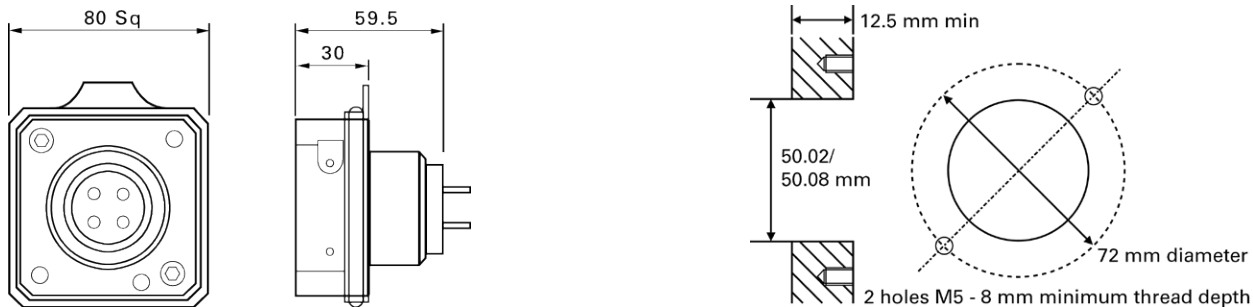
# TX3700 Series Data Sheet

## Technical Information - TX3701

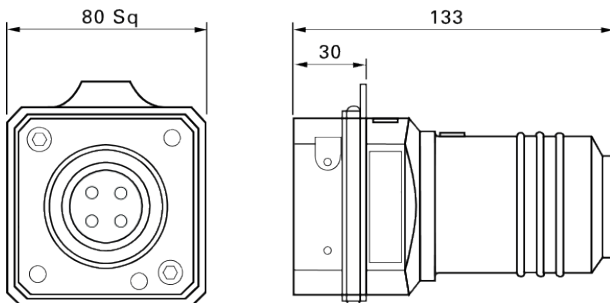
		Standard Contacts		High Voltage Contacts	
		26 contacts	37 contacts	8 contacts	3 contacts
Body Size:	80mm				
Flame Path:	12.5mm				
Body Material:	Brass				
Maximum current per pin:		20 A	20 A	20 A	20 A
Maximum total current:		100 A	100 A	100 A	100 A
Contact resistance:		400 μ ohms	400 μ ohms	400 μ ohms	400 μ ohms
Contact diameter:		2.0 mm	2.0 mm	2.0 mm	2.0 mm
Maximum conductor size:		2.0 mm <sup>2</sup>	2.0 mm <sup>2</sup>	2.0 mm <sup>2</sup>	2.0 mm <sup>2</sup>
Maximum insulation diameter:		3.0 mm	3.0 mm	3.0 mm	3.0 mm
Maximum voltage:		240 V ac/300 V dc		1500 V ac/2200 V dc	
Test voltage:		2000 V		4000 V ac/5400 V dc	
Termination:		The contacts are suitable for both solder & 8 point crimp termination		The contacts are suitable for solder connection only	
Contact material:		Silver plated brass			
Contact insulator:		Acetal co-polymer			
Ingress protection:		Dust and water proof to IP67			
Maximum temperature:		-20 °C to +55 °C		-20 °C to +70 °C	
Certification (refer to User Manual for full details):		ATEX/IECEX Group I and II			

## Dimensions - TX3701

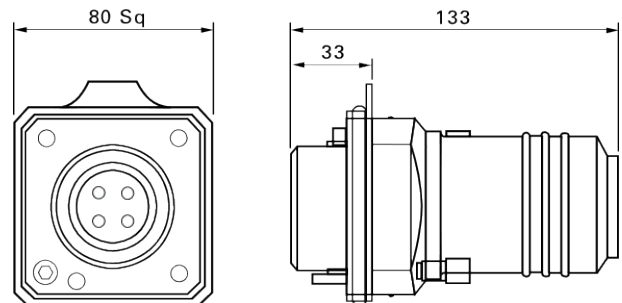
TX3701.S - Basic Receptacle Unit - for mounting on to explosion proof enclosures



TX3701.SS Receptacle Unit - with cover shell



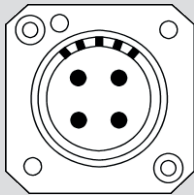
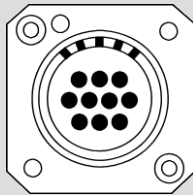
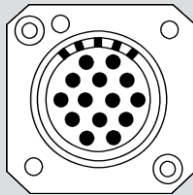
TX3701.PS Plug Unit - with cover shell





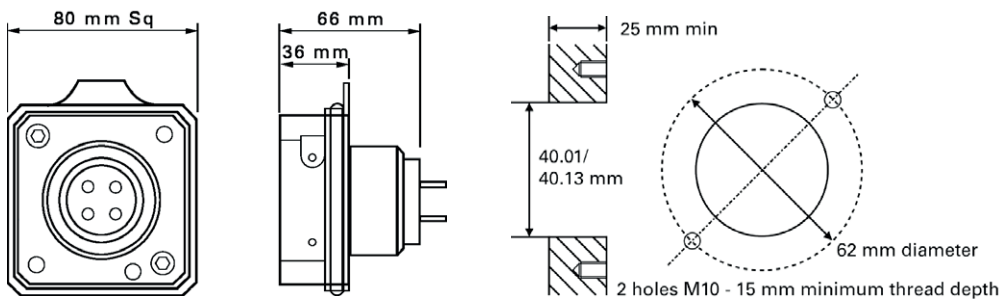
# **TX3700 Series Data Sheet**

## **Technical Information - TX3704**

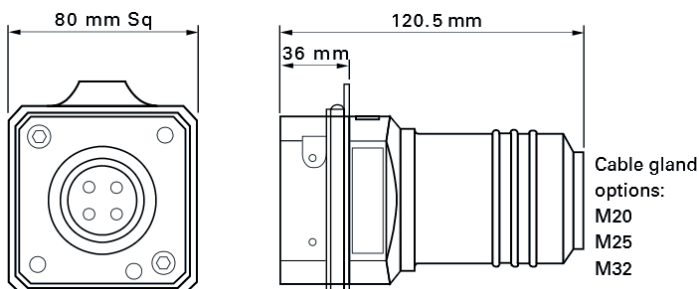
<b>Body Size: 80mm</b> <b>Flame Path: 25mm</b> <b>Body Material: Brass</b>	4 contacts	10 contacts	14 contacts	
				
	Maximum current per pin:	25 A	25 A	20 A
	Maximum total current:	100 A	100 A	100 A
Contact resistance:	400 μ ohms	400 μ ohms	400 μ ohms	
Contact diameter:	2.3 mm	2.3 mm	2.0 mm	
Maximum conductor size:	2.5 mm <sup>2</sup>	2.5 mm <sup>2</sup>	2.0 mm <sup>2</sup>	
Maximum insulation diameter:	3.5 mm	3.5 mm	3.0 mm	
Maximum voltage:	240 V ac/300 V dc			
Test voltage:	2000 V			
Termination:	The contacts are suitable for both solder or 8 point crimp termination			
Contact material:	Silver plated brass			
Contact insulator:	Acetal co-polymer			
Ingress protection:	Dust and water proof to IP67			
Maximum temperature:	-20 °C to +55 °C			
Certification (refer to User Manual for full details):	ATEX/IECEX Group I and II			

## **Dimensions - TX3704**

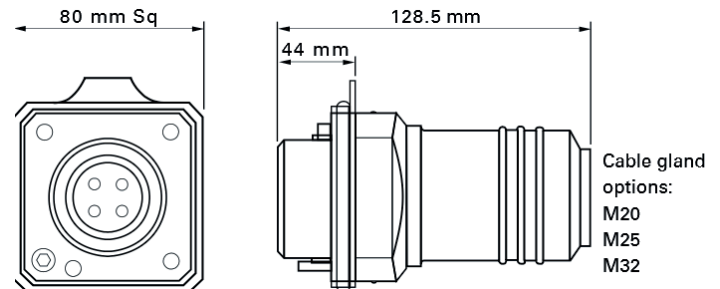
TX3704.S Basic Receptacle Unit - for mounting on to explosion proof enclosures



TX3704.SS Receptacle Unit - with cover shell



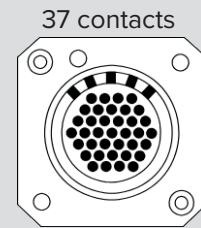
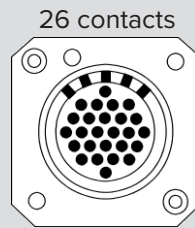
TX3704.PS Plug Unit - with cover shell



# TX3700 Series Data Sheet

## Technical Information - TX3705

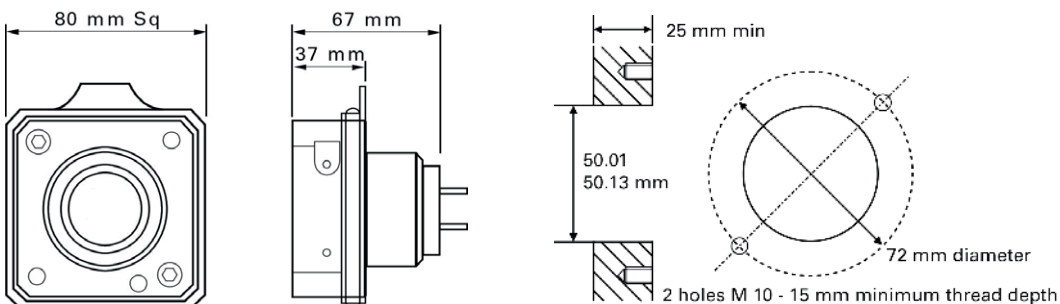
**Body Size: 80mm**  
**Flame Path: 25mm**  
**Body Material: Brass**



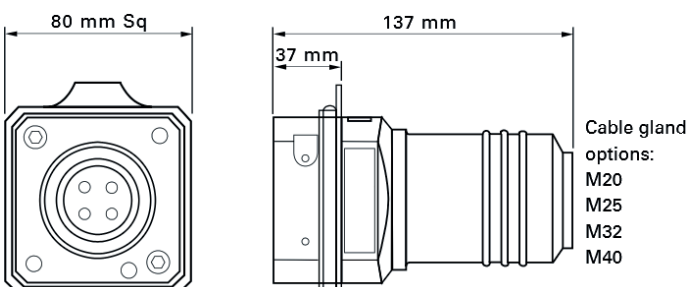
Maximum current per pin:	20 A	20 A
Maximum total current:	100 A	100 A
Contact resistance:	400 $\mu$ ohms	400 $\mu$ ohms
Contact diameter:	2.0 mm	2.0 mm
Maximum conductor size:	2.0 mm <sup>2</sup>	2.0 mm <sup>2</sup>
Maximum insulation diameter:	3.0 mm	3.0 mm
Maximum voltage:	240 V ac/300 V dc	
Test voltage:	2000 V	
Termination:	The contacts are suitable for both solder or 8 point crimp termination	
Contact material:	Silver plated brass	
Contact insulator:	Acetal co-polymer	
Ingress protection:	Dust and water proof to IP67	
Maximum temperature:	-20 °C to +55 °C	
Certification (refer to User Manual for full details):	ATEX/IECEx Group I and II	

## Dimensions - TX3705

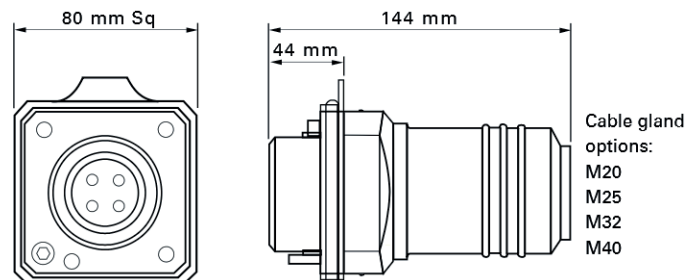
TX3705.S - Basic Receptacle Unit - for mounting on to explosion proof enclosures



TX3705.SS Receptacle Unit - with cover shell



TX3705.PS Plug Unit - with cover shell





# TX3700 Series Data Sheet

## Order Reference - TX3700 - 12.5mm Flame Path

### Basic Receptacle Unit

4 pins	TX3700.S.11.21.48
10 pins	TX3700.S.12.21.48
14 pins	TX3700.S.13.21.48



### Receptacle Unit with Cover Shell

	M20	M25
4 pins	TX3700.SS.11.21.48.31	TX3700.SS.11.21.48.32
10 pins	TX3700.SS.12.21.48.31	TX3700.SS.12.21.48.32
14 pins	TX3700.SS.13.21.48.31	TX3700.SS.13.21.48.32



### Plug Unit with Cover Shell

	M20	M25
4 sockets	TX3700.PS.11.22.48.31	TX3700.PS.11.22.48.32
10 sockets	TX3700.PS.12.22.48.31	TX3700.PS.12.22.48.32
14 sockets	TX3700.PS.13.22.48.31	TX3700.PS.13.22.48.32



### Plug Blank

		with safety wire
	TX3700.BP.48	TX3700.BPS.48

The Ex d plug blank enables power to be re-applied to a plug unit when it has been de-coupled.



### Socket Blank

		with safety wire
	TX3700.BS.48	TX3700.BSS.48

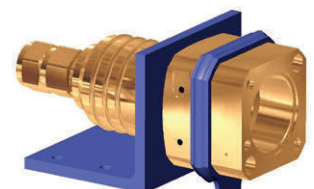
The Ex d socket blank enables power to be re-applied to a socket unit when it has been de-coupled.



### Mounting Bracket

	Stainless Steel
	TX3700.01

To anchor a socket unit when it is being used as half of a line connector. Material - powder coated stainless steel.



# TX3700 Series Data Sheet

## Order Reference - TX3701 - 12.5mm Flame Path

### Basic Receptacle Unit

26 pins	TX3701.S.16.21.48
37 pins	TX3701.S.17.21.48
3 pins	TX3701.S.19.21.48
8 pins	TX3701.S.18.21.48



### Receptacle Unit with Cover Shell

	M20	M25	M32
26 pins	TX3701.SS.16.21.48.31	TX3701.SS.16.21.48.32	TX3701.SS.16.21.48.33
37 pins	TX3701.SS.17.21.48.31	TX3701.SS.17.21.48.32	TX.3701.SS.17.21.48.33
3 pins	TX3701.SS.19.21.48.31	TX3701.SS.19.21.48.32	TX3701.SS.19.21.48.33
8 pins	TX3701.SS.18.21.48.31	TX3701.SS.18.21.48.32	TX3701.SS.18.21.48.33



### Plug Unit with Cover Shell

	M20	M25	M32
26 sockets	TX3701.PS.16.22.48.31	TX3701.PS.16.22.48.32	TX3701.PS.16.22.48.33
37 sockets	TX3701.PS.17.22.48.31	TX3701.PS.17.22.48.32	TX.3701.PS.17.22.48.33
3 sockets	TX3701.PS.19.22.48.31	TX3701.PS.19.22.48.32	TX3701.PS.19.22.48.33
8 sockets	TX3701.PS.18.22.48.31	TX3701.PS.18.22.48.32	TX.3701.PS.18.22.48.33



### Plug Blank

with safety wire

TX3701.BP.48	TX3701.BPS.48
--------------	---------------

The Ex d plug blank enables power to be re-applied to a plug unit when it has been de-coupled.



### Socket Blank

with safety wire

TX3701.BS.48	TX3701.BSS.48
--------------	---------------

The Ex d socket blank enables power to be re-applied to a socket unit when it has been de-coupled.

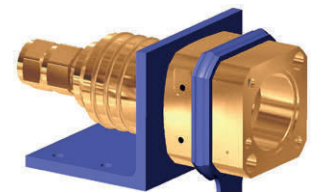


### Mounting Bracket

Stainless Steel

TX3701.01

To anchor a socket unit when it is being used as half of a line connector  
Material - powder coated stainless steel



# TX3700 Series Data Sheet

## Order Reference - TX3704 - 25mm Flame Path

### Basic Receptacle Unit

4 pins	TX3704.S.11.21.48
10 pins	TX3704.S.12.21.48
14 pins	TX3704.S.13.21.48



### Receptacle Unit with Cover Shell

M20

M25

4 pins	TX3704.SS.11.21.48.31	TX3704.SS.11.21.48.32
10 pins	TX3704.SS.12.21.48.31	TX3704.SS.12.21.48.32
14 pins	TX3704.SS.13.21.48.31	TX3704.SS.13.21.48.32



### Short Pin

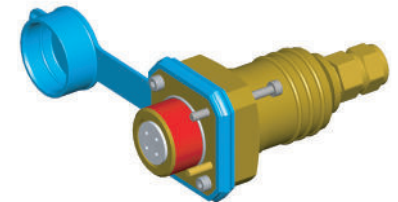
Please specify a 'short pin' if required for automatic pilot circuit isolation. The short pin can be fitted in any location in the contact insert according to preference.

### Plug Unit with Cover Shell

M20

M25

4 sockets	TX3704.PS.11.22.48.31	TX3704.PS.11.22.48.32
10 sockets	TX3704.PS.12.22.48.31	TX3704.PS.12.22.48.32
14 sockets	TX3704.PS.13.22.48.31	TX3704.PS.13.22.48.32



### Plug Blank

with safety wire

TX3704.BP.48

TX3704.BPS.48

The Ex d plug blank enables power to be re-applied to a plug unit when it has been de-coupled.



### Socket Blank

with safety wire

TX3704.BS.48

TX3704.BSS.48

The Ex d socket blank enables power to be re-applied to a socket unit when it has been de-coupled.

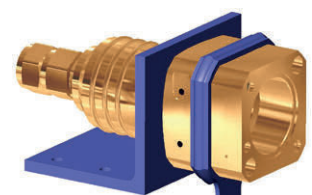


### Mounting Bracket

Stainless Steel

TX3704.01

To anchor a socket unit when it is being used as half of a line connector. Material - powder coated stainless steel.



# TX3700 Series Data Sheet

## Order Reference - TX3705 - 25mm Flame Path

### Basic Receptacle Unit

26 pins	TX3705.S.16.21.48
37 pins	TX3705.S.17.21.48



### Receptacle Unit with Cover Shell

	M20	M25	M32
26 pins	TX3705.SS.16.21.48.31	TX3705.SS.16.21.48.32	TX3705.SS.16.21.48.33
37 pins	TX3705.SS.17.21.48.31	TX3705.SS.17.21.48.32	TX3705.SS.17.21.48.33

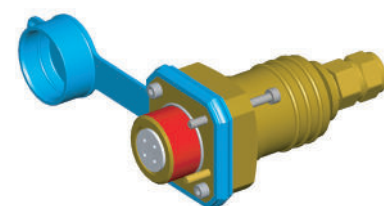
### Short Pin

Please specify a 'short pin' if required for automatic pilot circuit isolation. The short pin can be fitted in any location in the contact insert according to preference.



### Plug Unit with Cover Shell

	M20	M25
26 sockets	TX3705.PS.16.22.48.31	TX3704.PS.16.22.48.32
37 sockets	TX3705.PS.17.22.48.31	TX3704.PS.17.22.48.32



### Plug Blank

		with safety wire
	TX3705.BP.48	TX3705.BPS.48

The Ex d plug blank enables power to be re-applied to a plug unit when it has been de-coupled.



### Socket Blank

		with safety wire
	TX3705.BS.48	TX3705.BSS.48

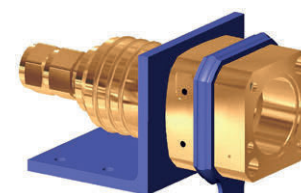
The Ex d socket blank enables power to be re-applied to a socket unit when it has been de-coupled.



### Mounting Bracket

	Stainless Steel
	TX3704.01

To anchor a socket unit when it is being used as half of a line connector. Material - powder coated stainless steel.



## **At Trolex, we save lives.**

We believe that no person should risk their life to earn a living.

Our aim is to become the world's leading name in health and safety technology, through pioneering products that provide real-world benefits to our customers, whenever workers operate in hazardous environments.

For more information about Trolex, please contact us at:

### **Enquiries**

[sales@trolex.com](mailto:sales@trolex.com)

### **Telephone**

+44 (0) 161 483 1435

### **Fax**

+44 (0) 161 483 5556

### **Trolex Ltd**

Newby Road, Hazel Grove  
Stockport, Cheshire  
SK7 5DY, United Kingdom

### **Website**

[www.trolex.com](http://www.trolex.com)



[/company/trolexUK](https://www.linkedin.com/company/trolexUK)



[trolexUK](https://twitter.com/trolexUK)



[/trolexUK](https://www.instagram.com/trolexUK)



[/user/TrolexUK](https://www.reddit.com/user/TrolexUK)