

new

# UTO

Dynamic IP68 / IP69K  
High salt spray resistance  
RoHS compliant



## Metal circular connector

### Description

"UTO" industrial circular connectors are a range of multiway connectors available in 8 shell sizes and 8 insert arrangements all intermateable, interchangeable and intermountable with the TRIM TRIO "UTG" and "UTP" industrial connector families.

"UTO" is equipped with identical shells from military connectors complying to MIL-C-26482 spec.

Strong and rugged built to resist every environmental and mechanical requirement for indoor and outdoor applications.

Amongst several characteristics, "UTO" offers possibilities on: Shielding, High levels on sealing and salt spray. UTO is also the perfect solution to connect cat5e Ethernet applications in combination with other signals, using the same TRIM TRIO contacts (consult factory for more info).



### Features and benefits (see p2)

- Suitable for shielding applications
- Available in 8 shell sizes and 8 insert arrangements.
- Available in plug and receptacle versions for both male and female contacts.
- Different insert orientations possible.
- Plastic inserts with flammability rating: UL94-V0.
- **2 levels of water protection:** Dynamic IP67 and IP68 both versions are IP69K
- **2 levels of salt spray:** 48h and 96h Higher salt spray resistance (200/500h) upon request
- Cat5e Ethernet compatible. Can be combined with other signals offering the advantage to use same contacts (consult factory).
- UL recognition in process.
- Metal bayonet ring:
  - Metal wave spring loaded
  - Locks with audible positive "click"
  - Assures 500 matings and unmatings
- RoHS compliant

### Performance characteristics

Operating temp:	-40°C to +105°C
Insulation resistance:	5000 MΩ min.
Test potential:	2000 VAC
Durability:	500 matings and unmatings.
Vibration resistance:	Per MIL-STD202 method 204
Thermal shock:	Per MIL-STD202 method 207
Corrosion:	Salt spray per MIL-STD 202 method 101 48h (standard version) 96h (black anodised coupling ring)
	Higher salt spray resistance (200/500h) upon request
Shielding effectiveness:	95 dB at 1 Mhz
Degree of water protection per DIN 40050:	Dynamic IP67 / IP68 / IP69K in mated condition and in combination with sealed back shell.

### Construction

Shells:	Zinc alloy
Backshells and cable glands:	Brass
Coupling ring:	Aluminium alloy
Coupling spring:	Spring stainless steel
Insert:	Glass-filled thermoplast UL94-V0
	RoHS compliant

### Contact accommodation

- "UTO" connectors accept TRIM TRIO size 16 crimp-type removable snap-lock contacts (see contacts section)
- Contacts to be ordered separately.

### How to order

	UTO	0	14	12	P	-	H or H6	--	--
	UTO	6	14	12	S	-	H		
<b>Body variation:</b>		0 : Wall mounting receptacle 6 : Cable plug 7 : Jam nut receptacle for rear panel mounting							
<b>Shell size:</b>									
<b>Insert arrangement:</b>									
<b>Type of contacts:</b>		P : Pin contacts S : Socket contacts							
<b>Insert polarisation:</b>		No letter : Standard version W, X, Y, Z: Different orientations (consult factory)							
<b>Application:</b>		H : Standard version, water protected IP 67 & IP 69K H6 : Water protected IP 68 & IP 69K (only needed for wall mounting & jam nut receptacles)							
<b>Design variation:</b>		No letter : Standard version Others : Special versions							
<b>Plating:</b>		No letter : Standard is nickel plating (48h salt spray) 01: Black anodised jam nut (96h salt spray) 02: Black anodised coupling ring (96h salt spray)							

# New UTO-UTOW series



## New UTO – UTOW series:

- The exclusive new product range in the TRIM TRIO broadline.
- Aesthetic and top class performances

## UTO – UTOW series major technical features & benefits

### • Full metal bayonet connector

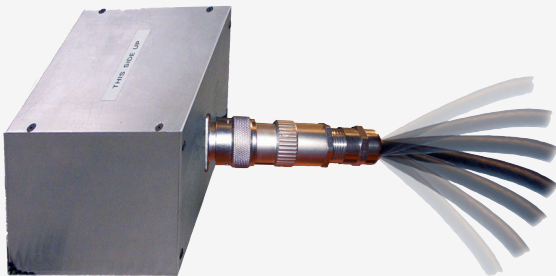
- Enabling 500 mating-unmating without wear out
- Secure locking device: audible “click” when mating



### • Dynamic IP68\*

Connector will remain IP68 even when:

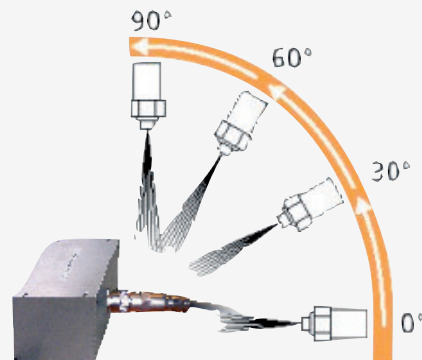
- Pulling on the cable
- Bending the cable



- \* With appropriate back shell
- \* Exists also in IP67 version

### • Dynamic IP69K\*

Connector withstands high pressure water cleaning.



- \* With appropriate back shell

### • High salt spray resistance\*

- Can be used in severe environment

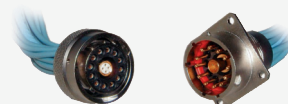
- \* Exists in 48 and 96 hours salt spray version
- \* Higher salt spray resistance (e.g. 200 or 500 hours) upon request

### • RoHS compliant

- Cadmium and lead free materials are used

### • In accordance with following standards

- UTO is Ethernet Cat5e compatible (consult factory)
- UTO-UTOW ranges are upgradeable to highspeed solutions

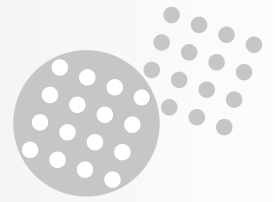


For detailed information on UTO and UTOW series offering see pages 21 to 31

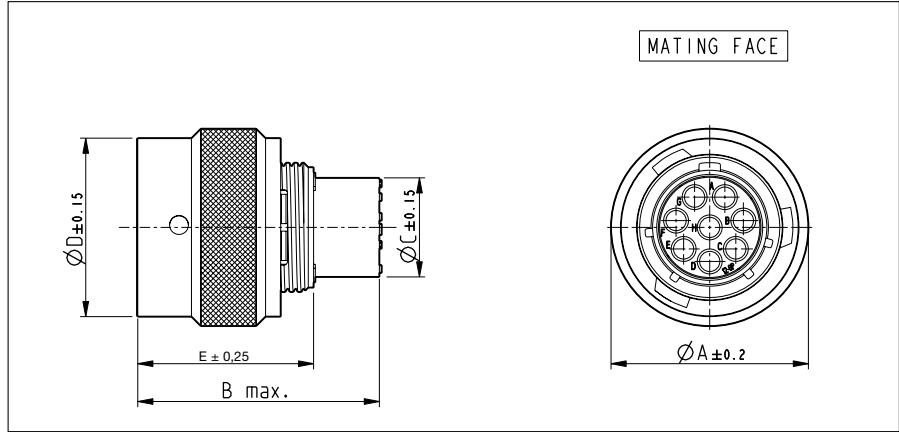
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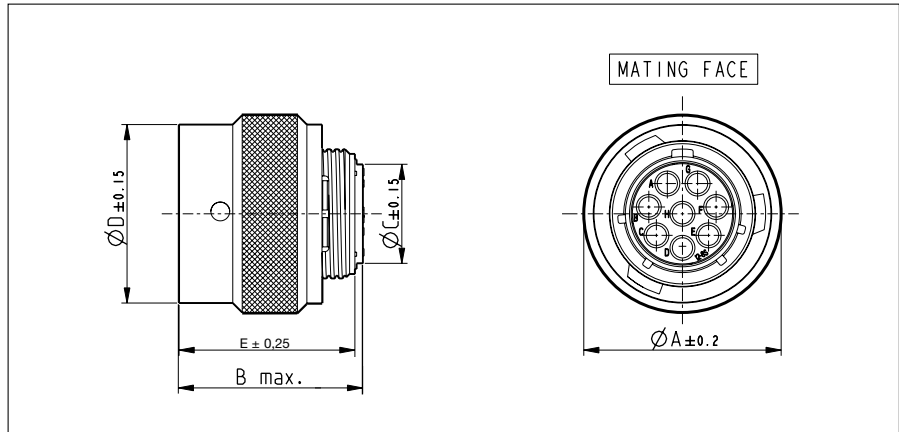
**Cable plug for pin contacts (UT06- - - -PH)**



Part number	Shell size	$\varnothing A \pm 0.2$	B max.	$\varnothing C \pm 0.15$	$\varnothing D \pm 0.15$	E $\pm 0.25$
UT06104PH	10	21.80	33.00	10.2	20.00	23.25
UT06128PH	12	26.10		13.4	23.60	
UT061412PH	14	29.30		16.7	26.80	
UT061619PH	16	32.45		19.7	30.00	
UT061823PH	18	35.25		21.7	33.30	
UT062028PH	20	38.80		24.9	36.55	
UT062235PH	22	42.00	27.30	28.1	39.50	25.20
UT062448PH	24	45.05		31.2	42.60	

Part numbers are suitable for both IP67 and IP68 water protection  
For 96h salt spray version add "02" behind "H" e.g. UT061412PH02 (only bayonet ring will be black anodised)

**Cable plug for socket contacts (UT06- - - -SH)**



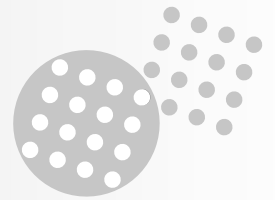
Part number	Shell size	$\varnothing A \pm 0.2$	B max.	$\varnothing C \pm 0.15$	$\varnothing D \pm 0.15$	E $\pm 0.25$
UT06104SH	10	21.80	33.00	10.2	20.00	23.25
UT06128SH	12	26.10		13.4	23.60	
UT061412SH	14	29.30		16.7	26.80	
UT061619SH	16	32.45		19.7	30.00	
UT061823SH	18	35.25		21.7	33.30	
UT062028SH	20	38.80		24.9	36.55	
UT062235SH	22	42.00	27.30	28.1	39.50	25.20
UT062448SH	24	45.05		31.2	42.60	

Part numbers are suitable for both IP67 and IP68 water protection  
For 96h salt spray version add "02" behind "H" e.g. UT061412SH02 (only bayonet ring will be black anodised)

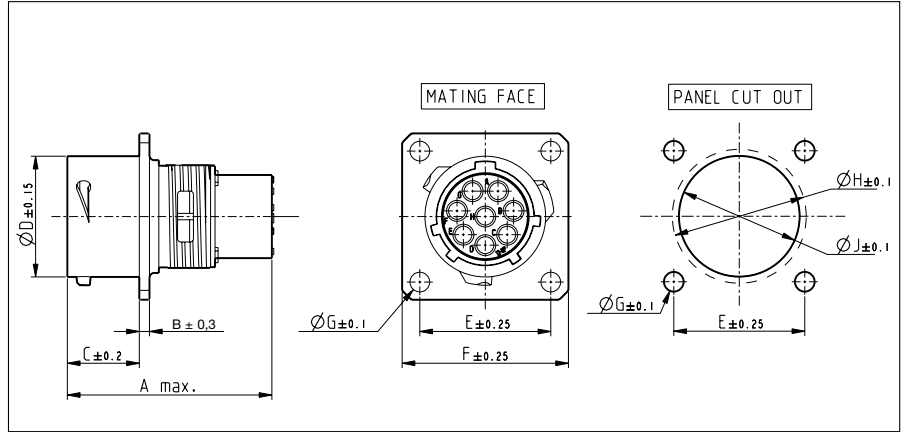
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**Wall mounting receptacle for pin contacts (UT00---PH/PH6)**

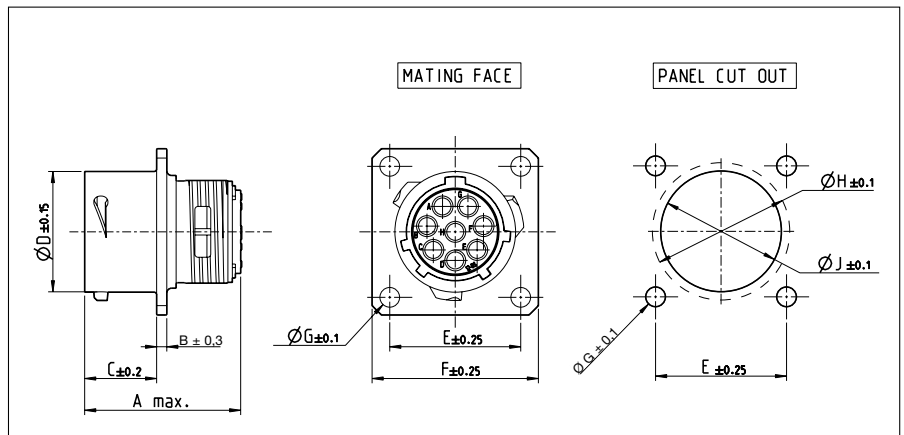


Part number		Shell size	A max.	B ± 0.3	C ± 0.2	Ø D ± 0.15	E ± 0.25	F ± 0.25	Ø G ± 0.1	Ø H ± 0.1	Ø J ± 0.1	
IP67	IP68											
UT00104PH	UT00104PH6	10	33.23	1.6	11.35	15.0	18.3	23.8	3.2	17.3	14.2	
UT00128PH	UT00128PH6	12				19.0	20.6	26.2		21.8	18.4	
UT001412PH	UT001412PH6	14				22.2	23.0	28.6		25.0	21.5	
UT001619PH	UT001619PH6	16				25.3	24.6	31.0		28.1	24.6	
UT001823PH	UT001823PH6	18				28.5	26.9	33.3		31.3	27.8	
UT002028PH	UT002028PH6	20	34.75	2.4	14.55	31.7	29.4	36.5	3.9	34.5	30.9	
UT002235PH	UT002235PH6	22				34.9	31.8	39.7		37.7	34.1	
UT002448PH	UT002448PH6	24				15.35	38.0	34.9		42.9	40.9	37.3

Part numbers are suitable for both 48h and 96h salt spray.

A square sealing has to be ordered separately to guarantee a sealing with equipment. Refer to "Circular accessories" section (UTFD--).

**Wall mounting receptacle for socket contacts (UT00---SH/SH6)**



Part number		Shell size	A max.	B ± 0.3	C ± 0.2	Ø D ± 0.15	E ± 0.25	F ± 0.25	Ø G ± 0.1	Ø H ± 0.1	Ø J ± 0.1	
IP67	IP68											
UT00104SH	UT00104SH6	10	25.20	1.6	11.35	15.0	18.3	23.8	3.2	17.3	14.2	
UT00128SH	UT00128SH6	12				19.0	20.6	26.2		21.8	18.4	
UT001412SH	UT001412SH6	14				22.2	23.0	28.6		25.0	21.5	
UT001619SH	UT001619SH6	16				25.3	24.6	31.0		28.1	24.6	
UT001823SH	UT001823SH6	18				28.5	26.9	33.3		31.3	27.8	
UT002028SH	UT002028SH6	20	29.00	2.4	14.55	31.7	29.4	36.5	3.9	34.5	30.9	
UT002235SH	UT002235SH6	22				34.9	31.8	39.7		37.7	34.1	
UT002448SH	UT002448SH6	24				15.35	38.0	34.9		42.9	40.9	37.3

Part numbers are suitable for both 48h and 96h salt spray.

A square sealing has to be ordered separately to guarantee a sealing with equipment. Refer to "Circular accessories" section (UTFD--).

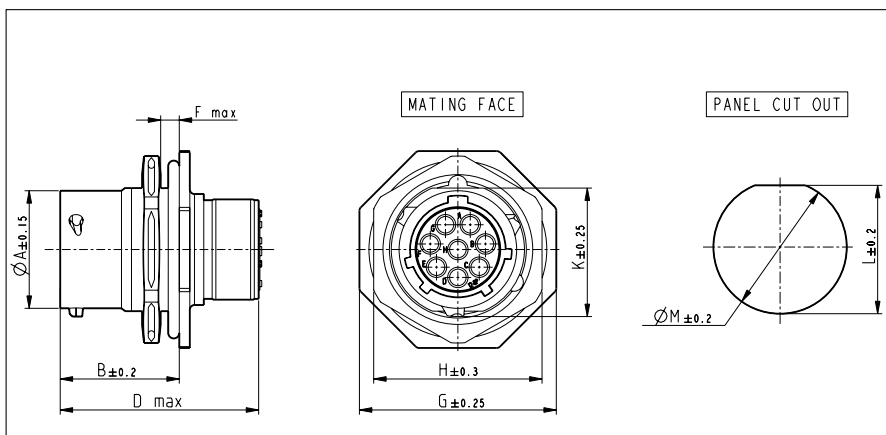
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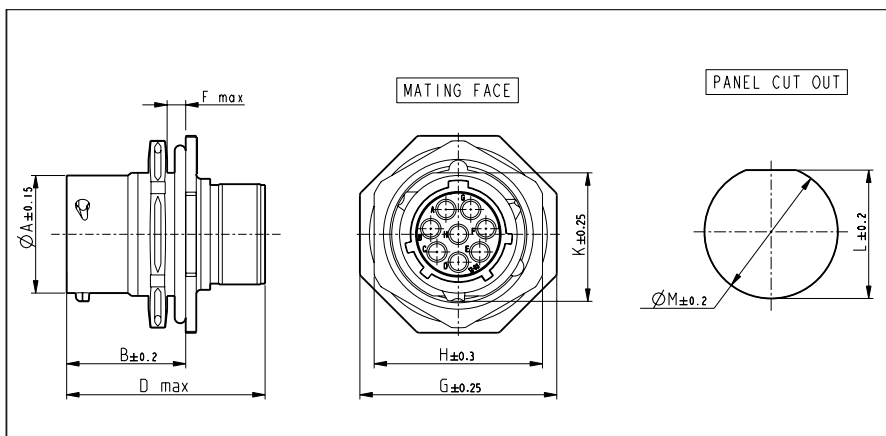
**Jam nut receptacle for pin contacts (UT07---PH/PH6) - suitable for rear panel mounting**



Part number		Shell size	$\varnothing A$ $\pm 0.15$	B $\pm 0.2$	D Max.	F Max.	G $\pm 0.25$	H $\pm 0.3$	K $\pm 0.25$	L $\pm 0.2$	$\varnothing M$ $\pm 0.2$
IP67	IP68										
UT07104PH	UT07104PH6	10	14.9	19.30	33.90	3.2	27.0	22.2	16.6	17.0	17.7
UT07128PH	UT07128PH6	12	19.0				31.8	27.0	20.8	21.2	22.5
UT071412PH	UT071412PH6	14	22.2				34.9	30.2	23.9	24.3	25.7
UT071619PH	UT071619PH6	16	25.3				38.1	33.3	27.1	27.5	28.7
UT071823PH	UT071823PH6	18	28.5				41.3	36.5	30.3	30.6	32.0
UT072028PH	UT072028PH6	20	31.7	24.70	39.00	6.4	46.1	39.7	33.4	33.8	35.2
UT072235PH	UT072235PH6	22	34.9				49.2	42.9	36.6	37.0	38.4
UT072448PH	UT072448PH6	24	38.0				25.50	40.50	53.4	46.0	39.8

For 96h salt spray version add "01" at the end of the part number e.g. UT071412PH601 (only jam nut will be black anodised)

**Jam nut receptacle for socket contacts (UT07---SH/SH6) - suitable for rear panel mounting**



Part number		Shell size	$\varnothing A$ $\pm 0.15$	B $\pm 0.2$	D Max.	F Max.	G $\pm 0.25$	H $\pm 0.3$	K $\pm 0.25$	L $\pm 0.2$	$\varnothing M$ $\pm 0.2$
IP67	IP68										
UT07104SH	UT07104SH6	10	14.9	19.30	33.00	3.2	27.0	22.2	16.6	17.0	17.7
UT07128SH	UT07128SH6	12	19.0				31.8	27.0	20.8	21.2	22.5
UT071412SH	UT071412SH6	14	22.2				34.9	30.2	23.9	24.3	25.7
UT071619SH	UT071619SH6	16	25.3				38.1	33.3	27.1	27.5	28.7
UT071823SH	UT071823SH6	18	28.5				41.3	36.5	30.3	30.6	32.0
UT072028SH	UT072028SH6	20	31.7	24.70	39.00	6.4	46.1	39.7	33.4	33.8	35.2
UT072235SH	UT072235SH6	22	34.9				49.2	42.9	36.6	37.0	38.4
UT072448SH	UT072448SH6	24	38.0				25.50	40.50	53.4	46.0	39.8

For 96h salt spray version add "01" at the end of the part number e.g. UT071412PH601 (only jam nut will be black anodised)

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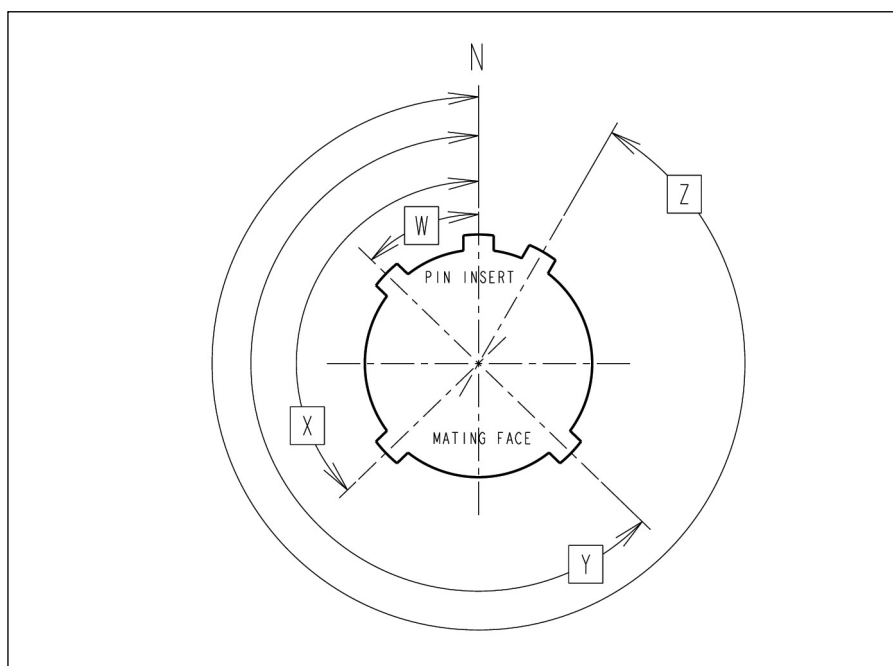


### Insert rotation positions

The table shows possible insert rotation positions. 5 positions N,W,X,y and Z differ in the degree of rotation for the various connectors sizes. The table indicates the exact degree of rotation.

Note: Insert rotation positions are optional (consult factory)

Shell size	Contact number	Insert rotation positions			
		W	X	y	Z
10	4	45	-	-	-
12	8	26	-	-	-
14	12	60	-	-	-
16	19	30	165	-	315
18	23	-	158	-	270
20	28	79	-	259	-
22	35	13	162	198	265
24	48	60	120	189	351



### Extra O-seals for wall mounting (UT00) and jam nut (UT07) receptacle connectors

An extra O-seal must be mounted on the receptacle connectors when a backshell is used. This to guarantee the IP68 sealing level

Part number	Shell size
UT010REARSEAL	10
UT012REARSEAL	12
UT014REARSEAL	14
UT016REARSEAL	16
UT018REARSEAL	18
UT020REARSEAL	20
UT022REARSEAL	22
UT024REARSEAL	24