

new

# UTOW

Dynamic IP68 / IP69K  
High salt spray resistance  
RoHS compliant



## High density Metal circular connector

### Description

"UTOW" industrial circular connectors are a range of multi way connectors available in 8 shell sizes and 8 high density insert arrangements.

"UTOW" wall mounting receptacle connectors have the same panel cut-out dimensions as the MIL-C-26482 series I specifications.

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

Amongst several characteristics, "UTOW" offers possibilities on: Shielding, high levels on sealing and salt spray.

### Features and benefits (see p2)

- Suitable for EMC requirements.
- Available in 8 shell sizes and 8 insert arrangements.
- Available in plug and receptacle version 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
- Higher salt spray (200/500h) upon request.
- 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 temperature:	-40°C to +105°C
Insulation resistance:	5000 MΩ min.
Test potential:	1500 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: 65 dB at 10 Mhz	
Degree of water protection per DIN 40050: Dynamic IP67 / IP68 / IP69K in mated condition and in combination with sealed back shell	

### Construction

Shells and accessories:	Zinc alloy
Coupling ring:	Aluminium alloy
Coupling spring:	Spring stainless steel
Insert:	Glass-filled thermoplast UL94-V0
Finish:	Nickel plated
RoHS compliant	

### Contact accommodation

- "UTOW" connectors accept TRIM TRIO size 20 crimp-type removable snap-lock contacts (see contacts section)
- Contacts to be ordered separately

### How to order

<b>Connector family:</b>	<b>UTOW</b>	<b>0</b>	<b>16</b>	<b>26</b>	<b>P</b>	<b>-</b>	<b>H or H6</b>	<b>--</b>	<b>-</b>
	<b>UTOW</b>	<b>6</b>	<b>16</b>	<b>26</b>	<b>S</b>	<b>-</b>	<b>H</b>	<b>--</b>	<b>-</b>
<b>Body variation :</b>	<b>0</b> : Wall mounting receptacle								
	<b>6</b> : Cable plug								
	<b>7</b> : Jam nut receptacle for rear panel mounting								
<b>Shell size :</b>									
<b>Insert arrangement :</b>									
<b>Type of contacts :</b>	<b>P</b> : Pin contacts								
	<b>S</b> : Socket contacts								
<b>Insert polarisation :</b>	<b>No letter</b> : Standard version								
	<b>W, X, Y, Z</b> : Different orientations (consult factory)								
<b>Application :</b>	<b>H</b> : Standard version, water protection IP 67 & IP 69K								
	<b>H6</b> : Water protected IP 68 & IP 69K (only needed for wall mounting & jam nut receptacles)								
<b>Design variation :</b>	<b>No letter</b> : Standard version								
	<b>Others</b> : Special versions								
<b>Plating :</b>	<b>No letter</b> : standard is nickel plating (48h salt spray)								
	<b>01</b> : Black anodised, jam nut (96h salt spray)								
	<b>02</b> : 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

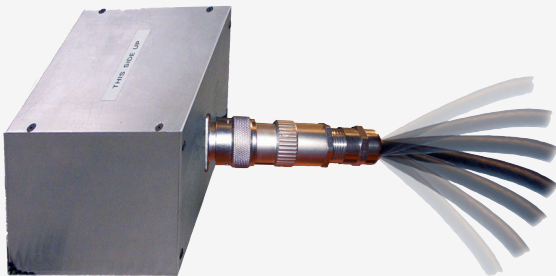
- Enabling 500 mating-unmating without wear out
- Secure locking device: audible “click” when mating



### • Dynamic IP68\*

Connector will remain IP68 even when:

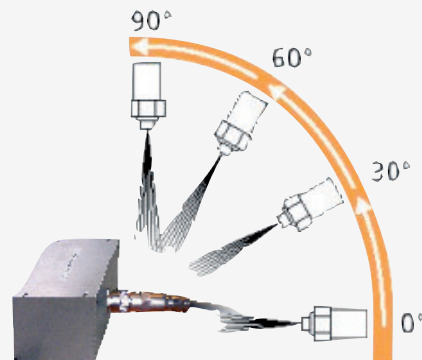
- Pulling on the cable
- Bending the cable



- \* 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

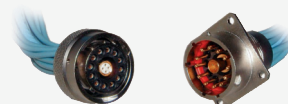
- \* Exists in 48 and 96 hours salt spray version
- \* Higher salt spray resistance (e.g. 200 or 500 hours) upon request

### • 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



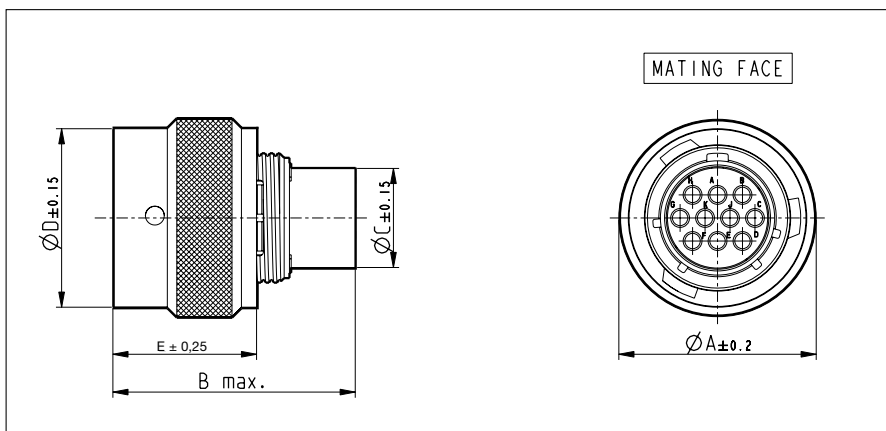
For detailed information on UTO and UTOW series offering see pages 21 to 31

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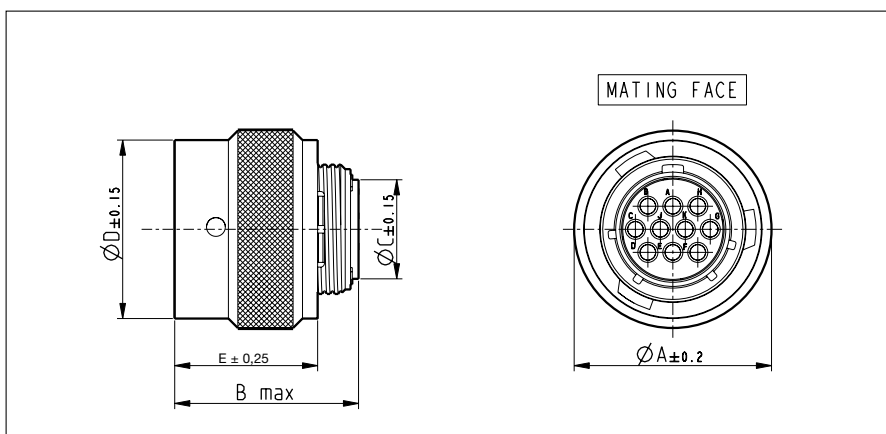
### Cable plug for pin contacts (UTOW6---PH)



Part number	Shell size	$\varnothing A \pm 0.2$	B max.	$\varnothing C \pm 0.15$	$\varnothing D \pm 0.15$	$E \pm 0.25$
UTOW6106PH	10	21.80	33.00	10.2	20.00	19.00
UTOW61210PH	12	26.10		13.4	23.60	
UTOW61419PH	14	29.30		16.7	26.80	
UTOW61626PH	16	32.45		19.7	30.00	
UTOW61832PH	18	35.25		21.7	33.30	
UTOW62041PH	20	38.80		24.9	36.55	
UTOW62255PH	22	42.00		28.1	39.50	
UTOW62461PH	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. UTOW61419PH02 (only bayonet ring will be black anodised)

### Cable plug for socket contacts (UTOW6---SH)



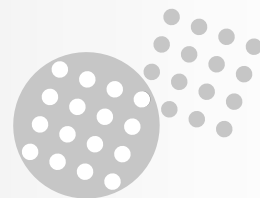
Part number	Shell size	$\varnothing A \pm 0.2$	B max.	$\varnothing C \pm 0.15$	$\varnothing D \pm 0.15$	$E \pm 0.25$
UTOW6106SH	10	21.80	25.30	10.2	20.00	19.00
UTOW61210SH	12	26.10		13.4	23.60	
UTOW61419SH	14	29.30		16.7	26.80	
UTOW61626SH	16	32.45		19.7	30.00	
UTOW61832SH	18	35.25	27.30	21.7	33.30	
UTOW62041SH	20	38.80		24.9	36.55	
UTOW62255SH	22	42.00		28.1	39.50	
UTOW62461SH	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. UTOW61419SH02 (only bayonet ring will be black anodised)

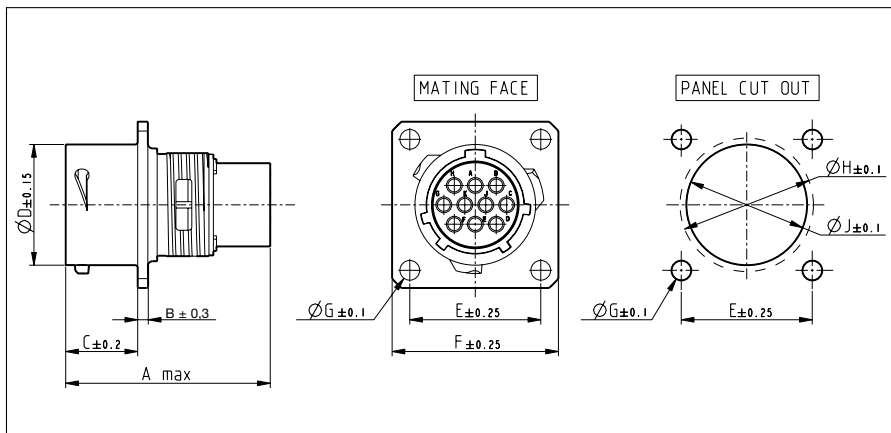
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## Wall mounting receptacle for pin contacts (UTOW0---PH/PH6)

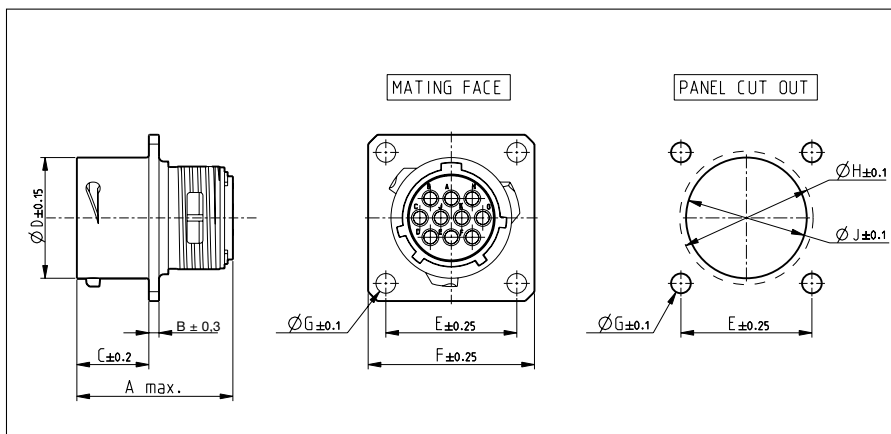


Part number		Shell size	A max.	B ± 0.3	C ± 0.2	Ø D ± 0.15	E ± 0.25	F ± 0.25	Ø G ± 0.1	Ø H ± 0.1	Ø J ± 0.1	
IP67	IP68											
UTOW0106PH	UTOW0106PH6	10	33.23	1.6	11.35	15.0	18.3	23.8	3.2	17.3	14.2	
UTOW01210PH	UTOW01210PH6	12				19.0	20.6	26.2		21.8	18.4	
UTOW01419PH	UTOW01419PH6	14				22.2	23.0	28.6		25.0	21.5	
UTOW01626PH	UTOW01626PH6	16				25.3	24.6	31.0		28.1	24.6	
UTOW01832PH	UTOW01832PH6	18				28.5	26.9	33.3		31.3	27.8	
UTOW02041PH	UTOW02041PH6	20	34.75	2.4	14.55	31.7	29.4	36.5	3.9	34.5	30.9	
UTOW02255PH	UTOW02255PH6	22				34.9	31.8	39.7		37.7	34.1	
UTOW02461PH	UTOW02461PH6	24				15.35	38.0	34.9		42.9	40.9	37.3

Part numbers are suitable for both 48hrs 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 (UTOW0---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											
UTOW0106SH	UTOW0106SH6	10	25.20	1.6	11.35	15.0	18.3	23.8	3.2	17.3	14.2	
UTOW01210SH	UTOW01210SH6	12				19.0	20.6	26.2		21.8	18.4	
UTOW01419SH	UTOW01419SH6	14				22.2	23.0	28.6		25.0	21.5	
UTOW01626SH	UTOW01626SH6	16				25.3	24.6	31.0		28.1	24.6	
UTOW01832SH	UTOW01832SH6	18				28.5	26.9	33.3		31.3	27.8	
UTOW02041SH	UTOW02041SH6	20	29.00	2.4	14.55	31.7	29.4	36.5	3.9	34.5	30.9	
UTOW02255SH	UTOW02255SH6	22				34.9	31.8	39.7		37.7	34.1	
UTOW02461SH	UTOW02461SH6	24				15.35	38.0	34.9		42.9	40.9	37.3

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

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

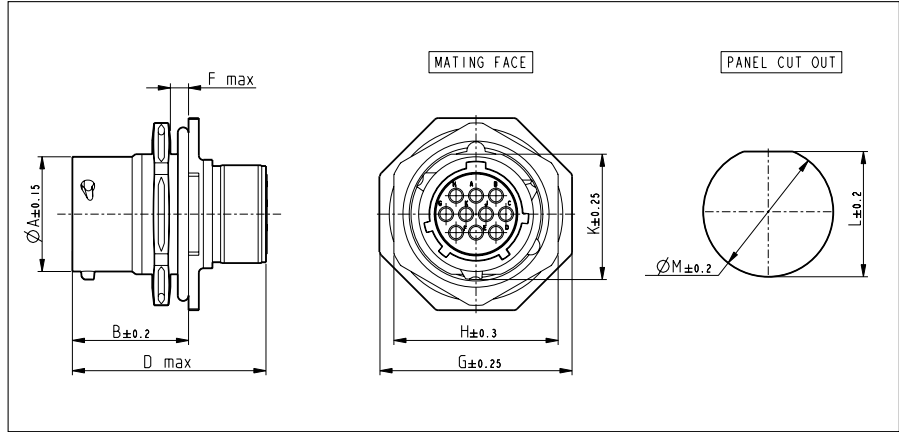
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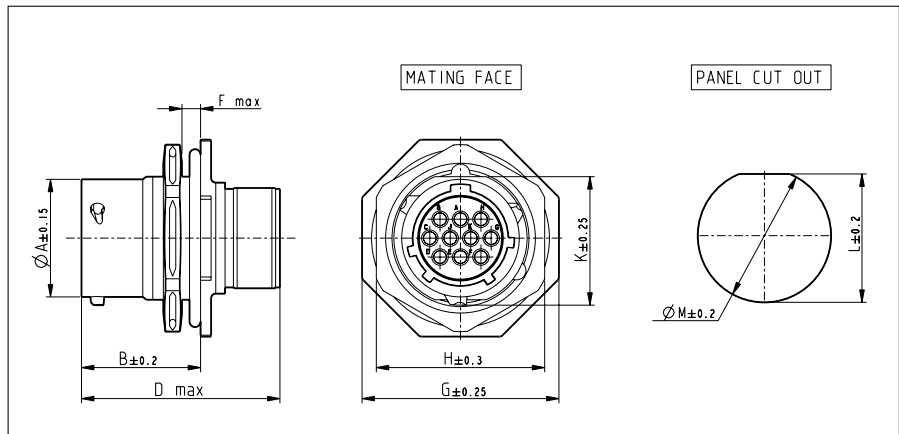
## Jam nut receptacle for pin contacts (UTOW7---PH/PH6) - suitable for rear panel mounting



Part number		Shell size	Ø A ± 0.15	B ± 0.2	D Max.	F Max.	G ± 0.25	H ± 0.3	K ± 0.2	L ± 0.2	Ø M ± 0.2
IP67	IP68										
UTOW7106PH	UTOW7106PH6	10	14.9	19.30	33.90	3.2	27.0	22.2	16.6	17.0	17.7
UTOW71210PH	UTOW71210PH6	12	19.0				31.8	27.0	20.8	21.2	22.5
UTOW71419PH	UTOW71419PH6	14	22.2				34.9	30.2	23.9	24.3	25.7
UTOW71626PH	UTOW71626PH6	16	25.3				38.1	33.3	27.1	27.5	28.7
UTOW71832PH	UTOW71832PH6	18	28.5				41.3	36.5	30.3	30.6	32.0
UTOW72041PH	UTOW72041PH6	20	31.7	24.70	39.00	6.4	46.1	39.7	33.4	33.8	35.2
UTOW72255PH	UTOW72255PH6	22	34.9				49.2	42.9	36.6	37.0	38.4
UTOW72461PH	UTOW72461PH6	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. UTOW71419PH601 (only jam nut will be black anodised)

## Jam nut receptacle for socket contacts (UTOW7---SH/SH6) - suitable for rear panel mounting



Part number		Shell size	Ø A ± 0.15	B ± 0.2	D Max.	F Max.	G ± 0.25	H ± 0.3	K ± 0.2	L ± 0.2	Ø M ± 0.2
IP67	IP68										
UTOW7106SH	UTOW7106SH6	10	14.9	19.30	33.00	3.2	27.0	22.2	16.6	17.0	17.7
UTOW71210SH	UTOW71210SH6	12	19.0				31.8	27.0	20.8	21.2	22.5
UTOW71419SH	UTOW71419SH6	14	22.2				34.9	30.2	23.9	24.3	25.7
UTOW71626SH	UTOW71626SH6	16	25.3				38.1	33.3	27.1	27.5	28.7
UTOW71832SH	UTOW71832SH6	18	28.5				41.3	36.5	30.3	30.6	32.0
UTOW72041SH	UTOW72041SH6	20	31.7	24.70	39.00	6.4	46.1	39.7	33.4	33.8	35.2
UTOW72255SH	UTOW72255SH6	22	34.9				49.2	42.9	36.6	37.0	38.4
UTOW72461SH	UTOW72461SH6	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. UTOW71419PH601 (only jam nut will be black anodised)

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## Insert rotation positions

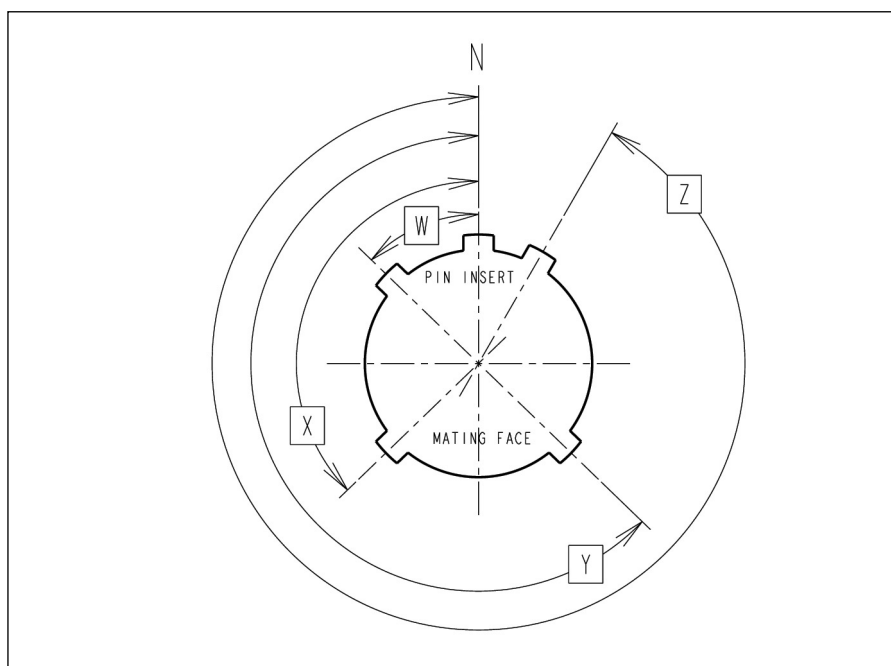
The table shows possible insert rotation positions.

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	6	90	-	-	-
12	10	60	155	270	295
14	19	30	165	315	-
16	26	60	-	275	338
18	32	85	138	222	265
20	41	45	126	225	-
22	55	30	142	226	314
24	61	90	180	270	324



## Extra O-seals for wall mounting (UTOW0) and jam nut (UTOW7) 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