



## The plastic circular connector with metal locking

**UTG provides the complete answer to the need for economical lightweight  
and robust metal coupling**

**Flammability rating**



UL94-V0 compliant

**Rapid and secure locking**



Locks with audible positive «click»

**Intermateable and interchangeable**



With UTO, UTP and UTS series

**Complete range of contacts**

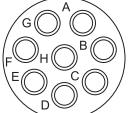
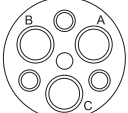
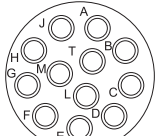
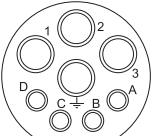
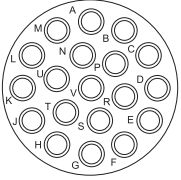
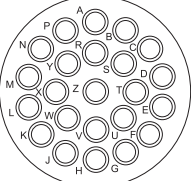
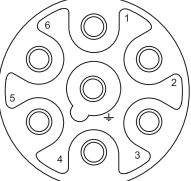
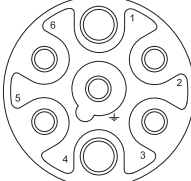


Trim Trio contacts #16

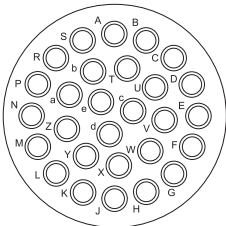
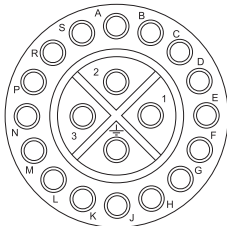
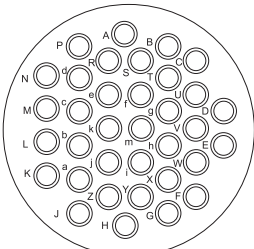
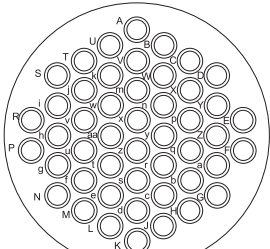
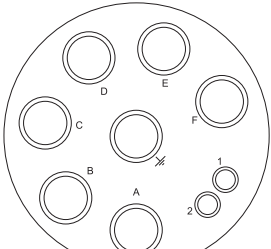
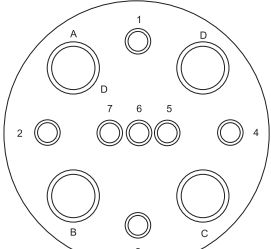


# UTG Series

## Layout

| Shell size | Contact # 16 (Ø 1,6)                                                                                                  | Mixed power / signal versions                                                                                                             |                                                                                                                                              |
|------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 10         |  <p>10-4<br/>4 x #16 (Ø 1,6)</p>     |  <p>10-3<br/>3 x #16 (Ø 1,6)<br/>Group C 250V</p>      |  <p>10-3W3<br/>3 x #16 (Ø 1,6)<br/>3 x #20 (Ø 1,0)</p>    |
| 12         |  <p>12-8<br/>8 x #16 (Ø 1,6)</p>    |  <p>122G1<br/>3 x #12 (Ø 2,4)</p>                     |                                                                                                                                              |
| 14         |  <p>14-12<br/>12 x #16 (Ø 1,6)</p> |  <p>14-8<br/>4 x #12 (Ø 2,4)<br/>4 x #16 (Ø 1,6)</p> |                                                                                                                                              |
| 16         |  <p>16-19<br/>19 x #16 (Ø 1,6)</p> |                                                                                                                                           |                                                                                                                                              |
| 18         |  <p>18-23<br/>23 x #16 (Ø 1,6)</p> |  <p>18-7<br/>Group C 380V<br/>7 x #16 (Ø 1,6)</p>     |  <p>18-7 34<br/>2 x #12 (Ø 2,4)<br/>5 x #16 (Ø 1,6)</p> |

# UTG Series

| Shell size | Contact # 16 (Ø 1,6)                                                                                                  | Mixed power / signal versions                                                                                                             |
|------------|-----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| 20         |  <p>20-28<br/>28 x #16 (Ø 1,6)</p>   |  <p>20-20<br/>20 x #16 (Ø 1,6)<br/>Group C 660V</p>    |
| 22         |  <p>22-35<br/>35 x #16 (Ø 1,6)</p>  |                                                                                                                                           |
| 24         |  <p>24-48<br/>48 x #16 (Ø 1,6)</p> |  <p>24-7<br/>7 x #8 (Ø 3,6)<br/>2 x #16 (Ø 1,6)</p>  |
|            |                                                                                                                       |  <p>24-11<br/>4 x #8 (Ø 3,6)<br/>7 x #16 (Ø 1,6)</p> |

Contact identification positions shown are for mating face of pin contact connectors and wire face of socket contact connectors.

# UTG Series



## Specifications

| Shell size | Contacts number* | Connector type / Part number |               |                           |               |
|------------|------------------|------------------------------|---------------|---------------------------|---------------|
|            |                  | Cable plug                   |               | Panel mounting receptacle |               |
|            |                  | Male insert                  | Female insert | Male insert               | Female insert |
| 10         | 4 #16            | UTG6104PN                    | UTG6104SN     | UTG0104P                  | UTG0104S      |
|            | 2 + ground #16   | UTG6103PN                    | UTG6103SN     | UTG0103P                  | UTG0103S      |
|            | 3 #20 + 3 #16    | UTG6103W3PN                  | -             | -                         | -             |
| 12         | 8 #16            | UTG6128PN                    | UTG6128SN     | UTG0128P                  | UTG0128S      |
|            | 3 #12            | UTG6122G1PN                  | UTG6122G1SN   | UTG0122G1P                | UTG0122G1S    |
| 14         | 12 #16           | UTG61412PN                   | UTG61412SN    | UTG01412P                 | UTG01412S     |
|            | 4#12 + 4 #16     | -                            | UTG6148SN     | UTG0148P                  | -             |
| 16         | 19 #16           | UTG61619PN                   | UTG61619SN    | UTG01619P                 | UTG01619S     |
| 18         | 23 #16           | UTG61823PN                   | UTG61823SN    | UTG01823P                 | UTG01823S     |
|            | 7 #16            | UTG6187PN                    | UTG6187SN     | UTG0187P                  | UTG0187S      |
|            | 2 #12 + 5 #16    | UTG6187PN34                  | UTG6187SN34   | UTG0187P34                | UTG0187S34    |
| 20         | 28 #16           | UTG62028PN                   | UTG62028SN    | UTG02028P                 | UTG02028S     |
|            | 20 #16           | UTG62020PN                   | UTG62020SN    | UTG02020P                 | UTG02020S     |
| 22         | 35 #16           | UTG62235PN                   | UTG62235SN    | UTG02235P                 | UTG02235S     |
| 24         | 48 #16           | UTG62448PN                   | UTG62448SN    | UTG02448P                 | UTG02448S     |
|            | 7 #8 + 2 #16     | UTG6247PN                    | UTG6247SN     | UTG0247P                  | UTG0247S      |
|            | 4 #8 + 7 #16     | -                            | UTG62411SN    | UTG02411P                 | -             |

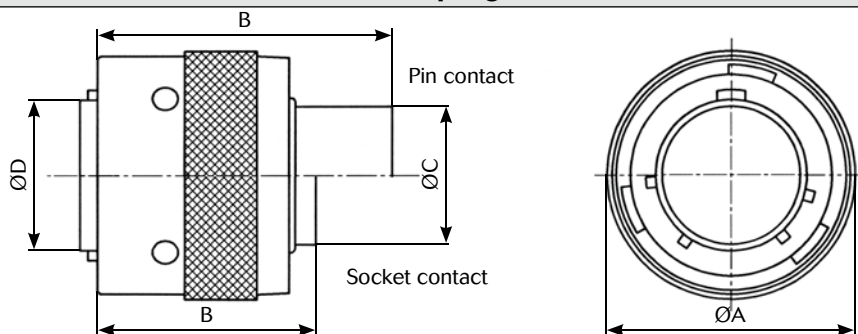
\*Contacts supply separately

For IP65 waterproofed version (for only receptacle) add «H» behind N or S. Ex. UTG0103PH

# UTG Series

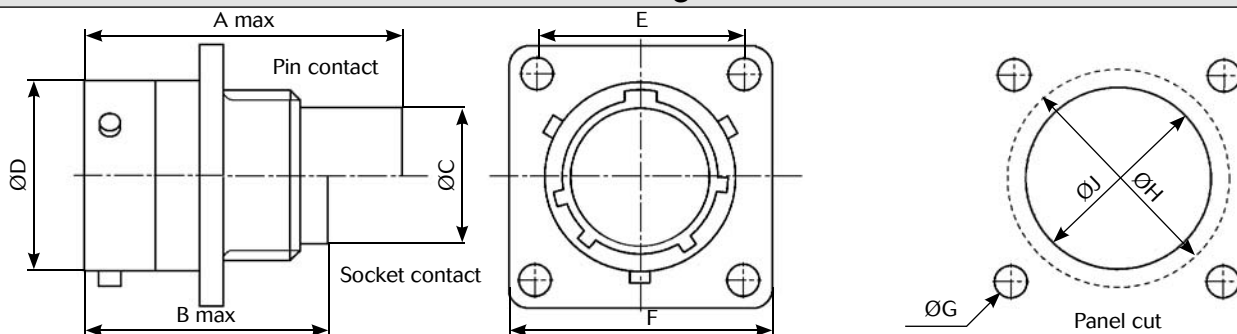
## Dimensions

### Cable plug - UTG6



| Shell size | ØA <sup>±0.2</sup> | B max       |                | ØC <sup>±0.15</sup> | ØD <sup>±0.15</sup> | ØE <sup>±0.2</sup> |
|------------|--------------------|-------------|----------------|---------------------|---------------------|--------------------|
|            |                    | Pin contact | Socket contact |                     |                     |                    |
| 10         | 21.6               | 31.8        | 23.9 / 26.75   | 10.9                | 12.2                | 19.1               |
| 12         | 24.8               |             | 23.9           | 13.8                | 15.1                |                    |
| 14         | 28.0               |             |                | 17.0                | 18.3                |                    |
| 16         | 31.2               |             |                | 19.9                | 21.5                |                    |
| 18         | 34.3               | 31.8 / 33.0 | 23.9 / 29.0    | 22.4                | 24.0                |                    |
| 20         | 37.5               | 31.8 / 35.3 | 24.9           | 25.6                | 27.2                |                    |
| 22         | 47.0               | 31.8        |                | 28.5                | 30.4                |                    |
| 24         | 50.1               |             | 26.2           | 31.7                | 33.5                |                    |

### Wall mounting - UTG0



| Shell size | A max       |                | B <sup>±0.15</sup> | C <sup>±0.2</sup> | ØD <sup>±0.15</sup> | ØE <sup>±0.2</sup> | F <sup>±0.25</sup> | ØG <sup>±0.1</sup> | ØH <sup>±0.1</sup> | ØJ <sup>±0.1</sup> |
|------------|-------------|----------------|--------------------|-------------------|---------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
|            | Pin contact | Socket contact |                    |                   |                     |                    |                    |                    |                    |                    |
| 10         | 31.7        | 24.3 / 27.6    | 2.3                | 11.3              | 15.0                | 18.3               | 23.8               | 3.2                | 17.3               | 15.1               |
| 12         |             | 24.3           |                    |                   | 19.0                | 20.6               | 26.2               |                    | 21.8               | 18.2               |
| 14         |             |                |                    |                   | 22.2                | 23.0               | 28.6               |                    | 25.0               | 21.4               |
| 16         |             |                |                    |                   | 25.3                | 24.6               | 31.0               |                    | 28.1               | 24.6               |
| 18         | 31.7 / 34.0 | 24.3 / 30.4    | 2.5                | 11.3 / 17.9       | 28.5                | 27.0               | 33.3               |                    | 31.3               | 27.7               |
| 20         | 33.3        | 27.0           |                    | 14.5              | 31.7                | 29.4               | 36.5               |                    | 34.5               | 30.9               |
| 22         |             | 28.0           | 3.5                |                   | 34.9                | 31.8               | 39.7               |                    | 37.7               | 34.1               |
| 24         |             | 30.4           |                    | 15.3              | 38.0                | 34.9               | 42.9               | 3.9                | 40.9               | 37.3               |

Note: all dimensions are in mm

# UTG Series



## Specifications

| Shell size | Contacts number* | Connector type / Part number |               |
|------------|------------------|------------------------------|---------------|
|            |                  | Free hanging receptacle      |               |
|            |                  | Male insert                  | Female insert |
| 10         | 4 #16            | UTG1104P                     | UTG1104S      |
|            | 2 + ground #16   | UTG1103P                     | UTG1103S      |
|            | 3 #20 + 3 #16    | -                            | UTG1103W3S    |
| 12         | 8 #16            | UTG1128P                     | UTG1128S      |
| 14         | 12 #16           | UTG11412P                    | UTG11412S     |
| 16         | 19 #16           | UTG11619P                    | UTG11619S     |
| 18         | 23 #16           | UTG11823P                    | UTG11823S     |
| 20         | 28 #16           | UTG12028P                    | UTG12028S     |
|            | 20 #16           | UTG12020P                    | UTG12020S     |
| 22         | 35 #16           | UTG12235P                    | UTG12235S     |
| 24         | 48 #16           | UTG12448P                    | UTG12448S     |
|            | 7 #8 + 2 #16     | UTG1247P                     | UTG1247S      |

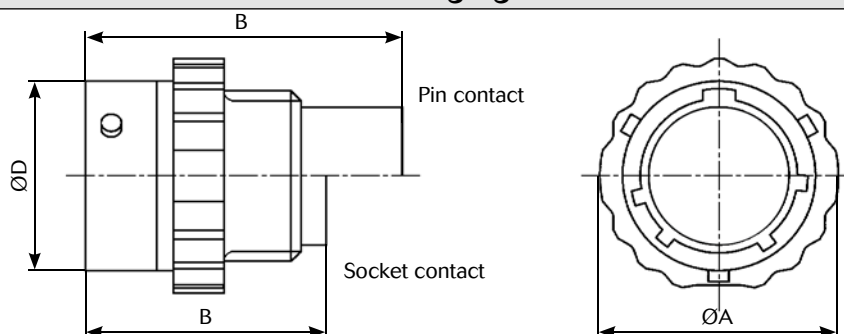
\*Contacts supply separately

For IP65 waterprotected version (for only receptacle) add «H» behind N or S. Ex. UTG1103PH

# UTG Series

## Dimensions

### Free hanging - UTG1



| Shell size | ØA <sup>±0.2</sup> | B max       |                | ØD <sup>±0.15</sup> |      |
|------------|--------------------|-------------|----------------|---------------------|------|
|            |                    | Pin contact | Socket contact |                     |      |
| 10         | 19.5               | 31.7        | 24.3 / 27.6    | 15.0                |      |
| 12         | 23.5               |             | 24.3           |                     | 19.0 |
| 14         | 27                 |             |                |                     | 22.2 |
| 16         | 30.0               |             |                |                     | 25.3 |
| 18         | 33.3               | 31.7 / 34.0 | 24.3 / 30.4    | 28.5                |      |
| 20         | 36.5               | 33.3 / 34.3 | 25.9           | 31.7                |      |
| 22         | 39.5               |             |                | 34.9                |      |
| 24         | 42.1               |             |                | 38.0                |      |

# UTG Series

## Accessories

### Cable clamp



| Part number | Shell size |
|-------------|------------|
| UTG10AC     | 10         |
| UTG12AC     | 12         |
| UTG14AC     | 14         |
| UTG16AC     | 16         |
| UTG18AC     | 18         |
| UTG20AC     | 20         |
| UTG22AC     | 22         |
| UTG24AC     | 24         |

### Cable clamp for waterprotected (IP65) application



| Part number | Shell size |
|-------------|------------|
| UTG10PG     | 10         |
| UTG12PG     | 12         |
| UTG14PG     | 14         |
| UTG16PG     | 16         |
| UTG18PG     | 18         |
| UTG20PG     | 20         |
| UTG22PG     | 22         |
| UTG24PG     | 24         |

### Cable gland for waterprotected (IP65) application



| Part number | Shell size |
|-------------|------------|
| UTG10ST     | 10         |
| UTG12ST     | 12         |
| UTG14ST     | 14         |
| UTG16ST     | 16         |
| UTG18ST     | 18         |
| UTG20ST     | 20         |
| UTG22ST     | 22         |
| UTG24ST     | 24         |

### Metal shrink boot



| Part number | Shell size |
|-------------|------------|
| UTG10AD     | 10         |
| UTG12AD     | 12         |
| UTG14AD     | 14         |
| UTG16AD     | 16         |
| UTG18AD     | 18         |
| UTG20AD     | 20         |
| UTG22AD     | 22         |
| UTG24AD     | 24         |

### Dustcap with chain (plug)



| Part number | Shell size |
|-------------|------------|
| UTG610DCG   | 10         |
| UTG612DCG   | 12         |
| UTG614DCG   | 14         |
| UTG616DCG   | 16         |
| UTG618DCG   | 18         |
| UTG620DCG   | 20         |
| UTG622DCG   | 22         |
| UTG624DCG   | 24         |

### Dustcap with chain (receptacle)



| Part number | Shell size |
|-------------|------------|
| UT010DCG    | 10         |
| UT012DCG    | 12         |
| UT014DCG    | 14         |
| UT016DCG    | 16         |
| UT018DCG    | 18         |
| UT020DCG    | 20         |
| UT022DCG    | 22         |
| UT024DCG    | 24         |

# UTG Series

## Plastic protective cap for receptacle



| Part number | Shell size |
|-------------|------------|
| 8500-5586A  | 10         |
| 8500-5587A  | 12         |
| 8500-5588A  | 14         |
| 8500-5589A  | 16         |
| 8500-5590A  | 18         |
| 8500-5591A  | 20         |
| 8500-5592A  | 22         |
| 8500-5593A  | 24         |

## Gasket



| Part number | Shell size |
|-------------|------------|
| UTFD12B     | 10         |
| UTFD13B     | 12         |
| UTFD14B     | 14         |
| UTFD15B     | 16         |
| UTFD16B     | 18         |
| UTFD17B     | 20         |
| UTFD18B     | 22         |
| UTFD19B     | 24         |

# UTG Series

## Tooling

### Standard contacts

| Contact size | Part number                                                   | Head                          | Handles   |
|--------------|---------------------------------------------------------------|-------------------------------|-----------|
| #20<br>1mm   | RM/RC 24W3 -                                                  | S20RCM                        | SHANDLES  |
|              | RM/RC 20W3 -                                                  |                               |           |
|              | RM/RC 18W3 -                                                  |                               |           |
|              | SM 24W3S - <sup>(1)</sup><br>SC 24W3S - <sup>(1)</sup>        | S20SCM20                      |           |
|              | SM 24WL3S - <sup>(2)</sup><br>SC 24WL3S - <sup>(2)</sup>      |                               |           |
|              | SM/SC 20W3S - <sup>(1)</sup><br>SM/SC 20WL3S - <sup>(2)</sup> |                               |           |
|              |                                                               |                               |           |
| #16<br>1.6mm | RM/RC 28M1-                                                   | S16RCM20                      |           |
|              | RM/RC 24M9-                                                   |                               |           |
|              | RM/RC 20M13-                                                  |                               |           |
|              | RM/RC 20M12-                                                  |                               |           |
|              | RM/RC 16M23-                                                  | S16RCM16                      |           |
|              | RM/RC 14M30-                                                  | S16RCM14                      |           |
|              | SM/SC 24M1-<br>SM/SC 24ML1-                                   | S16SCM20                      |           |
|              | SM/SC 20M1-<br>SM/SC 20ML1-                                   |                               |           |
|              |                                                               |                               |           |
|              | SM/SC 16M1-<br>SM/SC 16ML1-                                   | S16SCML1                      |           |
|              | SM/SC 14M1-<br>SM/SC 14ML1-                                   |                               |           |
|              |                                                               |                               |           |
|              |                                                               | SM/SC 16M11-<br>SM/SC 16ML11- | S16SCML11 |

(1) contact reeled (2) loose contact  
Note: endurance of SHANDLES tool = 5 000 cycles.



| Contact size | Part number            | Tool with separate locator |                              |     | Extraction tools |
|--------------|------------------------|----------------------------|------------------------------|-----|------------------|
|              |                        | Hand tool                  | Positioner + locator setting |     |                  |
| #12<br>2.4mm | 82911457N- / 82911456- | M317                       | VGE10077A                    | 1-2 | 5106020924       |
|              | 82911459N- / 82911458- |                            |                              | 2   |                  |
|              | 82911461N- / 82911460- |                            |                              | 2   |                  |
|              | 82911463N- / 82911462- |                            |                              | 3   |                  |
|              | 82911465N- / 82911464- |                            |                              | 3   |                  |
|              | 82911467N- / 82911466- |                            |                              | 4   |                  |
| #8<br>3.6mm  | 82913601A / 82913600A  | M317                       | VGE10078A                    | 3   | 51060210936      |
|              | 82913603A / 82913602A  |                            |                              | 3   |                  |
|              | 82913605A / 82913604A  |                            |                              | 4   |                  |
|              | 82913607A / 82913606A  |                            |                              | 5   |                  |
|              | 82913609A / 82913608A  |                            |                              | 6/7 |                  |
|              |                        |                            |                              |     |                  |

### Specific contacts

| Contact size                             | Part number                | Hand tools (SHANDLES)<br>head | Tool with separate locator |                              |     | Extraction tools |
|------------------------------------------|----------------------------|-------------------------------|----------------------------|------------------------------|-----|------------------|
|                                          |                            |                               | Hand tool                  | Positioner + locator setting |     |                  |
| # 16<br>Ø 1.6mm<br>Longer RM<br>contact  | RM28M1GE1-                 | S16RCM20                      | MH860                      |                              |     | RX2025GE1        |
|                                          | RM24M9GE1-                 |                               |                            |                              |     |                  |
|                                          | RM20M13GE1-                |                               |                            |                              |     |                  |
|                                          | RM16M23 GE1-               | S16RCM16                      |                            | 6/8                          |     |                  |
|                                          | RM14M30 GE1-               | S16RCM14                      |                            |                              |     |                  |
| # 16<br>Ø 1.6mm<br>Shorter RC<br>contact | RC28M1GE7-                 | S16RCM20                      | MH860                      | MH86164G                     | 4/6 |                  |
|                                          | RC24M9GE7-                 |                               |                            |                              | 5/6 |                  |
|                                          | RC20M13GE7-<br>RC20M12GE7- |                               |                            |                              | 5/7 |                  |
|                                          | RC16M23GE7-                | 6/8                           |                            |                              |     |                  |
|                                          | RC14M30GE7-                | S16RCM14                      |                            |                              |     |                  |
|                                          |                            |                               |                            |                              |     |                  |

### Coaxial contacts

See pages 17

## Crimping

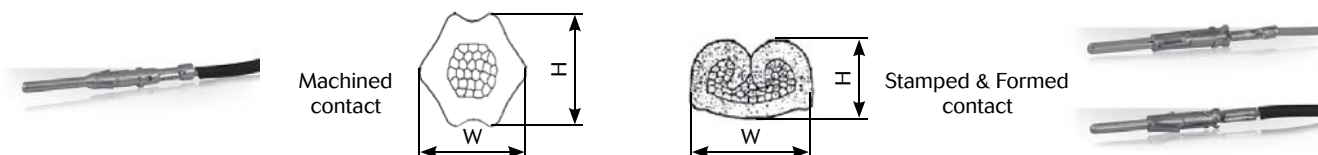
One of the key factors which affects the performance of a connector, is the way contacts are terminated. Crimped connections are nowadays seen as the best solution to ensure quality throughout the lifetime of the product. Here are some reasons why we recommend this method of termination for UTG connectors:

### Advantages (Extract from the IEC 60352-2):

- Efficient processing of connections at each production level
- Processing by fully-automatic or semi-automatic crimping machines, or with hand operated tools
- No cold-soldered joints
- No degradation of the spring characteristic of female contacts by the soldering temperature

- No health risk from heavy metal and flux steam
- Preservation of conductor flexibility behind the crimped connection
- No burnt, discolored and overheated wire insulation
- Good connections with reproducible electrical and mechanical performances
- Easy production control.

To ensure that the crimp tooling is performing according to original specifications, it is important to carry out regular checks. A common way to check the performance of tooling is with a simple pull test, ideally using a dedicated electric pull tester. Minimum recommended full forces are indicated in the tables below:



| Active contact part       | Contact type           | Die location on heads | Wire section range | Section (mm <sup>2</sup> ) | Tensile straight test (mini) | Height (Mm)<br>H (±0.075) | Width (Mm)<br>W (±0.075) | Head's P/N |
|---------------------------|------------------------|-----------------------|--------------------|----------------------------|------------------------------|---------------------------|--------------------------|------------|
| Machined contacts size 20 | RM/RC 24W3*            | 26/24                 | AWG 26             | 0.12 min                   | 15 N                         | 0.95                      | 1.27                     | S20RCM     |
|                           |                        |                       | AWG 24             | 0.25 max                   | 32 N                         |                           |                          |            |
|                           | RM/RC 20W3*            | 22/20                 | AWG 22             | 0.32 min                   | 40 N                         | 1.26                      | 1.78                     |            |
|                           |                        |                       | AWG 20             | 0.50 max                   | 60 N                         |                           |                          |            |
|                           | RM/RC 18W3*            | 20/18                 | AWG 20             | 0.50 max                   | 60 N                         | 1.35                      | 1.86                     |            |
|                           |                        |                       | AWG 18             | 0.82 max                   | 90 N                         |                           |                          |            |
| S & F contacts size 20    | SM/SC 24WL3TK6*        | 26/24                 | AWG 26             | 0.12 min                   | 15 N                         | 0.80                      | 1.49                     | S20SCM20   |
|                           |                        |                       | AWG 24             | 0.25 max                   | 32 N                         |                           |                          |            |
|                           | SM/SC 20WL3TK6*        | 22/20                 | AWG 22             | 0.32 min                   | 40 N                         | 1.01                      | 1.53                     |            |
|                           |                        |                       | AWG 20             | 0.50 max                   | 60 N                         |                           |                          |            |
| Machined contacts size 16 | RM/RC 28M1K*           | 30/28                 | AWG 30             | 0.05 min                   | 11 N                         | 1.14                      | 1.41                     | S16RCM20   |
|                           |                        |                       | AWG 28             | 0.08 max                   | 11 N                         |                           |                          |            |
|                           | RM/RC 24M9K*           | 26/24                 | AWG 26             | 0.12 min                   | 15 N                         | 1.15                      | 1.41                     |            |
|                           |                        |                       | AWG 24             | 0.25 max                   | 32 N                         |                           |                          |            |
|                           | RM/RC 20M13K*          | 22/20                 | AWG 22             | 0.32 min                   | 40 N                         | 1.26                      | 1.76                     |            |
|                           |                        |                       | AWG 20             | 0.50 max                   | 60 N                         |                           |                          |            |
|                           |                        |                       | AWG 22             | 0.32 min                   | 40 N                         |                           |                          |            |
|                           |                        |                       | AWG 20             | 0.50 max                   | 60 N                         |                           |                          |            |
|                           | RM/RC 16M23K*          | 20                    | AWG 20             | 0.50 max                   | 60 N                         | 1.66                      | 2.18                     | S16RCM16   |
|                           |                        |                       | AWG 18             | 0.82 max                   | 90 N                         | 1.80                      | 2.28                     |            |
|                           |                        |                       | AWG 16             | 1.50 max                   | 150 N                        | 1.96                      | 2.43                     |            |
|                           | RM/RC 14M30K*          | 16                    | AWG 16             | 1.50 min                   | 150 N                        | 2.10                      | 2.68                     | S16RCM14   |
|                           |                        | 14                    | AWG 14             | 2.50 min                   | 230 N                        | 2.30                      | 2.78                     |            |
|                           | S & F contacts size 16 | SM/SC 24ML1TK6*       | 26/24              | AWG 26                     | 0.12 min                     | 15 N                      | 0.84                     | 1.50       |
| AWG 24                    |                        |                       |                    | 0.25 max                   | 32 N                         |                           |                          |            |
| SM/SC 20ML1TK6*           |                        | 22/20                 | AWG 22             | 0.32 min                   | 40 N                         | 1.02                      | 1.54                     |            |
|                           |                        |                       | AWG 20             | 0.50 max                   | 60 N                         |                           |                          |            |
| SM/SC 16ML11TK6*          |                        | 18                    | AWG 18             | 0.82 min                   | 90 N                         | 1.32                      | 2.09                     | S16SCML11  |
|                           |                        | 16                    | AWG 16             | 1.50 max                   | 150 N                        | 1.36                      | 2.10                     |            |
| SM/SC 16ML1TK6*           |                        | 18                    | AWG 18             | 0.82 min                   | 90 N                         | 1.49                      | 2.02                     | S16SCML1   |
|                           |                        | 16                    | AWG 16             | 1.50 max                   | 150 N                        | 1.7                       | 2.05                     |            |
| SM/SC14ML1TK6*            |                        | 14                    | AWG 14             | 2.50 max                   | 230 N                        | 1.79                      | 2.58                     |            |

(1): example of plating, for other plating see page 13

# UTG Series

## Contacts



### Description

The UTG series is delivered without contact (crimp version). When contacts are not loaded, this series offers the unique possibility to use the same contact in any layout as long as it receives the same active part size. Thus it is possible to buy only one contact reference and equip all connectors even if housings are different.

The main benefit is the standardisation which means reduction of inventory cost.

Bearing in mind that any additional tool or complicated assembly process should be avoided, our contacts are based on a snap-in principle which avoid the use of an insertion tool.

Crimp contacts are available in different versions:



• machined



• stamped & formed



• coaxial



• fiber optic

# UTG Series

## Contact plating selector guide

As soon as you know what contact size you need, you next have to decide on which type to use.

Souriau proposes mainly two different types of electrical contacts:

- Machined
- Stamped & formed

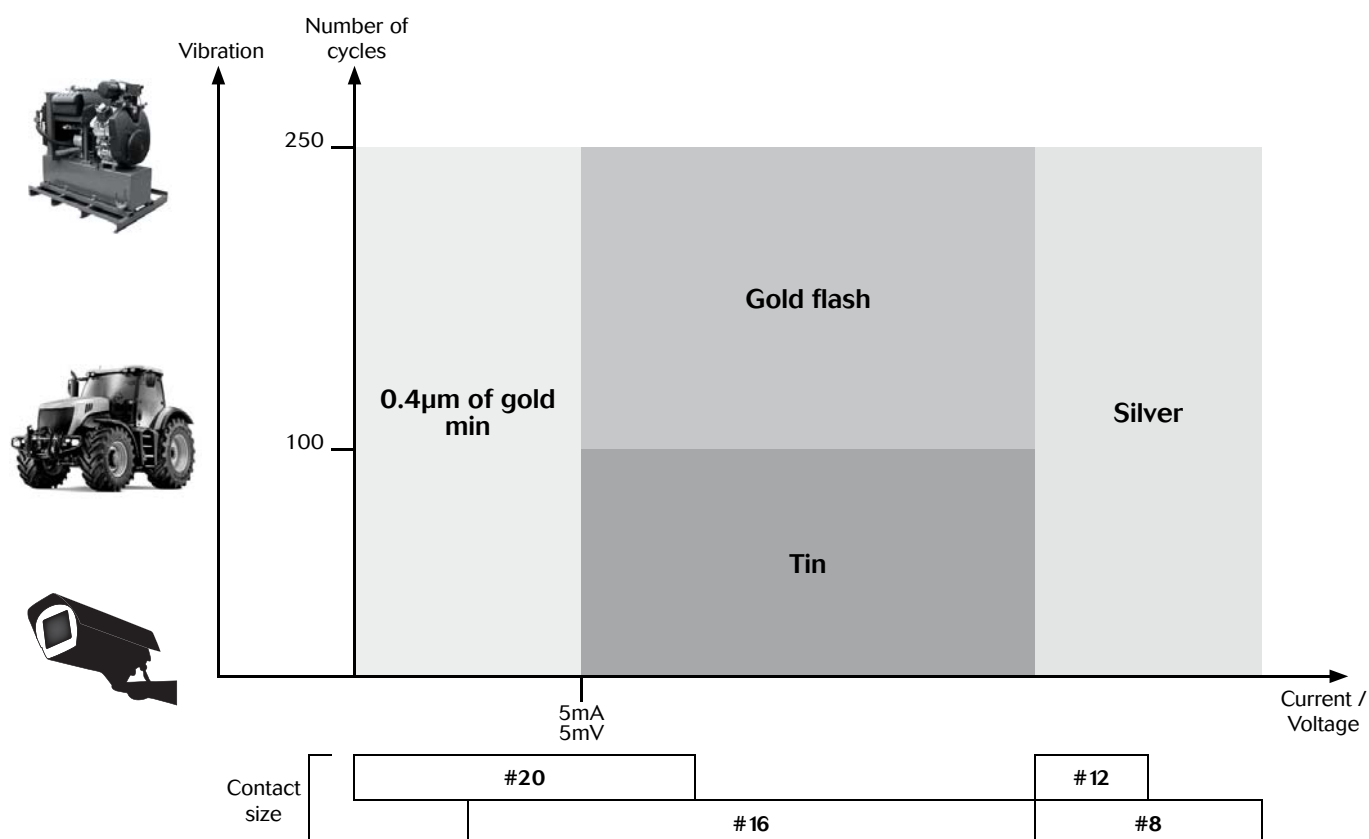
Machined contacts are generally chosen for low quantities purpose as well as a better solution for power applications.

Stamped & formed contacts offer the ability to be crimped automatically which makes them more suitable for high volume production applications.

Then comes the question: What plating should I choose ?

Hereunder is a graph with criteria to guide you:

*NB: do not mix different plating (e.g. tin plated pin contact with gold plated socket contact).*



# UTG Series

## Contact selector guide

### Contact preloaded

| Electrical characteristics: contact resistance |          |       |
|------------------------------------------------|----------|-------|
| #20<br>Ø1mm                                    | Machined | < 4mΩ |
| #16<br>Ø1.6mm                                  | Machined | < 3mΩ |

#### Available platings (contact preloaded)

Min 0.4μ gold over 2μ Ni

### Contact supply separately

| Electrical characteristics: contact resistance |                  |        |
|------------------------------------------------|------------------|--------|
| #20<br>Ø1mm                                    | Machined         | < 6mΩ  |
|                                                | Stamped & formed | < 15mΩ |
| #16<br>Ø1.6mm                                  | Machined         | < 3mΩ  |
|                                                | Stamped & formed | < 6mΩ  |
| #12<br>Ø2.4mm                                  | Machined         | < 5mΩ  |
| #8<br>Ø3.6mm                                   | Machined         | < 5mΩ  |

#### Available platings (contact supply separately)

| A                                                     | 2μ Ni + 2μ Ag                                                                           |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------|
| J                                                     | Gold flash over 2μ Ni                                                                   |
| K                                                     | Min 0.4μ gold over 2μ Ni                                                                |
| S31                                                   | Active part: Gold flash over Ni<br>Crimp area: Nickel                                   |
| S18                                                   | Active part: 0.75μ gold min over 2μ Ni<br>Crimp area: 1.3μ tin over Ni<br>Other: Nickel |
| S25<br>S26                                            | Active part: 0.75μ Au over Ni<br>Crimp area: flash Au over Ni                           |
| TK6                                                   | 2-5μ Sn pre-plated                                                                      |
| Other platings on request (contact supply separately) |                                                                                         |
| T                                                     | T: 2μm Ni mini all over +<br>3 to 5 μm Sn all over                                      |
| D28                                                   | 0.75μ gold over Ni                                                                      |

## Packaging

Conscious of the wide variety of applications, contact packaging has been considered for small series (bulk packaging) and high volume production (reeled contacts):

#### Size contacts #20 & #16



- 25 pieces bulk packing (stamped & formed contacts)



- 50 pieces bulk packing (machined contacts)



- 1000 pieces bulk packing (machined contacts)



- 3000 pieces reeled (stamped & formed contacts)



- 5000 pieces reeled (machined contacts)

#### Size contacts #12 & #8



- 100 pieces bulk packing (stamped & formed contacts)

# UTG Series

## Crimp contacts

### Standard version



| Contact size   | Type             | Wire size |                 | Part number                                           |                                                       | Max wire Ø | Max insulator Ø    | Plating available                 |
|----------------|------------------|-----------|-----------------|-------------------------------------------------------|-------------------------------------------------------|------------|--------------------|-----------------------------------|
|                |                  | AWG       | mm <sup>2</sup> | Male                                                  | Female                                                |            |                    |                                   |
| #20<br>Ø1 mm   | Machined         | 26-24     | 0.13-0.20       | RM24W3K                                               | RC24W3K                                               |            | 1.58 max           | K                                 |
|                | Stamped & Formed | 26-24     | 0.13-0.25       | SM24W3 - <sup>(1)</sup>                               | SC24W3 - <sup>(1)</sup>                               |            | 0.89-1.58          | TK6<br>S25 (female)<br>S26 (male) |
|                |                  |           |                 | SM24WL3 - <sup>(2)</sup>                              | SC24WL3 - <sup>(2)</sup>                              |            |                    |                                   |
|                | Machined         | 22-20     | 0.32-0.52       | RM20W3K                                               | RC20W3K                                               |            | 1.58 max           | K                                 |
|                | Stamped & Formed | 22-20     | 0.35-0.5        | SM20W3 - <sup>(1)</sup>                               | SC20W3 - <sup>(1)</sup>                               |            | 1.17-2.08          | TK6<br>S25 (female)<br>S26 (male) |
|                |                  |           |                 | SM20WL3 - <sup>(2)</sup>                              | SC20WL3 - <sup>(2)</sup>                              |            |                    |                                   |
| #16<br>Ø1.6 mm | Machined         | 20-18     | 0.50-0.93       | RM18W3K                                               | RC18W3K                                               |            | 2.10 max           | K                                 |
|                | Machined         | 30-28     | 0.05-0.08       | RM28M1 -                                              | RC28M1 -                                              | 0.55       | 1.1                | K, J                              |
|                | Machined         | 26-24     | 0.13-0.2        | RM24M9 -                                              | RC24M9 -                                              | 0.8        | 1.6                | K, J                              |
|                | Stamped & Formed | 26-24     | 0.13-0.25       | SM24M1 - <sup>(1)</sup><br>SM24ML1 - <sup>(2)</sup>   | SC24M1 - <sup>(1)</sup><br>SC24ML1 - <sup>(2)</sup>   | 0.89-1.28  | Insulation grip    | S31, S18, TK6                     |
|                |                  |           |                 | RM20M13 -<br>RM20M12 -                                | RC20M13 -<br>RC20M12 -                                | 1.18       | 1.8<br>2.2         |                                   |
|                | Stamped & Formed | 22-20     | 0.35-0.5        | SM20M1 - <sup>(1)</sup><br>SM20ML1 - <sup>(2)</sup>   | SC20M1 - <sup>(1)</sup><br>SC20ML1 - <sup>(2)</sup>   | 1.17-2.08  | Insulation grip    | S31, S18, TK6                     |
|                |                  |           |                 |                                                       |                                                       |            |                    |                                   |
|                | Machined         | 20-16     | 0.52-1.5        | RM16M23 -                                             | RC16M23 -                                             | 1.8        | 3.2                | K, J                              |
|                | Stamped & Formed | 18-16     | 0.8-1.5         | SM16M1 - <sup>(1)</sup><br>SM16ML1 - <sup>(2)</sup>   | SC16M1 - <sup>(1)</sup><br>SC16ML1 - <sup>(2)</sup>   | 3.0        | No insulation grip | S31, S18, TK6                     |
|                |                  |           |                 | SM16M11 - <sup>(1)</sup><br>SM16ML11 - <sup>(2)</sup> | SC16M11 - <sup>(1)</sup><br>SC16ML11 - <sup>(2)</sup> |            |                    |                                   |
|                | Stamped & Formed | 18-16     | 0.8-1.5         |                                                       |                                                       | 2.0-3.0    | Insulation grip    | S31, S18, TK6                     |
|                |                  |           |                 |                                                       |                                                       |            |                    |                                   |
| #12<br>Ø2.4 mm | Machined         | 22        | 0.13-0.4        | 82911457NA                                            | 82911456A                                             | -          | 4.9                | A, K                              |
|                |                  | 20        | 0.5             | 82911459NA                                            | 82911458A                                             |            |                    |                                   |
|                |                  | 18        | 0.75-1.0        | 82911461NA                                            | 82911460A                                             |            |                    |                                   |
|                |                  | 16        | 1.5             | 82911463NA                                            | 82911462A                                             |            |                    |                                   |
|                |                  | 14        | 2.5             | 82911465NA                                            | 82911464A                                             |            |                    |                                   |
|                |                  | 12        | 4               | 82911467NA                                            | 82911466A                                             |            |                    |                                   |
| #8<br>Ø3.6 mm  | Machined         | 16        | 1.5             | 82913601A                                             | 82913600A                                             | -          | 6.5                | A                                 |
|                |                  | 14        | 2.5             | 82913603A                                             | 82913602A                                             |            |                    |                                   |
|                |                  | 12        | 4               | 82913605A                                             | 82913604A                                             |            |                    |                                   |
|                |                  | 10        | 6.0             | 82913607A                                             | 82913606A                                             |            |                    |                                   |
|                |                  | 8         | 10.0            | 82913609A                                             | 82913608A                                             |            |                    |                                   |

(1) contact reeled (2) loose contact

Example: RM24W3K - Size #20, Machined, AWG24 wire.

# UTG Series

## Crimp contacts

### First Mate Last Break contacts

| Contact size                                       | Type     | Wire size |                 | Part number |             | Max wire Ø | Max insulator Ø | Color band |      | Plating available |
|----------------------------------------------------|----------|-----------|-----------------|-------------|-------------|------------|-----------------|------------|------|-------------------|
|                                                    |          | AWG       | mm <sup>2</sup> | Male        | Female      |            |                 | Front      | Rear |                   |
| # 16<br>Ø1.6 mm<br>Longer male contact (+1mm)      | Machined | 30-28     | 0.05-0.08       | RM28M1GE1□  | -           | 0.55       | 1.1             | -          | Red  | □ = K or J        |
|                                                    |          | 26-24     | 0.13-0.2        | RM24M9GE1□  |             | 0.8        | 1.6             | Red        | Red  |                   |
|                                                    |          | 22-20     | 0.32-0.52       | RM20M13GE1□ |             | 1.18       | 1.8             | Black      | Red  |                   |
|                                                    |          | 20-16     | 0.52-1.5        | RM20M12GE1□ |             | 1.8        | 2.2             | Blue       | Red  |                   |
|                                                    |          | 16-14     | 1.5-2.5         | RM16M23GE1□ |             | 2.05       | 3.2             | -          | Red  |                   |
|                                                    |          | 16-14     | 1.5-2.5         | RM14M50GE1□ |             | 2.28       | -               | -          | Red  |                   |
| # 16<br>Ø1.6 mm<br>Shorter female contact (-0.7mm) | Machined | 30-28     | 0.05-0.08       | -           | RC28M1GE7□  | 0.55       | 1.1             | -          | Blue | □ = K or J        |
|                                                    |          | 26-24     | 0.13-0.2        |             | RC24M9GE7□  | 0.8        | 1.6             | Red        | Blue |                   |
|                                                    |          | 22-20     | 0.32-0.52       |             | RC20M13GE7□ | 1.18       | 1.8             | Black      | Blue |                   |
|                                                    |          | 20-16     | 0.52-1.5        |             | RC20M12GE7□ | 2.2        | 2.2             | Blue       | Blue |                   |
|                                                    |          | 16-14     | 1.5-2.5         |             | RC16M23GE7□ | 1.8        | 3.2             | -          | Blue |                   |
|                                                    |          | 16-14     | 1.5-2.5         |             | RC14M50GE7□ | 2.05       | -               | -          | Blue |                   |
|                                                    |          |           |                 |             | RC14M30GE7□ | 2.28       | -               | -          | Blue |                   |

Example: RM16M3GE1K - Size # 16, Machined, Longer male, AWG16 wire.

### How to make FMLB / LMFB connection

| Contact 1<br>Contact 2  | Standard male contact | Standard female contact | Longer male contact |
|-------------------------|-----------------------|-------------------------|---------------------|
| Standard male contact   |                       | ✓                       |                     |
| Standard female contact | ✓                     |                         | ✓<br>FMLB           |
| Shorter female contact  | ✓<br>LMFB             |                         |                     |

First Mate Last Break contacts should be chosen only if the cavity is not marked with the earth symbol. For cavities marked with the earth symbol, standard contacts will fulfill the same role as a first mate, last break contact used in a standard cavity.



Ground symbol

## #16 coaxial contacts

### Coaxial contact range

We provide 2 types of coaxial contacts suitable for 50 or 75Ω, coaxial cable or twisted pair cable.

#### Monocrimp coaxial contact

- The monocrimp one-piece coaxial contacts offer high reliability plus the economic advantage of a 95% reduction in installation time over conventional assembly methods.
- This economy is achieved by simultaneously crimping both the inner conductor and outer braid or drain wire.



#### Multipiece crimp coaxial contact

- The inner conductor and outer braid is crimped individually.
- The thermoplastic insulating bushing in the outer body is designed to accept and permanently retain the inner contact.
- An outer ferrule is used to connect the braid to the outer contact and provide cable support to ensure against bending and vibration.



#### Suitable for Coaxial cable or Twisted cable

- For jacket diameter from 1.78 to 3.05mm  
Inner conductor up to 2.44mm diameter



- For jacket diameter from 0.64 to 1.45mm  
Inner conductor from AWG30 to AWG24



#### Contacts for coaxial cable summary

| Contact type | Contact range |                | Contact part number with cable combination | Cabling notice    |
|--------------|---------------|----------------|--------------------------------------------|-------------------|
|              | Male contact  | Female contact |                                            |                   |
| Multipiece   | RMDXK10D28    | RCDXK1D28      | See page 21                                | See pages 25 & 26 |
| Monocrimp    | RMDX60xxD28   | RCDX60xxD28    |                                            | See page 27       |

#### Contacts for twisted pairs cable summary

| Contact type | Contact range           |                        | Contact part number with cable combination | Cabling notice |
|--------------|-------------------------|------------------------|--------------------------------------------|----------------|
|              | Male contact            | Female contact         |                                            |                |
| Multipiece   | RMDXK10D28<br>+ YORK090 | RCDXK1D28<br>+ YORK090 | See page 22                                | See page 23    |
| Monocrimp    | RMDX60xxD28             | RCDX60xxD28            |                                            | See page 24    |

# UTG Series

## PCB contacts

### PCB contacts

#### PCB soldering

UTG range can be carried out with a wave soldering process, but not reflow soldering process.  
All high temperature processes are prohibited.

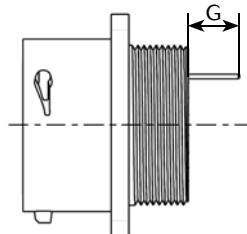


| Contact size  | Type          | Part number |             | Plating |
|---------------|---------------|-------------|-------------|---------|
|               |               | Male        | Female      |         |
| #20<br>Ø1mm   | Short version | RMW50A7K    | RCW50A7K    | K       |
|               | Long version  | RMW5016K    | RCW5016K    |         |
| #16<br>Ø1.6mm | Short version | RM20M12E8K  | RC20M12E8K  | K       |
|               | Long version  | RM20M12E83K | RC20M12E83K |         |
|               |               |             | RC20M12E84K |         |

Example: **RM50A7K** - Size #20, Short version, male.

#### Nominal length (G)

Dimension of dipsolder contacts out of connector (contacts to be ordered separately).



#### UTGØ

| Connector size | Pin contact |             | Socket contact |              |             |
|----------------|-------------|-------------|----------------|--------------|-------------|
|                | RM20M12E8*  | RM20M12E83* | RC20M12E8*     | RC20M12E83*□ | RC20M12E84* |
| 10             | 4           | 9.1         | 3.3            | 8.5          | 12.1        |
| 12             | 4           | 9.1         | 3.3            | 8.5          | 12.1        |
| 14             | 4           | 9.1         | 3.3            | 8.5          | 12.1        |
| 16             | 4           | 9.1         | 3.3            | 8.5          | 12.1        |

\* Plating indication: see plating table

# UTG Series

## Fibre optic contacts

### Description

#### Size 16 Fibre optic contacts for TRIM TRIO® connectors

Size 16 Fibre optic contacts are optical contacts designed for the integration of optical links in all TRIM TRIO® cable connectors.

The Fibre optic contacts are designed to accommodate:

- Plastic Optical Fibre (POF)  
1 mm core and 2.2 mm jacket
- Plastic Clad Fibre (PCF)  
230µm core and 2.2 mm jacket

Typical features and benefits are:

- Socket contact is spring loaded to avoid any air gap between the two optical faces.
- Low insertion loss is provided by high precision pieces.
- Single jumpers, multiway harness and active device housings can be supplied regarding customer requirement.



### Technical characteristics

#### Performance

- Fibre type: .....POF
- Wave length:.....650 nm
- Optical insertion loss (typ.): .....2 dB max.
- Jacketed external diameter:.....2.2mm
- Temperature range:.....-25°C to +70°C
- Cable retention:.....49N
- Mating cycles without cleaning:.....50
- Max. mating cycles:.....500

#### Construction

- Contact body: Copper alloy

#### Connector accommodation

Any TRIM TRIO® size 16 contact can be used in any contact position in any connector in the TRIM TRIO® size 16 interconnection system : UTP, UTS, UTG, UTO.

# UTG Series

## Fibre optic contacts

### Ordering information

POF Contacts (Plastic Optical Fibre)

Male contact ..... RMPOF1000

Female contact.....RCPOF1000B

### POF Contact (Plastic Optical Fibre)

#### STANDARD TOOLING KIT - P/N 80MS0004

The *standard tooling kit* is made of the part numbers below that can be ordered separately as well.

| Part numbers | Descriptions                                                   |
|--------------|----------------------------------------------------------------|
| 80WD0005     | Stripping tool                                                 |
| 80WD0025     | Automatic stripping tool for Ø 0.5 mm, 0.6 mm, 0.7 mm & 3.8 mm |
| 80WM0006     | Ruler                                                          |
| 80WP0005     | Polishing plate                                                |
| 80WP0013     | Non slip base (to hold the polishing plate)                    |
| 80WP0014     | Polishing disk (grain size 9µm)                                |
| 80WP0018     | Polishing tool                                                 |
| 80WP0019     | Polishing disk (grain size 30µm)                               |
| 80WS0002     | Crimping plier                                                 |

#### SPECIFIC TOOLING LIST - can be ordered only separately

| Part numbers | Descriptions    |
|--------------|-----------------|
| 80WG0010     | Needle          |
| 80WG0015     | Capsule         |
| 80WG0016     | Syringe         |
| 80WN0005     | Dry air spray   |
| 80WN0006     | Optical paper   |
| 80WN0012     | Dropping bottle |
| 80WN0008     | Wiping solvent  |

# UTG Series

## #16 coaxial contacts

### Coaxial cable - Contact monocrimp and multipiece

| Cable type                    | Impe-<br>dance | Contact type | Ø over jacket |          | Ø over dielectric |      | Inner cond size<br>Ext. Ø mm | Ø outer braid |          | Male contact kit for coaxial cable | Female contact kit for coaxial cable |
|-------------------------------|----------------|--------------|---------------|----------|-------------------|------|------------------------------|---------------|----------|------------------------------------|--------------------------------------|
|                               |                |              | inch          | mm       | inch              | mm   |                              | inch          | mm       |                                    |                                      |
| RG161/U                       | 75             | Multi piece  | 0.09          | 2.29     | 0.057             | 1.45 |                              |               |          | RMDXK10D28                         | RCDXK1D28                            |
| RG179A/U                      | 75             |              | 0.105         | 2.67     | 0.063             | 1.6  | 0.3                          | 0.084         | 2.13 max |                                    |                                      |
| RG179B/U                      | 75             |              | 0.105         | 2.67     | 0.063             | 1.6  | 0.3                          | 0.084         | 2.13 max |                                    |                                      |
| RG187/U                       | 75             |              | 0.11          | 2.79 max | 0.06              | 1.52 | 0.3                          |               |          |                                    |                                      |
| RG188/U                       | 50             |              | 0.11          | 2.79 max | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98 max |                                    |                                      |
| RG174/U                       | 50             |              | 0.11          | 2.92     | 0.06              | 1.52 | 0.48                         | 0.088         | 2.24 max |                                    |                                      |
| AMPHENOL 21-598               | 50             |              | 0.105         | 2.67     | 0.06              | 1.52 | 0.48                         |               |          |                                    |                                      |
| RG196/U                       | 50             |              | 0.08          | 2.03 max | 0.034             | 0.86 | 0.3                          |               |          |                                    |                                      |
| RG178A/U                      | 50             |              | 0.075         | 1.91     | 0.034             | 0.86 | 0.3                          | 0.054         | 1.37 max |                                    |                                      |
| RG188A/U                      | 50             | Mono crimp   | 0.110         | 2.79     | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98 max | RMDX6036D28                        | RCDX6036D28                          |
| KX21TVT (europe)<br>RG178 B/U | 50             |              | 0.075         | 1.91     | 0.034             | 0.86 | 0.3                          | 0.054         | 1.37 max | RMDX6034D28                        | RCDX6034D28                          |
| RG178 / BU                    | 50             |              | 0.075         | 1.91     | 0.034             | 0.86 | 0.3                          | 0.054         | 1.37 max | RMDX6050D28                        | RCDX6016D28                          |
| RG174/U                       | 50             |              | 0.115         | 2.92     | 0.06              | 1.52 | 0.48                         | 0.088         | 2.24 max | RMDX6032D28                        | RCDX6032D28                          |
| RG188A/U                      | 50             |              | 0.11          | 2.79     | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98 max | RMDX6036D28                        | RCDX6036D28                          |
| RG316/U                       | 50             |              | 0.107         | 2.72     | 0.6               | 1.52 | 0.51                         | 0.078         | 2.05 max | RMDX6036D28                        | RCDX6036D28                          |
| raychem 5024A3111             | 50             |              | 0.12          | 3.05     | 0.083             | 2.11 | 0.64                         | 0.097         | 2.46     | RMDX6052D28                        | RCDX6052D28                          |
| raychem 5026e1614             | 50             |              | 0.083         | 2.11     | 0.05              | 1.27 | 0.48                         | 0.067         | 1.7      | RMDX6036D28                        | RCDX6036D28                          |
| surprenant pn 8134            | -              | Multi piece  | 0.1           | 2.54     | 0.058             | 1.47 | 0.3                          |               |          | RMDXK10D28                         | RCDXK1D28                            |
| PRD PN 247AS-C123-001         | -              | Mono crimp   | 0.103         | 2.62     | 0.06              | 1.52 | 0.51                         | 0.078         | 1.98     | RMDX6018D28                        | RCDX6018D28                          |
| PRD PN 247AS-C1251            | -              |              | 0.092         | 2.34     | 0.05              | 1.27 | 0.64                         | 0.067         | 1.7      | RMDX6018D28                        | RCDX6018D28                          |
| JUDD C15013010902             | -              |              | 0.087         | 2.13     | 0.05              | 1.27 | 0.48                         | 0.066         | 1.67     | RMDX6036D28                        | RCDX6036D28                          |
| CDC PIN22939200               | -              |              | 0.09          | 2.29     | 0.048             | 1.22 | 0.3                          | 0.064         | 1.63     | RMDX6046D28                        | RCDX6016D28                          |
| CDC PIN22939200               | -              |              | 0.09          | 2.29     | 0.048             | 1.22 | 0.3                          | 0.064         | 1.63     | RMDX6050D28                        | RCDX6016D28                          |
| CDC PIN245670000              | -              |              | 0.104         | 2.64     | 0.067             | 1.7  | 0.3                          | 0.083         | 2.11     | RMDX6050D28                        | RCDX6016D28                          |
| ampex                         | -              |              | 0.114         | 2.9      | 0.075             | 1.91 | 0.38                         | 0.09          | 1.29     | RMDX6032D28                        | RCDX6032D28                          |
| TI PN 920580                  | -              |              | 0.7           | 1.78     | 0.038             | 0.96 | 0.48                         | 0.054         | 1.37     | RMDX6024D28                        | RCDX6024D28                          |
| Honeywell PN 58000062         | -              |              | 0.12          | 3.05     | 0.077             | 1.96 | 0.41 solid                   | 0.096         | 2.44     | RMDX6026D28                        | RCDX6026D28                          |
| -                             | -              |              | 0.104         | 2.64     | 0.067             | 1.7  | 0.3                          |               | 2.11     | RMDX6050D28                        | -                                    |
| -                             | -              |              | 0.09          | 2.29     | 0.048             | 1.22 | 0.3                          |               | 1.63     | RMDX6050D28                        | -                                    |
| -                             | -              |              | 0.114         | 2.9      | 0.075             | 1.91 | 0.38                         |               | 1.29     | RMDX6032D28                        | RCDX6032D28                          |
| -                             | -              |              | 0.07          | 1.78     | 0.038             | 0.96 | 0.48                         |               | 1.37     | RMDX6024D28                        | RCDX6024D28                          |
| -                             | -              |              | 0.12          | 3.05     | 0.077             | 1.96 | 0.41                         |               | 2.44     | RMDX6026D28                        | RCDX6026D28                          |

# UTG Series

## #16 coaxial contacts

### Twisted cable - Contact monocrimp and multipiece

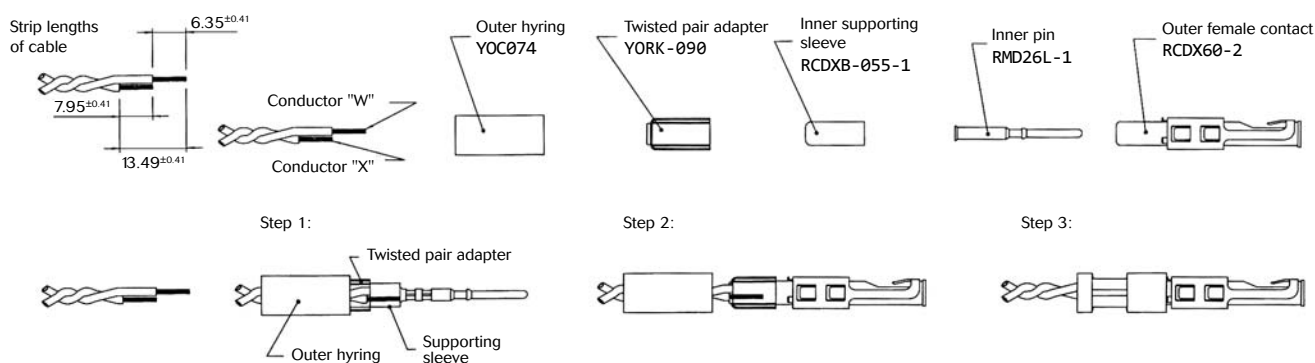
| Cable type                                                | Contact type | Inner AWG cond | Ø over jacket (single wire) |          | Inner cond size     |           | Ø outer braid |         | Male contact kit for coaxial cable | Female contact kit for coaxial cable |
|-----------------------------------------------------------|--------------|----------------|-----------------------------|----------|---------------------|-----------|---------------|---------|------------------------------------|--------------------------------------|
|                                                           |              |                | inch                        | mm       | Stranded definition | Ext. Ø mm | inch          | mm      |                                    |                                      |
| 2#24 stranded mil w 16878 type B                          | Multi piece  | 24             | 0.049                       | 1.24 max | 7/.008              |           | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| 2 #24 solid mil-w-76 type LW                              |              | 24             | 0.047                       | 1.12 max | 1/.0201             |           | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| 2 #26 stranded mil w 76 type LW or mil w16878 type b&e    |              | 26             | 0.043                       | 1.09 max | 7/.0063             | 0.16      | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| 2 #28 solid mil-w-81822/3                                 |              | 28             | 0.028                       | 0.71 max |                     |           | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| TWISTED PAIR 1/.201 SOLID MIL w 76 TYPE lw or MIL W 16878 |              | 26             | 0.044                       | 1.12 max | 1/.0201             | 0.511     | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| twisted pair solid mil w 81822/3                          |              | 28             | 0.028                       | 0.71 max | 1/.0126             | 0.32      | -             | -       | RMDXK10D28                         | RCDXK1D28                            |
| #28 7/.0036 per Hitachi spec ec-711 (13-2820)             | Mono crimp   | -              | 0.046                       | 1.17     | 7/.0036             | -         | -             | -       | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |
| 20218201                                                  |              | -              | 0.028                       | 0.71     | -                   | -         | -             | -       | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |
| #30 solid                                                 |              | -              | 0.025                       | 0.64     | -                   | -         | -             | -       | RMDX6015D28 + YORX090              | RCDX6015D28 + YORX090                |
| #26 7/.0063                                               |              | 26             | 0.028                       | 0.71     | 7/.063              | 0.16      | -             | -       | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |
| #26 19/.004                                               |              | 26             | 0.049                       | 1.24     | 19/.004             | -         | -             | -       | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| #24 7/.008                                                |              | 24             | 0.049                       | 1.24     | 7/.008              | -         | -             | -       | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| #24 19/.005                                               |              | 24             | 0.057                       | 1.45     | 19/.005             | -         | -             | -       | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 26             | -                           | 1.25     | -                   | -         | -             | 19x0.1  | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 24             | -                           | 1.25     | -                   | -         | -             | 7x0.2   | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 24             | -                           | 1.45     | -                   | -         | -             | 19x0.13 | RMDX6019D28 + YORX090              | RCDX6019D28 + YORX090                |
| -                                                         |              | 26             | -                           | 0.7      | -                   | -         | -             | 7x0.16  | RMDX6031D28 + YORX090              | RCDX6031D28 + YORX090                |

# UTG Series

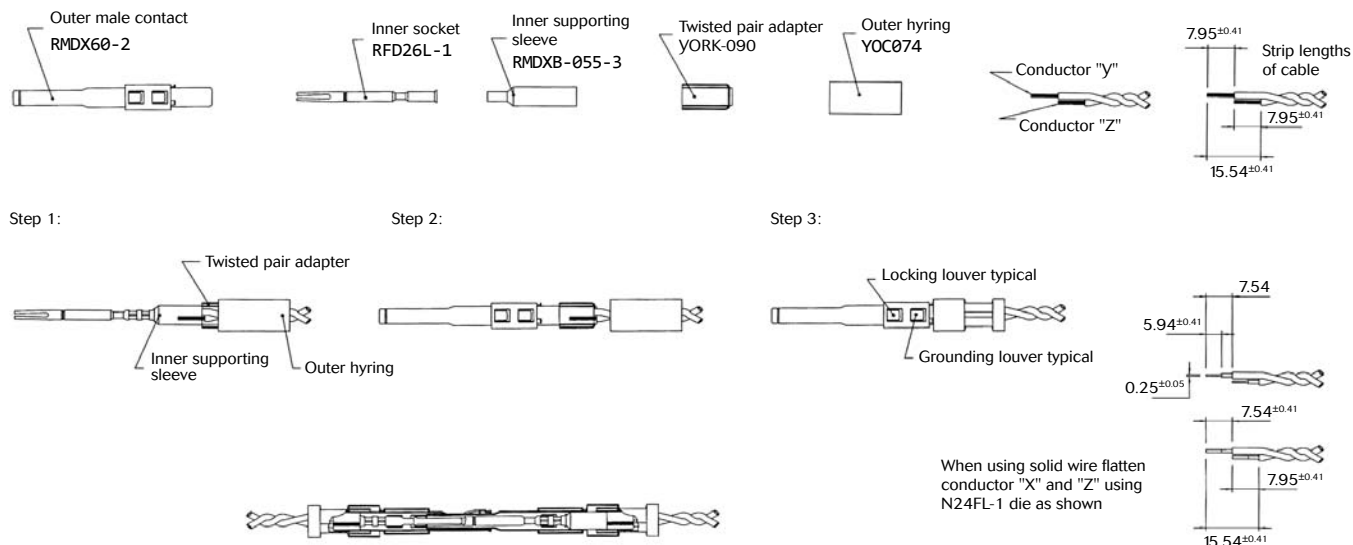
## Twisted pair cable multipiece contact cabling

| Cable reference                                           | Contact type | Male contact | Female contact | Crimp tool | Die set | Stop bushing | Cable strip length  |   |   | Inner conductor crimp |       | Braid crimp |       |
|-----------------------------------------------------------|--------------|--------------|----------------|------------|---------|--------------|---------------------|---|---|-----------------------|-------|-------------|-------|
|                                                           |              |              |                |            |         |              | A                   | B | C | g dim                 | t dim | g dim       | t dim |
| 2#24 stranded mil w 16878 type B                          | Multi piece  | RMDXK10D28   | RCDXK1D28      | M10S1J     | -       | -            | See assembly notice |   |   |                       |       |             |       |
| 2 #24 solid mil-w-76 type LW                              |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| 2 #26 stranded mil w 76 type LW or mil w16878 type B & E  |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| 2 #28 solid mil-w-81822/3                                 |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| twisted pair 1/.201 solid mil w 76 type LW or mil w 16878 |              |              |                |            |         |              |                     |   |   |                       |       |             |       |
| twisted pair solid mil w 81822/3                          |              |              |                |            |         |              |                     |   |   |                       |       |             |       |

### Female contact



### Male contact



Note : all dimensions are in mm

# UTG Series

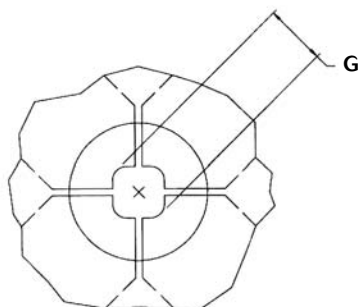
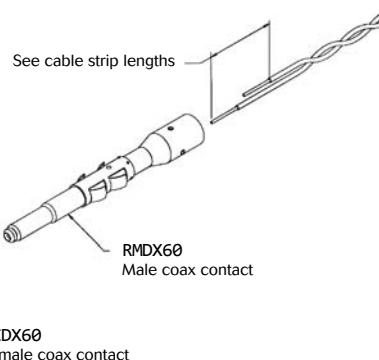
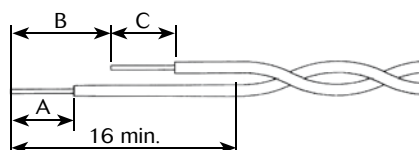
## #16 coaxial contacts

### Twisted pair cable monocrimp contact cabling

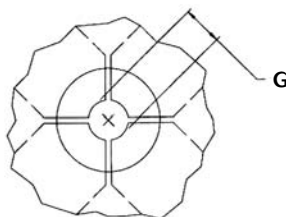
| Cable reference                              | Contact type | Male contact          | Female contact        | Crimp tool | Die set                                             | Stop bushing | Cable strip length |     |      | Inner conductor crimp |              | Braid crimp  |              |
|----------------------------------------------|--------------|-----------------------|-----------------------|------------|-----------------------------------------------------|--------------|--------------------|-----|------|-----------------------|--------------|--------------|--------------|
|                                              |              |                       |                       |            |                                                     |              | A                  | B   | C    | g dim                 | t dim        | g dim        | t dim        |
| #28 7/0036 per Hitachi spec ec-711 (13-2820) | Mono crimp   | RMDX6031D28 + YORX090 | RCDX6031D28 + YORX090 | M10S1J     | S80                                                 | SL105        | 4.7                | 6.1 | 4.32 | 1.30 to 1.12          | 1.4 to 1.22  | 2.97 to 2.84 | 3.07 to 2.9  |
| 20218204                                     |              |                       |                       |            | S80                                                 | SL105        | 3.94               | 6.1 | 3.16 | 1.30 to 1.17          | 1.4 to 1.22  | 2.97 to 2.84 | 3.07 to 2.79 |
| #30 solid                                    |              |                       |                       |            | S83                                                 | SL105        | 4.7                | 6.1 | 4.06 | 1.22 to 1.12          | 1.35 to 1.22 | 2.97 to 2.84 | 3.12 to 2.95 |
| #26 7/0063                                   |              |                       |                       |            | S80                                                 | SL105        | 4.7                | 6.1 | 4.06 | 1.30 to 1.17          | 1.4 to 1.22  | 2.97 to 2.84 | 3.07 to 2.9  |
| #26 19/004                                   |              |                       |                       |            | M10SG8 ASSY'Y TOOL DIE SET STOP BUSHING M10S1J TOOL |              | 4.7                | 6.1 | 4.06 | 1.22 to 1.17          | 1.35 to 1.22 | 2.84 to 2.79 | 3.12 to 2.97 |
| #24 7/008                                    |              |                       |                       |            |                                                     |              | 4.7                | 6.1 | 4.06 | 1.22 to 1.17          | 1.35 to 1.22 | 2.84 to 2.79 | 3.12 to 2.97 |
| #24 19/005                                   |              |                       |                       |            |                                                     |              | 4.7                | 6.1 | 4.06 | 1.22 to 1.17          | 1.35 to 1.22 | 2.84 to 2.79 | 3.12 to 2.97 |
| AWG26 (19x0.1)                               |              |                       |                       |            | M10SG8 crimping kit                                 |              | 4.7                | 6   | 4    |                       |              |              |              |
| AWG24 (7x0.2)                                |              |                       |                       |            |                                                     |              |                    |     |      |                       |              |              |              |
| AWG24 (19x0.13)                              |              |                       |                       |            |                                                     |              |                    |     |      |                       |              |              |              |
| AWG26 (7x0.16)                               |              |                       |                       |            | S80                                                 | SL150        |                    |     |      |                       |              |              |              |

- Select appropriate monocrimp coax twisted pair contact and cable combination.
- Select appropriate crimp tooling (hand tool, S-die set, stop bushing).
- Strip the twisted pair cable to the designated wire strip lengths.
- Insert the stripped cable into the contact. One cable is to be inserted into the inside diameter of hying, and pushed forward into the inner contact. The second cable is to be inserted between the outside diameter of hying and the inside diameter of the outer contact body.
- Crimp the contact.

Cable strip length



Braid crimp (G) to be measured with die set fully closed



Inner conductor crimp (G) to be measured with die set fully closed

Note : all dimensions are in mm

# UTG Series

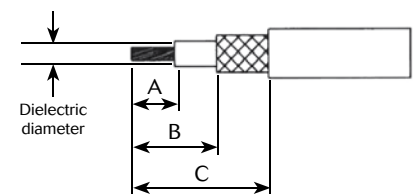
## Multipiece male contact with coax cable

| Cable reference       | Contact             | Hyring complemen-<br>tary compoments | Outer contact crimp tool |              | Inner contact crimp tool |              | Cable strip length |       |       |
|-----------------------|---------------------|--------------------------------------|--------------------------|--------------|--------------------------|--------------|--------------------|-------|-------|
|                       |                     |                                      | Crimp tool M10S1J        |              | Crimp tool M10S1J        |              |                    |       |       |
|                       |                     |                                      | Die set                  | Stop bushing | Die set                  | Stop bushing | A                  | B     | C     |
| RG161U                | Male:<br>RMDXK10D28 | YOC074                               | S221                     | SL471        | S23D2                    | SL46D2       | 4.37               | 7.95  | 15.88 |
| RG179                 |                     |                                      |                          |              |                          |              | 4.37               | 7.95  | 15.88 |
| RG187U                |                     |                                      |                          |              |                          |              | 4.37               | 7.95  | 15.88 |
| RG188/U               |                     |                                      |                          |              | S26D2                    |              | 4.37               | 7.95  | 15.88 |
| RG174/U               |                     | 4.37                                 |                          |              |                          |              | 7.95               | 15.88 |       |
| RG178A/U              |                     | S23D2                                |                          |              | 7.54                     |              | 9.12               | 17.53 |       |
| RG196U                |                     |                                      |                          |              | 7.54                     |              | 9.12               | 17.53 |       |
| AMPHENOL<br>21-598    |                     | YOC074                               |                          |              | -                        |              | 4.37               | 7.95  | 15.88 |
| surprenant<br>pn 8134 |                     |                                      |                          |              | -                        |              | 4.37               | 7.95  | 15.88 |

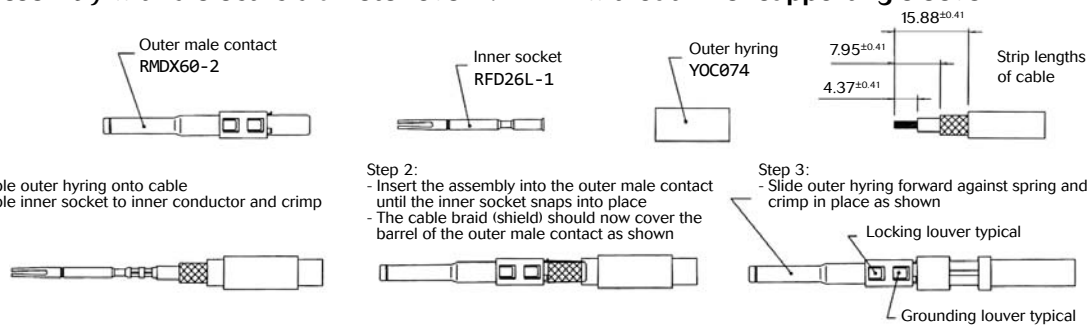
### Multipiece kit details

|                     |            |                         |
|---------------------|------------|-------------------------|
| RMDXK10D28 includes | RMDX602D28 | Outer contact           |
|                     | RFD26L1D28 | Inner contact           |
|                     | YOC074     | Outer hyring            |
|                     | RMDXB0553  | Inner supporting sleeve |

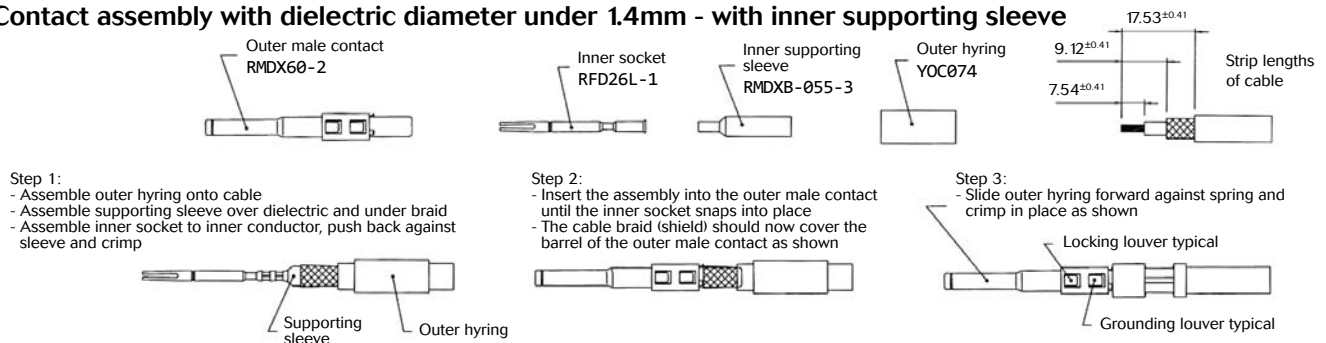
### Cable strip length



### Contact assembly with dielectric diameter over 1.4mm - without inner supporting sleeve



### Contact assembly with dielectric diameter under 1.4mm - with inner supporting sleeve



Note : all dimensions are in mm

# UTG Series

## #16 coaxial contacts

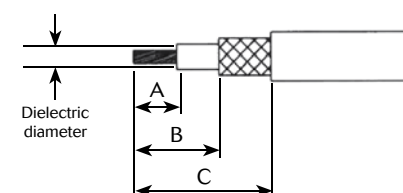
### Multipiece female contact with coax cable

| Cable reference    | Contact              | Hying complementary compoments | Outer contact crimp tool |              | Inner contact crimp tool |              | Cable strip length |   |       |
|--------------------|----------------------|--------------------------------|--------------------------|--------------|--------------------------|--------------|--------------------|---|-------|
|                    |                      |                                | Crimp tool M10S1J        |              | Crimp tool M10S1J        |              |                    |   |       |
|                    |                      |                                | Die set                  | Stop bushing | Die set                  | Stop bushing | A                  | B | C     |
|                    |                      |                                |                          |              |                          |              |                    |   |       |
| RG161U             | Female:<br>RCDXK1D28 | YOC074                         | S221                     | SL471        | S23D2                    | SL46D2       | 4.37               | - | 11.13 |
| RG179              |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG187U             |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG188/U            |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG174/U            |                      |                                |                          |              |                          |              | 4.37               |   | 11.13 |
| RG178A/U           |                      | YOC074 + RMDXB0553             |                          |              | S23D2                    |              | 6.35               |   | 11.13 |
| RG196U             |                      | 6.35                           |                          |              |                          |              | 11.13              |   |       |
| AMPHENOL 21-598    |                      | YOC074                         |                          |              | -                        |              | 4.37               |   | 11.13 |
| surprenant pn 8134 |                      |                                |                          |              | -                        |              | 4.37               |   | 11.13 |

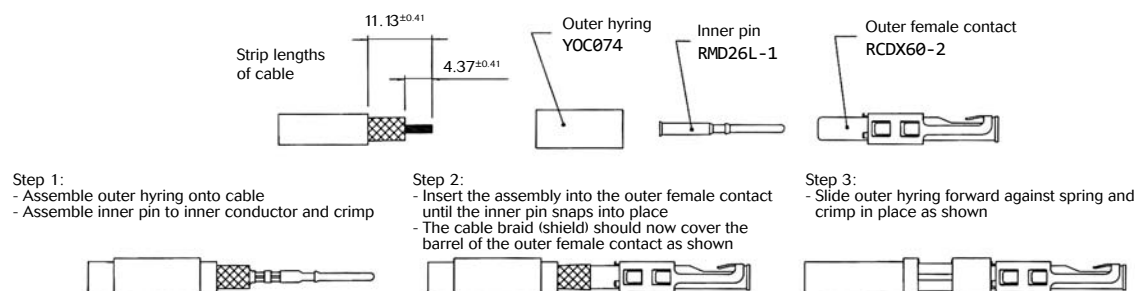
#### Multipiece kit details

|                    |            |                         |
|--------------------|------------|-------------------------|
| RCDXK1D28 includes | RCDX602D28 | Outer contact           |
|                    | RMD26L1D28 | Inner contact           |
|                    | YOC074     | Outer hying             |
|                    | RCDXB0553  | Inner supporting sleeve |

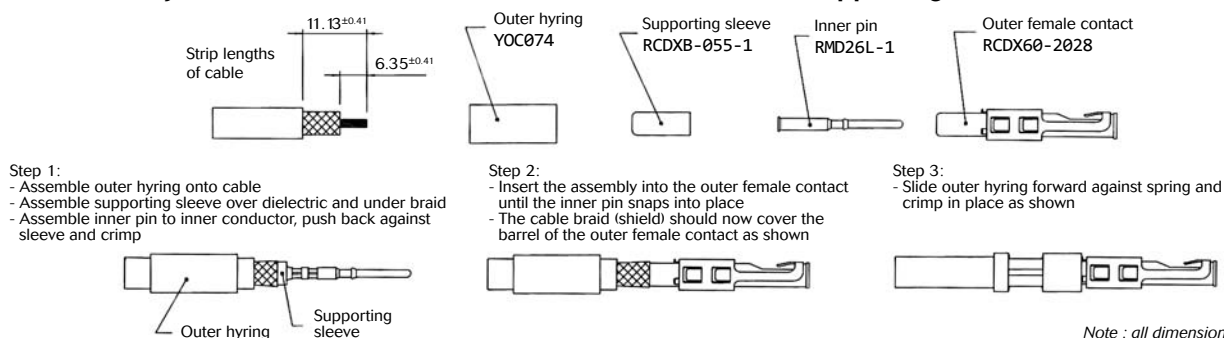
#### Cable strip length



#### Contact assembly with dielectric diameter over 1.4mm - without inner supporting sleeve



#### Contact assembly with dielectric diameter under 1.4mm - with inner supporting sleeve



Note : all dimensions are in mm

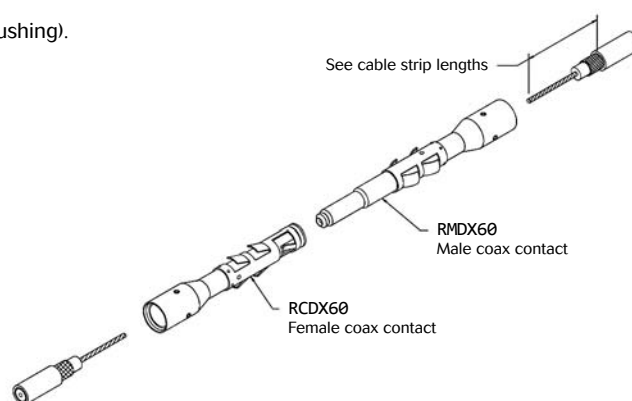
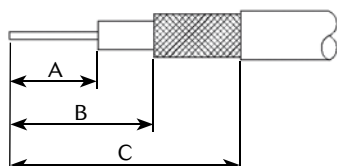
# UTG Series

## Coax cable with monocrimp contact cabling

| Cable reference                     | Male contact | Female contact | Crimp tool | Die set                                                      | Stop bushing | Cable strip length |      |       | Inner conductor crimp |           | Braid crimp |           |
|-------------------------------------|--------------|----------------|------------|--------------------------------------------------------------|--------------|--------------------|------|-------|-----------------------|-----------|-------------|-----------|
|                                     |              |                |            |                                                              |              | A                  | B    | C     | g dim                 | t dim     | g dim       | t dim     |
| CDC PIN22939200                     | RMDX6046D28  | RCDX6016D28    | M10S1J     | S80                                                          | SL105        | 4.19               | 5.97 | 8.51  | 1.30/1.17             | 1.40/1.22 | 2.77/2.64   | 3.02/2.84 |
| CDC PIN22939200                     | RMDX6046D28  | RCDX6016D28    |            | S87                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.40/1.22 | 2.77/2.64   | 3.02/2.84 |
| CDC PIN245670000                    | RMDX6050D28  | RCDX6016D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| KX21TVT (europe)<br>RG178 B/U       | RMDX6034D28  | RCDX6034D28    |            | S82                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.32/1.17 | 2.84/2.74   | 3.07/2.9  |
| RG178 / BU                          | RMDX6050D28  | RCDX6016D28    |            | S87                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.30/1.17             | 1.40/1.22 | 2.77/2.64   | 3.02/2.84 |
| ampex                               | RMDX6032D28  | RCDX6032D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| TI PN 920580                        | RMDX6024D28  | RCDX6024D28    |            | S82                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.35/1.19             | 1.42/1.27 | 2.87/2.74   | 3.07/2.9  |
| RG174/U                             | RMDX6032D28  | RCDX6032D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| Honeywell PN 58000062               | RMDX6026D28  | RCDX6026D28    |            | S82                                                          | SL105        | 5.08               | 6.35 | 8.89  | 1.35/1.19             | 1.42/1.27 | 2.87/2.74   | 3.07/2.9  |
| RG188A/U                            | RMDX6036D28  | RCDX6036D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| RG316/U                             | RMDX6036D28  | RCDX6036D28    |            | S80                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.30/1.17             | 1.40/1.22 | 2.97/2.84   | 3.12/2.95 |
| PRD PN 247AS-C123-001               | RMDX6018D28  | RCDX6018D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| PRD PN 247AS-C1251                  | RMDX6018D28  | RCDX6018D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| raychem 5024A3111                   | RMDX6052D28  | RCDX6052D28    |            | S88                                                          | SL105        | 5.08               | 6.35 | 11.68 | 1.37/1.27             | 1.45/1.32 | 2.92/2.79   |           |
| raychem 5026e1614                   | RMDX6036D28  | RCDX6036D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| JUDD C15013010902                   | RMDX6036D28  | RCDX6036D28    |            | M10SG8 ASSY'Y<br>TOOL DIE SET<br>STOP BUSHING<br>M10S1J TOOL |              | 5.08               | 6.35 | 8.89  | 1.22/1.17             | 1.35/1.22 | 2.92/2.79   | 3.12/2.97 |
| inner cond. #30,<br>braid diam 2.64 | RMDX6050D28  | -              |            | S80                                                          | SL105        | 5.1                | 6.35 | 8.9   | -                     | -         | -           | -         |
| inner cond. #30,<br>braid diam 2.29 | RMDX6050D28  | -              |            | S87                                                          | SL105        | 4.2                | 6.35 | 8.5   | -                     | -         | -           | -         |
| inner cond. #28,<br>braid diam 2.9  | RMDX6032D28  | RCDX6032D28    |            | S80                                                          | SL105        | 5.1                | 6.35 | 11.7  | -                     | -         | -           | -         |
| inner cond. #26,<br>braid diam 1.78 | RMDX6024D28  | RCDX6024D28    |            | S82                                                          | SL105        | 5.1                | 6.35 | 8.9   | -                     | -         | -           | -         |
| inner cond. #26,<br>braid diam 3.05 | RMDX6026D28  | RCDX6026D28    |            | S82                                                          | SL105        | 5.1                | 6.35 | 8.9   | -                     | -         | -           | -         |

- Select appropriate cable and contact combination.
- Select appropriate crimp tooling (hand tool, S-die set, stop bushing).
- Strip coax cable to the designated wire strip lengths.
- Insert the stripped coax into the rear of the contact.
- Crimp the contact.

Cable strip length



Note : all dimensions are in mm

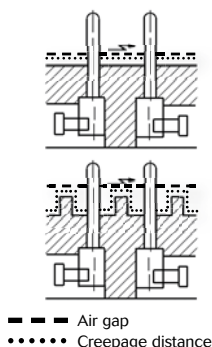
## Glossary of terms

### • Clearance

Per the IEC 60664-1 it is the shortest distance between two conductive parts even over the air.

### • Creepage distance

Per the IEC 60664-1 it represents the shortest distance along the surface of the insulating material between two conductive parts.



### • Working voltage

Per the IEC 60664-1 it is the highest r.m.s. value of A.C. or D.C. voltage across any particular insulation which can occur when the equipment is supplied at rated voltage.

### • Rated impulse voltage

Impulse withstands voltage value assigned by the manufacturer to the equipment or to a part of it characterizing the specified withstand capability of its insulation against transient overvoltage.

### • Working current

It is the maximum continuous and not interrupted current able to be carried by all contacts without exceeding the maximum temperature of the insulating material.

### • Transient voltage

Extract from the IEC 60664-1: Short duration overvoltage of a few millisecond or less, oscillatory or non-oscillatory, usually highly damped.

### • CTI (Comparative Tracking Index)

The CTI value is commonly used to characterize the electrical breakdown properties of an insulating material. It allows users to know the tendency to create creepage paths. This value represents the maximum voltage after 50 drops of ammonium chloride solution without any breakdown.

### • RTI (Relative temperature Index):

Extract from ULs website:

"Maximum service temperature for a material, where a class of critical property will not be unacceptably compromised through chemical thermal degradation, over the reasonable life of an electrical product, relative to a reference material having a confirmed, acceptable corresponding performance defined RTI.

- **RTI Elec:** Electrical RTI, associated with critical electrical insulating properties.

- **RTI Mech Imp:** Mechanical Impact RTI, associated with critical impact resistance, resilience and flexibility properties.

- **RTI Mech Str:** Mechanical Strength (Mechanical without Impact) RTI, associated with critical mechanical strength where impact resistance, resilience and flexibility are not essential"

## UTG Series

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# UTG Series

Stage - Light

Building automation & control



Industry

Off road - Mining  
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Medical



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