



## Contact selector guide

### 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

|            |                                                                |
|------------|----------------------------------------------------------------|
| A          | 2μ Ni + 2μ Ag                                                  |
| J          | Gold flash over 2μ Ni                                          |
| K          | Min 0.4μ gold over 2μ Ni                                       |
| S31        | Gold flash over Ni                                             |
| S18        | 0.75μ gold min in active part over 2μ Ni<br>Gold flash over Ni |
| S25<br>S26 | Active part: 0.75μ Au over Ni<br>Crimp area: flash Au over Ni  |
| T          | T: 2μ Ni mini all over + 3 to 5 μm Sn all over                 |
| TK6        | 2-5μ Sn pre-plated                                             |

## Packaging

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



• 50 pieces bulk packing (standard)



• 1000 pieces bulk packing



• 3000 pieces reeled stamped & formed contacts



• 5000 pieces reeled machined contacts

# UTS Series



## Crimp contacts

### Standard version



| Contact size   | Type     | Wire size |           | Part number                     |                                 | Max wire Ø | Max insulator Ø | Color band |      | Plating available |
|----------------|----------|-----------|-----------|---------------------------------|---------------------------------|------------|-----------------|------------|------|-------------------|
|                |          | AWG       | mm²       | Male                            | Female                          |            |                 | Front      | Rear |                   |
| #20<br>Ø1 mm   | Machined | 26-24     | 0.13-0.20 | RM24W3-                         | RC24W3-                         |            | 1.58 max        | -          | -    | K                 |
|                | S&F      | 26-24     | 0.13-0.25 | SM24W3S26 (1)<br>SM24WL3S26 (2) | SC24W3S25 (1)<br>SC24WL3S25 (2) |            | 0.89-1.58       | -          | -    | S25, S26          |
|                | Machined | 22-20     | 0.32-0.52 | RM20W3-                         | RC20W3-                         |            | 1.58 max        | -          | -    | K                 |
|                | S&F      | 22-20     | 0.35-0.5  | SM20W3S26 (1)<br>SM20WL3S26 (2) | SC20W3S25 (1)<br>SC20WL3S25 (2) |            | 1.17-2.08       | -          | -    | S25, S26          |
|                | Machined | 20-18     | 0.50-0.93 | RM18W3-                         | RC18W3-                         |            | 2.10 max        | -          | -    | K                 |
| #16<br>Ø1.6 mm | Machined | 30-28     | 0.05-0.08 | RM28M1-                         | RC28M1-                         | 0.55       | 1.1             | -          | -    | K, J, T           |
|                | Machined | 26-24     | 0.13-0.2  | RM24M9-                         | RC24M9-                         | 0.8        | 1.6             | Red        | -    | K, J, T           |
|                | S&F      | 26-24     | 0.13-0.25 | SM24M1- (1)<br>SM24ML1- (2)     | SC24M1- (1)<br>SC24ML1- (2)     | 0.89-1.28  |                 | -          | -    | S31, S18, TK6     |
|                | Machined | 22-20     | 0.32-0.52 | RM20M13-                        | RC20M13-                        | 1.18       | 1.8             | Black      | -    | K, J, T           |
|                |          |           |           | RM20M12-                        | RC20M12-                        |            | 2.2             | Blue       | -    |                   |
|                | S&F      | 22-20     | 0.35-0.5  | SM20M1- (1)<br>SM20ML1- (2)     | SC20M1- (1)<br>SC20ML1- (2)     | 1.17-2.08  |                 | -          | -    | S31, S18, TK6     |
|                | Machined | 20-16     | 0.52-1.5  | RM16M23-                        | RC16M23-                        | 1.8        | 3.2             | -          | -    | K, J, T           |
|                | S&F      | 18-16     | 0.8-1.5   | SM16M1- (1)<br>SM16ML1- (2)     | SC16M1- (1)<br>SC16ML1- (2)     | 3.0        |                 | -          | -    | S31, S18, TK6     |
|                | S&F      | 18-16     | 0.8-1.5   | SM16M11- (1)<br>SM16ML11- (2)   | SC16M11- (1)<br>SC16ML11- (2)   | 2.0-3.0    |                 | -          | -    | S31, S18, TK6     |
|                | Machined | 16-14     | 1.5-2.5   | RM14M50-                        | RC14M50-                        | 2.05       | 3.2             | -          | -    | K, J, T           |
|                | Machined | 16-14     | 1.5-2.5   | RM14M30-                        | RC14M30-                        | 2.28       | 3.2             | -          | -    | K, J, T           |
|                | S&F      | 14        | 2.0       | SM14M1- (1)<br>SM14ML1- (2)     | SC14M1- (1)<br>SC14ML1- (2)     | 3.2        |                 | -          | -    | S31, S18, TK6     |
| #12<br>Ø2.4 mm | Machined | 22        | 0.13-0.4  | 8291 1457N-                     | 8291 1456-                      | -          | 4.9             | -          | -    | A, K              |
|                |          | 20        | 0.5       | 8291 1459N-                     | 8291 1458-                      |            |                 |            |      |                   |
|                |          | 18        | 0.75-1.0  | 8291 1461N-                     | 8291 1460-                      |            |                 |            |      |                   |
|                |          | 16        | 1.5       | 8291 1463N-                     | 8291 1462-                      |            |                 |            |      |                   |
|                |          | 14        | 2.5       | 8291 1465N-                     | 8291 1464-                      |            |                 |            |      |                   |
|                |          | 12        | 4         | 8291 1467N-                     | 8291 1466-                      |            |                 |            |      |                   |
| #8<br>Ø3.6 mm  | Machined | 16        | 1.5       | 8291 3601-                      | 8291 3600-                      | -          | 6.5             | -          | -    | A                 |
|                |          | 14        | 2.5       | 8291 3603-                      | 8291 3602-                      |            |                 |            |      |                   |
|                |          | 12        | 4         | 8291 3605-                      | 8291 3604-                      |            |                 |            |      |                   |
|                |          | 10        | 6.0       | 8291 3607-                      | 8291 3606-                      |            |                 |            |      |                   |
|                |          | 8         | 10.0      | 8291 3609-                      | 8291 3608-                      |            |                 |            |      |                   |

(1) contact reeled  
(2) loose contact



## 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          | mm²       | 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  | □ =<br>K, J or T  |
|                                                        |          | 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  |                   |
|                                                        |          |              |           | RM20M12 GE1□ |             |            | 2.2             | Blue       | Red  |                   |
|                                                        |          | 20-16        | 0.52-1.5  | RM16M23 GE1□ |             | 1.8        | 3.2             | -          | Red  |                   |
|                                                        |          | 16-14        | 1.5-2.5   | RM14M50 GE1□ |             | 2.05       | -               | -          | Red  |                   |
| 16-14                                                  | 1.5-2.5  | RM14M30 GE1□ | 2.28      | -            | -           | Red        |                 |            |      |                   |
| #16<br>Ø1.6 mm<br>Shorter fe-<br>male contact (-0.7mm) | Machined | 30-28        | 0.05-0.08 | -            | RC28M1GE7□  | 0.55       | 1.1             | -          | Blue | □ =<br>K, J or T  |
|                                                        |          | 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 |                   |
|                                                        |          |              |           |              | RC20M12GE7□ |            | 2.2             | Blue       | Blue |                   |
|                                                        |          | 20-16        | 0.52-1.5  |              | RC16M23GE7□ | 1.8        | 3.2             | -          | Blue |                   |
|                                                        |          | 16-14        | 1.5-2.5   |              | RC14M50GE7□ | 2.05       | -               | -          | Blue |                   |
|                                                        |          | 16-14        | 1.5-2.5   |              | RC14M30GE7□ | 2.28       | -               | -          | Blue |                   |

### How to make FMLB / LMFB connection

| Contact 1 \ 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



# UTS Series

## 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.



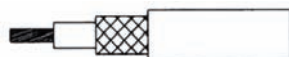
#### Multipiece crimp coaxial contact

- 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 |                                            |                   |
| <b>Multipiece</b> | RMDXK10D28    | RCDXK1D28      | See page 68                                | See pages 72 & 73 |
| <b>Monocrimp</b>  | RMDX60xxD28   | RCDX60xxD28    |                                            | See page 74       |

#### Contacts for twisted pairs cable summary

| Contact type      | Contact range           |                        | Contact part number with cable combination | Cabling notice |
|-------------------|-------------------------|------------------------|--------------------------------------------|----------------|
|                   | Male contact            | Female contact         |                                            |                |
| <b>Multipiece</b> | RMDXK10D28<br>+ YORK090 | RCDXK1D28<br>+ YORK090 | See page 69                                | See page 70    |
| <b>Monocrimp</b>  | RMDX60xxD28             | RCDX60xxD28            |                                            | See page 71    |



## PCB contacts

### PCB contacts

#### PCB soldering

UTS 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 | RMW50A7□    | RCW50A7□    | □ = K      |
|               | Long version  | RMW5016□    | RCW5016□    |            |
| #16<br>Ø1.6mm | Short version | RM20M12E8□  | RC20M12E8□  | □ = K or T |
|               | Long version  | RM20M12E83□ | RC20M12E83□ |            |
|               |               |             | RC20M12E84□ |            |



# UTS 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
- Multimode Silica Fibre
  - 62.5/125µm type 2.0 mm max. jacket
- Singlemode Silica Fibre
  - 9/125µm type 2.0 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/PCF        | Multimode      | Singlemode     |
| • Wave length:                    | 650 nm         | 62.5/125µm     | 9/125µm        |
| • Optical insertion loss (typ.):  | 2 dB max.      | 1300 nm        | 1310 nm        |
| • Jacketed external diameter:     | 2.2mm          | < 0.5 dB       | < 0.35 dB      |
| • Temperature range:              | -25°C to +70°C | 2.0mm max.     | 2.0mm max.     |
| • Cable retention:                | 49N            | -25°C to +70°C | -25°C to +70°C |
| • 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.



## Fibre optic contacts

### Ordering information

#### POF Contacts (Plastic Optical Fibre)

|                |            |
|----------------|------------|
| Male contact   | RMPOF1000  |
| Female contact | RCPOF1000B |

#### PCF Contacts (Plastic Clad Fibre)

|                |           |
|----------------|-----------|
| Male contact   | RMPCF230  |
| Female contact | RCPCF230B |

#### Silica Contacts - Multimode

|                |         |
|----------------|---------|
| Male contact   | RMMMOFA |
| Female contact | RCMMOFA |

#### Silica Contacts - Monomode

|                |         |
|----------------|---------|
| Male contact   | RMSMOFA |
| Female contact | RCSMOFA |

### 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  |

### PCF Contact (Plastic Clad Fibre)

#### STANDARD TOOLING KIT - P/N 80MG0039

| Descriptions                 |
|------------------------------|
| Stripping tool for Ø 2.2 mm  |
| Kevlar scissors              |
| Stripping tool for Ø 0.25 mm |
| Alumina blade                |
| Polishing tool               |
| Press fit tool               |
| Microscope                   |

| Descriptions                                |
|---------------------------------------------|
| Polishing disk (grain size 9µm)             |
| Polishing disk (grain size 0.3µm)           |
| Curing oven                                 |
| Polishing plate                             |
| Non slip base (to hold the polishing plate) |
| Glue                                        |



## Fibre optic contacts

### Multimode Contact - Silica

#### STANDARD TOOLING KIT - P/N 80MG0027

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

| Part numbers | Descriptions                                                   |
|--------------|----------------------------------------------------------------|
| 80WC0001     | Aramid yarn scissors                                           |
| 80WC0003     | Cutter                                                         |
| 80WC0004     | Alumina blade                                                  |
| 80WD0008     | Stripping tool for Ø 0.20 mm                                   |
| 80WD0010     | Stripping tool for Ø 0.25 mm                                   |
| 80WD0014     | Stripping tool for Ø 0.60 mm                                   |
| 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)                    |
| 80WT0008     | Curing oven                                                    |
| 80WT0009     | Protective tube                                                |

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

| Part numbers | Descriptions                          |
|--------------|---------------------------------------|
| 80WD0036     | Stripping tool for Ø 0.9 mm & 0.25 mm |
| 80WD0005     | Stripping tool for Ø 2.2 mm & 1.5 mm  |
| 80WL0001     | Microscope x400                       |
| 80WL0008     | Microscope adaptor                    |
| 80WP0025     | Polishing tool                        |
| 80WS0002     | Crimping tool                         |
| 80WT0005     | Contact support for polymerisation    |
| 80WG0010     | Needle                                |
| 80WG0014     | Glue                                  |
| 80WG0015     | Capsule                               |
| 80WG0016     | Syringe                               |
| 80WN0005     | Dry air spray                         |
| 80WN0006     | Optical paper                         |
| 80WN0012     | Dropping bottle                       |
| 80WP0014     | Polishing disk (grain size 9µm)       |
| 80WP0015     | Polishing disk (grain size 0.3µm)     |