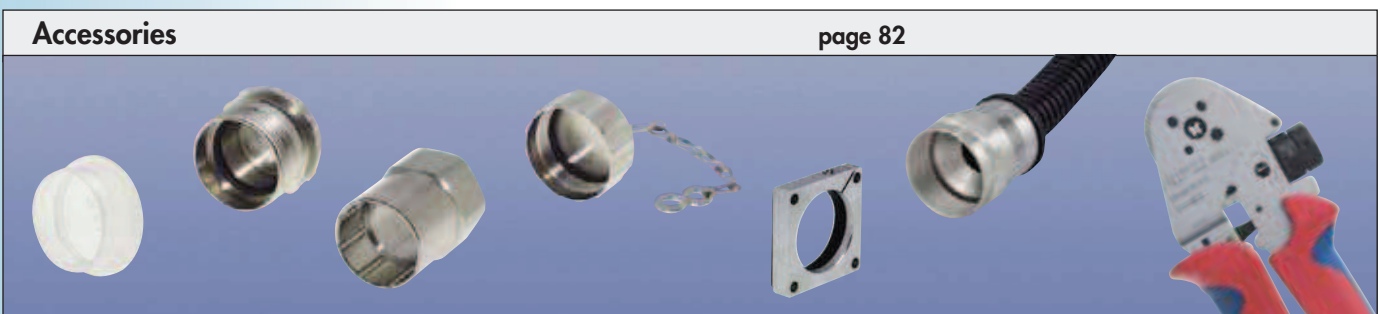
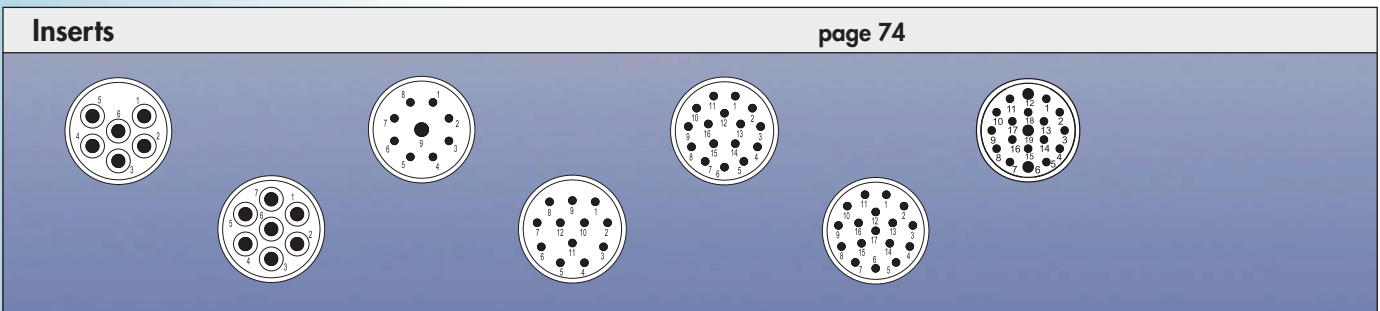


Signal Connectors M 23



Product Overview



M 23 Signal Connectors

| Mechanical Data | Materials and Technical Data |
|-------------------------------------|--|
| Housing | Copper-Zinc alloy Die Casting |
| Housing surface | Nickel plated other surface upon request |
| Inserts (for contacts) | Thermoplastic Polyamid PA 6 (Nylon 6/6), PBT Fire protection class V-0 |
| Contacts | Brass Alloy |
| Contact surface at point of contact | Nickel and gold plated (0,25µm Au) |
| Minimum mating cycles | > 1000 |
| Seals / O-Rings | Buna-N standard optional Viton® (Viton is a registered trademark of DuPont) |
| Temperature range | -40° C – 125° C (-40 °F – 257 °F) |
| Type of contacts | Crimp, solder, dip-solder (PCB) |
| Protection | IP 67 / IP 69K per EN 60 529 (connected), NEMA 4x |
| Cable diameter range | 3 – 17 mm (.12 – .67") |

Electrical Data

| | | | | | | | |
|---|--------------------|--------------------|--------------------|--------------------|-------------------|-------------------|-------------------|
| Number of positions | 6 | 7 | 9 (8+1) | 12 | 16 | 17 | 19 (16+3) |
| Number of contacts | 6 | 7 | 8 1 | 12 | 16 | 17 | 16 3 |
| Contact-Ø [mm] | 2 | 2 | 1 2 | 1 | 1 | 1 | 1 1,5 |
| Nominal current ¹⁾ [A] | 20 | 20 | 8 20 | 8 | 8 | 8 | 8 10 |
| Nominal voltage ²⁾ [V~] Degree of Protection 2 ³⁾ | 630 | 630 | 500 | 500 | 400 | 400 | 320 |
| Nominal voltage ²⁾ [V~] Degree of Protection 3 ³⁾ | 300 | 300 | 200 | 200 | 160 | 160 | 100 |
| Test voltage (Breakdown voltage) ⁴⁾ [V~] | 2500 | 2500 | 2500 | 2500 | 1500 | 1500 | 1500 |
| Insulation resistance [mΩ] | > 10 ¹⁰ | > 10 ¹⁰ | > 10 ¹⁰ | > 10 ¹⁰ | > 10 ⁶ | > 10 ⁶ | > 10 ⁶ |
| Max. contact resistance [mΩ] | 3 | 3 | 3 | 3 | 3 | 3 | 3 |

^{1), 2), 3), 4)} See Technical Informations page 14

Signal Connectors M 23 / Housing

| Straight Connector, Female Thread | | Cable-Ø | Part Number |
|--|--|------------------------------|---------------|
| | | 3 – 7 mm (.12 – .28")..... | 7.106.400.000 |
| | | 7 – 12 mm (.28 – .47")..... | 7.106.500.000 |
| | | 11 – 17 mm (.44 – .67")..... | 7.106.600.000 |
| Contacts and inserts page 74 • Assembly instructions page 88 | | | |

| Straight Connector, Male Thread | | Cable-Ø | Part Number |
|--|--|------------------------------|---------------|
| | | 3 – 7 mm (.12 – .28")..... | 7.206.400.000 |
| | | 7 – 12 mm (.28 – .47")..... | 7.206.500.000 |
| | | 11 – 17 mm (.44 – .67")..... | 7.206.600.000 |
| Contacts and inserts page 74 • Assembly instructions page 88 | | | |

| Panel Connector, Male Thread, with Strain Relief | | Cable-Ø | Part Number |
|--|--|-------------------------------------|---------------|
| | | 4 threads M 3, rear mounting | |
| | | 3 – 7 mm (.12 – .28")..... | 7.476.400.000 |
| | | 7 – 12 mm (.28 – .47")..... | 7.476.500.000 |
| | | 11 – 17 mm (.44 – .67")..... | 7.476.600.000 |
| | | Optional: Flat gasket | |
| Contacts and inserts page 74 • Assembly instructions page 88 | | | |

| Panel Connector, Male Thread, with Strain Relief | | Cable-Ø | Part Number |
|--|--|--|---------------|
| | | Rear mounting, M 25 x 1,5 single hole mounted | |
| | | 3 – 7 mm (.12 – .28")..... | 7.486.400.000 |
| | | 7 – 12 mm (.28 – .47")..... | 7.486.500.000 |
| | | 11 – 17 mm (.44 – .67")..... | 7.486.600.000 |
| | | Including jam nut M 25 x 1,5 | |
| Contacts and inserts page 74 • Assembly instructions page 88 | | | |

Signal Connectors M 23 / Housing

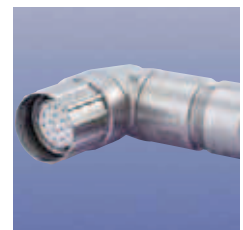
| Cable-Ø | Part Number | Right Angle Connector, Female Thread with positioning |
|--|--------------------|---|
| 3 – 7 mm (.12 – .28") |7.300.300.000 | |
| 5 – 10 mm (.20 – .39") |7.300.400.000 | |
| 7 – 12 mm (.28 – .47") |7.300.500.000 | |
| 10 – 14 mm (.39 – .55") |7.300.600.000 | |
| Contacts and inserts page 74 • Assembly instructions page 89 | | |



| Cable-Ø | Part Number | Right Angle Connector, Female Thread, EMC with positioning |
|--|--------------------|--|
| 7 – 12 mm (.28 – .47") |7.301.500.000 | |
| 10 – 14 mm (.39 – .55") |7.301.600.000 | |
| Contacts and inserts page 74 • Assembly instructions page 89 | | |



| Cable-Ø | Part Number | Right Angle Connector, EMC, rotating |
|--|--------------------|--------------------------------------|
| 7 – 12 mm (.28 – .47") |7.306.500.000 | |
| 11 – 17 mm (.43 – .67") |7.306.600.000 | |
| Contacts and inserts page 74 • Assembly instructions page 89 | | |



| Cable-Ø | Part Number | Right Angle Connector, Male Thread |
|--|--------------------|------------------------------------|
| 3 – 7 mm (.12 – .28") |7.350.300.000 | |
| 5 – 10 mm (.20 – .39") |7.350.400.000 | |
| 7 – 12 mm (.28 – .47") |7.350.500.000 | |
| 10 – 14 mm (.39 – .55") |7.350.600.000 | |
| Contacts and inserts page 74 • Assembly instructions page 89 | | |



Signal Connectors M 23 / Housing

| Panel Connector, Male Thread, Front Mounting | | Type | Part Number |
|--|--|---|---------------|
| | | 4 holes Ø 3,2 mm (.13") | 7.400.000.000 |
| | | 4 threads M 3 | 7.402.000.000 |
| | | 4 holes Ø 2,7 mm (.11") | 7.404.000.000 |
| | | 4 threads M 2,5 | 7.406.000.000 |
| | | Optional: Flat gasket | |
| | | Contacts and inserts page 74 • Assembly instructions page 91 / 92 | |

| Panel Connector, Male Thread, Front Mounting | | Type | Part Number |
|--|--|---|---------------|
| | | With anti-vibration O-Ring | |
| | | 4 holes Ø 3,2 mm (.13") | 7.410.000.000 |
| | | 4 threads M 3 | 7.412.000.000 |
| | | 4 holes Ø 2,7 mm (.11") | 7.414.000.000 |
| | | 4 threads M 2,5 | 7.416.000.000 |
| | | Optional: Flat gasket | |
| | | Contacts and inserts page 74 • Assembly instructions page 91 / 92 | |

| Panel Connector, Female Thread, with knurled Nut | | Type | Part Number |
|--|--|--|---------------|
| | | Without coding option | |
| | | 4 holes Ø 3,2 mm (.13") | 7.440.000.000 |
| | | 4 holes Ø 2,7 mm (.11") | 7.444.000.000 |
| | | Optional: Flat gasket | |
| | | Contacts and inserts page 74 • Assembly instructions page 90 | |

| Panel Connector, Female Thread, with knurled Nut | | Type | Part Number |
|--|--|--|---------------|
| | | With coding option (8 x 45°) | |
| | | 4 holes Ø 3,2 mm (.13") | 7.448.000.000 |
| | | 4 holes Ø 2,7 mm (.11") | 7.449.000.000 |
| | | Optional: Flat gasket | |
| | | Contacts and inserts page 74 • Assembly instructions page 90 | |

Signal Connectors M 23/Housing

| Type | Part Number | Panel Connector, Male Thread, Single Hole Mounted | |
|---|-------------|---|--|
| Front mounting for male inserts Thread M 20 x 1,57.420.000.000 Thread PG 13,57.422.000.000 | | | |
| Optional: Flat gasket, jam nut M 20 x 1,5 / PG 13,5 | | | |
| Contacts and inserts page 74 • Assembly instructions page 91 | | | |


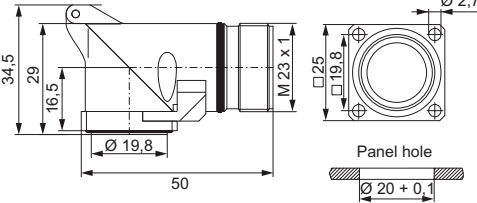
FOR MALE INSERTS ONLY


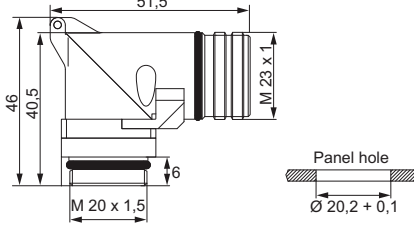
| Type | Part Number | Panel Connector, Male Thread, Single Hole Mounted | |
|---|-------------|---|--|
| Front mounting for female inserts Thread M 20 x 1,57.421.000.000 Thread PG 13,57.423.000.000 | | | |
| Optional: Flat gasket, jam nut M 20 x 1,5 / PG 13,5 | | | |
| Contacts and inserts page 74 • Assembly instructions page 92 | | | |


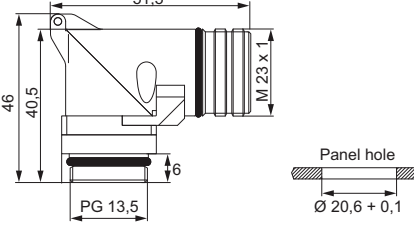
FOR FEMALE INSERTS ONLY


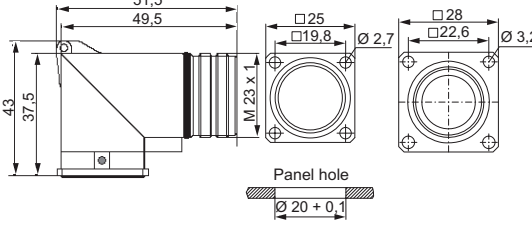
| Type | Part Number | Panel Connector, Male Thread, Single Hole Mounted | |
|---|-------------|---|--|
| For insert with pins / sockets Thread M 25 x 1,57.425.000.000 | | | |
| Optional: Flat gasket, jam nut M 25 x 1,5 | | | |
| Contacts and inserts page 74 • Assembly instructions page 91 / 92 | | | |

Signal Connectors M 23 / Housing

| Right Angle Panel Connector, Male Thread | | Type | Part Number |
|---|---|---|---------------|
|  |  | 4 holes 2,7 mm (.11")..... | 7.435.000.000 |
| | | Optional: Flat gasket Easy fixation with M2,5 screws Contacts and inserts page 74 • Assembly instructions page 93 | |

| Right Angle Panel Connector, Male Thread, rotating | | Type | Part Number |
|--|--|--|------------------------|
|  |  | 335° rotating, hole mounted | Thread M20 x 1,5 |
| | | Contacts and inserts page 74 • Assembly instructions page 93 | 7.431.000.000 |

| Right Angle Panel Connector, Male Thread, rotating | | Type | Part Number |
|---|---|--|----------------------|
|  |  | 335° rotating, hole mounted | Thread PG 13,5 |
| | | Contacts and inserts page 74 • Assembly instructions page 93 | 7.432.000.000 |

| Right Angle Panel Connector, Male Thread, rotating | | Type | Part Number |
|---|---|---|--------------------------------|
|  |  | 300° rotating, 1,5 mm locking screw at flange | 4 x holes Ø 2,7 mm (.11") .. |
| | | Flange 25 x 25 mm 4 x holes Ø 3,2 mm..... Flange 28 x 28 mm Contacts and inserts page 74 • Assembly instructions page 93 | 7.433.000.000 7.433.100.000 |

Signal Connectors M 23 / Housing


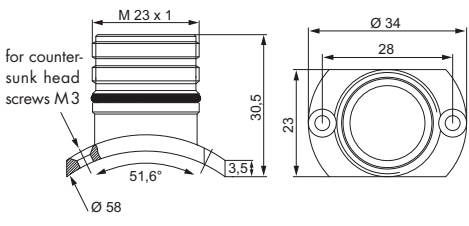
| Type | Part Number | Panel Connector, Male Thread, Rear Mounting | |
|---|--------------------|---|--|
| 4 holes \varnothing 3,2 mm (.13") |7.450.000.000 | | |
| 4 threads M 3 |7.452.000.000 | | |
| 4 holes \varnothing 2,7 mm (.11") |7.454.000.000 | | |
| 4 threads M 2,5 |7.456.000.000 | | |
| Optional: Flat gasket | | | |
| Contacts and inserts page 74 • Assembly instructions page 91 / 92 | | | |


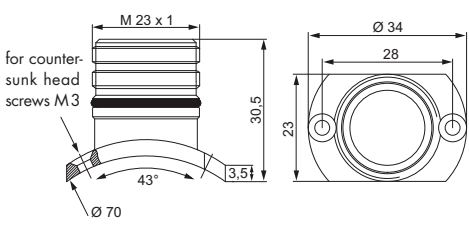
| Type | Part Number | Panel Connector, Male Thread, Rear Mounting | |
|---|--------------------|---|--|
| With anti-vibration O-Ring | | | |
| 4 holes \varnothing 3,2 mm (.13") |7.460.000.000 | | |
| 4 threads M 3 |7.462.000.000 | | |
| 4 holes \varnothing 2,7 mm (.11") |7.464.000.000 | | |
| 4 threads M 2,5 |7.466.000.000 | | |
| Optional: Flat gasket | | | |
| Contacts and inserts page 74 • Assembly instructions page 91 / 92 | | | |


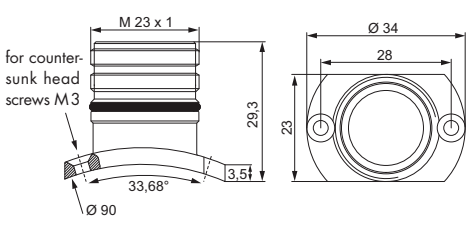
| Type | Part Number | Panel Connector, Male Thread, Single Hole Mounted | |
|---|--------------------|---|--|
| Rear mounting | | | |
| Thread M 25 x 1,5 |7.458.000.000 | | |
| Including jam nut M 25 x 1,5 | | | |
| | | | |
| Contacts and inserts page 74 • Assembly instructions page 91 / 92 | | | |

| Type | Part Number | Panel Connector, Female Thread, Rear Mounting | |
|--|--------------------|---|--|
| With knurled nut, rear mounting | | | |
| 4 threads M 3 |7.459.000.000 | | |
| | | | |
| Contacts and inserts page 74 • Assembly instructions page 90 | | | |


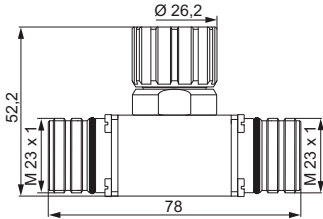
Signal Connectors M 23 / Housing


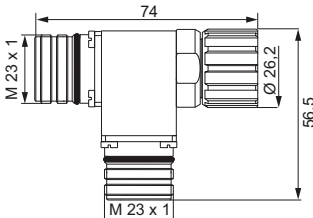
| Panel Connector with Radius Flange | | Type | Part Number |
|---|--|--|---|
|  |  <p>for counter-sunk head screws M3</p> | With anti-vibration O-Ring and flat body gasket Ø 58 mm (2.28")7.490.000.000 | |
| | | | Contacts and inserts page 74 • Assembly instructions page 91 / 92 |


| Panel Connector with Radius Flange | | Type | Part Number |
|--|---|--|---|
|  |  <p>for counter-sunk head screws M3</p> | With anti-vibration O-Ring and flat body gasket Ø 70 mm (2.76")7.491.000.000 | |
| | | | Contacts and inserts page 74 • Assembly instructions page 91 / 92 |

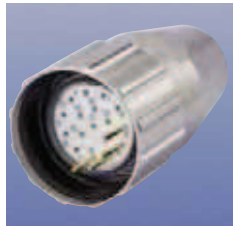
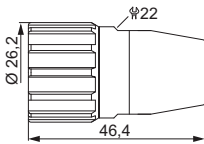
| Panel Connector with Radius Flange | | Type | Part Number |
|---|--|--|---|
|  |  <p>for counter-sunk head screws M3</p> | With anti-vibration O-Ring and flat body gasket Ø 90 mm (3.54")7.492.000.000 | |
| | | | Contacts and inserts page 74 • Assembly instructions page 91 / 92 |

Signal Connectors M 23 / Housing

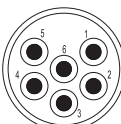
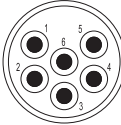
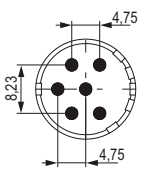
| Type | Part Number | Signal Distribution |
|--|-------------|---|
| T 01 | 7.T01 |  |
| <p>Contacts and inserts page 74</p>  | | |

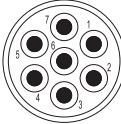
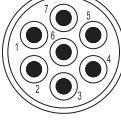
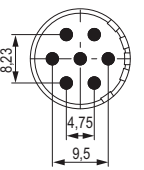
| Type | Part Number | Signal Distribution |
|---|-------------|--|
| T 02 | 7.T02 |  |
| <p>Contacts and inserts page 74</p>  | | |

| Signal Distribution | |
|--|--|
| <p>In case of so called Flying Connections it is often required to distribute, cross or combine signals. Depending on the requirements of the application, the connections can be supplied either as male or female connector, or they can be configured with strain relief fittings. There are many possible combinations, including the internal wiring, independent of their style, as T-, Y-, H-, or other special configurations.</p>  | |

| Type | Part Number | Bus End Connector |
|---|---------------|---|
| Closed type | 7.105.000.000 |  |
| <p>Used to cap an open male connector in bus-systems</p>  | | |
| <p>Contacts and inserts page 74</p> | | |

Signal Connectors M 23 / Inserts / Pinouts

| Inserts 6-pole | Type | Part Number | Part Number |
|---|--|---|----------------|
|  <p>Insert pin mating view (Part E)</p>  <p>Insert socket mating view (Part P)</p>  | Pinout clockwise | Pins | Sockets |
| | Insert with solder contacts | 7.001.906.103 | 7.001.906.104 |
| | Insert without contacts | 7.003.906.101 | 7.003.906.102 |
| | Insert with dip solder contacts | | |
| | Length 3,5 mm | 7.001.906.107 | |
| | Insert with dip solder contacts | | |
| | Length 10 mm | 7.001.906.127 | 7.001.906.108 |
| | Insert with dip solder contacts | | |
| | Length 17 mm | 7.001.906.137 | 7.001.906.118 |
| | | The correct dimension of a connector with dip solder contacts depends on the particular type of housing. | |
| | Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79) | | |

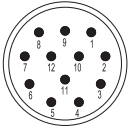
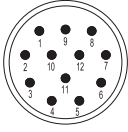
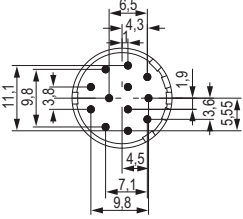
| Inserts 7-pole | Type | Part Number | Part Number |
|--|--|---|----------------|
|  <p>Insert pin mating view (Part E)</p>  <p>Insert socket mating view (Part P)</p>  | Pinout clockwise | Pins | Sockets |
| | Insert with solder contacts | 7.001.907.103 | 7.001.907.104 |
| | Insert without contacts | 7.003.907.101 | 7.003.907.102 |
| | Insert with dip solder contacts | | |
| | Length 3,5 mm | 7.001.907.107 | |
| | Insert with dip solder contacts | | |
| | Length 10 mm | 7.001.907.127 | 7.001.907.108 |
| | Insert with dip solder contacts | | |
| | Length 17 mm | 7.001.907.137 | 7.001.907.118 |
| | | The correct dimension of a connector with dip solder contacts depends on the particular type of housing. | |
| | Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79) | | |

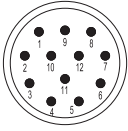
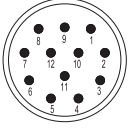
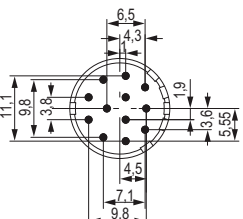
Signal Connectors M 23 / Inserts / Pinouts

| Type | Part Number | Part Number | Inserts 9-pole (8 + 1) |
|--|---------------------|---------------------|---|
| Pinout clockwise | Pins | Sockets | |
| Insert with solder contacts | 7.001.981.103 | 7.001.981.104 | <p>Insert pin mating view (Part E)</p> |
| Insert without contacts | 7.003.981.101 | 7.003.981.102 | |
| Insert with dip solder contacts Length 3,5 mm | 7.001.981.107 | | <p>Insert socket mating view (Part P)</p> |
| Insert with dip solder contacts Length 10 mm | 7.001.981.127 | 7.001.981.108 | |
| Insert with dip solder contacts Length 17 mm | 7.001.981.137 | 7.001.981.118 | |
| <p>The correct dimension of a connector with dip solder contacts depends on the particular type of housing.</p> | | | |
| | | | |
| <p>Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)</p> | | | |

| Type | Part Number | Part Number | Inserts 9-pole (8 + 1) |
|--|---------------------|---------------------|---|
| Pinout counter-clockwise | Pins | Sockets | |
| Insert with solder contacts | 7.002.981.103 | 7.002.981.104 | <p>Insert pin mating view (Part P)</p> |
| Insert without contacts | 7.004.981.101 | 7.004.981.102 | |
| Insert with dip solder contacts Length 3,5 mm | 7.002.981.107 | | <p>Insert socket mating view (Part E)</p> |
| Insert with dip solder contacts Length 10 mm | 7.002.981.127 | 7.002.981.108 | |
| Insert with dip solder contacts Length 17 mm | 7.002.981.137 | 7.002.981.118 | |
| <p>The correct dimension of a connector with dip solder contacts depends on the particular type of housing.</p> | | | |
| | | | |
| <p>Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)</p> | | | |

Signal Connectors M 23 / Inserts / Pinouts

| Inserts 12-pole | Type | Part Number | Part Number | |
|---|---|---------------|----------------|--|
|  <p>Insert pin mating view (Part E)</p>  <p>Insert socket mating view (Part P)</p>  | Pinout clockwise | Pins | Sockets | |
| | Insert with solder contacts | 7.001.912.103 | 7.001.912.104 | |
| | Insert with solder contacts +PE (Pos.9) | 7.001.912.113 | 7.001.912.114 | |
| | Insert without contacts | 7.003.912.101 | 7.003.912.102 | |
| | Insert without contacts +PE (Pos.9) | 7.003.912.111 | 7.003.912.112 | |
| | Insert with dip solder contacts Length 3,5 mm | 7.001.912.107 | | |
| | Insert with dip solder contacts Length 10 mm | 7.001.912.127 | 7.001.912.108 | |
| | Insert with dip solder contacts Length 17 mm | 7.001.912.137 | 7.001.912.118 | |
| | <p>The correct dimension of a connector with dip solder contacts depends on the particular type of housing.</p> | | | |
| | <p>Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)</p> | | | |

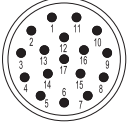
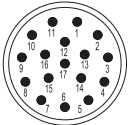
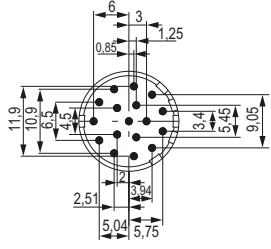
| Inserts 12-pole | Type | Part Number | Part Number | |
|--|---|---------------|----------------|--|
|  <p>Insert pin mating view (Part P)</p>  <p>Insert socket mating view (Part E)</p>  | Pinout counter-clockwise | Pins | Sockets | |
| | Insert with solder contacts | 7.002.912.103 | 7.002.912.104 | |
| | Insert with solder contacts +PE (Pos.9) | 7.002.912.113 | 7.002.912.114 | |
| | Insert without contacts | 7.004.912.101 | 7.004.912.102 | |
| | Insert without contacts +PE (Pos.9) | 7.004.912.111 | 7.004.912.112 | |
| | Insert with dip solder contacts Length 3,5 mm | 7.002.912.107 | | |
| | Insert with dip solder contacts Length 10 mm | 7.002.912.127 | 7.002.912.108 | |
| | Insert with dip solder contacts Length 17 mm | 7.002.912.137 | 7.002.912.118 | |
| | <p>The correct dimension of a connector with dip solder contacts depends on the particular type of housing.</p> | | | |
| | <p>Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)</p> | | | |

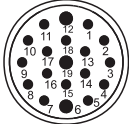
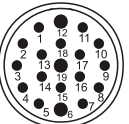
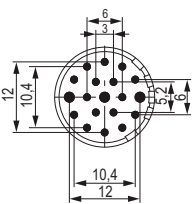
Signal Connectors M 23 / Inserts / Pinouts

| Type | Part Number | Part Number | Inserts 16-pole |
|--|---------------------|---------------------|---|
| Pinout clockwise | Pins | Sockets | |
| Insert with solder contacts | 7.001.916.103 | 7.001.916.104 | <p>Insert pin mating view (Part E)</p> |
| Insert without contacts | 7.003.916.101 | 7.003.916.102 | |
| Insert with dip solder contacts Length 3,5 mm | 7.001.916.107 | | <p>Insert socket mating view (Part P)</p> |
| Insert with dip solder contacts Length 10 mm | 7.001.916.127 | 7.001.916.108 | |
| Insert with dip solder contacts Length 17 mm | 7.001.916.137 | 7.001.916.118 | |
| <p>The correct dimension of a connector with dip solder contacts depends on the particular type of housing.</p> | | | |
| | | | |
| <p>Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)</p> | | | |

| Type | Part Number | Part Number | Inserts 17-pole |
|--|---------------------|---------------------|---|
| Pinout clockwise | Pins | Sockets | |
| Insert with solder contacts | 7.001.917.103 | 7.001.917.104 | <p>Insert pin mating view (Part E)</p> |
| Insert without contacts | 7.003.917.101 | 7.003.917.102 | |
| Insert with dip solder contacts Length 3,5 mm | 7.001.917.107 | | <p>Insert socket mating view (Part P)</p> |
| Insert with dip solder contacts Length 10 mm | 7.001.917.127 | 7.001.917.108 | |
| Insert with dip solder contacts Length 17 mm | 7.001.917.137 | 7.001.917.118 | |
| <p>The correct dimension of a connector with dip solder contacts depends on the particular type of housing.</p> | | | |
| | | | |
| <p>Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79)</p> | | | |

Signal Connectors M 23 / Inserts / Pinouts

| Inserts 17-pole | Type | Part Number | Part Number | |
|---|---|---------------------|----------------|--|
|  <p>Insert pin mating view (Part P)</p>  <p>Insert socket mating view (Part E)</p>  | Pinout counter-clockwise | Pins | Sockets | |
| | Insert with solder contacts | 7.002.917.103 | 7.002.917.104 | |
| | Insert without contacts | 7.004.917.101 | 7.004.917.102 | |
| | Insert with dip solder contacts Length 3,5 mm | 7.002.917.107 | | |
| | Insert with dip solder contacts Length 10 mm | 7.002.917.127 | 7.002.917.108 | |
| | Insert with dip solder contacts Length 17 mm | 7.002.917.137 | 7.002.917.118 | |
| | The correct dimension of a connector with dip solder contacts depends on the particular type of housing. | | | |
| | Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79) | | | |

| Inserts 19-pole | Type | Part Number | Part Number |
|--|---|---------------------|----------------|
|  <p>Insert pin mating view (Part E)</p>  <p>Insert socket mating view (Part P)</p>  | Pinout clockwise | Pins | Sockets |
| | Insert with solder contacts | 7.001.919.103 | 7.001.919.104 |
| | Insert with solder contacts +PE (Pos. 12) | 7.001.919.113 | 7.001.919.114 |
| | Insert with solder contacts + PE (Pos. 12) 1,5 mm elongated | 7.001.919.123 | |
| | Insert without contacts | 7.003.919.101 | 7.003.919.102 |
| | Insert without contacts +PE (Pos. 12) | 7.003.919.111 | 7.003.919.112 |
| | Insert with dip solder contacts Length 3,5 mm | 7.001.919.107 | |
| | Insert with dip solder contacts Length 10 mm | 7.001.919.127 | 7.001.919.108 |
| | Insert with dip solder contacts Length 17 mm | 7.001.919.137 | 7.001.919.118 |
| | The correct dimension of a connector with dip solder contacts depends on the particular type of housing. | | |
| Contacts page 80 • Coding possibilities N, S, H, X and Y (see page 79) | | | |

Signal Connectors M 23 / Required Contacts

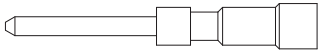
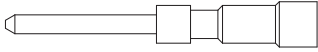
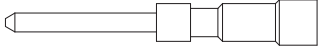


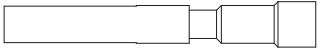
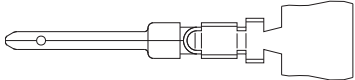
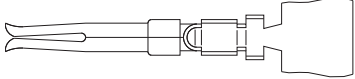
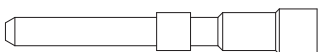
| Number of Poles | Required Contacts | Contact Arrangement |
|-----------------|-------------------------|---------------------|
| 6 | 6 x 2 mm | |
| 7 | 7 x 2 mm | |
| 9 (8 + 1) | 8 x 1 mm 1 x 2 mm | |
| 12 | 12 x 1 mm | |
| 16 | 16 x 1 mm | |
| 17 | 17 x 1 mm | |
| 19 | 16 x 1 mm 3 x 1,5 mm | |

Crimp contacts page 80



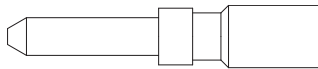

| Number of Poles | Coding Possibilities | Coding |
|-----------------|----------------------|---|
| 6-pole | N, S, H, X, Y and Z | <p>Female Inserts mating view</p> <p>Male Inserts mating view</p> |
| 7-pole | N, S, H, X and Y | |
| 9-pole | N, S, H, X and Y | |
| 12-pole | N, S, H, X, Y and Z | |
| 16-pole | N, S, H, X, Y and Z | |
| 17-pole | N, S, H, X, Y and Z | |
| 19-pole | N, S, H, X and Y | |

As standard, coding groove N is opened. To use other codings, please remove the coding barrier.

Signal Connectors M23 / Contacts

| Contacts | Type | Crimp Range | Part Number |
|---|-----------------------------|--|--------------------|
|  | Crimp pin 1 mm, machined |0,08 – 0,56 mm ² (AWG 28 – 20) | ..7.010.901.031 |
|  | Crimp pin 1 mm, machined |0,14 – 1 mm ² (AWG 26 – 17) |7.010.901.001 |
|  | Crimppin 1 mm, machined |0,75 – 1,5 mm ² (AWG 17 – 16) | ..7.010.901.021 |
|  | Crimp socket 1 mm, machined | ...0,08 – 0,56 mm ² (AWG 28 – 20) | ..7.010.901.012 |
|  | Crimp socket 1 mm, machined | ...0,34 – 1 mm ² (AWG 22 – 17) |7.010.901.002 |
|  | Crimp socket 1 mm, machined | ...0,75 – 1,5 mm ² (AWG 17 – 16) | ..7.010.901.022 |
|  | Crimp pin 1 mm, stamped |0,14 – 0,56 mm ² (AWG 26 – 20) | ..upon request |
|  | Crimp socket 1 mm, stamped |0,14 – 0,56 mm ² (AWG 26 – 20) | ..upon request |
|  | Crimp pin 1,5 mm, machined |0,14 – 1 mm ² (AWG 26 – 17) |7.010.901.501 |

Signal Connectors M23 / Contacts


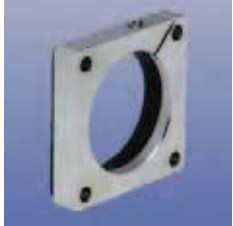

| Type | Crimp Range | Part Number | Contacts |
|----------------------------------|---|--------------------|--|
| Crimp socket 1,5 mm, machined... | 0,14 – 0,56 mm ² (AWG 26 – 20) | ..7.010.901.512 |  |
| Crimp socket 1,5 mm, machined... | 0,56 – 1 mm ² (AWG 20 – 17) |7.010.901.502 |  |
| Crimp pin 2 mm, machined | 0,75 – 2,5 mm ² (AWG 18 – 14) | ..7.010.902.001 |  |
| Crimp socket 2 mm, machined ... | 0,75 – 2,5 mm ² (AWG 18 – 14) | ..7.010.902.002 |  |


Crimp Tool Settings see page 86

Signal Connector / Accessories


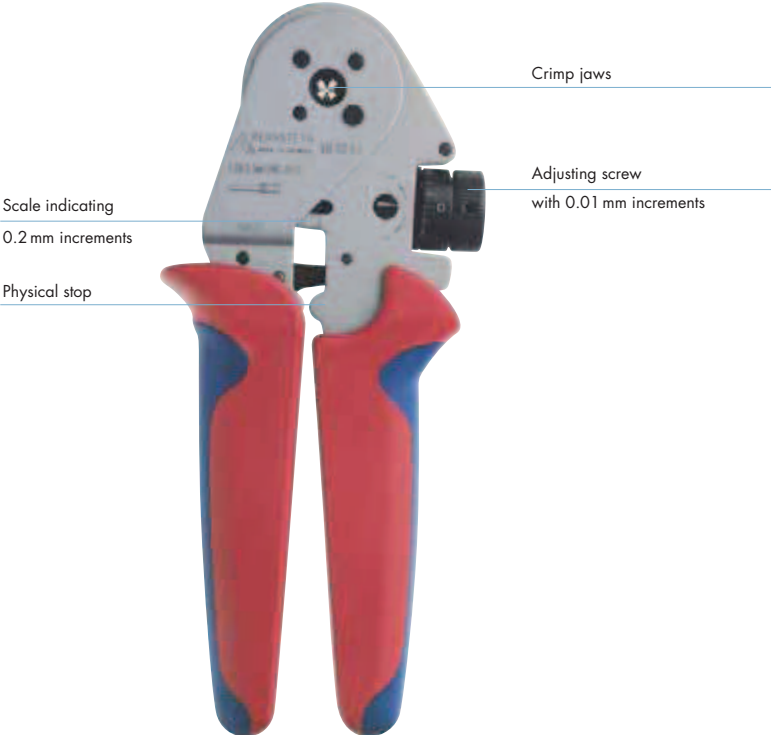
| Accessories | Type | Part Number |
|---|--|-------------|
|  | Plastic protective cap for connectors with male thread7.000.900.101 for connectors with female thread.....7.000.900.102 | |
|  | Brass protective cap for connectors with female thread.....7.010.900.103 | |
|  | Brass protective cap for connectors with male thread7.010.900.102 | |
|  | Brass protective cap with chain for connectors with female threadLength 70 mm7.010.9S0.703 Length 100 mm7.010.9S1.003 | |
|  | Brass protective cap with chain for connectors with male thread.....Length 70 mm7.010.9S0.702 Length 100 mm7.010.9S1.002 | |
|  | Assembly tool7.010.900.101 | |

Signal Connector / Accessories

| Type | Part Number | Accessories |
|---|---|--|
| Crimp tool for manual crimping of machined crimp contacts for signal connectors | 7.000.900.904 |  |
| Operating instructions on page 84 - 86, 94 | | |
| Adaptor flange for Straight Connectors | 7.010.900.128 |  |
| Adapter for Conduit Fittings | Snapflex 16.....7.010.900.204 DN 127.010.900.205 Snapflex 20.....7.010.900.206 DN 147.010.900.207 Snapflex 25.....7.010.900.208 DN 177.010.900.209 |  |

| Type | Part Number | for HUMMEL Contact | Locator |
|--|---------------------|---|---|
| Locator for Crimp Tool DMC M22520 with positioner | 7.000.9DM.C03 | 7.010.901.001, 7.010.901.501, 7.010.902.001 |  |
| Locator for Crimp Tool DMC M22520 with positioner | 7.000.9DM.C04 | 7.010.901.012, 7.010.901.002, 7.010.901.512, 7.010.901.502, 7.010.902.002 | |

Crimp Tool for Signal Connectors M 23 / M 16

| Crimp Tool | Type | Part Number |
|--|---|--|
|  | <p>Crimp tool7.000.900.904 / 7.000.900.907</p> <p>Application The four indent crimp tool 7.000.900.904 / 7.000.900.907 has been developed for optimal crimping of machined contacts with diameters from 0.08 to 2.5 mm² (28 through 14 AWG).</p> <p>How to Crimp The reference table indicates the correct locator position to be selected and the crimp depth to be adjusted for the contact to be crimped. The contact is then inserted through the access hole of the tool on the opposite side of the locator. The contact is held in place by closing the handles to the first lock-in position thus preventing the contact from falling out of the tool and facilitating insertion of the wire into the contact. The precision ratchet assures consistently accurate crimping every time by forcing the tool to be closed all the way completing the crimping cycle before the tool can be opened again.</p> <p>Exchange of the Locator The locator can be exchanged by removing the socket head cap screw with a socket wrench. It can then be disassembled from the hex head screw by turning it counter-clockwise.</p> |  |

Crimp Tool for Signal Connectors M23 / M16

Crimp Tool

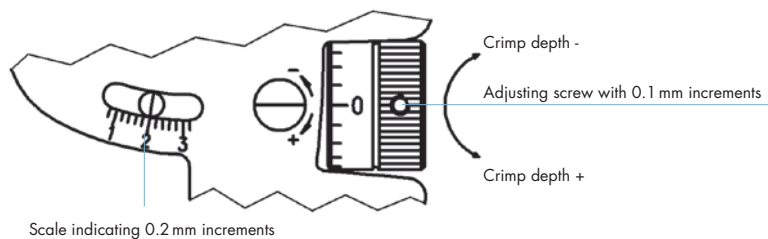
Adjustment of Crimp Depth

Crimp depth can be adjusted as follows:

Turn the adjusting screw clockwise for reducing the crimp depth and counter-clockwise for increasing the crimp depth.

Adjustment Increments:

- 1 space on the adjusting screw $\hat{=}$ adjustment by 0.01 mm
- 1 full rotation of adjusting screw $\hat{=}$ adjustment by 0.2 mm (indication on the screw as well as on the rough scale)
- 5 rotations of the adjusting screw $\hat{=}$ adjustment by 1 mm (indication on the scale)



Control of Crimp Depth

Crimp tool adjustment is done at the factory, but with frequent use, periodic calibration is recommended to insure accuracy. This is easily accomplished with a 1.0 mm \varnothing wire gauge as follows.

A crimp depth of 1.0 mm is set by means of the adjusting screw (scale mark at „1“, screw mark at „0“ as shown in the fig. above) and the tool in the closed position. After insertion of the gauge, there must be just enough space for moving the gauge inside the entry hole. If the opening is too small or too large to exactly match the gauge, the deviation (+/-) can be checked by the precision setting of the screw. Please contact the factory in case the deviation exceeds the tolerances specified by the contract manufacturer.

Maintenance and Repair

Keep the tool clean and properly stored when not in service. All pivot points need to be oiled regularly and the spring clips securing the bolts have to always be in place. For repair please send the tool back to the factory.

Crimp Tool for Signal Connectors M 23

| Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.904) | | | | | |
|---|---|----------------------------------|--------|-----------------------|-----------------|
| Part Number | Crimp Contact | Cross Section (mm ²) | AWG | Crimp Tool Setting mm | Locator Setting |
| 7.010.901.001 | Crimp pin 1 mm | 0,14 | AWG 26 | 0,70 | 1 |
| | | 0,25 | AWG 24 | 0,76 | |
| | | 0,34 | AWG 22 | 0,82 | |
| | | 0,50 | AWG 20 | 0,90 | |
| | | 0,75 | AWG 18 | 1,00 | |
| | | 1,00 | AWG 17 | 1,10 | |
| 7.010.901.012 | Crimp socket 1 mm (0,08 – 0,56 mm ²) | 0,08 | AWG 28 | 0,75 | 2 |
| | | 0,14 | AWG 26 | 0,78 | |
| | | 0,25 | AWG 24 | 0,82 | |
| | | 0,34 | AWG 22 | 0,86 | |
| | | 0,56 | AWG 20 | 0,90 | |
| 7.010.901.002 | Crimp socket 1 mm (0,34 – 1 mm ²) | 0,34 | AWG 22 | 0,77 | 2 |
| | | 0,56 | AWG 20 | 0,82 | |
| | | 0,75 | AWG 18 | 0,88 | |
| | | 1,00 | AWG 17 | 0,95 | |
| 7.010.901.501 | Crimp pin 1,5 mm | 0,14 | AWG 26 | 0,65 | 3 |
| | | 0,25 | AWG 24 | 0,68 | |
| | | 0,34 | AWG 22 | 0,72 | |
| | | 0,56 | AWG 20 | 0,81 | |
| | | 0,75 | AWG 18 | 0,95 | |
| | | 1,00 | AWG 17 | 1,07 | |
| 7.010.901.512 | Crimp socket 1,5 mm (0,14 – 0,56 mm ²) | 0,14 | AWG 26 | 0,70 | 2 |
| | | 0,25 | AWG 24 | 0,73 | |
| | | 0,34 | AWG 22 | 0,77 | |
| | | 0,56 | AWG 20 | 0,85 | |
| 7.010.901.502 | Crimp socket 1,5 mm (0,34 – 1 mm ²) | 0,34 | AWG 22 | 0,88 | 2 |
| | | 0,56 | AWG 20 | 0,95 | |
| | | 0,75 | AWG 18 | 1,05 | |
| | | 1,0 | AWG 17 | 1,13 | |
| 7.010.902.001 | Crimp pin 2 mm | 0,75 | AWG 18 | 1,20 | 4 |
| | | 1,0 | AWG 17 | 1,35 | |
| | | 1,5 | AWG 16 | 1,45 | |
| | | 2,5 | AWG 14 | 1,60 | |
| 7.010.902.002 | Crimp socket 2 mm | 0,75 | AWG 18 | 1,25 | 5 |
| | | 1,0 | AWG 17 | 1,35 | |
| | | 1,5 | AWG 16 | 1,45 | |
| | | 2,5 | AWG 14 | 1,60 | |

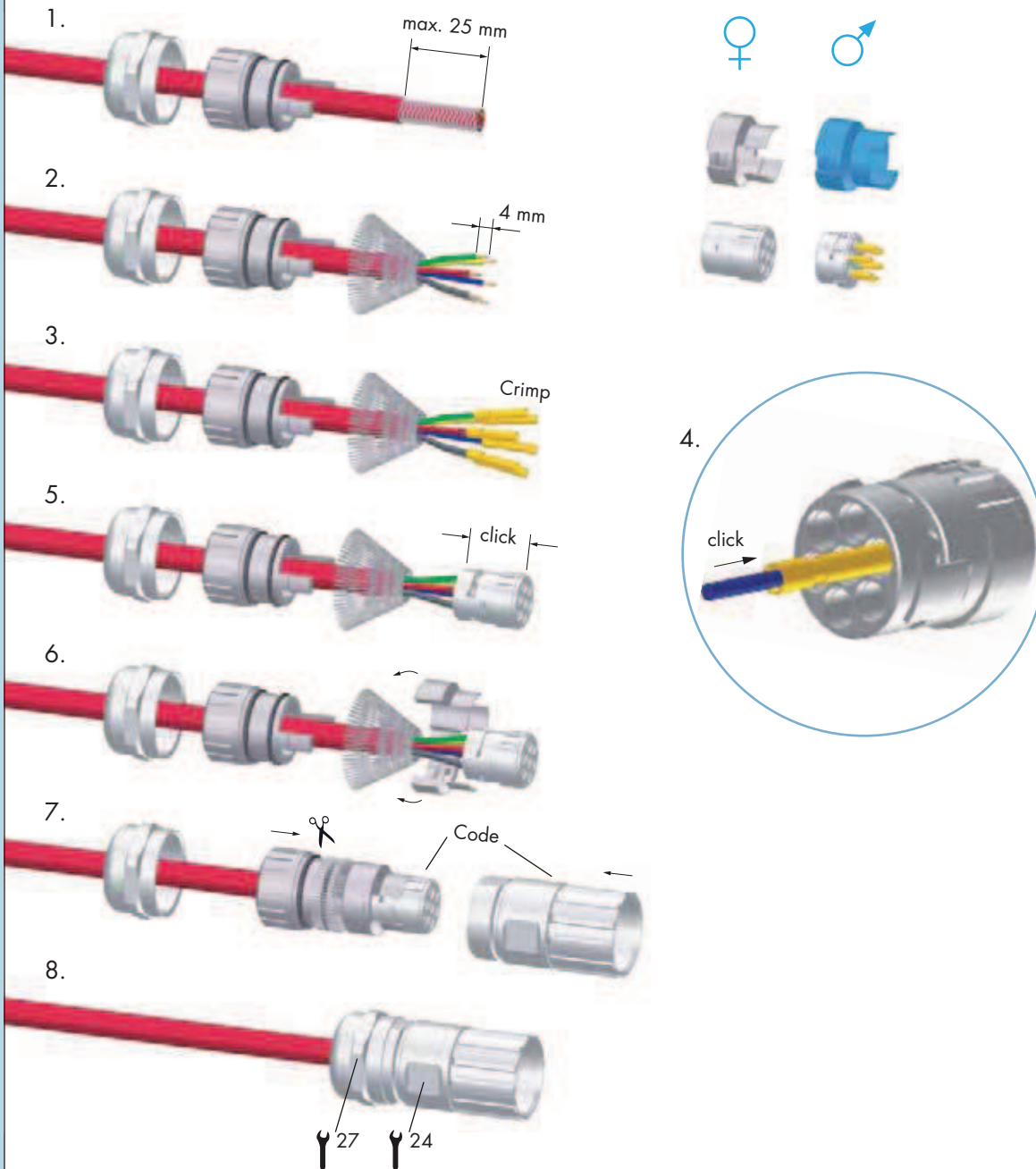
Assembly information see page 94

Crimp Tool for Signal Connectors M 23

| Crimp Tool Setting for HUMMEL Crimp Contacts (Crimp Tool 7.000.900.904) | | | | | |
|---|-------------------|----------------------------------|-----|-----------------------|-----------------|
| Part Number | Crimp Contact | Cross Section (mm ²) | AWG | Crimp Tool Setting mm | Locator Setting |
| 7.010.901.031 | Crimp pin 1 mm | 0,08 | | 0,72 | 1 |
| | | 0,14 | | 0,78 | |
| | | 0,25 | | 0,82 | |
| | | 0,34 | | 0,86 | |
| | | 0,56 | | 0,90 | |
| 7.010.901.021 | Crimp pin 1 mm | 0,75 | | 0,80 | 1 |
| | | 1,00 | | 0,86 | |
| | | 1,50 | | 0,95 | |
| 7.010.901.022 | Crimp socket 1 mm | 0,75 | | 0,80 | 2 |
| | | 1,00 | | 0,86 | |
| | | 1,50 | | 0,95 | |

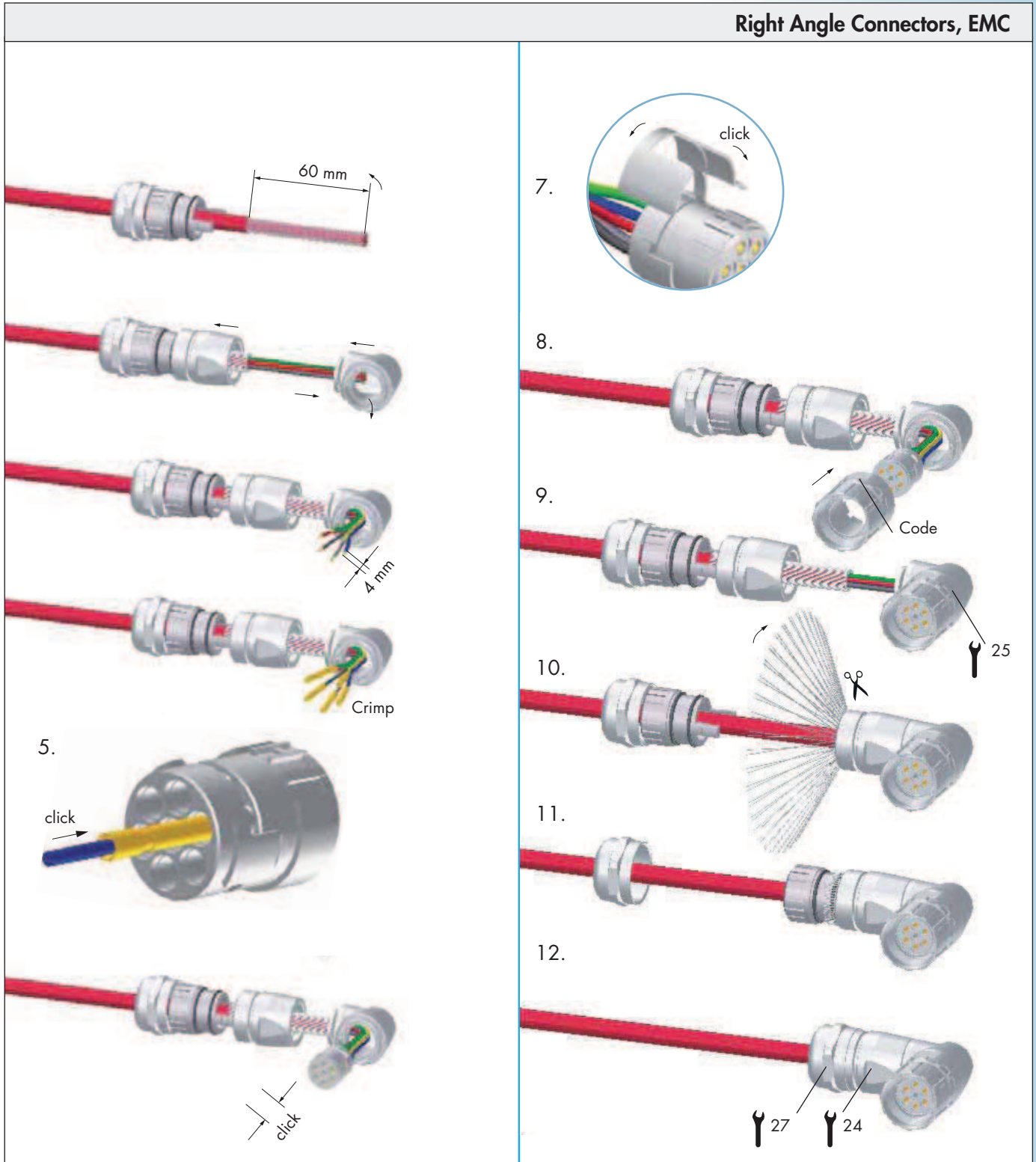
Signal Connectors M 23 / Assembly Instructions

Straight Connector, Male / Female Thread



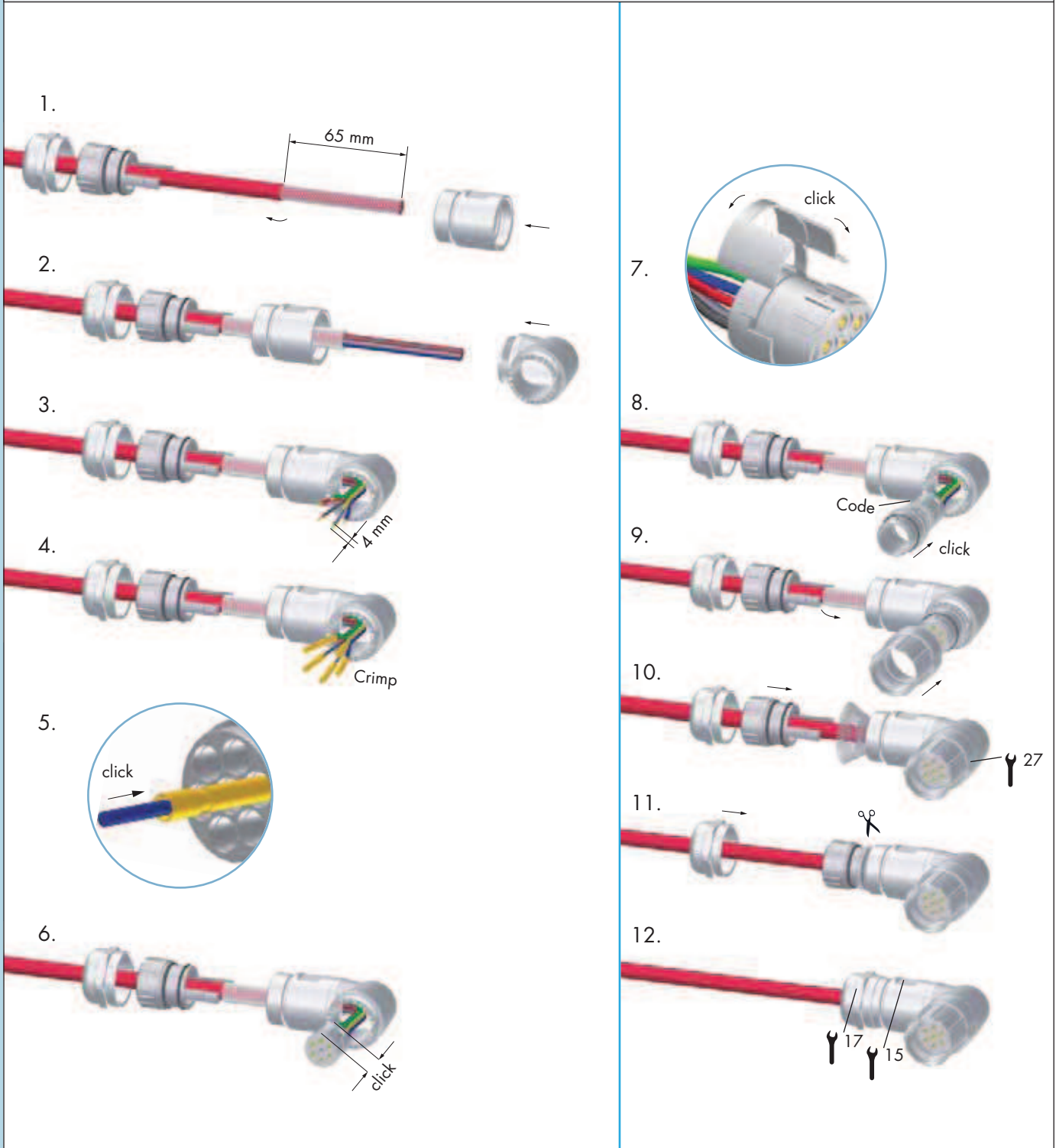
Signal Connectors M23 / Assembly Instructions

Right Angle Connectors, EMC



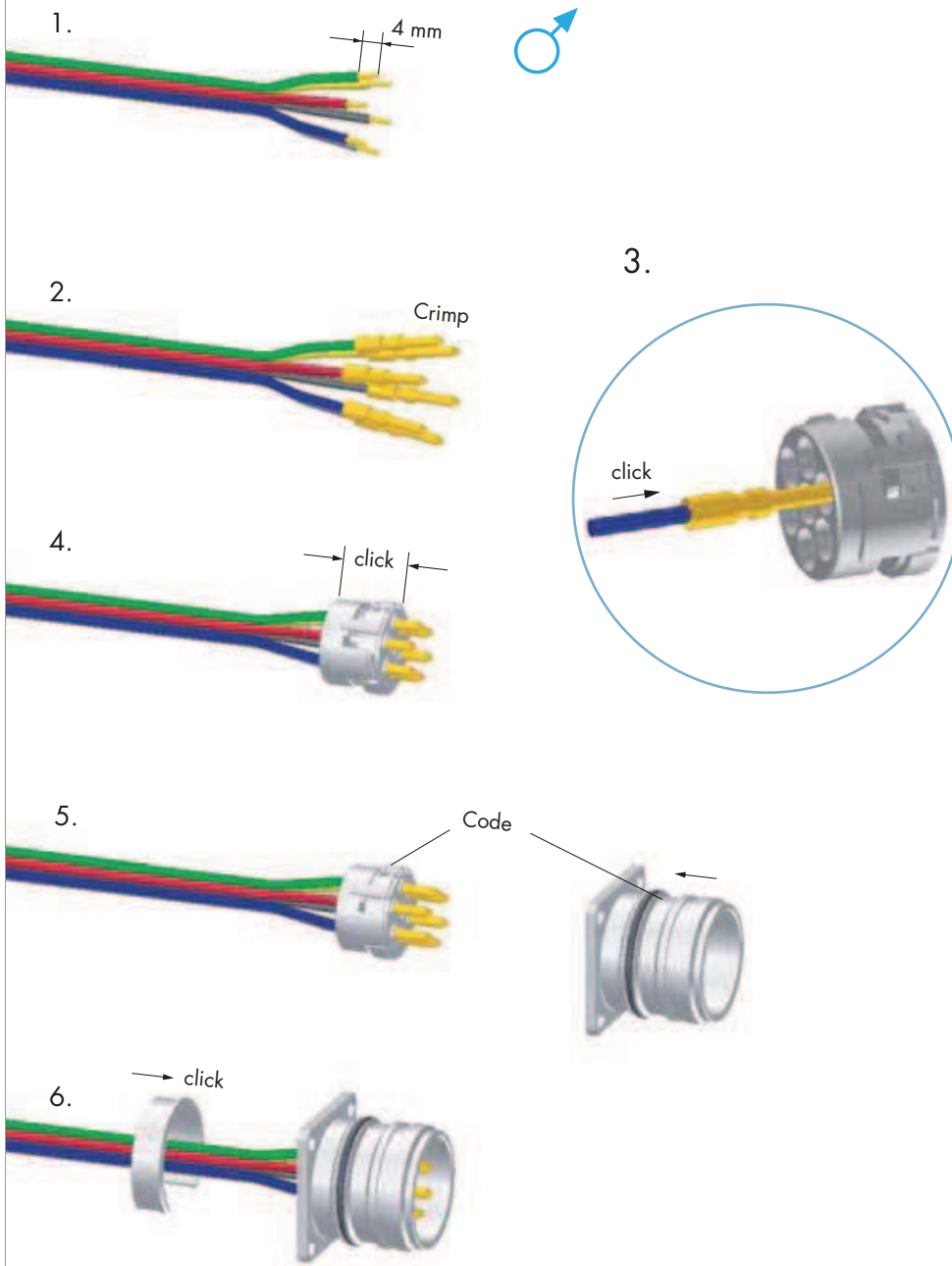
Signal Connectors M 23 / Assembly Instructions

Right Angle Connector, rotating, EMC



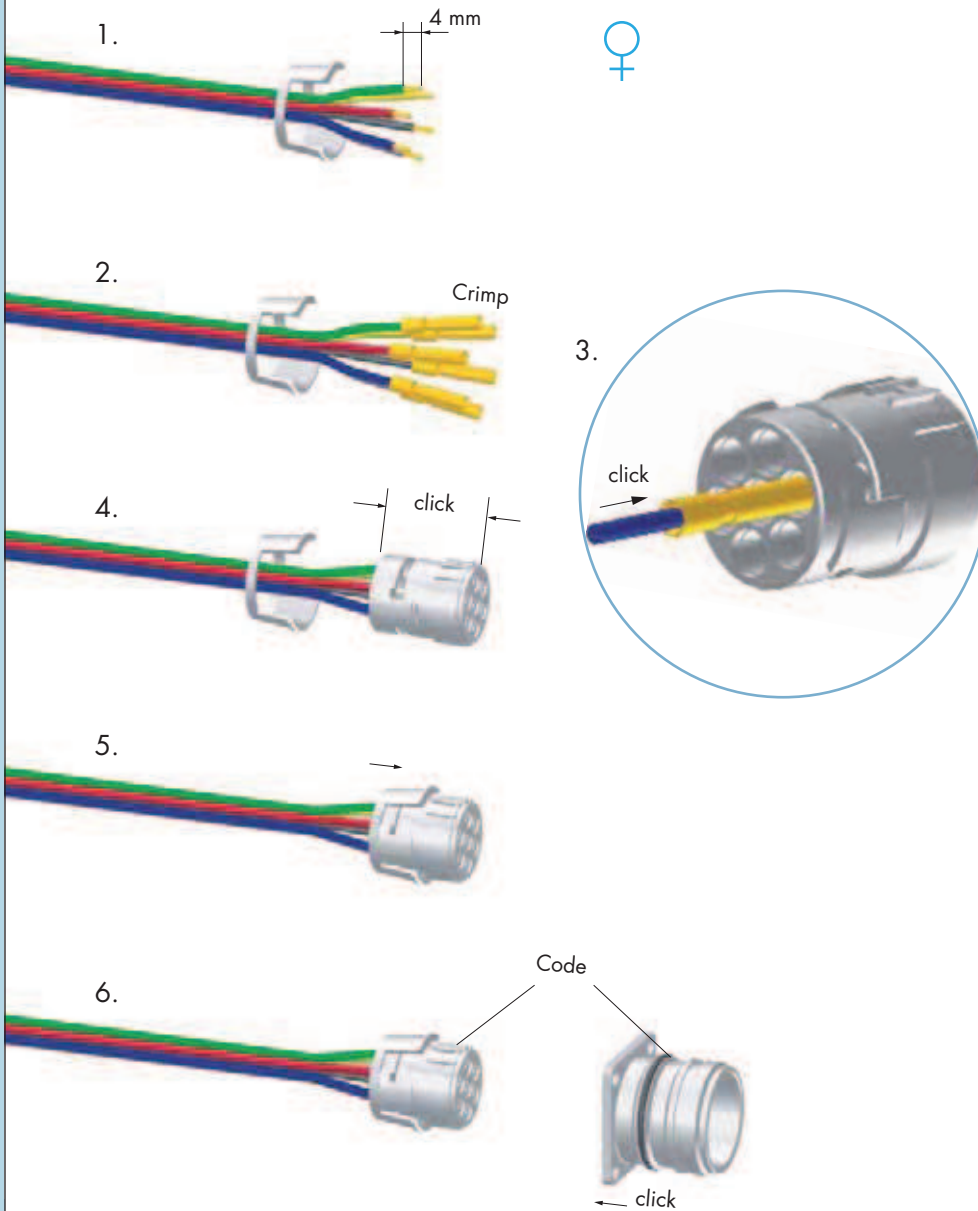
Signal Connectors M23 / Assembly Instructions

Panel Connectors, Male Inserts



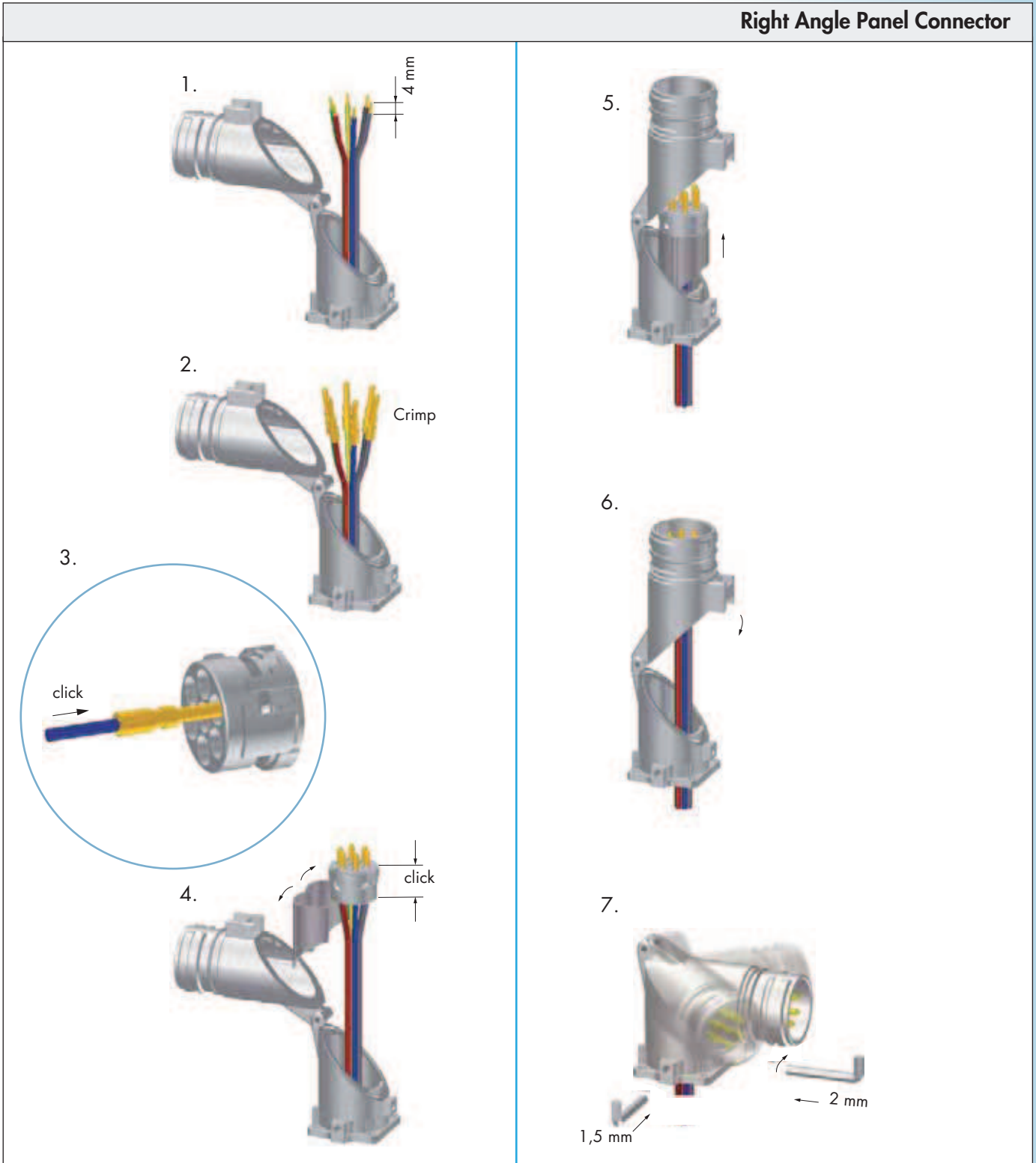
Signal Connectors M23 / Assembly Instructions

Panel Connectors, Female Inserts



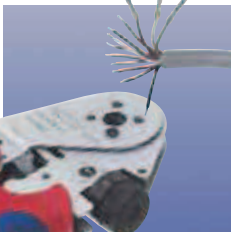
Signal Connectors M23 / Assembly Instructions

Right Angle Panel Connector



Crimping, Assembly and Disassembly of Contacts

Crimping, Assembly and Disassembly of Contacts



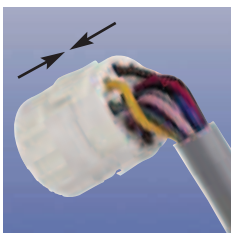
Crimping

- Remove conductor insulation 4 mm (.16") max.
- Select appropriate Crimp tool setting (see page 86)
- Insert Crimp contact into the positioner of the tool
- Insert stripped end of conductor into the crimp opening of the contact
- Squeeze handles of crimp tool together



Assembly

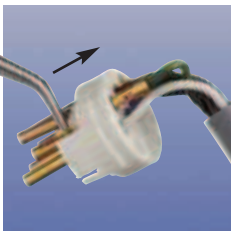
- Open crimping jaws and remove contact
- Pry open upper and lower insert approx. 3 mm (1/8") apart as shown
- Insert the contact and conductor assembly into the desired location
- Press upper and lower insert parts together



Disassembly

No special tools are needed to remove the crimp contacts from the insert.


- Remove upper part of insert
- With a pair of needle nose pliers, wiggle the contact and push it back through the lower part of insert
- Insert contacts into new location and push until it snaps in position
- Align the nose and groove of the upper and lower part of insert and press together



Shielding

- Assemble strain relief insert with insert
- Fold stranding of the shield back over the first O-Ring of the strain relief insert
- Cut back the overextending braid



 The stranding of the shield is not allowed to touch the second O-Ring. Otherwise the assembly may not be proof.