

HYBRID CONNECTORS

*with Fiber Optic,
Signal, Fluid,
and Gas contacts.*



• *Light (Single- and Multi-mode)*



• *Power*
• *Coax*
• *High Voltage*
• *Signal*



• *Fluid / Gas*



W.W. FISCHER

CONNECT TO THE FUTURE™



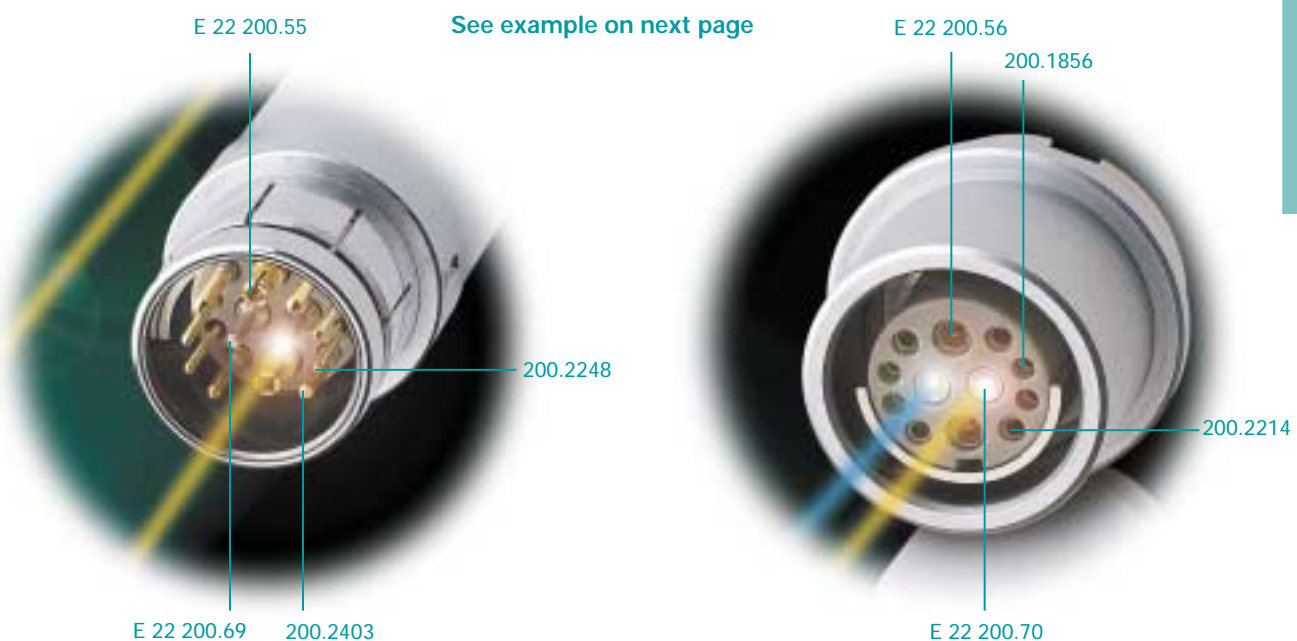
W.W.Fischer SA is proud to introduce its newly developed line of Hybrid Connectors. Expanding on our existing, wide range of connector solutions, the Hybrid line offers unprecedented versatility in solving today's complex inter-connection requirements. The contact blocks of the Hybrid line can be assembled into a wide variety of configurations by employing user installed Fiber Optic, Coax, and Electrical contacts, as well as inserts for the transmission of Fluid and/or Gas.

This versatility also extends to the various connector body styles available in the Hybrid line. As they are modeled on our existing connector line, they are well known for both their flexibility in adapting to the demands of almost any project, as well as their long term reliability operating in the most stringent of environments. Initially offered with a choice of eight standard bodies, the Hybrid line will be expanded to include many more styles in the future.

As with Fischer's general line of connectors, the Hybrid line can be optionally sealed to IP68 with a number of well integrated options and accessories.

The capabilities of the Hybrid line include:

- Fiber Optic contacts: Singlemode (for 9/125 μm fiber)
Multimode (for 50/125 and 62.5/125 μm fiber)
- Coax contacts: 50 Ohm (for RG174, RG178, RG188, RG196, etc. cable)
75 Ohm (for RG179, RG187, etc. cable)
- Electrical contacts: Signal and/or Power (for 14 to 32 AWG conductors)
- Fluid and/or Gas: 5 bar maximum pressure





PART NUMBER SYSTEM

Example

S 106 A 037-1 -XXX

Connector Style

| | |
|------|--|
| S | Locking plug |
| SE | Sealed locking plug ① |
| SF | Non-locking plug |
| SFE | Sealed non-locking plug ① |
| SV | Tamper-proof plug |
| SVE | Sealed tamper-proof plug ① |
| D | Panel receptacle |
| DE | Sealed panel receptacle ① |
| DB | Front projecting receptacle |
| DBE | Sealed front projecting receptacle ① |
| DBP | Rear-mounted panel receptacle |
| DBPE | Sealed, rear-mounted panel receptacle ① |
| DG | Fully threaded receptacle |
| K | Cable receptacle |
| KE | Sealed cable receptacle ① |
| DK | Panel-mounted cable receptacle |
| DKE | Sealed, panel-mounted cable receptacle ① |

Contact Polarity (as a general rule)

- A Plugs have contacts, Receptacle have sockets.
- Z Plugs have sockets, Receptacles have contacts.

Important:

Precise sizing of the connector to its cable is necessary to assure maximum performance. Please contact us this regard, prior to ordering.

Dimensions (mm) (see figure)

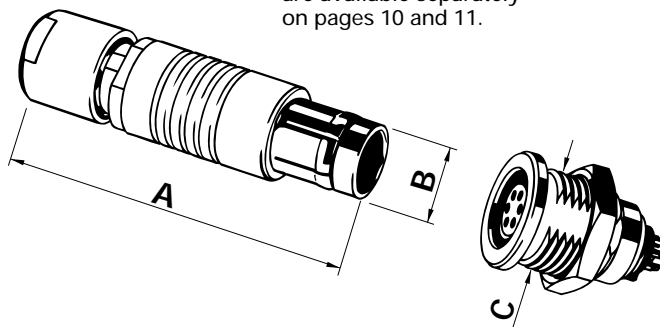
| Series | A | B | C |
|--------|-----|----|----|
| 104 | 50 | 12 | 15 |
| 105 | 60 | 15 | 18 |
| 1051 | 80 | 19 | 20 |
| 106 | 78 | 27 | 32 |
| 107 | 110 | 30 | 35 |

Contact Configuration

See table of electrical ratings for corresponding type and Series on pages 12 and 13.

Please note that connectors are not supplied with contacts or inserts, which are available separately on pages 10 and 11.

Suffix for special options



Example

Desired: A connector combination consisting of locking plug (S) and sealed front-projecting receptacle (DBE) with the following contact configuration:

- 2ea. Fiber Optic contact multimode
- 2ea. Coax contact for RG 196 A/U
- 4ea. Electrical contacts Ø 0.9 mm

Solution: Plug

- 1ea. S 1051 A024-1
- 2ea. Fiber Optic contact male P/N E22 200.69
- 2ea. Coax contact male P/N E22 200.55
- 4ea. Male contact Ø 0.9 P/N 200.2248

Receptacle

- 1ea. DBE 1051 A024-1
- 2ea. Fiber Optic contact female P/N E22 200.20
- 2ea. Coax contact female P/N E22 200.56
- 4ea. Female contact Ø 0.9 P/N 200.1856

We can also supply turnkey cable assemblies according to your specification.

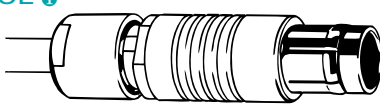
① Hybrides connectors are sealed only when mated to another connector or to a sealing cap.



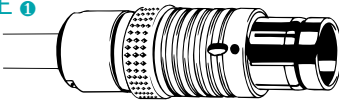
CONNECTOR STYLES

Plugs

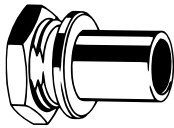
S
SE ①



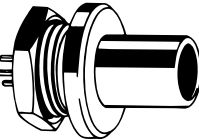
SV
SVE ①



SF

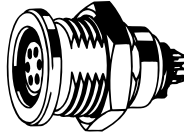


SFE ①

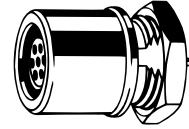


Receptacles

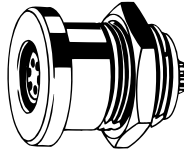
D



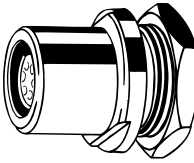
DB



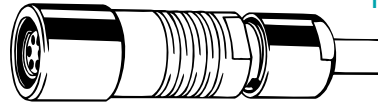
DE ①



DBE ①



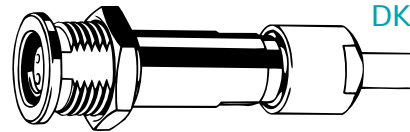
K
KE ①



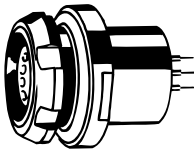
DBP



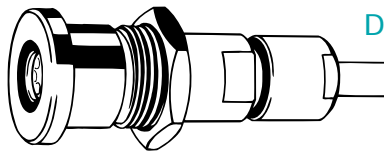
DK



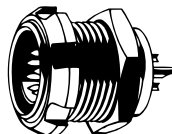
DBPE ①



DKE ①



DG

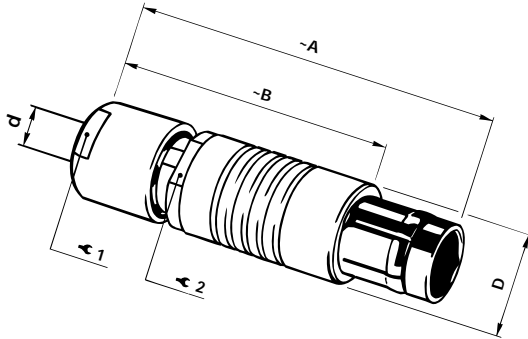


① Hybrides connectors are sealed only when mated to another connector or to a sealing cap.



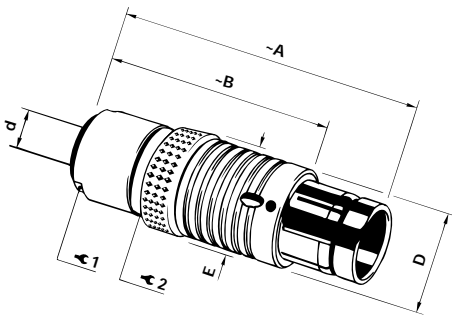
PLUGS

- S Locking Plug
- SE Sealed Locking Plug ①



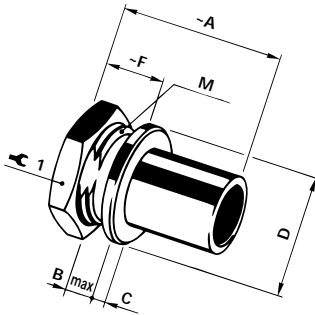
| Series | ~A | ~B | D | d max S / SE | Y ₁ | Y ₂ |
|--------|-----|----|------|-----------------|----------------|----------------|
| 104 | 50 | 38 | 15 | 8.7 | 12 | 13 |
| 105 | 62 | 47 | 18 | 10.7 | 15 | 16 |
| 1051 | 80 | | 22.5 | | 17 | 20 |
| 106 | 80 | 55 | 28 | 19.2 | 22 | |
| 107 | 110 | 85 | 34 | 22.7 | 32 | 32 |

- SV Tamper-Proof Plug
- SVE Sealed Tamper-Proof Plug ①



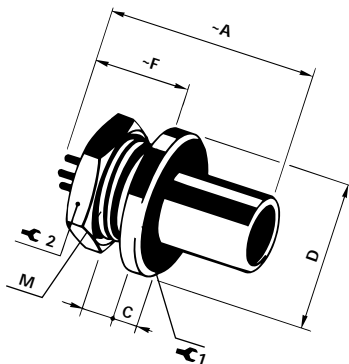
| Series | ~A | ~B | D | E | d max SV / SVE | Y ₁ | Y ₂ |
|--------|----------------|----|----|----|-------------------|----------------|----------------|
| 104 | 50 | 38 | 15 | 20 | 8.7 | 12 | 13 |
| 105 | 62 | 46 | 18 | 22 | 10.7 | 15 | 16 |
| 1051 | Please inquire | | | | | | |
| 106 | 80 | 55 | 30 | 35 | 19.2 | 22 | - |
| 107 | 110 | 85 | 34 | 38 | 22.7 | 32 | 32 |

- SF Non-locking Panel Plug



| Series | ~A | B max | C | D | ~F | M | Y ₁ |
|--------|----------------|----------|-----|----|----|------|----------------|
| 104 | 27 | 3 | 2 | 18 | 13 | 15x1 | 17 |
| 105 | 29 | 5.5 | 1.2 | 22 | 13 | 16x1 | 19 |
| 1051 | Please inquire | | | | | | |
| 106 | | | | | | | |
| 107 | 50 | 6 | 3 | 36 | 22 | 32x1 | TX00.106 |

- SFE Sealed, Non-locking Panel Plug ①



| Series | ~A | B max | C | D | ~F | M | Y ₁ | Y ₂ |
|--------|----------------|----------|---|----|----|------|----------------|----------------|
| 104 | 28 | 7.5 | 3 | 22 | 13 | 16x1 | - | 19 |
| 105 | 32 | 6 | 4 | 27 | 13 | 20x1 | - | 25 |
| 1051 | Please inquire | | | | | | | |
| 106 | | | | | | | | |
| 107 | | | | | | | | |

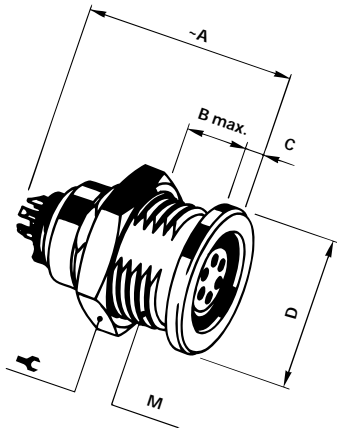
① Hybrides connectors are sealed only when mated to another connector or to a sealing cap.

All dimensions shown are in millimeters and are for reference only



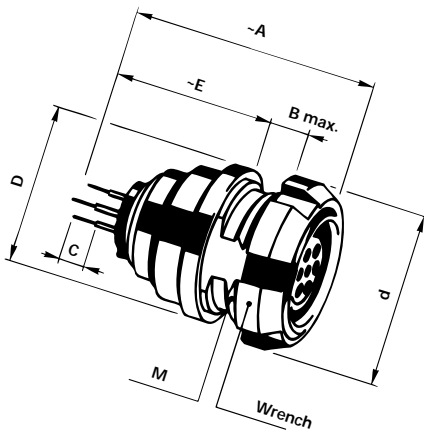
RECEPTACLES

D Panel Receptacle



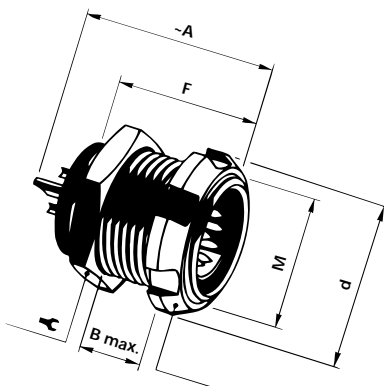
| Series | ~A | B max | C | D | M | ⚗ |
|--------|----------------|-------|------|----|------|----------|
| 104 | 25 | 11 | 2.25 | 19 | 15x1 | 17 |
| 105 | 32 | 15 | 2 | 22 | 18x1 | 22 |
| 1051 | Please inquire | | | | | |
| 106 | 50 | 18 | 3 | 37 | 32x1 | TX00.106 |
| 107 | 46 | 18 | 4 | 40 | 35x1 | TX00.107 |

DBP Rear-mounted Panel Receptacle



| Series | ~A | B max | C | D | d | ~E | M | Wrench |
|--------|----------------|-------|------|----|----|----|------|----------|
| 104 | 26 | 5 | 2.54 | 19 | 19 | 15 | 15x1 | TK00.000 |
| 105 | 30 | 12 | 2.54 | 22 | 23 | 13 | 18x1 | TP00.011 |
| 1051 | Please inquire | | | | | | | |
| 106 | Please inquire | | | | | | | |
| 107 | Please inquire | | | | | | | |

DG Completely Threaded Receptacle



| Series | ~A | B max | d | F | M | ⚗ ₁ | ⚗ ₂ |
|--------|----------------|-------|----|----|------|----------------|----------------|
| 104 | 24 | 9 | 19 | 18 | 15x1 | 17 | TK00.000 |
| 105 | 32 | 15 | 23 | 24 | 18x1 | 22 | TP00.011 |
| 1051 | Please inquire | | | | | | |
| 106 | Please inquire | | | | | | |
| 107 | Please inquire | | | | | | |

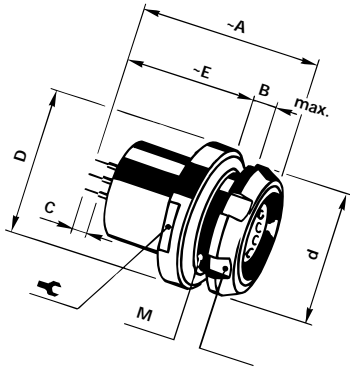
All dimensions shown are in millimeters and are for reference only



MECHANICAL INFORMATION

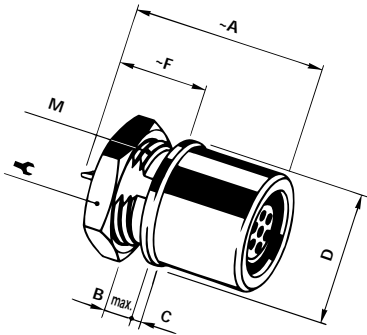
RECEPTACLES

DBPE Sealed, Rear-mounted Panel Receptacle ①



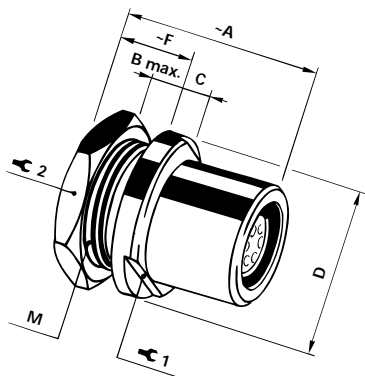
| Series | ~A | B _{max} | D | d | ~E | C | M | ⚙ ₁ | ⚙ ₂ |
|--------|----------------|------------------|----|----|----|------|------|----------------|----------------|
| 104 | 26 | 4 | 22 | 20 | 18 | 2.54 | 16x1 | - | TK00.002 |
| 105 | 30 | 5 | 27 | 25 | 20 | 2.54 | 20x1 | - | TP00.005 |
| 1051 | Please inquire | | | | | | | | |
| 106 | | | | | | | | | |
| 107 | | | | | | | | | |

DB Front Projecting Receptacle



| Series | ~A | B _{max} | C | D | ~F _{max} | M | ⚙ ₁ |
|--------|----------------|------------------|-----|----|-------------------|------|----------------|
| 104 | 26 | 3 | 2.5 | 19 | 11 | 16x1 | 19 |
| 105 | 33 | 7 | 2 | 22 | 14 | 18x1 | 22 |
| 1051 | Please inquire | | | | | | |
| 106 | | | | | | | |
| 107 | | | | | | | |

DBE Sealed Front Projecting Receptacle ①



| Series | ~A | B _{max} | C | D | ~F | M | ⚙ ₁ | ⚙ ₂ |
|--------|----|------------------|-----|----|-----|------|----------------|----------------|
| 104 | 30 | 3.5 | 4 | 22 | 9 | 16x1 | 17 | 19 |
| 105 | 32 | 7 | 4 | 27 | 13 | 18x1 | 22 | 22 |
| 1051 | 31 | 3.5 | 2.5 | 28 | 8.5 | 22x1 | - | TX00.105 |
| 106 | 50 | 6.5 | 7 | 40 | 24 | 32x1 | - | TX00.106 |
| 107 | 47 | 5 | 5 | 45 | 23 | 35x1 | 38 | TX00.107 |

① Hybrid connectors are sealed only when mated to another connector or to a sealing cap.

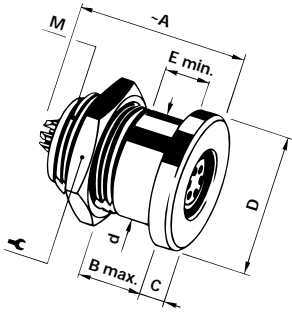
All dimensions shown are in millimeters and are for reference only



MECHANICAL INFORMATION

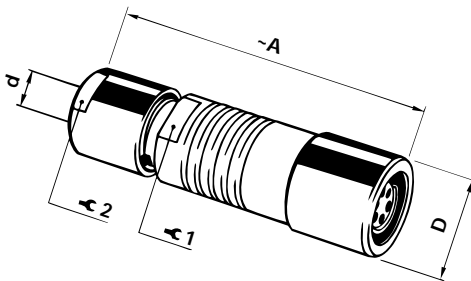
RECEPTACLES

DE Sealed Panel Receptacle ①



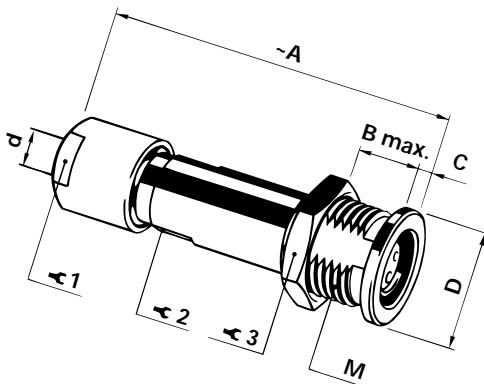
| Series | ~A | B max | C | D | d | E min | M | Y ₁ |
|--------|----------------|-------|---|----|----|-------|------|----------------|
| 104 | 25 | 15.5 | 4 | 22 | 16 | 8 | 16x1 | 19 |
| 105 | 33 | 18 | 4 | 27 | 20 | 10.5 | 20x1 | 25 |
| 1051 | Please inquire | | | | | | | |
| 106 | 50 | 24 | 5 | 41 | 34 | 19 | 32x1 | TX00.106 |
| 107 | 47 | 22 | 5 | 45 | 36 | 19 | 35x1 | TX00.107 |

K Cable Receptacle KE Sealed Cable Receptacle ①



| Series | ~A | D | d max | Y ₁ | Y ₂ |
|--------|-----|------|-------|----------------|----------------|
| 104 | 50 | 16 | 8.7 | 13 | 12 |
| 105 | 60 | 19 | 10.7 | 16 | 15 |
| 1051 | 81 | 23.5 | - | 20 | 17 |
| 106 | 79 | 33 | 19.2 | 25 | 25 |
| 107 | 105 | 36 | 22.7 | 32 | 32 |

DK Panel Receptacle with Cable Support



| Series | ~A | B | C | D | d max | M | Y ₁ | Y ₂ | Y ₃ |
|--------|----------------|----|---|----|-------|------|----------------|----------------|----------------|
| 104 | 50 | 11 | 2 | 19 | 8.7 | 15x1 | 12 | 12 | 17 |
| 105 | 60 | 16 | 2 | 22 | 10.7 | 18x1 | 15 | 14 | 22 |
| 1051 | Please inquire | | | | | | | | |
| 106 | 80 | 21 | 3 | 37 | 19.2 | 30x1 | 25 | 25 | TX00.106 |
| 107 | 105 | 17 | 4 | 40 | 22.7 | 35x1 | 32 | 30 | TX00.107 |

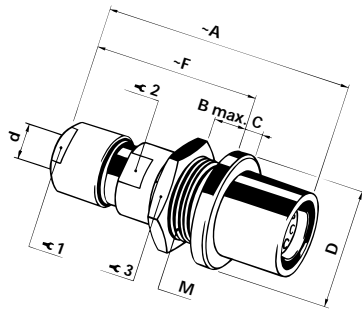
① Hybrid connectors are sealed only when mated to another connector or to a sealing cap.

All dimensions shown are in millimeters and are for reference only



RECEPTACLES

DKE Sealed, Panel Receptacle with Cable Support ①



| Series | ~A | B max | C | D | ~F | d max | M | Y ₁ | Y ₂ | Y ₃ |
|--------|------|-------|---|----|----|-------|------|----------------|----------------|----------------|
| 104 | 50 | 8 | 3 | 22 | 34 | 8.7 | 16x1 | 12 | 13 | 19 |
| 105 | 68 | 9 | 4 | 27 | 50 | 10.7 | 20x1 | 15 | 16 | 25 |
| 1051 | 81.5 | 12 | 5 | 34 | - | - | 25x1 | 17 | 21 | 30 |
| 106 | 85 | 9 | 7 | 37 | 56 | 19.2 | 30x1 | 25 | 25 | TX00.106 |
| 107 | 110 | 21 | 5 | 45 | 84 | 22.7 | 35x1 | 32 | 30 | TX00.107 |

① Hybrides connectors are sealed only in mated position mated with connector or sealing cap

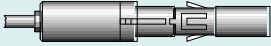
All dimensions shown are in millimeters and are for reference only

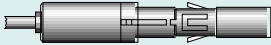


CONTACT INSERTS

Fiberoptic

Fiber Optic Female Contact


| | |
|-------------|---|
| Part Number | E22 200.74 |
| 1 |  |


| | |
|-------------|---|
| Part Number | E22 200.70 |
| 2 |  |

| | |
|-------------------|--|
| Recommended Cable | Singlemode for 9/125 μm fiber |
|-------------------|--|

| | |
|-------------------|---|
| Recommended Cable | Multimode for 50/125 and 62.5/125 μm fiber |
|-------------------|---|


Fiber Optic Male Contact


| | |
|-------------|---|
| Part Number | E22 200.73 |
| |  |

| | |
|-------------|---|
| Part Number | E22 200.69 |
| |  |

Coax 50 Ω

Coax Female Contact


| | |
|-------------|---|
| Part Number | E22 200.49 |
| 3 |  |


| | |
|-------------|---|
| Part Number | E22 200.56 |
| 4 |  |

| | |
|-------------------|---------------|
| Recommended Cable | RG-178 RG-196 |
|-------------------|---------------|

| | |
|-------------------|-------------------------|
| Recommended Cable | RG-174 RG-188 RG-316 |
|-------------------|-------------------------|


Coax Male Contact


| | |
|-------------|---|
| Part Number | E22 200.48 |
| |  |


| | |
|-------------|---|
| Part Number | E22 200.55 |
| |  |

Coax 75 Ω

Coax Female Contact

| | |
|-------------|---|
| Part Number | E22 200.56 |
| 5 |  |

| | |
|-------------|---|
| Part Number | E22 200.68 |
| 6* |  |


| | |
|-------------|---|
| Part Number | E22 200.72 |
| 7* |  |


| | |
|-------------------|---------------------------|
| Recommended Cable | RG 179 (up to 400 MHz) |
|-------------------|---------------------------|

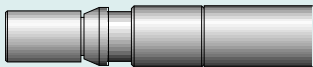
| | |
|-------------------|------------------|
| Recommended Cable | RG-179 RG-189 |
|-------------------|------------------|

| | |
|-------------------|--|
| Recommended Cable | SEIS CRF 75/85 SIEMENS 2YCCY 0,4/2,5 2YC(MS) CY 0,4/2,5 |
|-------------------|--|

Coax Male Contact

| | |
|-------------|---|
| Part Number | E22 200.55 |
| |  |

| | |
|-------------|---|
| Part Number | E22 200.67 |
| |  |

| | |
|-------------|---|
| Part Number | E22 200.71 |
| |  |

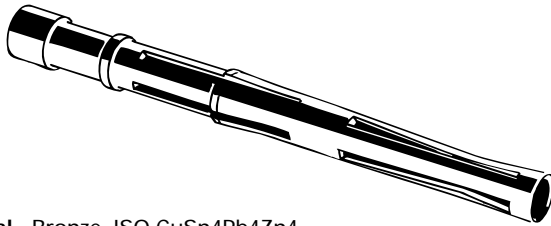
*Note: pos. 6 and 7 are not insertable into 50 Ohm Coax cavities.



CONTACTS INSERTS

Signal, Power, High Voltage

Crimp Contacts



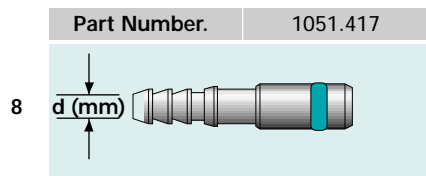
Material - Bronze, ISO CuSn4Pb4Zn4
Plating - 1 μm Au over 4 μm Ni

Crimp Contact/Positioner Reference Chart

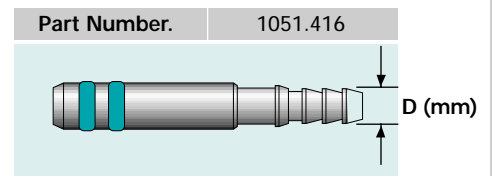
| Size | Polarity | Max Wire (AWG) | Series | | | | | Crimp Tool | Positioner |
|--------|----------|----------------|----------|----------|----------|----------|----------|------------|------------|
| | | | 102 | 103 | 1031 | 104 | 105 | | |
| 0.5 mm | male | 28-32 | 200.2113 | | | | | TX00.240 | TX00.300 |
| | male | 28-32 | | | 200.2172 | | 200.2172 | TX00.240 | TX00.301 |
| | female | 28-32 | 200.2114 | | | | | TX00.240 | TX00.302 |
| | female | 28-32 | | | 200.2183 | | | TX00.240 | TX00.303 |
| | female | 28-32 | | | | | 200.2412 | TX00.240 | TX00.324 |
| 0.7 mm | male | 24-28 | 200.1682 | 200.1682 | 200.1682 | 200.1682 | 200.1682 | TX00.240 | TX00.304 |
| | female | 24-28 | 200.1683 | 200.1683 | 200.1683 | 200.1683 | | TX00.240 | TX00.305 |
| | female | 24-28 | | | | | 200.2050 | TX00.240 | TX00.306 |
| 0.9 mm | male | 22-26 | | 200.2248 | | 200.2248 | | TX00.240 | TX00.307 |
| | male | 22-26 | | | | | 200.2350 | TX00.240 | TX00.308 |
| | female | 22-26 | | 200.1856 | | 200.1856 | | TX00.240 | TX00.309 |
| | female | 22-26 | | | | | 200.2143 | TX00.240 | TX00.310 |
| 1.3 mm | male | 18-24 | | | | 200.2402 | | TX00.240 | TX00.311 |
| | female | 18-24 | | | | 200.2214 | | TX00.240 | TX00.312 |
| 1.6 mm | male | 14-18 | | | | 200.1653 | 200.1653 | TX00.242 | TX00.313 |
| | female | 14-18 | | | | 200.1654 | 200.1654 | TX00.242 | TX00.314 |

Gas and Fluid Conduit

Female Contacts



Male Contacts



Recommended tube size: d = 1.5 mm
D = 3.5 mm (max.)

Material: Nickel plated brass

Gas and Fluid Inserts are pre-installed and not removable.



CONTACT BLOCK CONFIGURATIONS

| | Viewed toward receptacle mating side | Fiber Optic or Coax Contacts | Coax 75 ohm | Electrical contacts | | | Liquid/ Gas Conduits | |
|------------|--|------------------------------|-------------|---------------------|------------------|--------------------|----------------------|--|
| | | | | Quantity | Contact Diameter | Maximum Wire (AWG) | | Termination Style (C - crimp S - solder) |
| SERIES 104 | 104 A108-1 | 3 | | | | | | |
| | 104 A109-1 | 1 | | 6 | 0.9 | 22 | C | |
| | 104 A110-1 | 1 | | 2 | 0.9 | 22 | C | |
| | 104 A111-1 | 1 | | 3 | 0.9 | 22 | C | |
| | 104 A101 | | | 6 | 0.9 | 22 | S | 1 |
| | 104 A106 | | | 8 | 0.9 | 22 | S | 1 |
| | 104 A107 | | | 12 | 0.5 | 30 | S | 1 |
| | P 1924 | 1 | | 10 | 0.5 | 30 | C | |
| | SERIES 105 | 105 A116-1 | 2 | | | | | |
| 105 A105-1 | | 4 | | | | | | |



CONTACT BLOCK CONFIGURATIONS

| | Viewed toward receptacle mating side | Fiber Optic or Coax Contacts | Coax 75 ohm pos. 6 + 7, page 10 | Electrical contacts | | | Liquid/ Gas Conduits | |
|-------------|--|------------------------------|---------------------------------|---------------------|------------------|--------------------|----------------------|--|
| | | | | Quantity | Contact Diameter | Maximum Wire (AWG) | | Termination Style (C - crimp S - solder) |
| SERIES 105 | 105 A117-1 | 2 | | 4 | 0.7 | 26 | C | |
| | 105 A121-1 | 3 | | 5 | 0.7 | 26 | C | |
| | 105 A111 | | | 9 | 1.3 | 20 | S | 1 |
| | P 1877 | 1 | | 1 HT 2 | 0.7 0.7 | 26 26 | C C | |
| | P 1912 | 2 | | 10 | 0.7 | 26 | C | |
| | P 1927 | 3 | | 4 | 0.9 | 22 | C | |
| SERIES 1051 | 1051 A023-1 | 8 | | | | | | |
| | 1051 A024-1 | 4 | | 4 | 0.9 | 22 | C | |
| | 1051 A025-1 | 4 | | 4 4 | 0.9 1.3 | 22 20 | C C | |
| | 1051 A022 | | | 10 | 0.9 | 22 | S | 2 |



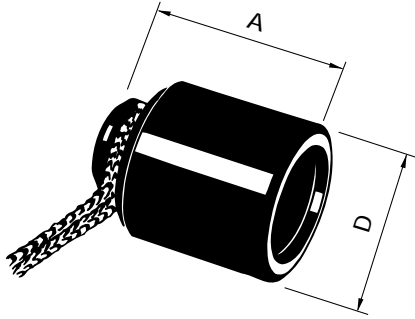
CONTACT BLOCK CONFIGURATIONS

| | Viewed toward receptacle mating side | Fiber Optic or Coax Contacts | Coax 75 ohm pos. 6 + 7, page 10 | Electrical contacts | | | Liquid/ Gas Conduits | |
|-------------|--------------------------------------|------------------------------|---------------------------------|---------------------|------------------|--------------------|----------------------|--|
| | | | | Quantity | Contact Diameter | Maximum Wire (AWG) | | Termination Style (C - crimp S - solder) |
| SERIES 1051 | 1051 A020-1 | 2 | | 4 | 0.7 | 26 | C | 2 |
| | | | | 2 | 2.3 | 12 | S | |
| | P 1878 | 3 | | 2 HT | 1.6 | 14 | C | |
| | | | | 8 | 0.7 | 26 | C | |
| | P 1882 | 2 | | 22 | 0.7 | 26 | C | |
| | P 1923 | 2 | | 4 HT | 1.3 | 20 | C | |
| | 2 | | | 0.9 | 22 | C | | |
| P 1931 | | | 8 | 0.9 | 22 | C | 3 | |
| 106 | 106 A037-1 | 8 | | 12 | 0.9 | 22 | C | |
| | P 1867 | 6 | | 2 | 1.6 | 14 | C | |
| SERIES 107 | 107 A088-1 | 8 | | | | | | |
| | 107 A089-1 | | 8 | | | | | |
| | 107 A090-1 | 12 | | | | | | |



DELTRIN SEALING CAPS

Sealing Caps for Plugs

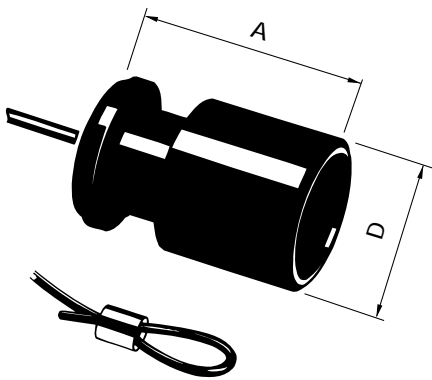


Material – POM (Polyoxymethylene) black Delrin®

with black NYLON cord 1 mm diameter, approx. 2 x 150 mm long.

| Series | Part Number | A | D |
|--------|-------------|----|----|
| 102 | 102.775 | 16 | 10 |
| 103 | 103.720 | 17 | 13 |
| 1031 | | | |
| 104 | 104.299 | 18 | 15 |

Both versions are equipped with a Nitrile O-ring seal (NBR). These caps protect the mating face of the styles S, SC, SV, SOV, SF and WS and seal hermetically the styles SE, SVE, SOVE, SFE and WSE.



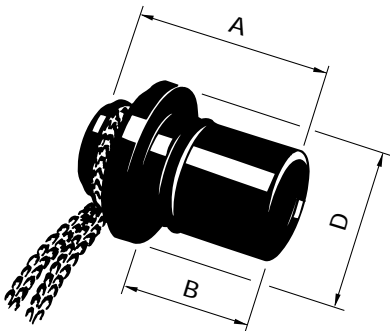
Caps assembled with black NYLON (PA 6.6) covered stainless steel cable and delivered with an additional crimp ferrule.

| Series | Part Number | A | D | Cable Dia. | Cable Length | Crimp Ferrule |
|--------|-------------|----|----|------------|--------------|---------------|
| 103 | 103.740 | 26 | 13 | 1.6 | 400 | 300.285 |
| 1031 | | | | | | |
| 104 | 104.885 | 28 | 15 | 1.6 | 170 | 300.285 |
| 105 | 105.1659 | 30 | 19 | 1.6 | 400 | 300.285 |
| 106 | 106.791 | 40 | 32 | 1.6 | 400 | 300.285 |
| 107 | 107.690 | 40 | 36 | 1.6 | 400 | 300.285 |

To attach the ferrule or the crimp lug to the stainless-steel cable, use a crimp tool, a vice or a pair of pliers with parallel jaws

Sealing Caps for Receptacles

with black NYLON cord 1 mm diameter, approx. 2 x 150 mm long.

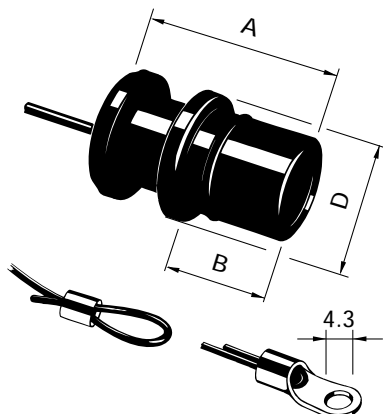


Material – POM (Polyoxymethylene) black Delrin®

| Series | Part Number | A | B | D |
|--------|-------------|----|----|----|
| 102 | 102.776 | 15 | 10 | 10 |
| 1021 | 1021.800 | 15 | 10 | 10 |
| 103 | 103.721 | 17 | 11 | 13 |
| 1031 | 1031.800 | 16 | 10 | 14 |
| 104 | 104.399 | 19 | 12 | 17 |

Both versions are equipped with a Nitrile O-ring seal (NBR). The caps protect and seal hermetically the mating face of the styles D, DB, DBP, DBPC, DG, DGP, K, KE, DK and DKE.

They protect the mating face of the DBPE and WDE as well as the IP 67 sealed DEU, DBEU and DBPU.



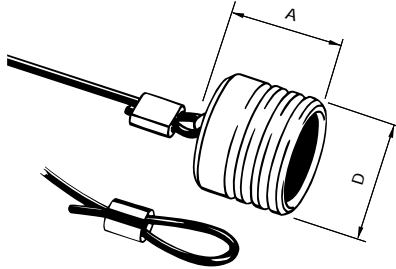
Caps assembled with black NYLON (PA 6.6) covered stainless steel cable and delivered with an additional crimp ferrule and an additional crimp lug.

| Series | Part Number | A | B | D | Cable Dia. | Cable Length | Crimp Ferrule | Crimp Lug |
|--------|-------------|----|------|----|------------|--------------|---------------|-----------|
| 103 | 103.750 | 14 | 7 | 13 | 0.9 | 250 | - | - |
| 1031 | | | | | | | | |
| 104 | | | | | | | | |
| 105 | 105.1660 | 30 | 15 | 19 | 1.6 | 400 | 300.285 | 300.295 |
| 106 | 106.792 | 30 | 15.5 | 32 | 1.6 | 400 | 300.285 | 300.295 |
| 107 | 107.691 | 30 | 15 | 36 | 1.6 | 400 | 300.285 | 300.295 |



METAL SEALING CAPS / PROTECTIVE SLEEVES

Sealing Caps for Plugs



These metal caps are equipped with Viton® O-ring seals. They protect and seal the mating face of connector types S, SV, SF, SE, SVE and SFE.

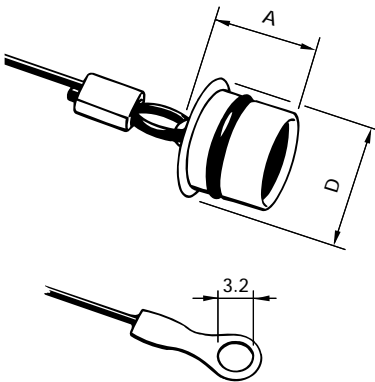
Supplied with 250 x 1 mm black, Teflon® coated, stainless steel cable and spare crimp ferrule¹.

Material: Nickel and chromium plated brass (ISO CuZn39Pb3) Viton® O-ring

| Series | Part Number | | Dimensions (mm) | |
|--------|----------------|--------------|-----------------|----|
| | Natural Chrome | Black Chrome | A | D |
| 104 | 104.1964 | 104.1965 | 16 | 15 |
| 105 | 105.2075 | 105.2076 | 19 | 19 |
| 1051 | - | - | - | - |
| 106 | - | - | - | - |
| 107 | 107.2134 | - | 25 | 40 |

¹ Except Series 107: 400 x 1.6 mm, Nylon coated, stainless steel cable

Sealing Caps for Receptacles



These metal caps are equipped with Viton® O-ring seals. They protect and seal the mating face of connector types D, DB, DBP, DG,K, KE, DK, DKE, DE, DBE and DBPE.

Supplied with 250 x 1 mm black, Teflon® coated, stainless steel cable and spare crimp ferrule¹.

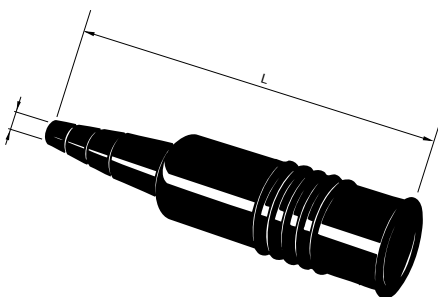
Material: Nickel and chromium plated brass (ISO CuZn39Pb3) Viton® O-ring

| Series | Part Number | | Dimensions (mm) | |
|--------|----------------|--------------|-----------------|----|
| | Natural Chrome | Black Chrome | A | D |
| 104 | 104.1972 | 104.2078 | 12 | 14 |
| 105 | 105.2132 | 105.2133 | 19 | 17 |
| 1051 | - | - | - | - |
| 106 | - | - | - | - |
| 107 | 107.2133 | - | 40 | 40 |

¹ Except Series 107: 400 x 1.6 mm, Nylon coated, stainless steel cable

All dimensions shown are in millimeters and are for reference only

Protective Sleeves



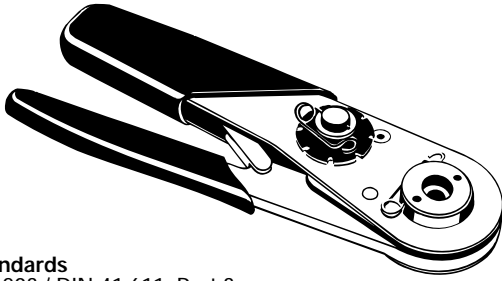
| Series | Cabel Diameter (mm) | For Plugs S, SE | | For Receptacles K, KE | |
|--------|---------------------|-----------------|---------|-----------------------|---------|
| | | Part Number | L (mm) | Part Number | L (mm) |
| 104 | 4.0 - 8.5 | 104.861 | L = 83 | 104.862 | L = 68 |
| 105 | 3.5 - 10.5 | 105.1545 | L = 104 | 105.1546 | L = 88 |
| 1051 | 7.5 - 10.5 | 1051.885 | L = 130 | 1051.895 | L = 111 |
| 106 | 6.0 - 19 | 106.226 | L = 123 | 106.405 | L = 110 |
| 107 | 7.0 - 22.5 | 107.808 | L = 170 | 107.809 | L = 146 |

Material: Thermoplastic Elastomer (TPE)



ASSEMBLY TOOLS

Crimp Tool ULTRA PRECISION
for closed C crimp termination



Standards
IEC 203 / DIN 41 611, Part 3
MIL-C-22520, Class I, Type 1

| Contact Dia. | C Crimp Tool | Part Number |
|--------------|-------------------------------------|-------------|
| 0.5 | BALMAR 18 - 000 DANIELS MH - 800 | TX00.240 |
| 0.7 | | |
| 0.9 | | |
| 1.3 | BUCHANAN 615 708 | TX00.242 |
| 1.6 | | |

The best choice of precision crimp tools for highly reliable eight indenter crimping per US-MIL, IEC and DIN Specifications. Positioners have to be ordered according to contact size.

Positioner FISCHER

For crimp tool
TX00.240

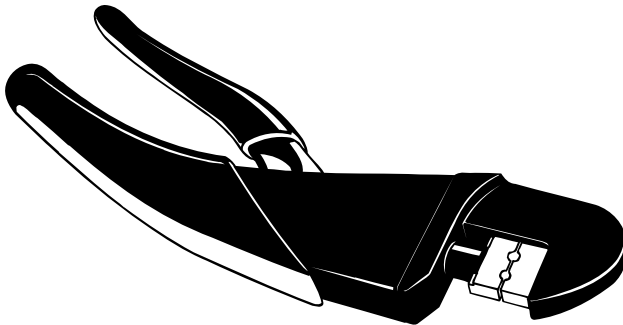


For crimp tool
TX00.242



For the choice of Fischer positioner, please refer to page 11.

Crimp Tool for coaxial cable



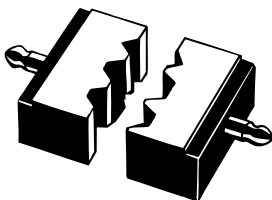
Standards
MIL-C-22520, Class I, Type 2

Part Number TX00.241 - ERMA 29020

Precision crimp tool without dies for hexagon and square crimping. A light weight tool with handle span of only 130 mm. Mass (without dies): 0.75 kg

For crimping dies not larger than 8.23 mm across flats. Maximum crimping dies: IEC 803-G; BSI size G.

Crimping Die TX00.257



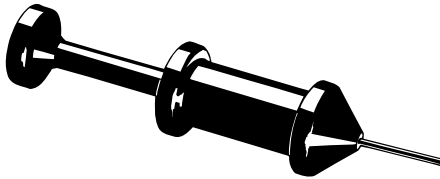
Use with the following contact inserts:

| Contact P/N | Polarity |
|-------------|----------|
| E22 200.48 | Male |
| E22 200.49 | Female |
| E22 200.55 | Male |
| E22 200.56 | Female |

Cable assembly instructions, see page 19



Contact Extraction Tool



Tools for extracting male and female crimp contacts from the contact block. Typically used for rework and repair.

The sleeve of this tool is pushed over the contact, thereby releasing the contact retaining mechanism. The tool plunger is then pushed to eject the contact.

Materials: Housing and plunger: POM (Black Delrin®)
 Sleeve: Stainless Steel
 Slide: Tool Steel

| Coax Insert Part Number | Extraction Tool Part Number |
|-------------------------|-----------------------------|
| E22 200.48 | TX00.275 |
| E22 200.49 | |
| E22 200.55 | |
| E22 200.56 | |
| E22 200.67 | TX00.274 |
| E22 200.68 | |
| E22 200.71 | |
| E22 200.72 | |

| Fiber Optic Part Number | Extraction Tool Part Number |
|-------------------------|-----------------------------|
| E22 200.69 | TX00.275 |
| E22 200.70 | |
| E22 200.73 | |
| E22 200.74 | |

| Electrical Contact Diameter (mm) | Extraction Tool Part Number |
|----------------------------------|-----------------------------|
| 0.5 | TX00.213 |
| 0.7 | TX00.200 |
| 0.9 | TX00.205 |
| 1.3 | TX00.212 |
| 1.6 | TX00.201 |
| 2.0 | |

Contact Insertion Tool



Tools for inserting male and female removable, crimp contacts into the contact block.

Especially recommended for small gauge and fragile wires.

Material: Handle: POM (Black Delrin®)
 Fork: Tool Steel, chrome plated

| Electrical Contact Diameter (mm) | Insertion Tool Part Number |
|----------------------------------|----------------------------|
| 0.5 | TX00.214 |
| 0.7 | TX00.210 |
| 0.9 | TX00.211 |
| 1.3 | TX00.273 |

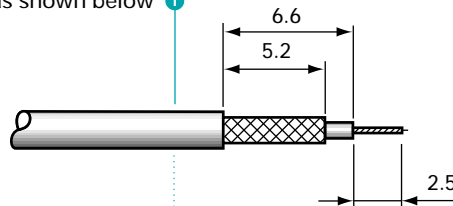


ASSEMBLY INSTRUCTIONS

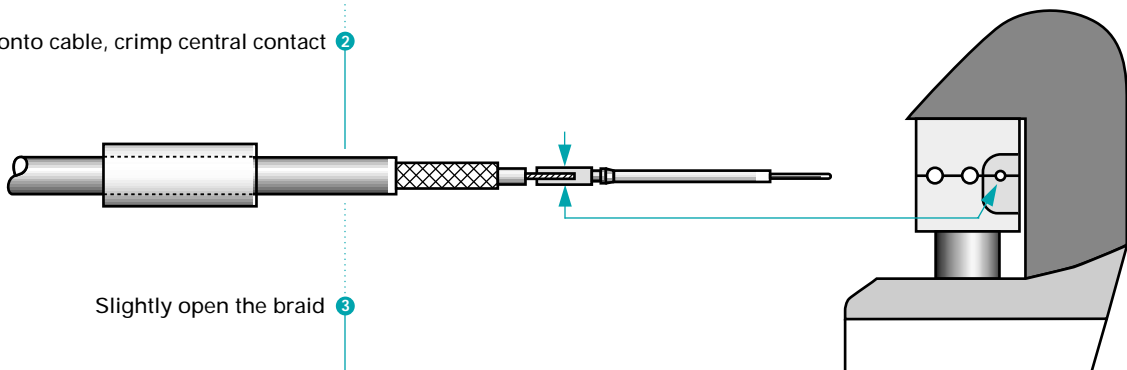
For Coax CRIMP contacts

| Cable Reference | Male Contact | Female Contact | Tool | Die |
|-----------------|--------------|----------------|----------|----------|
| RG 178 B/U | E22 200.48 | E22 200.49 | TX00.241 | TX00.257 |
| RG 196 A/U | E22 200.48 | E22 200.49 | TX00.241 | TX00.257 |
| RG 174 A/U | E22 200.55 | E22 200.56 | TX00.241 | TX00.257 |
| RG 188 A/U | | | | |
| RG 316 /U | | | | |
| RG 179 | | | | |

Strip cable as shown below ①



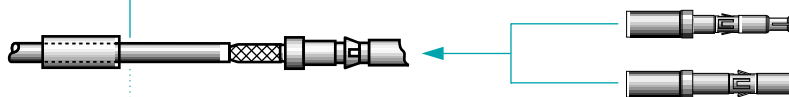
Push sleeve onto cable, crimp central contact ②



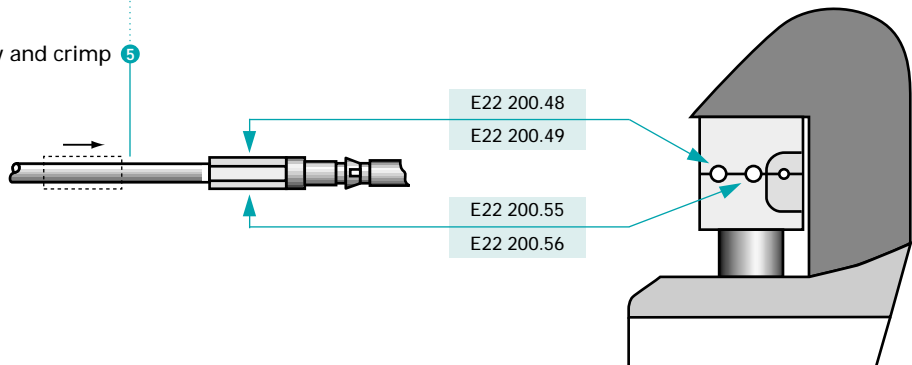
Slightly open the braid ③



Push the cable with the contact into the body ④



Push sleeve against the body and crimp ⑤





1. Fiber Optic Inserts

| | <u>Singlemode</u> | <u>Multimode</u> |
|-------------------------------|-------------------|---------------------|
| Fiber diameter (µm) | 9/125 | 50/125 or 62.5/125 |
| Insertion loss (dB) @ 1300 nm | 0.5 | < 1.0 |
| Return loss (dB) @ 1300 nm | > 30 | |
| Durability (mating cycles) | > 500 | > 500 |
| Operating Temperature (°C) | - 40 to +80 | - 40 to +80 |
| Fiber retention method | adhesive | adhesive |
| Fiber polishing | spherical | flat |
| Fiber assembly by | Fischer | Fischer or Customer |

2. Coax Inserts

| | |
|--------------------------------|---|
| Contact resistance (milliOhms) | Inner conductor ≤ 10 Outer conductor ≤ 3 |
| Max. current at 20°C | 500 mA |
| Operating voltage | 500 V |
| Impedance | 50 or 75 Ohms |
| Frequency range | 0-10 GHz |
| VSWR (at 50 Ohm) | 0-1 GHz: 1.08 maximum 1-3 GHz: 1.12 maximum 3-6 GHz: 1.35 maximum |
| Attenuation (typical) | 0.2 dB |
| Durability (mating cycles) | > 500 |
| Recommended cables | 50 Ohm: RG-174 A/U, RG-178 B/U, RG-188 A/U, RG-196 A/U, RG 316/U 75 Ohm: RG-179 B/U |

3. Electrical Inserts

| Contact diameter (mm) | Maximum current (A) | Maximum wire size (AWG) |
|-----------------------|---------------------|-------------------------|
| 0.5 | | 30 |
| 0.7 | 6 | 26 |
| 0.9 | 9 | 22 |
| 1.3 | 14 | 20 |
| 1.6 | 20 | 14 |

Current capacity may vary due to contact spacing.

4. Liquid / Gas Inserts

5 bar maximum pressure.

Max pressure depends on type of tube as well as on clamping system. Trials were performed successfully up to 5 bar operating pressure.



GENERAL INQUIRY FORM

Company.....
Name.....
Project Name
Address.....
.....
Telephone.....
Fax
E-mail

Size:
Maximum current:..... (A)/contact
Size:
Maximum current:..... (A)/contact

General Requirements

- 1. Project description:
.....
- 2. Annual quantity:
.....
- 3. Delivery requirements:
Prototype/Samples:.....
Production:.....
- 4. Replacing competing product ?
 Yes No
- 5. Connector design:
 Electric Fiberoptic
 HF Liquid
- 6. Dimensional restrictions:
.....
- 7. Size: Style:
- 8. Sealing Required: Yes No
Operating Condition:.....
Maximum Pressure:
- 9. Environmental specifics
Operating temperature limits:
Long term min: max:.....
Short term min: max:.....
Radiation:..... Rad
Corrosive Environment (please describe):
.....

- 11. Voltage (contact-contact):..... (V)
 AC DC Operating Test
- 12. Frequency:
.....
- 13. Impedance:
.....
- 14. Additional requirements:
.....

Fiber Optic Requirements

- 15. Number of fiber optic contacts:.....
- 16. Fiber type and size:
 Singlemode Multimode
 9/125 50/125 62.5/125 other
- 17. Fiber buffer:
 <1mm >1mm
- 18. Return loss
..... db
- 19. Additional requirements:
.....

Liquid / Gas Conduit Requirements

- 20. Quantity required:.....
Tube dimensions:.....
- 21. Operating Pressure:
..... (bar or psi)

Cable Design

- 22. Sample available:
 Yes please include
 No please include specification
- 23. Max. cable jacket diameter:
..... (mm)
- 24. Min. bend radius (if required):
..... (mm)

Electrical Requirements

- 10. Number of contacts:



Subsidiaries

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South Africa

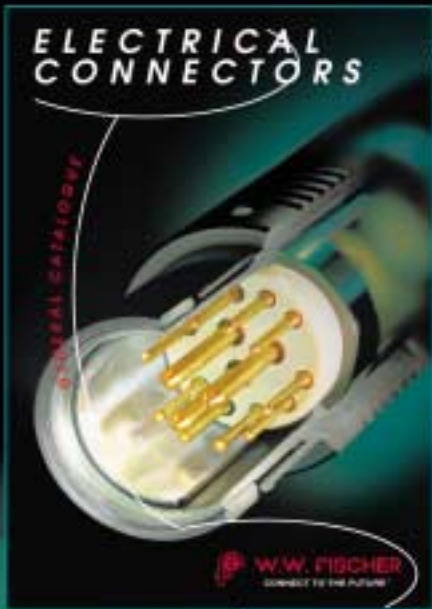
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*W.W. Fischer is a Multinational company with world-wide representation.
Please contact your nearest office for additional information.*

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Email: mail@fischerconnectors.ch



◀ **General Catalogue Electrical Connectors**

The entire line of Electrical Connectors and Accessories.

▼ **101 A004 Series: 50 Ohms Self-Locking Coaxial Connectors per NIM-CAMAC-CD/N 549**

A miniature coax series for high density packaging and frequency up to 4 GHz.

New additions include IP68 / hermetic receptacles and feedthroughs.



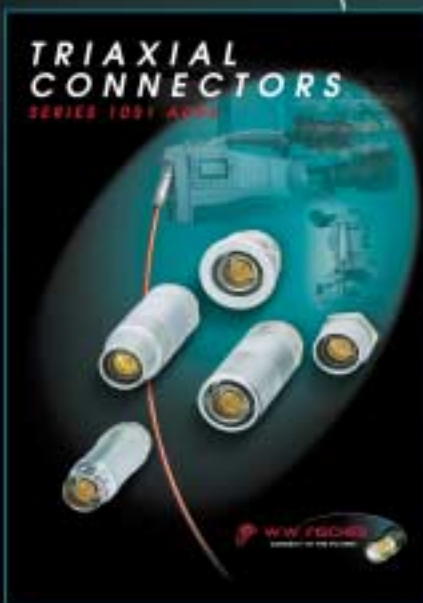
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