

# HYBRID CONNECTORS

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



• *L i g h t* (Single- and Multi-mode)



• *P o w e r*  
• *C o a x*  
• *H i g h V o l t a g e*  
• *S i g n a l*



• *F l u i d / G a s*



**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.

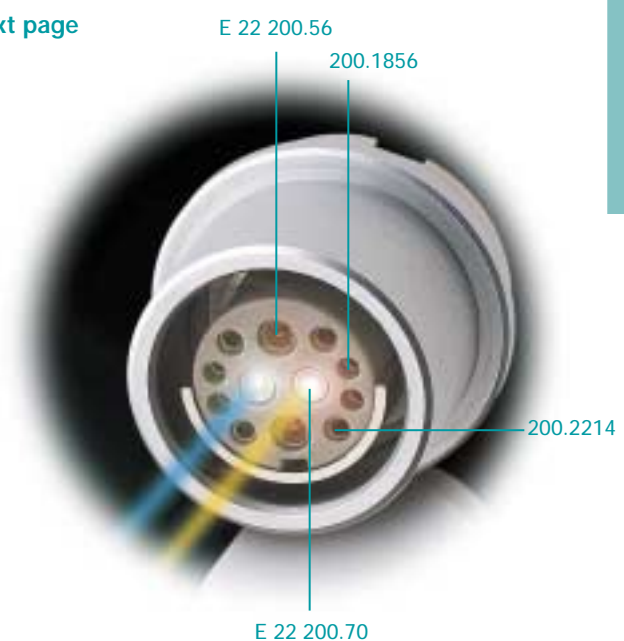
As with Fischer's general line of connectors, the Hybrid line can be optionally sealed to IP68 with a number of well integrated options and accessories.

The capabilities of the Hybrid line include:

- Fiber Optic contacts: Singlemode (for 9/125  $\mu\text{m}$  fiber)  
Multimode (for 50/125 and 62.5/125  $\mu\text{m}$  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



See example on next page





## PART NUMBER SYSTEM

Example

**S** **106** **A** **037-1** **-XXX**

### Connector Style

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

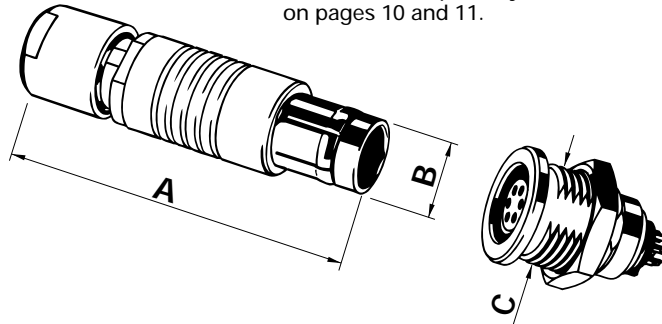
Series	A	B	C
104	50	12	15
105	60	15	18
1051	80	19	20
106	78	27	32
107	110	30	35

### 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.

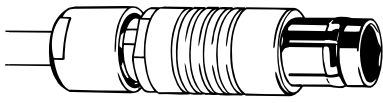
① Hybrides connectors are sealed only when mated to another connector or to a sealing cap.



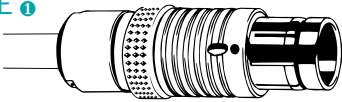
## CONNECTOR STYLES

### Plugs

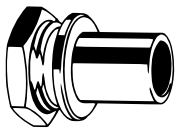
S  
SE ①



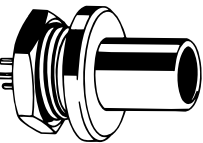
SV  
SVE ①



SF

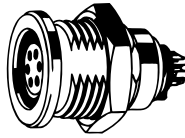


SFE ①



### Receptacles

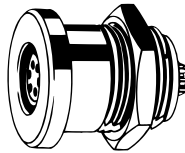
D



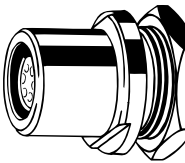
DB



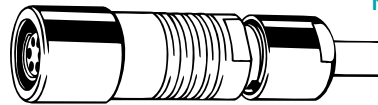
DE ①



DBE ①



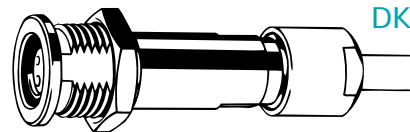
K  
KE ①



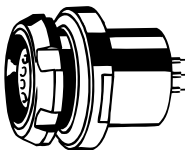
DBP



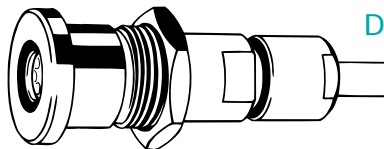
DK



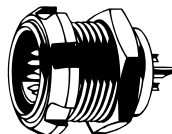
DBPE ①



DKE ①



DG

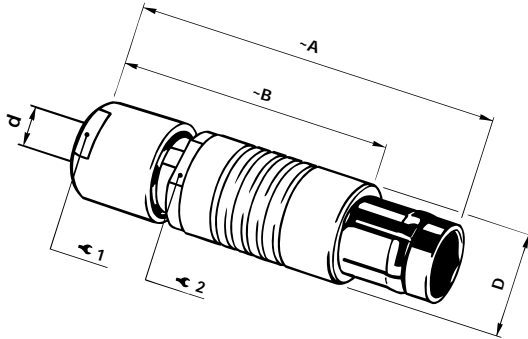


① Hybrides connectors are sealed only when mated to another connector or to a sealing cap.



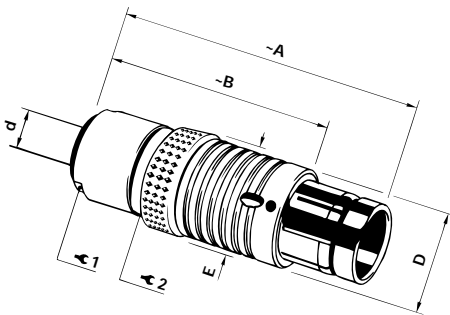
PLUGS

- S Locking Plug
- SE Sealed Locking Plug ①



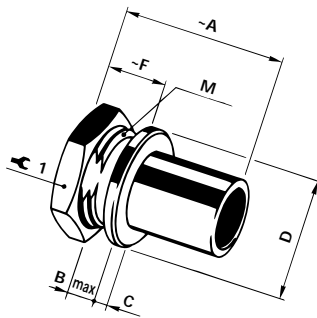
Series	~A	~B	D	d max S / SE	Y <sub>1</sub>	Y <sub>2</sub>
104	50	38	15	8.7	12	13
105	62	47	18	10.7	15	16
1051	80		22.5		17	20
106	80	55	28	19.2	22	
107	110	85	34	22.7	32	32

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



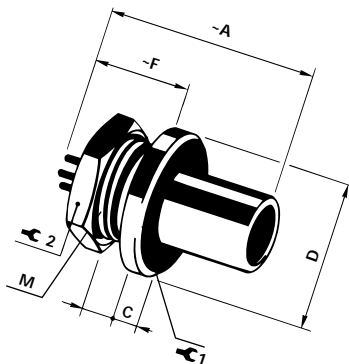
Series	~A	~B	D	E	d max SV / SVE	Y <sub>1</sub>	Y <sub>2</sub>
104	50	38	15	20	8.7	12	13
105	62	46	18	22	10.7	15	16
1051	Please inquire						
106	80	55	30	35	19.2	22	-
107	110	85	34	38	22.7	32	32

- SF Non-locking Panel Plug



Series	~A	B max	C	D	~F	M	Y <sub>1</sub>
104	27	3	2	18	13	15x1	17
105	29	5.5	1.2	22	13	16x1	19
1051	Please inquire						
106	Please inquire						
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 <sub>1</sub>	Y <sub>2</sub>
104	28	7.5	3	22	13	16x1	-	19
105	32	6	4	27	13	20x1	-	25
1051	Please inquire							
106	Please inquire							
107	Please inquire							

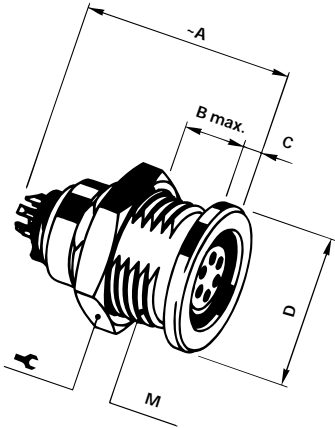
① Hybrides connectors are sealed only when mated to another connector or to a sealing cap.

All dimensions shown are in millimeters and are for reference only



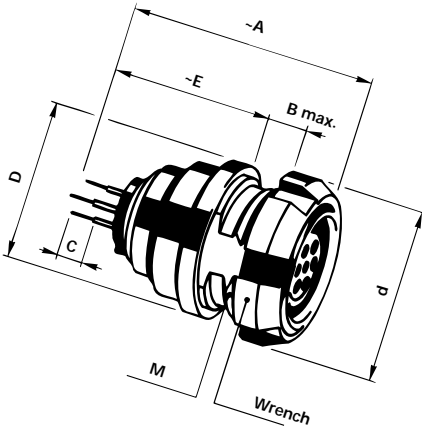
RECEPTACLES

**D Panel Receptacle**



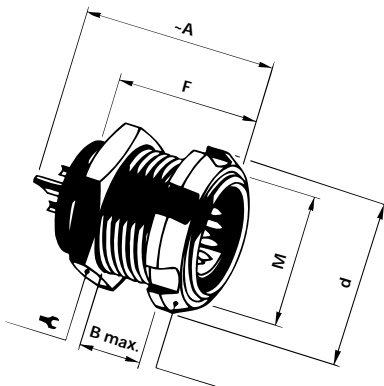
Series	~A	B max	C	D	M	⚙
104	25	11	2.25	19	15x1	17
105	32	15	2	22	18x1	22
1051	Please inquire					
106	50	18	3	37	32x1	TX00.106
107	46	18	4	40	35x1	TX00.107

**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	⚙ <sub>1</sub>	⚙ <sub>2</sub>
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						

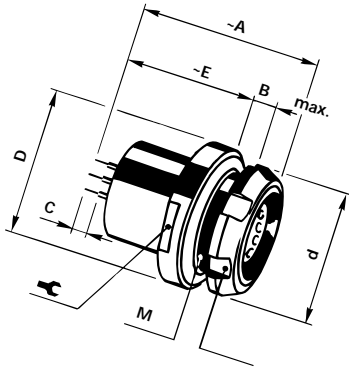
All dimensions shown are in millimeters and are for reference only



## MECHANICAL INFORMATION

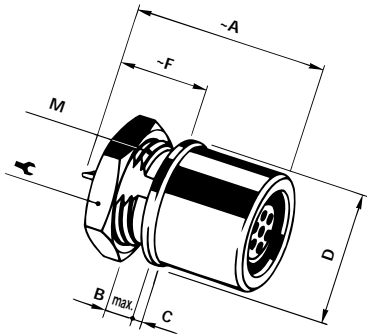
### RECEPTACLES

#### DBPE Sealed, Rear-mounted Panel Receptacle ①



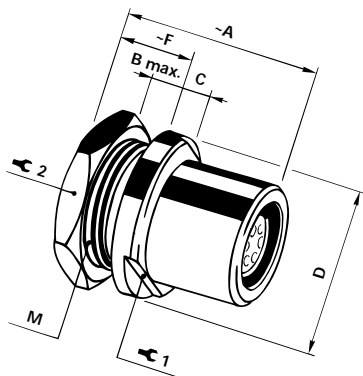
Series	~A	B <sub>max</sub>	D	d	~E	C	M	☞ <sub>1</sub>	☞ <sub>2</sub>
104	26	4	22	20	18	2.54	16x1	-	TK00.002
105	30	5	27	25	20	2.54	20x1	-	TP00.005
1051	Please inquire								
106									
107									

#### DB Front Projecting Receptacle



Series	~A	B <sub>max</sub>	C	D	~F <sub>max</sub>	M	☞ <sub>1</sub>
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 <sub>max</sub>	C	D	~F	M	☞ <sub>1</sub>	☞ <sub>2</sub>
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

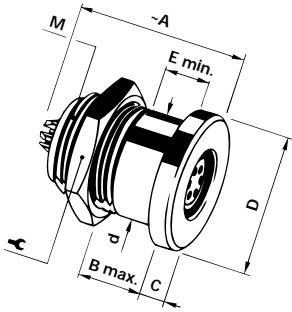
① Hybrid connectors are sealed only when mated to another connector or to a sealing cap.

All dimensions shown are in millimeters and are for reference only



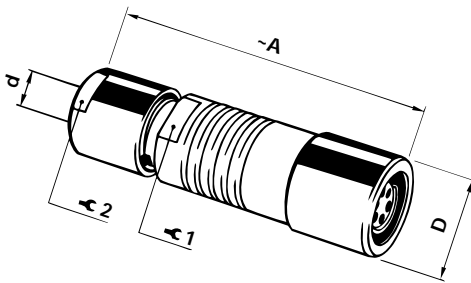
RECEPTACLES

DE Sealed Panel Receptacle ①



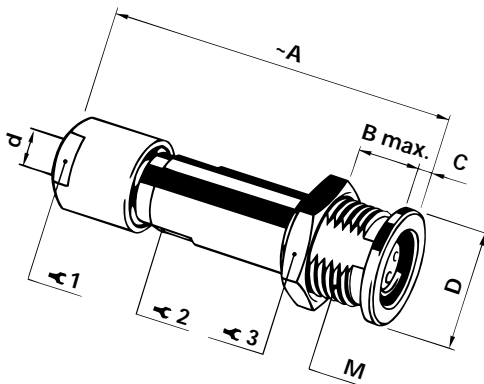
Series	~A	B max	C	D	d	E min	M	Y <sub>1</sub>
104	25	15.5	4	22	16	8	16x1	19
105	33	18	4	27	20	10.5	20x1	25
1051	Please inquire							
106	50	24	5	41	34	19	32x1	TX00.106
107	47	22	5	45	36	19	35x1	TX00.107

K Cable Receptacle  
KE Sealed Cable Receptacle ①



Series	~A	D	d max	Y <sub>1</sub>	Y <sub>2</sub>
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 <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>
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

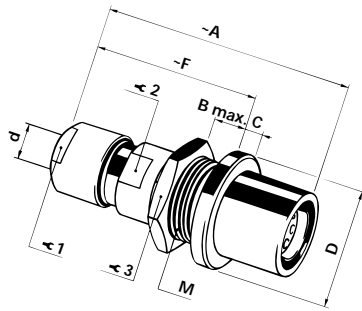
① Hybrid connectors are sealed only when mated to another connector or to a sealing cap.

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 <sub>1</sub>	Y <sub>2</sub>	Y <sub>3</sub>
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

### Fiber Optic Male Contact


1

Part Number	E22 200.74
	


Recommended Cable
Singlemode for 9/125 $\mu\text{m}$ fiber

Part Number	E22 200.73
	

2

Part Number	E22 200.70
	

Recommended Cable
Multimode for 50/125 and 62.5/125 $\mu\text{m}$ fiber


Part Number	E22 200.69
	

## Coax 50 $\Omega$


### Coax Female Contact

### Coax Male Contact


3

Part Number	E22 200.49
	


Recommended Cable
RG-178 RG-196

Part Number	E22 200.48
	

4

Part Number	E22 200.56
	

Recommended Cable
RG-174 RG-188 RG-316


Part Number	E22 200.55
	

## Coax 75 $\Omega$


### Coax Female Contact

### Coax Male Contact


5

Part Number	E22 200.56
	


Recommended Cable
RG 179 (up to 400 MHz)

Part Number	E22 200.55
	


6\*

Part Number	E22 200.68
	

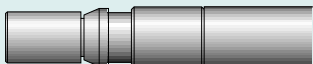
Recommended Cable
RG-179 RG-189

Part Number	E22 200.67
	

7\*

Part Number	E22 200.72
	

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

Part Number	E22 200.71
	

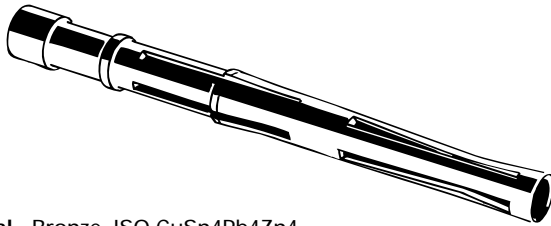
\*Note: pos. 6 and 7 are not insertable into 50 Ohm Coax cavities.



## CONTACTS INSERTS

Signal, Power, High Voltage

### Crimp Contacts



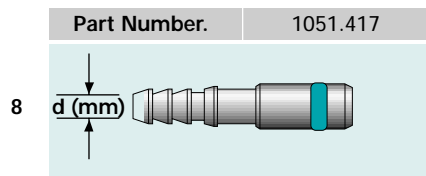
**Material** - Bronze, ISO CuSn4Pb4Zn4  
**Plating** - 1  $\mu\text{m}$  Au over 4  $\mu\text{m}$  Ni

### Crimp Contact/Positioner Reference Chart

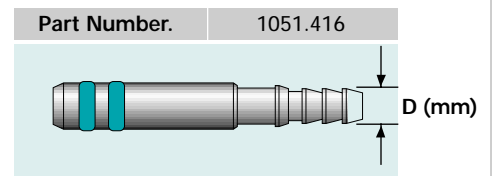
Size	Polarity	Max Wire (AWG)	Series					Crimp Tool	Positioner
			102	103	1031	104	105		
0.5 mm	male	28-32	200.2113					TX00.240	TX00.300
	male	28-32			200.2172		200.2172	TX00.240	TX00.301
	female	28-32	200.2114					TX00.240	TX00.302
	female	28-32			200.2183			TX00.240	TX00.303
	female	28-32					200.2412	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



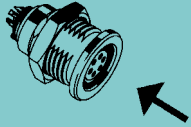










**Recommended tube size:** d = 1.5 mm  
D = 3.5 mm (max.)

**Material:** Nickel plated brass

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

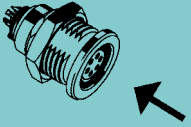












## CONTACT BLOCK CONFIGURATIONS

 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	
	105 A116-1 	2						
SERIES 105	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



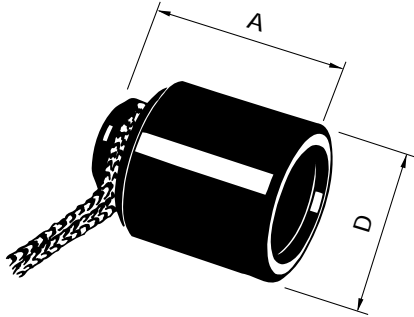
# CONTACT BLOCK CONFIGURATIONS

	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

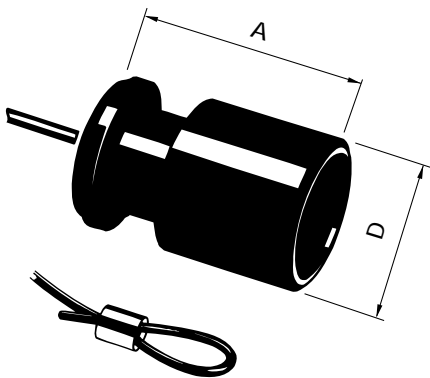


Material – POM (Polyoxymethylene) black Delrin®

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.



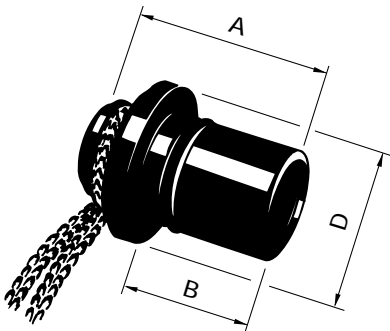
Caps assembled with black NYLON (PA 6.6) covered stainless steel cable and delivered with an additional crimp ferrule.

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.

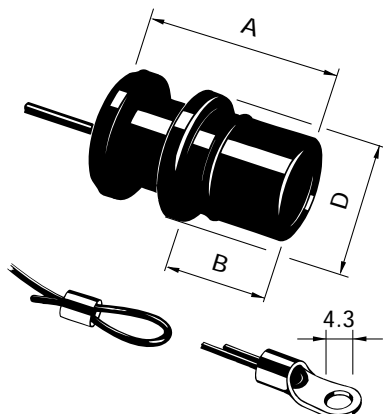


Material – POM (Polyoxymethylene) black Delrin®

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.



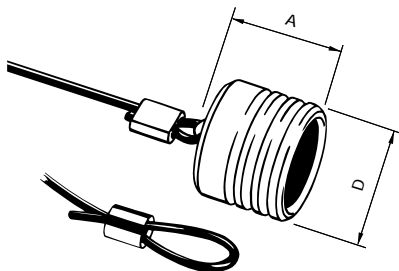
Caps assembled with black NYLON (PA 6.6) covered stainless steel cable and delivered with an additional crimp ferrule and an additional crimp lug.

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.

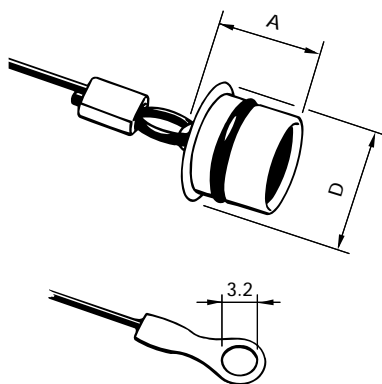
Supplied with 250 x 1 mm black, Teflon® coated, stainless steel cable and spare crimp ferrule<sup>1</sup>.

**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

<sup>1</sup> 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 ferrule<sup>1</sup>.

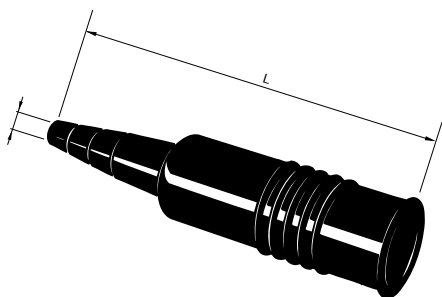
**Material:** Nickel and chromium plated brass (ISO CuZn39Pb3) Viton® O-ring

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

<sup>1</sup> 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



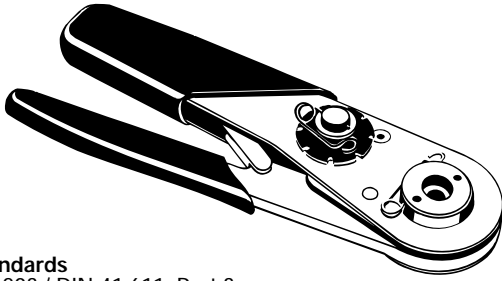
Series	Cabel Diameter (mm)	For Plugs S, SE		For Receptacles K, KE	
		Part Number	L (mm)	Part Number	L (mm)
104	4.0 - 8.5	104.861	L = 83	104.862	L = 68
105	3.5 - 10.5	105.1545	L = 104	105.1546	L = 88
1051	7.5 - 10.5	1051.885	L = 130	1051.895	L = 111
106	6.0 - 19	106.226	L = 123	106.405	L = 110
107	7.0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

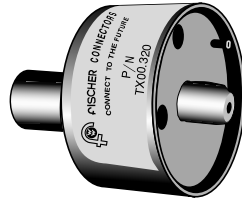
The best choice of precision crimp tools for highly reliable eight indenter crimping per US-MIL, IEC and DIN Specifications. Positioners have to be ordered according to contact size.

Positioner FISCHER

For crimp tool  
TX00.240

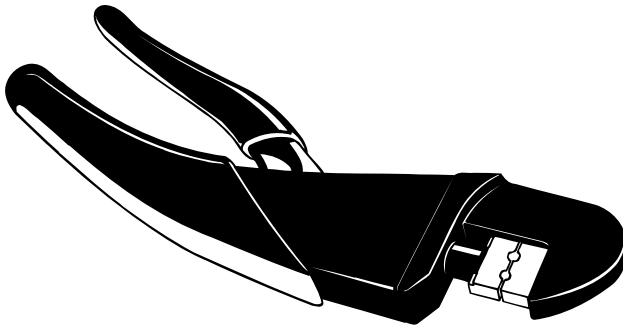


For crimp tool  
TX00.242



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

Crimp Tool for coaxial cable



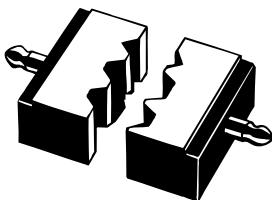
**Standards**  
MIL-C-22520, Class I, Type 2

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



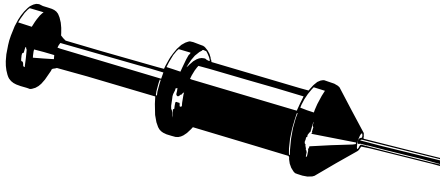
Use with the following contact inserts:

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

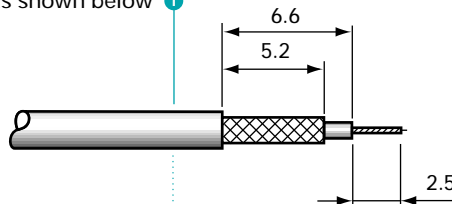


# ASSEMBLY INSTRUCTIONS

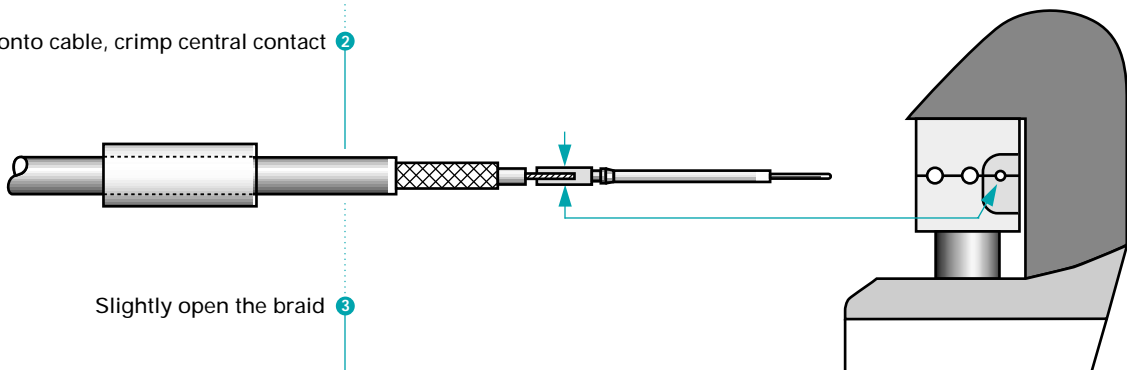
## For Coax CRIMP contacts

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



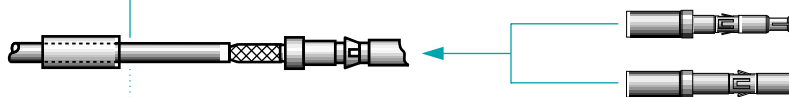
Push sleeve onto cable, crimp central contact ②



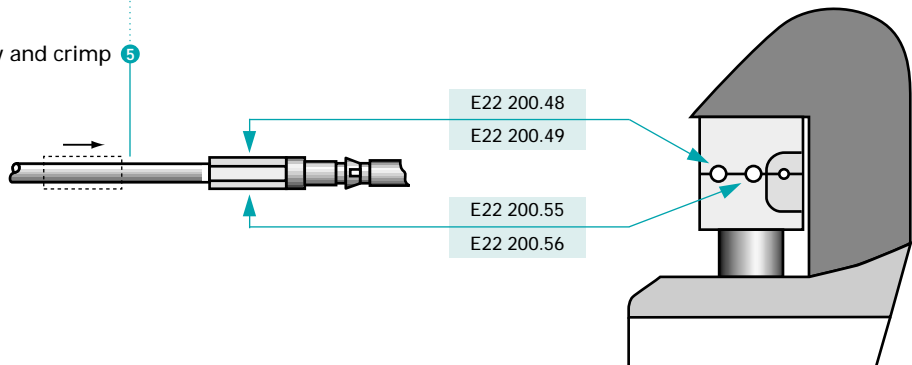
Slightly open the braid ③



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: .....



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### South Africa

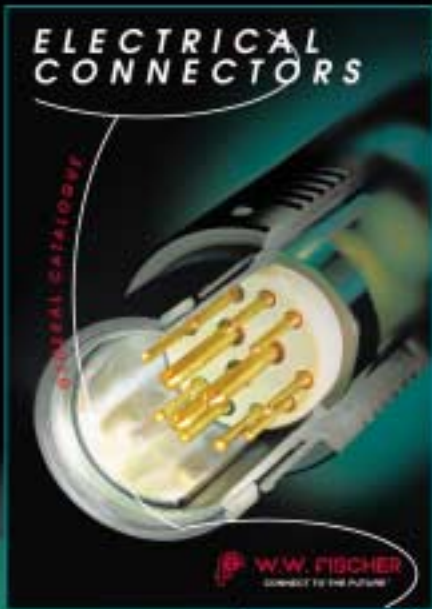
SUNTRONIKA (PTY) Ltd., 10, Station Street, 2001 **Braamfontein/Johannesburg**  
Tel. (+27) 11-403 3420, Fax (+27) 11-403 4050

*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](mailto: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**

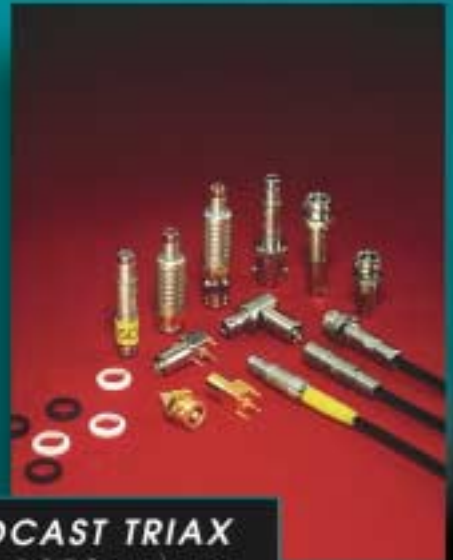
A miniature coax series for high density packaging and frequency up to 4 GHz.

New additions include IP68 / hermetic receptacles and feedthroughs.



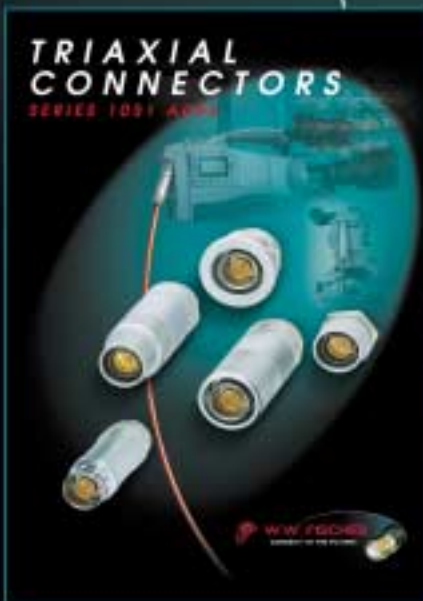
◀ **405 Series: High Performance Self-Locking Plastic Connectors**

An innovative design, lightweight, full RFI screen available, up to 40 contacts. Impervious to thousands of medical sterilization cycles. Intermateable with the metal-body 105 Series connectors.



◀ **Broadcast Triax Series 1052: High Quality for Picture Integrity**

Engineered to meet the American-Standard broadcast industry. Compatible with standard triax 3/8" and 1/2" 75 Ohm cables.



◀ **1051 A004 Series: 75 Ohms Triaxial Connectors for Television Cameras**

A series of robust, waterproof, self-locking connectors for multiplex signal transmission of color TV in studios and at outside broadcasting events.





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