fischer triax connectors

1051 A004 Series



fischer triax connectors

1051 A004 Series New and improved

For more than 25 years, the Fischer Connectors 1051 series Triaxial connectors has been a worldwide standard in high end camera broadcast connections.

In recent years, the move from standard definition (SD) to high definition (HD) and need for cost effective solutions have driven technologies and user requirements in diverse directions. To address these advancements, we are pleased to introduce our totally re-engineered* cable mount connectors that further improve assembly, maintenance and cable installation. Fully compatible with its preceding model, they will enable a seamless upgrade of existing equipment.





New design benefits

Easier and faster termination

- ✓ reduced number of internal parts
- ✓ crimp or solder
- ✓ rapid termination
- ✓ no special tooling required

■ More convenient maintenance

- ✓ field repair without re-termination
- ✓ inter-changeable gender contact blocks
- ✓ locking protective caps
- ✓ easily replaceable modular protection

Advanced technology and materials

- ✓ Improved RF performance
- ✓ Ergonomic and robust
- ✓ Watertight IP68 (2m/24h)





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Technical Specifications

Mechanical & Environmental Data

Parameter	Typical values	Norm
Mating cycles	5000	
Temperature range - 1051 A004-3 - 1051 A004-4 - 1051 A004-9	-55°C to + 135°C -55°C to + 135°C -40°C to + 85°C	
Vibration	10 to 2000 Hz, 1.5 mm or 20 g, no discontinuity > 1 µs	MIL-STD-1344, Method 2005, Test cond. IV
Protection level SE, KE, DKE	IP68 (2m/24h) when mated or with fitted sealing caps	IEC60529
Corrosion, salt spray	48 h with 5% salt solution at 35°C	MIL-STD-1344, Method 1001, Test cond. B

Material & Surface Treatments

Part	Materials	Finish
Housings - 1051 A004-3 - 1051 A004-4 - 1051 A004-9	Brass Brass Brass, steel, PA	Nickel, chromium Nickel, chromium Nickel
Housing accessories	Brass	Nickel
Inner contact	Bronze	Gold over nickel
Crimp contact	Brass	Gold over nickel
Outer contact	Brass	Gold over nickel
Ground contact	Brass	Nickel
Insulators - 1051 A004-3 - 1051 A004-4 - 1051 A004-9	PTFE, PCFTE, PP-H PTFE, PCFTE, PP-H POM, PP-H, PEI	-
Washers	PEEK, PET	-
O-ring seals	NBR, NBR Low Temp	-
Cable seal and protections	TPE	-

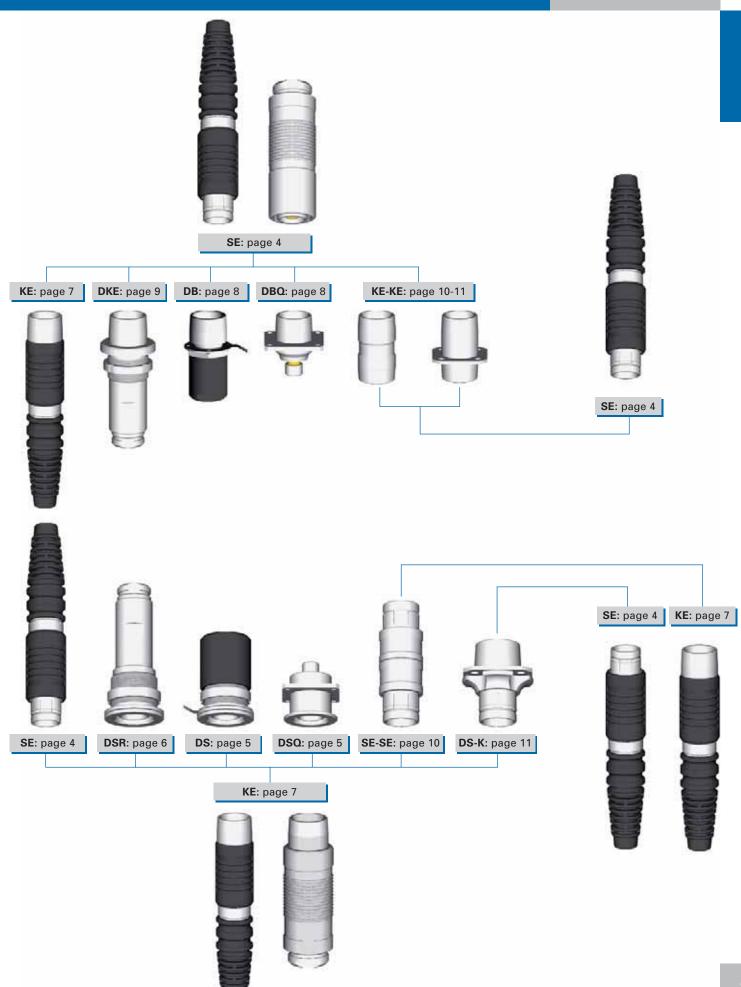
Our products are RoHS compliant

Electrical Data

Parameter	Typical values	Norm
Nominal impedance	75 ohms	
Test voltage at sea level (mated) - Center to outer contact - Outer to ground contact	1.7 kVAC 1.0 kVAC	IEC60512-2, Test 4a, Method c
Current rating per contact	14 A	IEC60512-3, Test 5b
Contact resistance - Center contact - Outer contact - Ground contact	<3 mohms <0.5 mohms <5 mohms	IEC60512-2, Test 2
Insulation resistance	> 10 ¹⁰ ohms	IEC60512-2, Test 3a, Method c
VSWR (Voltage Standing Wave Ratio) - 0 to 250 MHz - 250 to 1300 MHz	<1.05 <1.2	

Connector Styles



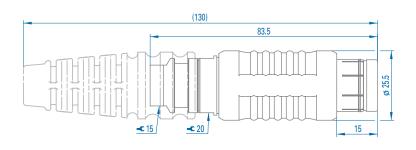




Cable Plugs

\blacksquare For $\emptyset 8.5$ to $\emptyset 11.3$ mm cables

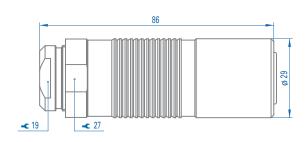




Cable plug part number	Cable group ¹	Cable clamp part number ²
	1	E3 1051.1/A004-9/1.0/4.5/8.7
CF 40F4 A004 O	2	E3 1051.1/A004-9/1.0/4.5/9.4
SE 1051 A004-9+	2	E3 1051.1/A004-9/1.4/4.5/9.4
	3	E3 1051.1/A004-9/1.4/6.6/11.3

■ For Ø12.2 to Ø15.2mm cables





Cable plug part number	Cable group ¹	Cable clamp part number
SE 1051 A004-4 1.4/6.6/12.6	4	
SE 1051 A004-4 T1895/13.6	5	Included
SE 1051 A004-4 2.1Ls/10s/15.2	6	

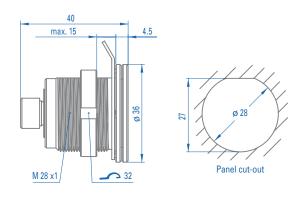
¹ See list of recommended cables on page 23² See cable clamp details on page 13

Panel Plugs



■ For Ø8.5mm cables



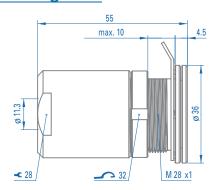


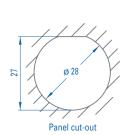
Panel plug part number

DS 1051 A004-3 1.0/5.0

■ For Ø11.3mm cables, with cable guide





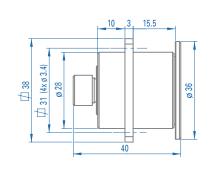


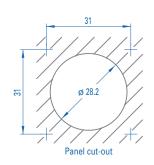
Panel plug part number

DS 1051 A004-3 1.4/6.6

■ For Ø8.5mm cables, with square flange







Panel plug part number

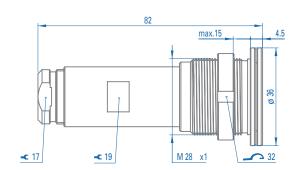
DSQ 1051 A004-3 1.0/5.0

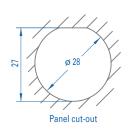


Panel Plugs with Cable Clamp

\blacksquare For $\emptyset 8.5$ to $\emptyset 11.3$ mm cables



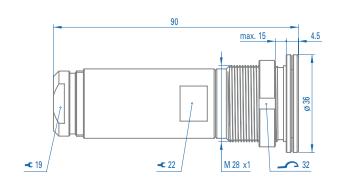


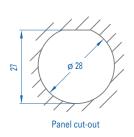


	0.11	
Panel plug part number	Cable group ¹	Cable clamp part number ²
	1	E3 1051.1/A004-3/1.0/4.5/8.7
DSR 1051 A004-3+	2	E3 1051.1/A004-3/1.0/4.5/9.4
DSK 1031 A004-3+	2	E3 1051.1/A004-3/1.4/4.5/9.4
	3	E3 1051.1/A004-3/1.4/6.6/11.3

■ For Ø12.2 to Ø15.2mm cables







Panel plug part number	Cable group ¹	Cable clamp part number
DSR 1051 A004-4 1.4/6.6/12.6	4	
DSR 1051 A004-4 T1895/13.6	5	Included
DSR 1051 A004-4 2.1Ls/10s/15.2	6	

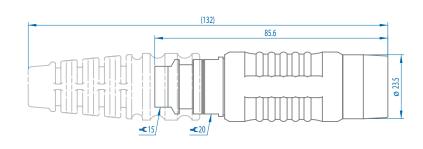
¹ See list of recommended cables on page 23² See cable clamp details on page 13

Cable Receptacles



\blacksquare For $\varnothing 8.5$ to $\varnothing 11.3$ mm cables

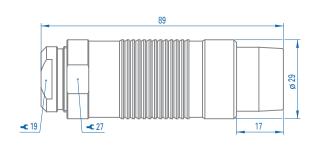




Cable receptacle part number	Cable group ¹	Cable clamp part number ²
	1	E3 1051.1/A004-9/1.0/4.5/8.7
VE 1051 A004 O.	2	E3 1051.1/A004-9/1.0/4.5/9.4
KE 1051 A004-9+	2	E3 1051.1/A004-9/1.4/4.5/9.4
	3	E3 1051.1/A004-9/1.4/6.6/11.3

■ For Ø12.2mm to Ø15.2mm cables





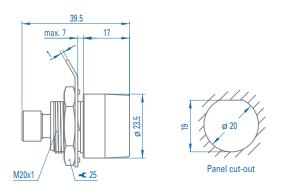
Cable receptacle part number	Cable group ¹	Cable clamp part number
KE 1051 A004-4 1.4/6.6/12.6	4	
KE 1051 A004-4 T1895/13.6	5	Included
KE 1051 A004-4 2.1Ls/10s/15.2	6	



Panel Receptacles

■ For Ø8.5mm cables



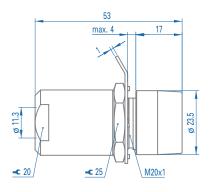


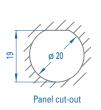
Receptacle part number

DB 1051 A004-3 1.0/5.0

■ For Ø11.3mm cables, with cable guide





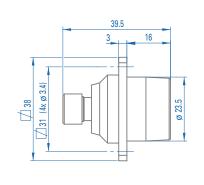


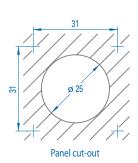
Receptacle part number

DB 1051 A004-3 1.4/6.6

\blacksquare For \emptyset 8.5mm cables, with square flange







Receptacle part number

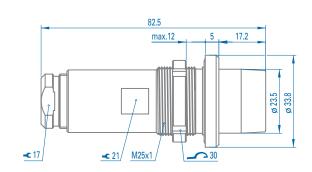
DBQ 1051 A004-3 1.0/5.0

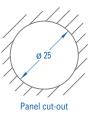
Panel Receptacles with Cable Clamp



\blacksquare For $\varnothing 8.5$ to $\varnothing 11.3$ mm cables



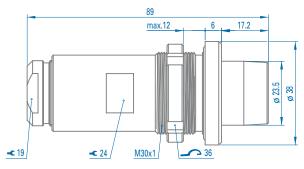


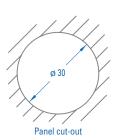


Receptacle part number	Cable group ¹	Cable clamp part number ²
	1	E3 1051.1/A004-3/1.0/4.5/8.7
DVF 4054 A004 2	2	E3 1051.1/A004-3/1.0/4.5/9.4
DKE 1051 A004-3+	2	E3 1051.1/A004-3/1.4/4.5/9.4
	3	E3 1051.1/A004-3/1.4/6.6/11.3

■ For \emptyset 12.2mm to \emptyset 15.2mm cables







Receptacle part number	Cable group ¹	Cable clamp part number
DKE 1051 A004-4 1.4/6.6/12.6	4	
DKE 1051 A004-4 T1895/13.6	5	Included
DKE 1051 A004-4 2.1Ls/10s/15.2	6	

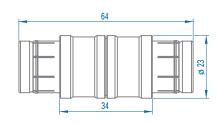
¹ See list of recommended cables on page 23 ² See cable clamp details on page 13



In-line Adaptors

■ For connection of panel or cable receptacles

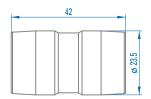




Adaptor part number	Suitable for
SE-SE 1051 A004	KE, DB and DKE connections

■ For connection of cable or panel plugs





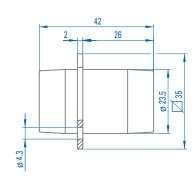
Adaptor part number	Suitable for
KE-KE 1051 A004	SE, DS and DSR connections

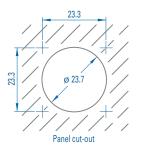
Panel Feedthroughs



■ For connection of cable plugs



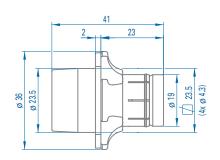


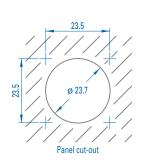


Feedthrough part number	Suitable for
KE-KE 1051 A004-8	SE connections

■ For connection of cable plugs and cable receptacles







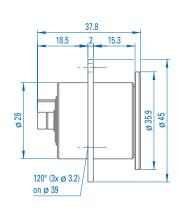
Feedthrough part number	Suitable for
DS-K 1051 A004	SE with KE connections

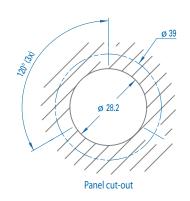


Panel Plug/Receptacle with SMB Adaptor

■ Panel plug with 75Ω SMB male plug





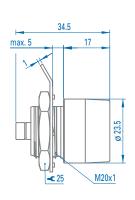


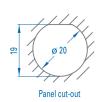
Panel plug part number

DS 1051 A004-SMB75/M

\blacksquare Panel receptacle with 75 Ω SMB male plug







Panel receptacle part number

DB 1051 A004-SMB75/M

Cable Clamp Sets



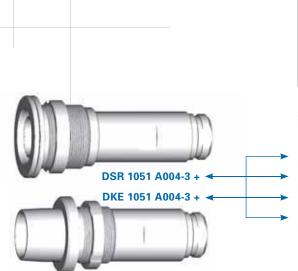
■ For SE and KE models





Cable diameters (mm)	Cable clamp part number 1
1.0 / 4.5 / 8.7	E3 1051.1/A004-9/1.0/4.5/8.7
1.0 / 4.5 / 9.4	E3 1051.1/A004-9/1.0/4.5/9.4
1.4 / 4.5 / 9.4	E3 1051.1/A004-9/1.4/4.5/9.4
1.4 / 6.6 / 11.3	E3 1051.1/A004-9/1.4/6.6/11.3

■ For DSR and DKE models





Cable diameters (mm)	Cable clamp part number 1	
1.0 / 4.5 / 8.7	E3 1051.1/A004-3/1.0/4.5/8.7	
1.0 / 4.5 / 9.4	E3 1051.1/A004-3/1.0/4.5/9.4	
1.4 / 4.5 / 9.4	E3 1051.1/A004-3/1.4/4.5/9.4	
1.4 / 6.6 / 11.3	E3 1051.1/A004-3/1.4/6.6/11.3	

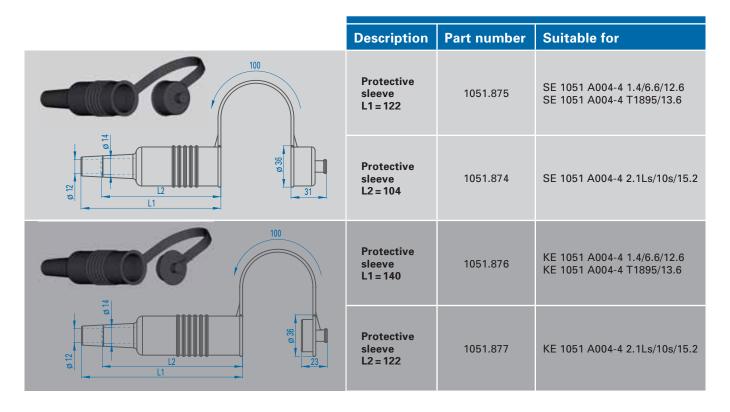


Accessories

■ Accessories for A004-9 models

	Description	Part number	Suitable for
67.5	Protective sleeve	1051.1569	SE 1051 A004-9 KE 1051 A004-9
130	Plug cap	1051.1570	SE 1051 A004-9
38.5	Cable receptacle cap	1051.1571	KE 1051 A004-9

■ Combined sleeve and cap for A004-4 models



Accessories



■ Caps for A004-3 and A004-4 models

	Description	Part number	Suitable for
23	Cap with fastener eyelet	1051.887	DS, DSR
30 100 Ø 4	Cap with fastener eyelet	1051.897	DB, DKE
-400 30 7E 8	Delrin sealing cover with O-ring and plastic coated stainless steel wire	1051.816	SE, DS, DSR
-400 24.3 Ø 4.3	Delrin sealing cover with O-ring and plastic coated stainless steel wire	1051.817	KE, DB, DKE



Assembly Tools

Spanner for inner threaded ring



Part number	Suitable for	
TQ00.001	DKE+DSR 1051 A004-3 1.0/4.5/8.7+9.4 DKE+DSR 1051 A004-3 1.4/4.5/9.4 DKE+DSR 1051 A004-3 1.4/6.6/11.3	
TQ00.002	SE+KE+DKE+DSR 1051 A004-4 1.4/6.6/12.6 SE+KE+DKE+DSR 1051 A004-4 T1895/13.6 SE+KE+DKE+DSR 1051 A004-4 2.1Ls/10s/15.2	

■ Hook spanner for slotted nuts



Part number	Suitable for
TX00.105	Ø 30-32
TX00.106	Ø 34-36

Assembly Tools



■ Shield crimp tool without dies



Part number	Description
TX00.245	Daniels HX4 (M 22520/5-01)

■ Shield crimp tool dies



Part number	umber Hexagon width Hexagon width	
TX00.270	10.9	Daniels Y178 (M 22520/5-61)
TX00.271	13.51	Daniels Y151 (M 22520/5-27)

■ Contact crimp tool



Part number	Description
TX00.242	Buchanan 615708

■ Contact crimp tool positioner



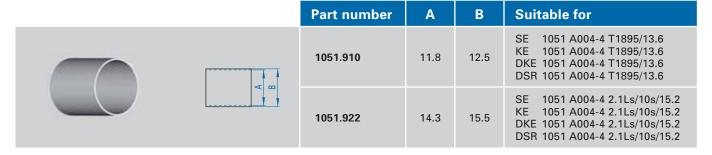
Part number	Suitable for
TX00.315	All connectors corresponding to cable groups 1 to 4 ¹
TX00.317	All connectors corresponding to cable groups 5 to 6 ¹

¹ See list of recommended cables on page 23



Spare Parts

Crimp ferrules



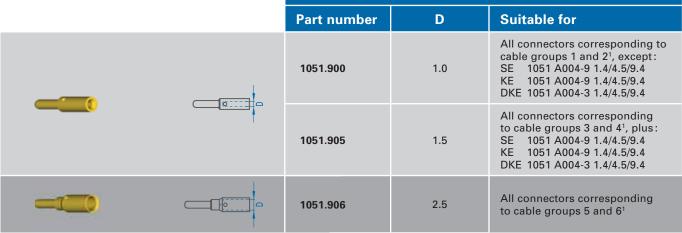
■ Solder lug with claws

	Part number	D	Suitable for
λ	1051.311	30	DB
U	1051.615	34	DS

■ Hexagon and slotted nuts

			Part number	M	Suitable for
0		25	105.724	M20×1	DB
	5	ø 30	1051.611	M28x1	DS, DSR
()			105.865	M25x1	DKE 1051 A004-3
			106.395	M30x1	DKE 1051 A004-4

Crimp contacts



Cable Assembly Services



■ Complete and integrated cable solutions

Based on years of experience in Outside Broadcasting and studios installations, Fischer Connectors® has built a tried and tested value-added cable assembly service. From simple to complex, small to high volume production, we provide turnkey solutions to suit the specific needs of your HD or SD application.

Utilizing the latest machinery and test equipment, our facilities are geared to producing cable assemblies. They operate strict process controls to ensure optimum reliability even in the most arduous environments. Cables are delivered with your choice of connector fitted at either end. Connectors come with protective sleeve and sealing cap as standard, but these can be omitted as on option. Cable lengths are offered according to your request in either 8mm or 11mm diameter cables. Other cable types and variations are available by request.



- Complete and integrated connector and cable system solutions
- Testing process ensures optimum reliability
- Flexible yet strong cables, ideal for harsh environments
- Protective sleeves and sealing caps fitted as standard
- Fast delivery of standard 8 and 11mm cable diameters
- Other cable solutions on request
- Training programs to assemble and repair cable lines on-site



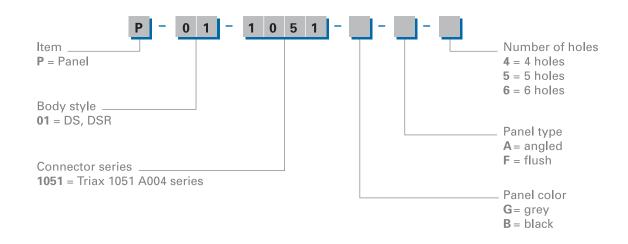




Panels for OB and Studio Use

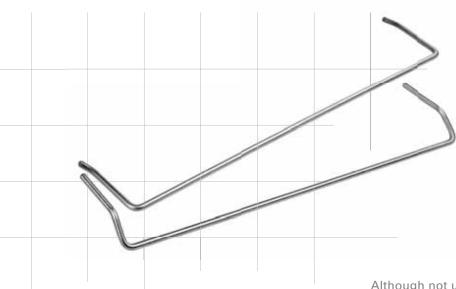


■ Part numbers



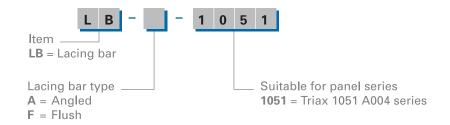
Optional Lacing Bars





Although not usually required, the lacing bar can offer additional cable support at the rear of the panel if space permits. Lacing bars are supplied with all necessary fittings for quick fitting to the panel. Lacing bar choices are specific to either Angled or Flush panel types.

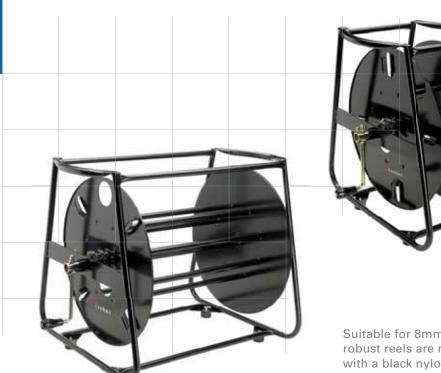
■ Part numbers





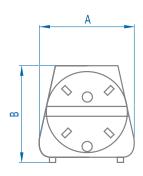


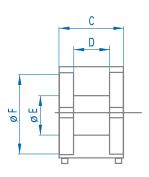
Cable Reels



Suitable for 8mm and 11mm triaxial cables, these robust reels are manufactured from steel and finished with a black nylon dip. For storage and space saving, the manual rewind handle can be reversed and the reels can be stacked up to 3 units high. A retained drum locking pin prevents drum rotation during transit. Thermoplastic feet provide grip and protection to flooring. The cable reels are RoHS exempt.

■ Part numbers





Part number		. reel ty¹[m]	Weight ² [kg]	Dimensions [mm]					
	8.5 mm triax	11.5 mm triax		Α	В	С	D	Е	F
CR-01	200	125	9.75	520	540	350	150	230	450
CR-02	425	275	11.25	520	540	500	300	230	450
CR-03	630	415	13.00	520	540	650	450	230	450

¹Cable capacity shown is tight and carefully wound, de-rate by 30% for loose packed or cross wound.

²Weights shown are without cable fitted.

Cable Groups Reference



Recommended triaxial camera cables 75Ω

	rtecomi	Hended triaxi	di camera					
	Cable			Cable diameters ¹		[mm]	Suitable	Suitable
	Brand	Туре	Reference	Core	Dielectric	Ext.	connectors ²	clamp set
	Bedea	Standard 8 (PUR)	-	1.0	4.5	8.5		
	Bedea	Superflex 8 (TPE flex)	-	1.0	4.5	8.6		
	Belden	Triax 8	7783A	1.0	4.5	8.4	SE+KE 1051 A004-9+	E3 1051.1/A004-9/1.0/4.5/8.7
	Draka	Triax 8 (PVC)	CT2765700	1.0	4.5	8.4	DS+DB 1051 A004-3 1.0/5.0	N/A
1	Draka	Triflex 8 (PUR)	CT2767900	1.0	4.5	8.4	DSQ+DBQ 1051 A004-3 1.0/5.0	N/A
	Intercond	8.5mm (PVC or PUR)	RX 75/55	1.0	4.7	8.5	DSR+DKE 1051 A004-3+	E3 1051.1/A004-3/1.0/4.5/8.7
	Fujikura	4.8/1.0 EFTXF	-	1.0	4.8	8.6		
	Hirakawa	TRIAX 4.8/1.0-TUFRET	3118-250	1.0	4.8	8.8		
	Belden	-	9267, 1857A	0.8	3.7	9.2	SE+KE 1051 A004-9+	E3 1051.1/A004-9/1.0/4.5/9.4 E3 1051.1/A004-9/1.4/4.5/9.4
2	Draka	Triax 8 (FRNC) Reinforced	CT2853203	1.0	4.5	9.0	DS+DB 1051 A004-3 1.0/5.0 DSQ+DBQ 1051 A004-3 1.0/5.0 DSR+DKE 1051 A004-3+	N/A N/A E3 1051.1/A004-3/1.0/4.5/9.4 E3 1051.1/A004-3/1.4/4.5/9.4
	Belden	Triax 11	7784AS	1.4	6.5	11.2		
	Intercond	11.0mm (PVC or PUR)	RX 75/56	1.4	6.5	11.0	SE+KE 1051 A004-9+	E3 1051.1/A004-9/1.4/6.6/11.3
3	Bedea	Standard 11 (PUR)	-	1.4	6.5	11.0	DS+DB 1051 A004-3 1.4/6.6	N/A
3	Bedea	Superflex 11 (TPE flex)	-	1.4	6.0	11.3	DSR+DKE 1051 A004-3+	E3 1051.1/A004-3/1.4/6.6/11.3
	Draka	Triax 11 (PVC)	CT2766400	1.4	6.5	11.0		
	Draka	Triflex 11 (PUR)	CT2768100	1.4	6.5	11.0		
4	Draka	Triax 11/1 (PU) Reinforced	CT2767101	1.4	6.5	12.2	SE+KE 1051 A004-4 1.4/6.6/12.6 DS+DB 1051 A004-3 1.4/6.6 DSR+DKE 1051 A004-4 1.4/6.6/12.6	Included N/A Included
5	Belden	-	9192, 9232	1.6	8.0	13.2	SE+KE 1051 A004-4 T1895/13.6 DSR+DKE 1051 A004-4 T1895/13.6	Included
	Belden	Triax 14	7785A	2.2	9.7	14.5		
	Intercond	14.0mm (PVC or PUR)	RX 75/57	2.2	9.7	14.0		
	Draka	Triax 14 (PVC)	CT2766700	2.2	9.7	14.4	05 4054 400 1154 1154	
	Draka	Triax 14 (PUR)	CT2767000	2.2	9.7	14.5	SE 1051 A004-4 2.1Ls/10s/15.2 KE 1051 A004-4 2.1Ls/10s/15.2	
6	Bedea	Standard 14 (PUR)	-	2.2	9.7	14.4	DSR 1051 A004-4 2.1Ls/10s/15.2	Included
	Bedea	Superflex 14 (TPE flex)	-	2.2	9.7	14.5	DKE 1051 A004-4 2.1Ls/10s/15.2	
	Fujikura	9.6/2.22 EFTXF	-	2.2	9.6	14.5		
	Hirakawa	TRIAX-1/2.22- TUFRET	3118-290	2.2	9.6	14.5		

Please note that the above list is a guideline only, not all cables available in the marketplace are listed.

 $^{^1\}mbox{The cable dimensions listed are reference only, sizes may fluctuate during production. <math display="inline">^2\mbox{Connector}$ types for other cables not listed are by request.



Customer Information

This is the revised edition of Fischer Connectors 1051 series Triaxial connectors and related products. Every effort has been taken to ensure that all details in this catalogue are correct. Fischer Connectors SA reserve the right to make any modification or product update without notice and without obligation to replace or manufacture obsolete parts.

All mechanical and electrical test data given have been measured under normal environmental conditions. This data should not be interpreted for other applications without careful examination of any relevant standards and careful consideration of local operating environments. All connectors shown in this catalogue are intended for applications using both high frequencies and high voltage. Users should ensure that the correct safety procedures are observed during installation and operation.

Certified ISO 9001:2000 and 14001:2004, Fischer Connectors embraces Total Quality through continuous improvement in all processes and procedures. Our company continues to invest in our environment, all of our products are RoHS compliant and we are proud to be incorporated into the global Sony Green Partnership since 2003.

Comprehensive technical information and termination procedures are available for download from our online technical library at www.fischerconnectors.com/technical

Please do not hesitate to contact our worldwide customer service and support network for specialist advice or details of any of our other product ranges. Log on to our website to find the contact details of your local office.



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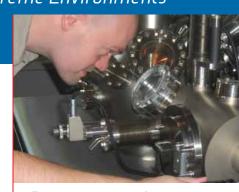
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