

Single-mode cable assemblies

Pigtails and jumpers

Connectorized single fiber cables (pigtails and jumpers) are used in almost all products for cable termination of the FIST system.

Single-mode fiber optic cable assemblies are designed for use in telecommunications, CATV, datacommunications and wide area network applications.

Tyco Electronics offers three ranges of cable assemblies: one including standard connectors, the other including low loss connectors that offer superior optical performance and a consumer grade.

Pigtails are single fiber cables pre-assembled with a connector at one end. They are typically used to terminate primary coated fiber to optical equipment.

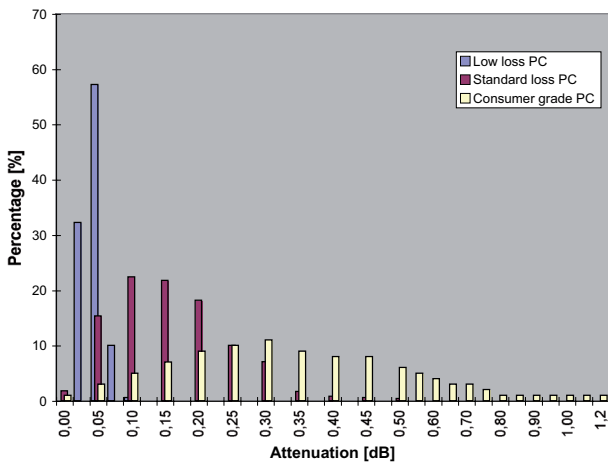
Jumpers are single fiber cables preassembled with a connector at both ends. They are typically used to cross-connect patch panel to patch panel and to inter-connect patch panels to optical equipment.

For all single-mode connectors used on the pigtails and jumpers the matching connector mating adapter kits are available and can be ordered separately.

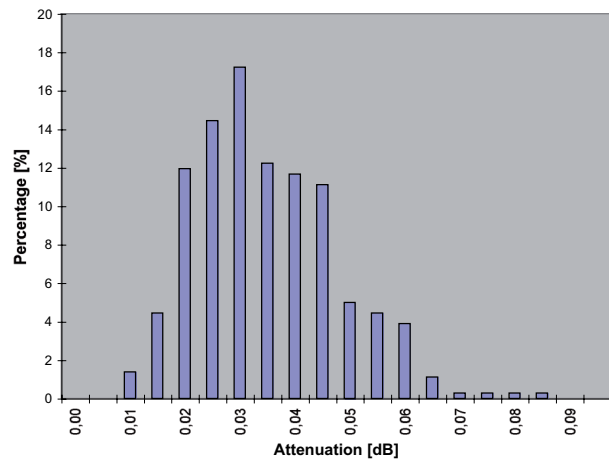
Performance comparison

	Standard connectors S1, S2, S3, F1, F2, ...	Low loss connectors S6, S7, S8, E8	Consumer grade SC, SD, FC, FD, ...
Operating temperature	-40 to +70°C	- 40 to +70°C	-10 to +60°C
Insertion loss	Random 100% (dB)	≤ 0.7	-
	Random 97% (dB)	≤ 0.5	≤ 1.0
	Random average (dB)	≤ 0.2	≤ 0.3
	Max. against reference connector (dB)	≤ 0.3	na
	Checked in factory	1310/1550/1625 nm	1310/1550/1625 nm
Minimum order quantity	1	1	100
IEC 61755-1 grade	C	B	D
TELCORDIA qualification		Designed to meet GR326 objectives	

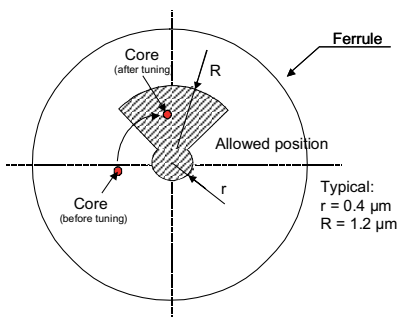
Graph showing the insertion loss spreading of standard, low loss and consumer grade connectors (macro scale)



Graph showing the insertion loss spreading of low loss connectors (micro scale)

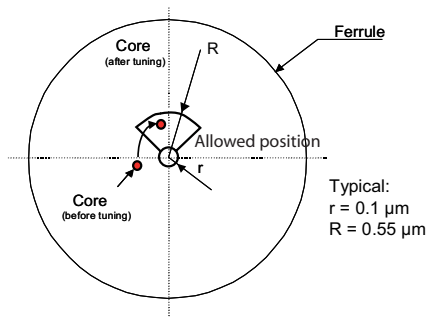


Tuned standard connector



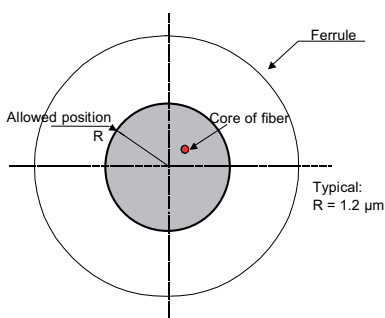
The center of the cores are all distributed in a defined area on **one side** of the center of the ferrule.

Tuned low loss connector



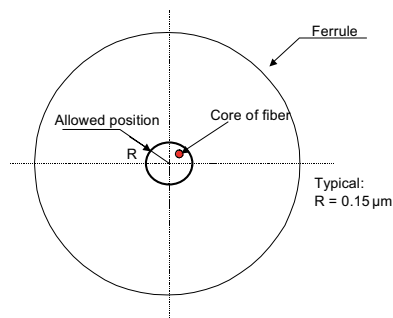
Typical:
r = 0.1 μm
R = 0.55 μm

Consumer grade connector



The center of the cores are randomly distributed around the center of the ferrule.

Centered connector (E8)



The fiber is positioned in the center by making controlled notches in the soft metal layer of the endface of the ferrule.

Ordering information single-mode pigtails and jumpers

OC **X** - **XX** - **XX** **X** **XXXX** - **XX** - **(100)**

Connectorized simplex cable type

P Pigtail
J Jumper

Connector type at end 1

Min.return loss	Standard connector types						
	SC	FC	E2000	LC	DIN	ST	MU
45 dB (PC)						D0	T0
50 dB (UPC)	S1	F1		L1			U1
60 dB (APC 8°)	S2	F2	E9	L 2			
60 dB (APC 9°)	S3						
Min.return loss	Low loss connector types						
	SC		E2000				
50 dB (UPC)	S6						
60 dB (APC 8°)	S7		E8				
60 dB (APC 9°)	S8						
Min.return loss	Consumer grade connector types						
	SC	FC		LC			
50 dB (UPC)	SC	FC		LC			
60 dB (APC 8°)	SD	FD		LD			

Cable length

01, 02, ... 10, 11, ... Always use 2 digits for cable length

Bulk option

Connector type at end 2

Same options as for connector type at end 1. Select **XX** in case of a pigtail.

Cable type

Single mode fiber (9/125μ) according to ITU-T G652

	Diameter	Outer jacket*	Secondary coating
ASCA	2.4 mm	LSZH	semi-tight
ATCB	2.4 mm	PVC	tight
ASIA	1.8 mm	LSZH	semi-tight
ATIB	1.8 mm	PVC	tight
ASEN	900 μm	none	semi-tight
ASEE	900 μm + 0.55 m FOPT tubing	none	semi-tight
ASHA	2 x 1.8 mm	LSZH	semi-tight

* Including reinforced aramid yarn/all LSZH outer jackets are UL "Riser" rated.

Cable length unit

M Meter
D Decimeter (only for jumpers)

Notes

- Connector characteristic: UPC: ultra polished physical contact; APC: angle polished physical contact.
- In case of a hybrid jumper, sort the connector type alphanumerical.
- For bulk packaging (100 pcs), add - (100) to the name string - MOQ = 100 pcs.
- For SC connector types, a red sleeve behind the connector boot distinguishes the low loss connectors from the standard ones.

Remark

Limitations for consumer grade only

- Supported patchcords: 01, 02, 03, 05, 10, 20 m - in ASIA and ASHA cable types.
- Supported pigtails: - 02 and 03 m in ASEN cable type
- 02, 03, 05, 10, 20 m in ASIA and ASHA cable types
- Only bulk packaging (100pcs) is supported. - (100) is mandatory. MOQ = 100 pcs.

Ordering examples

1 x standard pigtail:	1 x	OCP - S1 - 02MASIA - XX	1 pigtail in 1 plastic bag
50 x standard pigtails:	50 x	OCP - S1 - 02MASIA - XX	50 pigtails, each in 1 plastic bag
100 x standard pigtail:	100 x	OCP - S1 - 02MASIA - XX - (100)	1 box with 100 pigtails
200 x standard pigtail:	200 x	OCP - S1 - 02MASIA - XX - (100)	2 boxes with 100 pigtails each
1 x consumer grade pigtail:		Not applicable	
100 x consumer grade pigtails:	100 x	OCP - SC - 02MASIA - XX - (100)	1 box with 100 pigtails
200 x consumer grade pigtails:	200 x	OCP - SC - 02MASIA - XX - (100)	2 boxes with 100 pigtails each

Ordering information single-mode connector mating adapters

Ordering description*	Quantity	Adapter type
OC-ADK-S1-S1-NNCS	1 pc	SC/UPC
OC-ADK-S2-S2-NNCS	1 pc	SC/APC
OC-ADK-S6-S6-NNCS	1 pc	low loss SC/UPC
OC-ADK-S7-S7-NNCS	1 pc	low loss SC/APC
OC-ADK-F1-F1-NNCS	1 pc	FC/UPC
OC-ADK-F2-F2-NNCS	1 pc	FC/APC
OC-ADK-F6-F6-NNCS	1 pc	low loss FC/UPC
OC-ADK-F7-F7-NNCS	1 pc	low loss FC/APC
OC-ADK-E9-E9-NNCS	1 pc	E2000 APC (tuned connector)
OC-ADK-E8-E8-NNCS	1 pc	low loss E2000 APC (centered connector)
OC-ADK-L1-L1-NNCD	1 pc	LC/UPC duplex
OC-ADK-L2-L2-NNCD	1 pc	LC/APC duplex
OC-ADK-D1-D1-NNCS	1 pc	DIN/PC
OC-ADK-T1-T1-NNCS	1 pc	ST/PC
OC-ADK-U1-U1-NNCD	1 pc	MU/UPC duplex
OC-ADK-SC-SC-NNCS	1 pc	consumer grade SC/UPC
OC-ADK-SD-SD-NNCS	1 pc	consumer grade SC/APC
OC-ADK-LC-LC-NNCD	1 pc	consumer grade LC/UPC
OC-ADK-LD-LD-NNCD	1 pc	consumer grade LC/APC
OC-ADK-FC-FC-NNCS	1 pc	consumer grade FC/UPC
OC-ADK-FD-FD-NNCS	1 pc	consumer grade FC/APC

Notes

- For adapters without retainers, replace in the ordering description ADK by ADP.
- For bulk packaging (24 pieces), add suffix - (24) to the ordering description.
Minimum order quantity (MOQ) = 24 pcs.

Ordering example

24 adapters 24 x OC - ADK - SC - SC - NNCS - (24) 1 bag with 24 pcs.

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Tyco Electronics Raychem NV
Diestsesteenweg 692
3010 Kessel-Lo, Belgium
Tel 32-16 351 011 (USA)1-919-557-8900
Fax 32-16 351 697 (USA)1-919-557-8498
www.tycoelectronics.com
www.telecomosp.com
TC 536/BR/12 01/08