

Connection components - fiber optic cabling

Master Class Patchcord



INTRODUCTION:

Master Class fiber optic patchcords are specifically designed to measure and test telecommunication networks and optical elements. The Master Patchcord is equipped with the highest quality master connector of tightly controlled concentricity and bore angle as well as the end face geometric parameters, which determine very low Insertion Loss and high connection repeatability. Optical measurements, in accordance with PN-EN 61280-4-2/-4-1, PN-ISO/IEC 14763-3, ITU-T G.650.3 require the use of the Master Class patchcord. Patchcords can be terminated with two connectors of Master Class or a mixed option: a connector of the Master Class - a standard connector, polished of the Gold Grade.

Fibrain Master Class of fiber optic connectors can be characterized by very low Insertion Loss and increased control of the ferrule's and face geometry. The control over the end face geometry after polishing process of a fiber optic termination provides the following benefits: guarantees optical performance, minimizes IL, and minimizes back reflection.

APPLICATIONS:

- ✓ Measurements concerning telecommunication networks,
- ✓ Testing optical devices,
- ✓ Measuring equipment,
- ✓ Local Area Network (LAN),
- ✓ FTTx, FTTH, FTTB, FTTH networks,
- ✓ CATV solution,
- ✓ CWDM networks.

FEATURES:

- ✓ Comply with IEC, TIA/EIA requirements,
- ✓ High quality and repeatability of the transmission parameters,
- ✓ Connectors are constructed from high quality plastic, resistant to corrosion and high temperatures with UL94-V0 flammability index or the high quality metal resistant to corrosion,
- ✓ Good value for money,
- ✓ High quality ceramic ferrules with tightly controlled concentricity and bore angle,
- ✓ Very low IL value, $IL_{TYP} \leq 0.05$ dB.

TECHNICAL SPECIFICATION:

Parametr	Connectors SM PC	Connectors SM APC
Insertion Loss IL_{max} Acc. IEC 61300-3-34	≤ 0.10 dB	≤ 0.10 dB
Insertion Loss $IL_{97\%}$ Acc. IEC 61300-3-34	≤ 0.07 dB	≤ 0.07 dB
Insertion Loss IL_{mean} Acc. IEC 61300-3-34	≤ 0.05 dB	≤ 0.05 dB
Return Loss RL Acc. IEC 61300-3-6	≥ 55 dB	≥ 65 dB

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Master Connector End Face Geometry

Parametr	Connectors SM PC	Connectors SM APC
Concentricity	$\leq 0.30 \mu\text{m}$	$\leq 0.30 \mu\text{m}$
Bore angle	$\leq 0.20 \text{ degree}$	$\leq 0.20 \text{ degree}$
Apex Offset (AO)	$\leq 30 \mu\text{m}$	$\leq 30 \mu\text{m}$
Radius of Curvature (ROC)	$10 \leq \text{ROC} \leq 20 \text{ mm}$	$7 \leq \text{ROC} \leq 12 \text{ mm}$
Fiber Height (FH)	$-30.0 \leq \text{FH} \leq +30.0 \text{ nm}$	$-30.0 \leq \text{FH} \leq +30.0 \text{ nm}$
Angle (AN)	-	$7.7 \leq \text{AN} \leq 8.3 \text{ degree}$

MATERIALS:

Connector housing: high quality plastic, resistant to corrosion and high temperature with UL 94-V0 flammability index or high quality metal resistant to corrosion.

Ferrule: high quality ceramic ferrule.

Fiber optic cables: singlemode.

ORDERING INFORMATION:

Series	Connector A Class	Connector A Type	Connector B Class	Connector B Type	Length [m]	Cable type	Fiber type	Cable diameter	Color	
MP	M Master	SC	M Master*	SC	001.0	SX patchcord simplex	A SMF G.652D	18	1.8 mm	Y
		SCA	G Gold	SCA			D SMF G657A1			
		LC		LC						
		LCA		LCA						
		FC		FC						
		FCA		FCA						
		E2		E2						
		E2A		E2A						
				ST						
				MU						
				DIN						

* Master Connectors in accordance with the table of availability

MP-MSCA-MSCA-002.0-SX-A-18-Y Fibrain Master Class Patchcord, with SC APC Master class connectors at both side, simplex, 2m length, G652D, 1.8mm cable diameter, yellow.

Detailed reports containing test result with individual measurements of IL and RL as well as end face geometry are attached with Master Class Patchcords.

Type:	Master Class Patchcord, MP-xx	REV: 1.0
Date:	17/12/2014	AŁ
Approved:		BK
Issued::		

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AVAILABLE CONNECTORS:

Connector type	Master Class	Gold Grade
SC PC	✓	✓
SC APC	✓	✓
LC PC	✓	✓
LC APC	✓	✓
FC PC	✓	✓
FC APC	✓	✓
E2000 PC	-	✓
E2000 APC	-	✓
ST	-	✓
MU	-	✓
DIN	-	✓

Important notice

Buyer and/or user of this product has to make sure before using this product that it is suitable for the intended use. All questions of liability relating to this product are subject – in accordance with the prevailing – to the Term of Sale of the selling Fibrain subsidiary.