SC FC ST DIN D4

SENKO Connector and Adapter Series

SENKO Offers 3 Product Grades to Meet Customer Needs

PREMIUM 1 PC Connector Series















CONNECTOR KIT Multi-Piece Connector





Pre-assembled 1pc Type Connector

This premium connector is available in SC, FC, ST, DIN and D4. This connector was designed to meet the highest requirements in the market.

The premium SC and FC Connector is designed to meet and exceed the Verizon FOC TPR requirement, for the OSP application, or for anywhere customers need a high quality product. Premium SM and Premium Low Loss SM (LS) are available. Typical IL of 0.05 for LS SM Ferrule, and 0.08 for Premium UPC. Various option for boots are available.

Pre-assembled 1pc Connector

STANDARD 1 PC

Connector Series

This connector series (SC, FC, and ST) gives value for cost. Using high quality components, these connectors meet IEC, and the general requirement of GR-326.

The same crimp and boot can be interchanged for all the Standard Connector Series (SC, FC, ST).

Multi-Piece Connector Kit

(Ferrule to be Purchased Separately)

Manufactured to the original NTT designed SC Connector kit, it is supplied as a multi-piece unassembled connector. Using high quality components, this connector meets IEC, and the general requirement of GR-326.

Ferrule with Flange are to be ordered separately.

FEATURES COMPARISON CHART				
For SC Premium and SC Standard	PREMIUM LS CONNECTOR	PREMIUM SM CONNECTOR	STANDARD CONNECTOR	CONNECTOR KIT
IL Average Against Master (UPC)	0.05	0.08	0.12	***
IL Mean Value Random Mating (UPC)	0.07	0.12	0.25	***
Verizon FOC TPR-9409	0	0		
GR-326 Core Issue 4	0	0	Δ	
IEC, TIA/EIA JIS Spec	0	0	0	0
IEC Random Mating Grade A*	0			***
IEC Random Mating Grade B*	0	0		***
IEC Random Mating Grade C*	0	0	0	***
RoHS Compliant	0	0	0	0
UL 94V-0	0	0	0	0
4 Position Tuning After Assembly (SC, FC)**	0	0		
MINI Boots	0	0		
Standard Boots	0	0	0	
Long Boots	0	0		0
Premium Crimp Ring	0	0		
Standard Crimp Ring			0	
Pre-assembled 1pc Body	0	0	0	
Push Pull Mechanism	0	0	0	0
Free Floating Ferrule	0	0	0	0
Metal Back Post	0	0	0	0
Premium Duplex Clip	0	0		
Standard Duplex Clip			0	0
Crimp Tool CRT-401	0	0	0	CRT-501

TECHNICAL SPECIFICATIONS Premium and Standard Connector

PRODUCT SERIES	TYPE OF CONNECTOR SENKO P/N	IL AGAINST MASTER (dB)		IL RANDOM MATING (dB)			
		Average IL	Maximum IL	Mean IL	Maximum IL		
Premium Low Loss SM	SC (254-199-xxx), FC (351-109-xx), (215-109-xx)	0.05	0.15	0.07	0.15*1		
Premium SM	SC (254-193-xxx), FC (351-103-xx), ST (215-103-xx)	0.08	0.20	0.12	0.25*2		
Premium Low Loss APC	remium Low Loss APC SC APC (291/294-199-xx), FC APC (292/293-209-xx)		0.15	0.09	0.20		
Premium APC	um APC SC APC (291/294-193-xx), FC APC (292/293-203-xx)		0.25	0.14	0.30		
Premium MM Connector	SC (254-291-xxx), FC (351-201-xx), ST (215-201-xx)	0.10	0.20	-	-		
Standard SM	SC (231-191-xxx), FC (341-101-xx), (233-101-xx)	0.12	0.30	0.25	0.50*3		
Standard MM	SC (231-291-xxx), FC (341-201-xx), (233-201-xx)	0.15	0.30	-	-		
Singlemode		Multimode					
Operating Temperature -40°C to +75°C		-40°C to +75°C					
Durability <0.1dB typical change, 500 matings* <0.1dB typical change, 500 matings*		matings*					

IEC Random mating test IEC 61753-1

- 1 To meet IEC Random Mating Grade A (≤0.07dB mean, ≤0.15dB max for >97% of sample). Grade A Spec is not finalized, above is a recommendation
- 2 To meet IEC Random Mating Grade B (≤0.12dB mean, ≤0.25dB max for >97% of sample)
- 3 To meet IEC Random Mating Grade C (\leq 0.25dB mean, \leq 0.50dB max for >97% of sample)

Random Mating IL

SENKO has categorized its connectors to reflect the IEC Random Mating specified grades A*, B, and C, allowing the end-user to make an informed decision when selecting connectors, of how finished patchcords using SENKO connectors will perform.

Random mating Insertion Loss

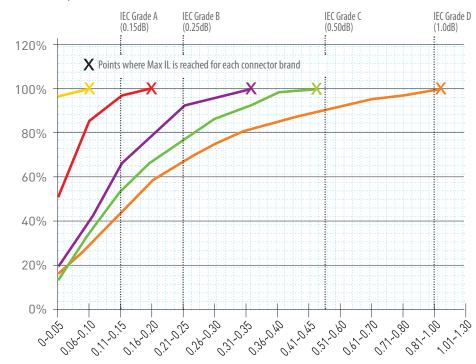
SENKO Low Loss

SENKO Premium

SENKO Standard

High quality Competitor

Low quality Competitor



E-3.0



1 PC Connector (254 Series)

SC UPC PREMIUM







CONNECTOR		FERR	ULE TYPE	Н0	USING		B00	T TYPE	ВО	OT COLOR
254 Prem	ium	193	SM: Premium 125µm	5	Aqua		7	Long 3.0mm	1	Blue
		199	SM: Low Loss 125µm	6	Blue		Α	Long 2.0mm	2	Black
	2	291	MM: Premium 127μm	7	Black		M	Standard 900µm	3	Green
		1		8	Red		N	Standard 2.0mm	4	Red
				9	Beige		Р	Standard 3.0mm	6	Yellow
							J	MINI 900μm	7	White
							K	MINI 2.0mm	8	Beige
							L	MINI 3.0mm	9	Aqua
							F	Flex Angle Boot 3.0mm	1	
							G	Flex Angle Boot 2.0mm		
	254 - 193 - 6F1 ORDER CODE example									

Note: Other ferrule ID size are available SM 81μm SM 126μm SM 125.5μm MM 230μm MM 144μm

Features:

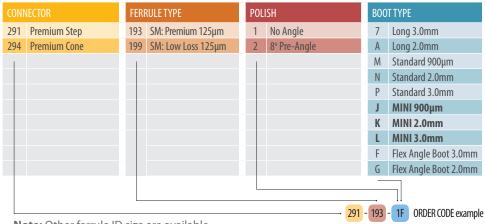
- SENKO's flagship Premium Connector series
- Designed to exceed the requirement of Verizon FOC TPR 9409 requirements
- Premium Low Loss SM, typical IL against Master 0.05dB
- Premium Low Loss SM to meet IEC 61753-1 Grade A random mating requirement of Max 0.15dB
- Premium SM typical IL against Master 0.08dB
- Premium SM to meet IEC 61753-1 Grade B random mating requirement of Max 0.25dB
- 4 direction tuning feature to improve random mating IL
- Crimp tool to be used CRT-401

1 PC Connector (291/294 Series)

SC APC PREMIUM







Note: Other ferrule ID size are available SM 81μm SM 126μm SM 125.5μm

- SENKO's flagship Premium Connector series
- · Designed to exceed the requirement of Verizon FOC TPR 9409 requirement
- Premium Low Loss SM, typical IL against Master 0.07dB
- Premium SM typical IL against Master 0.08dB
- Cone Ferrule type and Step Ferrule type available





· Option of an 8 degree pre-angle cut available

· Crimp tool to be used CRT-401

STANDARD CONNECTOR SERIES



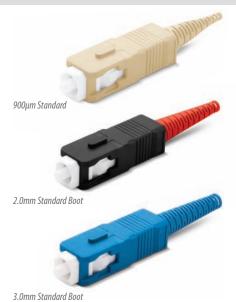
SC UPC STANDARD

HOUSING **BOOT TYPE BOOT COLOR** 231 Standard 191 SM: Standard 125.5μm 5 Aqua P Standard 3.0mm Blue N Standard 2.0mm 2 291 MM: Standard 127μm Blue Black 6 Black Standard 900µm Red Red MINI 900µm 6 Yellow 9 Beige 8 Beige - 231 - 191 - 7N4 ORDER CODE example

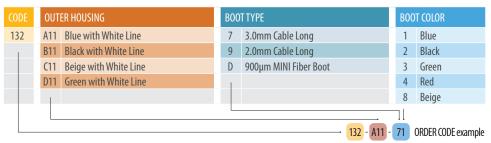
Features:

- Pre-assembled one piece design to reduce assembly time
- Meets and exceeds the TIA/EIA, IEC and JIS SC Specification
- Typical IL against master to be 0.12dB Max 0.3dB
- Crimp tool to be used CRT-401

1 PC Connector (231 Series)



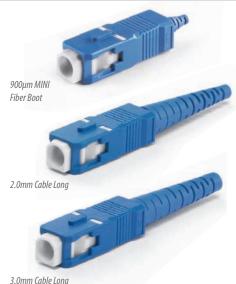
SC CONNECTOR KIT



Features:

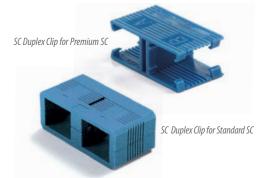
- The original NTT Style Connector Kit design (*Multi Piece Connector*)
- Meets and exceeds the TIA/EIA, IEC and JIS SC Specification
- Various housing and boot color to meet customer need.
- Ferrule to be ordered separately
- Crimp tool to be used CRT-501

NTT Kit Style (132 Series)



SC DUPLEX CLIP







SC CONNECTOR 1.2

The new SC Connector is as strong as a 3mm cable. Reduce your cable size, but keep the strength. The SC Connector for 1.2mm cable is fully compliant to GR-326-Core for Media 1.







CONNECTOR		FERI	RULE SIZE	FER	RULE POLISH	BOOT SIZE					
596	SC APC Step 1.2mm Assembled	193	Premium SM	1	No angle	R	1.2mm				
597	SC APC Step Premium 1.2mm Un-Assembled			2	Pre-angle	- 1					
598	SC APC Cone Premium 1.2mm Assembled			1							
599	SC APC Cone Premium 1.2mm Un-Assembled										
L					→ <mark>596</mark> - 193 - I	R ORI	DER CODE example				

Features:

- Meets the same GR-326 mechanical requirements as a conventional 3mm and 2mm cable
- Exceeds 15lb Proof Test Objective as per GR-326-Core section 4.4.3.4
- Passes the GR-326 TWAL Test for Media 1 (ruggedized cable) as per section 4.4.3.5
- Reduces cable congestion without sacrificing mechanical strength





Duct containing 48 x Ø 3mm cable



Duct containing 48 x Ø 2mm cable



Duct containing 48 x Ø 1.2mm cable

Note: Duct size reduced by 1/6 (approx 16%) compared to a 3mm cable

STANDARD CONNECTOR SERIES E-3.0



SC CONNECTOR 4.8

SPECIFICATION	SINGLEMODE	MULTIMODE				
For SC Connector 4.8	Typical	Typical				
Insertion Loss	Premium Connector UPC	0.08dB	0.15dB			
ilisertion Loss	Premium Connector APC					
Return Loss	≥ 55dB typical (PC)≥ 68dB typical (APC)					
Durability	< 0.1dB change, 500 matings					
Operating Temperature	-40 to +75°C					

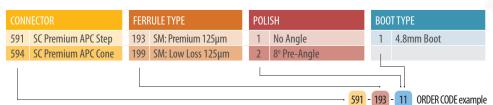
Note: Specifications shown above were obtained using SENKO recommended products and procedures.



4.8mm APC Connector



Note: Other ferrule ID size are available SM 81μm SM 126μm SM 125.5μm



Note: Other ferrule ID size are available SM 81µm SM 126µm SM 125.5µm



4.8mm UPC Connector

Features:

- Compliance with Telcordia, TIA/IEA, IEC and JIS interface specifications
- Low insertion loss & back reflection*
- One-piece construction & pull-proof design
- Free-floating ceramic ferrule
- Precision anti-rotation key and corrosion resistant body
- UL-rated plastic housing and boots in a variety of colors
- Telcordia style boots
- Adapters with choice of metal or plastic housing, mount styles & flange options



4.8mm MM Connector

SC CRIMP TOOL

CODE	CONNECTOR TYPE				
CRT	401 SC, FC, ST One Piece Connectors				
	501 SC Connector Kit 132 series				
	705 SC/LC 1.2mm Connector				
	CRT - 401 ORDER CODE example				





Locking Connector

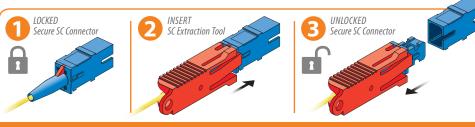


SENKO's patent pending Secure SC connectivity solution is designed to prevent unauthorized or inadvertent changes to cabling networks in highly sensitive applications such as data centers, telecom rooms, enterprise networks including financial, educational, secure IT and military networks, where multiple physical layer access classifications are critical. SENKO's unique 'tamper proof' Secure SC connectivity solution is compatible and can be fitted to any industry-standard SC ports in active network equipment, patch panels and customer premise equipment.

Features:

- · True locked keyed connector security
- Multiple key configurations of access control and tamper-proofing
- Compatible with all industry standard passive and active SC ports
- Industry standard color coding of housings for easy identification and administration of SM and MM Port
- Blockers available for 'protecting' unused ports

SC SECURE



Allows user to plug into any Conventional SC adaptor but requires extraction tool for removal

OPTICAL SPECIFICATION AND CONNECTOR OPTIONS								
Insertion Loss	0.1dB Typical for SM UPC, SM APC, MM PC							
Return Loss 55dB for SM UPC, 65dB for SM APC								
Lock Key Options	4 Key configuration in 4 colors Red, Yellow, Black and White							
Boot / Cable Option	3mm, 2mm boot Flex angle boot also available							
Operating Temperature	-40°C to +75°C							
Mechanical Requirement	To meet and exceed GR-326 Core Issue 4							

CODE		KEY	TYPE	FERE	RULE SIZE	HOU	USING	B00	OT TYPE			BOC	T COLOR
581	Secure SC UPC	Α	Key Type A- Black	193	SM 125μm	6	Blue	K	2.0mm l	Mini B	oot	1	Blue
		В	Key Type B-White	199	Low Loss SM 125µm	9	Beige	L	3.0mm l	Mini B	oot	2	Black
		C	Key Type C-Yellow	291	MM 127μm							5	Red
		D	Key Type D- Red										
CODE		KEY	TYPE	FER	RULE SIZE	FER	RULE PO	LISHII	NG	B00	OT TYPE		
582	Secure APC	Α	Key Type A- Black	193	SM 125μm	1	No Angl	e		K	2.0mm /	Aini Bo	ot
1	Green Cone	В	Key Type B-White	199	Low Loss SM 125µm	2	8º Pre-A	ngle		L	3.0mm N	Aini Bo	ot
		C	Key Type C-Yellow	1									
		D	Key Type D- Red										
	582A 193 2K ORDER CODE example												

SECURE-SC PORT BLOCKER





CODE		KEY	ГҮРЕ	HOU	JSING
SK-PBK	Secure SC Port Blocker	Α	Key Type A- Black	G	Green
		В	Key type B- White	В	Blue
		C	Key Type C-Yellow	T	Beige
		D	Key Type D- Red	1	
				- SK-	PBK - A - G ORDER CODE exampl

SECURE-SC KEYED EXTRACTION TOOL

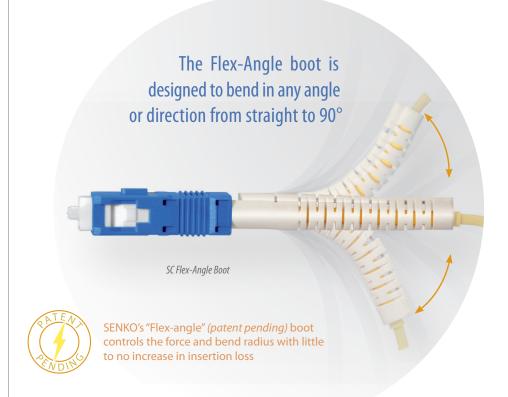


EXTRACT KEY		COLO	R CODE	HOUSING					
SK-KEY	Secure SC Port Blocker	Α	Key Type A- Black	(None)	Standard Type				
I		В	Key type B- White	1	Side Road Type				
		C	Key Type C-Yellow						
		D	Key Type D- Red						
				SK	- KEY - A ORDER CODE example				



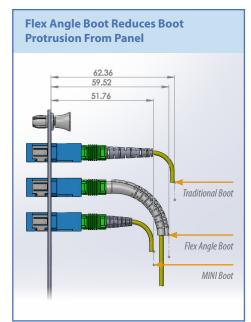
SC FLEX ANGLE BOOT

SENKO's new 2.0mm and 3.0mm boot addition for the Premium SC connectors. The Flex-Angle boot is designed to bend and maintain any angle or direction from straight to 90°. The boot is molded over a single stainless steel wire and can be easily positioned by hand. The internal wire holds the boot at the desired angle or direction.





SC Flex-Angle Boot









PRODUCT SERIES	воот	TYPE OF CONNECTOR		
Premium SC 2.0mm	HW-25001-xx	254-xxx-xGx		
Premium SC 3.0mm	HW-25002-xx	254-xxx-xFx		
Standard SC 2.0mm	HW-25001-xx	231-xxx-xGx		
Standard SC 3.0mm	HW-25002-xx	231-xxx-xFx		

E-3.1



TOP (True One Piece) **Adapter 243/248 series**

SC TOP SIMPLEX ADAPTER





Note: 1. Custom colors available upon request 2. High TG Hook meets GR326 TG100 requirements





SC One Piece Adapter, No Weld Type



SC Standard Adapter, Welded Type

The new patented one piece housing design prevents breakage of the adapter due to the absence of ultrasonic weld type construction.

TOP (True One Piece) **Adapter 243/248 series**

SCTOP DUPLEX ADAPTER





Features:

- One piece solid body, no welding point (patent pending)
- Built in panel mounting plate
- Rattle free wings to support tight fit in the panel (patent pending)
- Inner shutter and Outer shutter ready for eye safety
- Flange type, and No flange type available

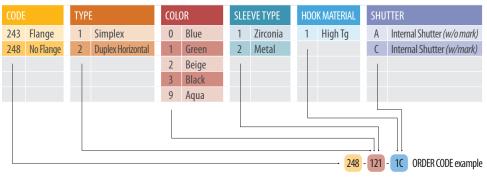


10 STANDARD CONNECTOR SERIES E-3.0



SCTOP ADAPTER WITH SHUTTER

SC Adapter with Shutter (Internal and External)





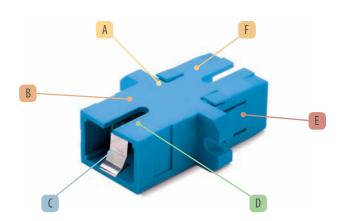




SC Simplex with Flange and External Shutter

SCTOP ADAPTER FEATURES







Features:

- Four (4) Anti-Rattle "wings" prevent the freedom of the adapter to wiggle in a topto-bottom direction when snapped into adapter panels
- An integrated panel clip is molded into the adapter's plastic housing which eliminates the need for any added metallic panel clip
- The integral panel clips have the dual role of also preventing the adapter to wiggle in a side-to-side direction
- Recesses on both sides of the adapter allow the current external shutter to be used
- Rattle Free Wings
- One Piece Solid Body
- (**Shutter Ready**
- High TG Hook meets GR326 TG100 requirements
- Integrated Mount Clip
- Anti Fungus Plastic UL 94 V-0

E-3.0



Premium Adapter 242/247 series

SC PREMIUM ONE PIECE SIMPLEX ADAPTER





SC One Piece Adapter

The SENKO patented design, one piece adapter is stronger than the conventional, seam-welded SC adapter giving improved side loading strength and the preventing adapter breakage. SC Simplex adapters have been tested to the Verizon FOC TPR 9409 standard and sleeves used in this adapter have been tested and passed the TRP requirements. High TG hooks are used to meet the GR-326 requirements. Shuttered versions are also available.

ADAPTER SPECIFICATION	ZIRCONIA SLEE	VE	METAL SLEEVE			
For SC, FC and ST Adapters	Typical	Max	Typical	Max		
Insertion Loss	0.05	0.20	0.10	0.30		
Sleeve / Ferrule Withdraw Force	200gf - 600g	gf				
Operating Temperature	-40° to +75°					
Durability	<0.1dB typical change, 500 matings*					

Note: Zirconia tested with SMF Fiber, metal sleeve tested with MMF





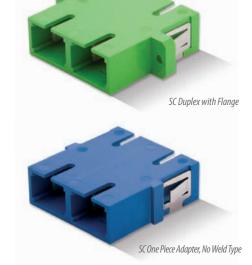
Note: Custom colors available upon request

Features:

- SENKO's highest quality adapter series
- Patented one piece housing design prevents housing breakage
- Designed to exceed the requirement of the Verizon FOC TPR 9409 requirement
- High TG hook prevents unwanted hook
- opening in OSP application
- Typical insertion loss under 0.05dB and Max IL of 0.20dB
- Various housing color to meet customer's requirement
- Shutter option ready for eye safety

Premium Adapter 242/247 series

SC PREMIUM ONE PIECE DUPLEX ADAPTER





Note: Custom colors available upon request





Conventional Adapter Welded type

The new one piece housing design prevents breaking of the adapter due to the absence of ultrasonic weld type construction.

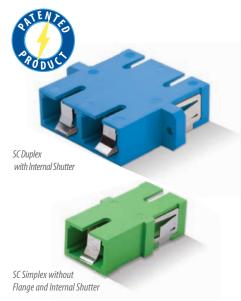
12 STANDARD CONNECTOR SERIES



SC PREMIUM ONE PIECE ADAPTER WITH SHUTTER

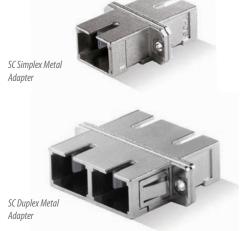
Internal Shutter





SC METAL ADAPTER





SC SIMPLIFIED CONNECTOR AND ADAPTER

