



C-Blue



GPS application

D-Bordeaux



GSM/Mobil Phone

DC- 6 GHz

The FAKRA (Automobile Expert Group) has therefore defined a standardised connector system for the various communication applications in cars. Our FAKRA-compliant SMBA connectors have a standardised coding system with thirteen different codings for easy and fast assembly. The locking system, with primary and secondary locking, guarantees maximum assembly and contact reliability and perfect data transfer even in parts of the car subject to high stresses, such as vibration.

TECHNICAL SPECIFICATIONS

SMBA[®] connectors are equipped with a standardised coding system which permits easy and fast assembly using thirteen possible codings. The locking system with primary and secondary locking guarantees highest reliability of assembly and contact. Even in vehicle areas with high stress, for example vibrations, SMBA[®] connectors will always guarantee correct data transfer.

- Electrical specifications:

Impedance	50 ohms
Operating frequency	DC – 6 GHz
Return loss	≥ 18 dB typ
Insertion loss at 4 GHz	≤ 0,1 dB
Insulation resistance	≥ 1 GOhm
Contact resistance:	
Center contact	≤ 5 mOhm
Outer contact	≤ 2,5 mOhm
Withstand voltage	≤ 750
Operating Voltage	≤ 335 V max
Current carrying capacity	≤ 1,0 ADC
RF leakage	> 55dB

- Mechanical Characteristics

Engagement force (With or without latch)	Max. 25 N
Separation force (without latch)	Min. 2 N - max. 25 N
Retention force (With latch)	Min. 100 N
Mating cycles	≥ 50
Design according to	DIN 72594, SAE / USCAR

- Environmental specification

Operating temperature range	IEC 68-2-2, -40°C up to 105°
Temperature change	IEC 68-2-14
Vibration	IEC 68-2-64
Humidity (Cyclic)	IEC 68-8-30
Shock	IEC 68-2-29-35G

- Material

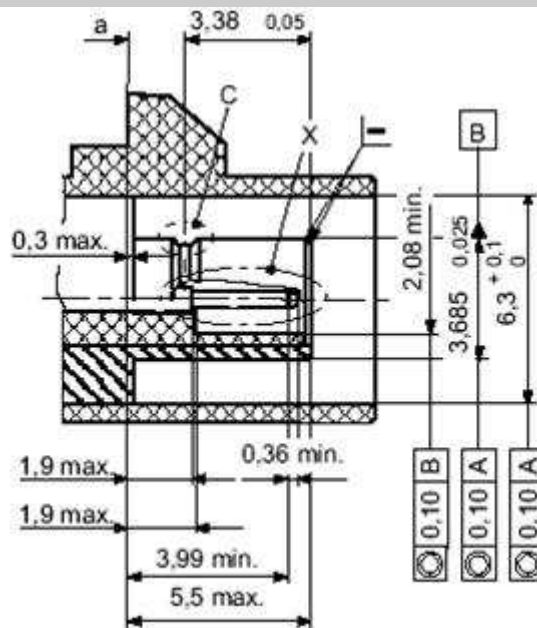
Outer contact Male Female	Brass Brass
Center contact Male Female	Brass Copper beryllium or Bronze
Spring washer	Stainless steel
Insulator	PTFE/PE/SPS
Plastic Housing	PA Diecast
Crimp ferrule	Copper Brass

- Plating

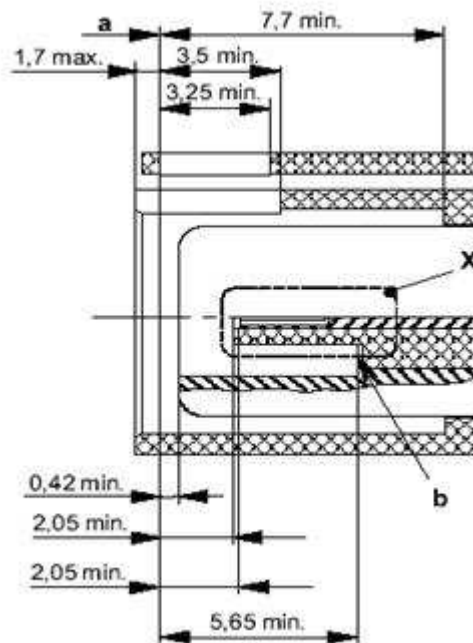
Outer contact	
Standard plating	2 μm Ni min
Alternative plating	0,8 μm Au min
Center contact	0,8 μm Au min
Other parts	2 μm Ni min

- Interface dimension

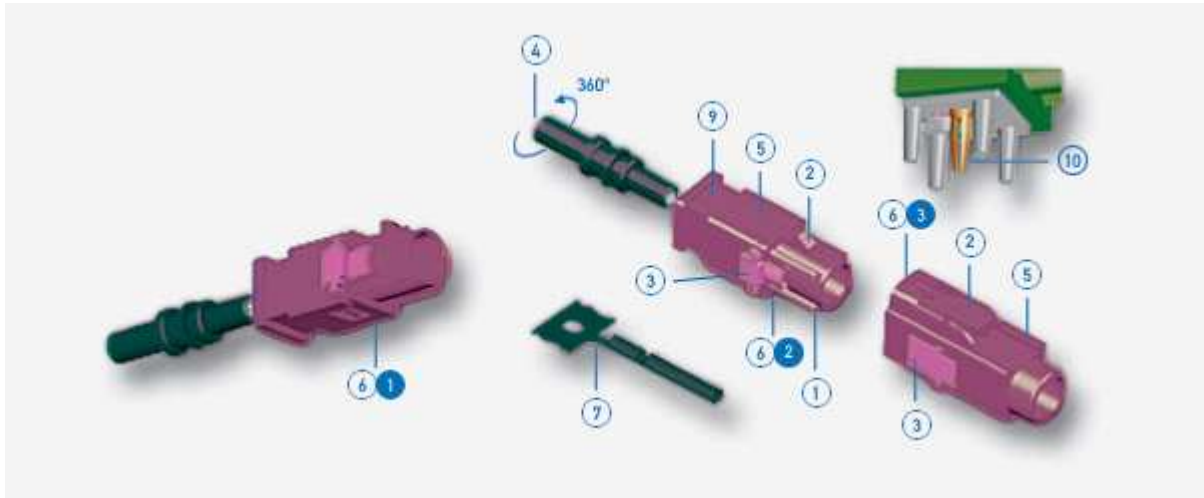
Plug



Jack

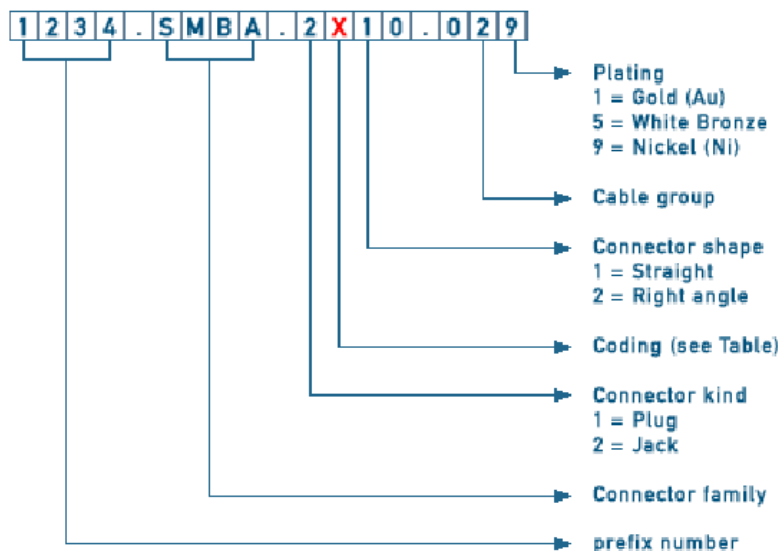


- SMBA® benefits at a glance



















1. Sophisticated mechanical and color coding system with 13 different codes.
2. Secure primary locking system with tactile and audible locking.
3. Secure secondary locking with high axial retention force of the coaxial insert within the plastic housing.
4. 360° rotatability of the connector without torque transmission to the cable.
5. Protection of coaxial insert against mechanical damage and vibration due to the shockproof plastic housing.
6. High mounting security: a) Pre-assembling locking features ensure correct positioning of the coaxial insert during assembly. b) Secondary locking prevents the locking if not fixed properly. c) Protection frame and protection strip protect against unintentional demating.
7. Efficient automatic assembling due to continuous strip mounted stamped and formed center contacts.
8. Compact, space and weight saving design.
9. Fixation groove for chassis mounting.
PCB connectors with lateral tilting resistance.

- Type identification















- Coding

Jack	Device applications	Colour	RAL	Coding	Plug
	Analogue radio without supply voltage	Black	9005	A	
	Analogue radio with supply voltage	Creme-white	9001	B	
	GPS: telemetry or navigation	Blue	5005	C	
	Cellular phone	Bordeaux-red	4004	D	
	TV 1	Green	6002	E	
	TV 2	Brown	8011	F	
	Remote control keyless entry Zentralverriegelung	Grey	7031	G	
	GPS: telemetry and navigation	Violet	4003	H	

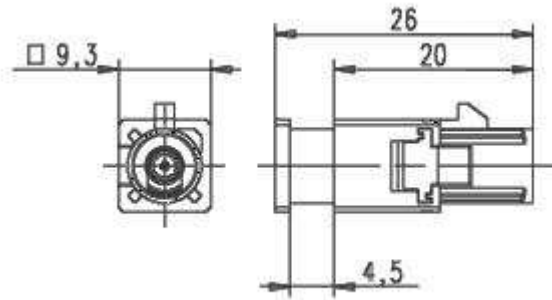


- Coding

Jack	Device applications	Colour	RAL	Coding	Plug
	Remote control pre-heaters or bluetooth	Beige	1047	I	
	Radio with IF output (Antenna diversity)	Curry	1027	K	
	not defined	Carmin-red	3002	L	
	not defined	Pastel-orange	2003	M	
	not defined	Pastel-green	6019	N	

Exemple of Type D Fakra connectors

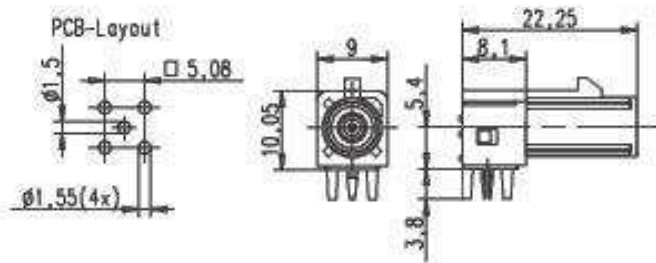
- Cable mount plug



Part Number	3401.SMBA.1D10.019
Cable type	ET 124899 1,2 mm
Plating	1 = Au 9 = Ni
Coding	D
Cable termination	Full crimp version
Feature	Assembly instruction Cable group 1,4: M156 Assembly instruction cable group 2, 3, 8: M157 Can be rotated 360° See assembly table for crimp and tooling

Exemple of Type D Fakra connectors

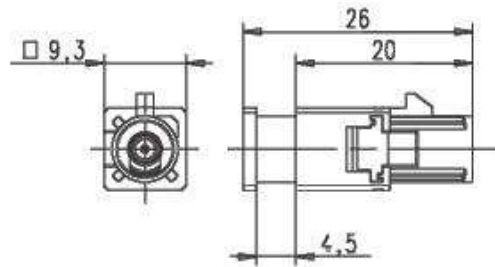
- PCB angle plug - locking position 12 : 00



Part Number	3307.SMBA.1D20.009
Plating	1 = Au 9 = Ni
Coding	D
Feature	Anti-tilt Other primary locking Positions on request Through hole mounting technology

Exemple of Type C Fakra connectors

- Cable mount plug

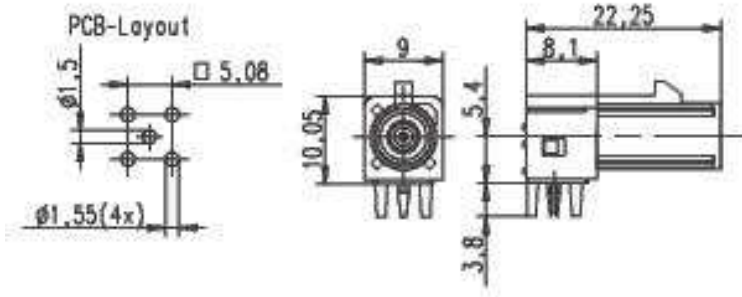


Coaxial connectors

Part Number	3401.SMBA.1C10.019
Cable type	ET 124899 1,2mm
Plating	1 = Au 9 = Ni
Coding	C
Cable termination	Full crimp version
Feature	Assembly instruction cable group 1, 4: M156 Assembly instruction cable group 2, 3, 8: M157 Can be rotated 360° See assembly table for crimp and tooling information

Exemple of Type C Fakra connectors

- PCB angle Plug - locking position 12 : 00



Part Number	3307.SMBA.1C20.009
Plating	1 = Au 9 = Ni
Coding	
Cable termination	C
Feature	Anti-tilt Other primary lockin Positions on request Through hole mounting technology