

FAKRA Technical Data (Code 59)

Applicable Standards

Interface according to	ISO 20860-1, SAE/USCAR-18
Quality tested according to	ISO 20860-2

Electrical Data

Impedance	50 Ω
Frequency range (depends on cable)	DC to 6 GHz
Return loss	≥ 18 dB
Insertion loss	$\leq 0.1 \times \sqrt{f(\text{GHz})}$ dB
Insulation resistance	$\geq 1 \times 1$ G Ω
Center contact resistance	≤ 5 m Ω
Outer contact resistance	≤ 5 m Ω
Test voltage	750 V rms
Working voltage	335 V rms
Contact current (depending on cable size)	≤ 1 A DC
RF-leakage	≥ 65 dB

Mechanical Data

Mating cycles	≥ 25
Engagement force (single, standard)	≤ 25 N
Disengagement force	≥ 2 N
Retention force latch	≥ 110 N
Retention force primary lock	≥ 80 N
Retention force secondary lock	≥ 60 N

Environmental Data

Temperature range	-40 °C – +105 °C
Vibration/mechanical shock	ISO 20860-2 clause 9.1
Thermal shock	ISO 20860-2 clause 9.2
Temperature/humidity cycling	ISO 20860-2 clause 9.3
High temperature exposure	ISO 20860-2 clause 9.4

Materials

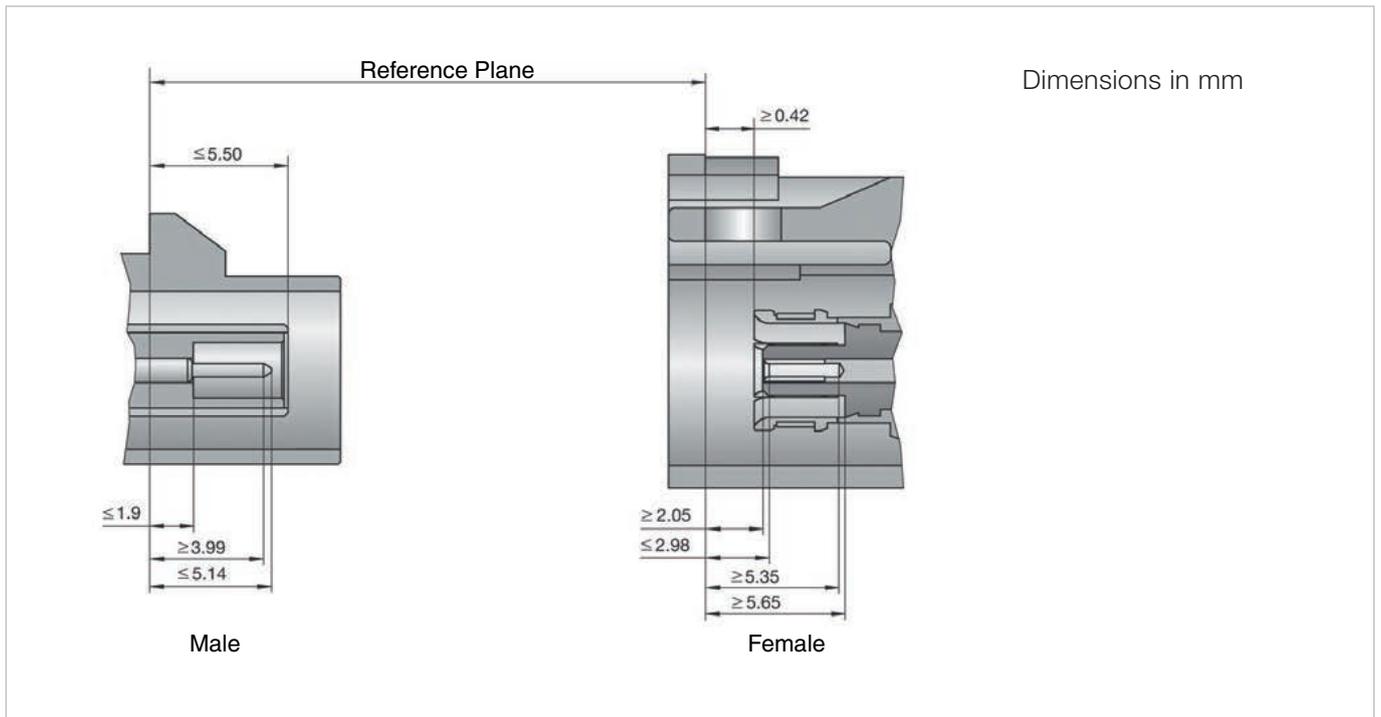
Outer contact	CuZn, CuSn, Zn, Stainless steel
Center contact	CuZn, CuBe, CuSn
Dielectric	PTFE, PA, LCP, PBT
Gasket	Silicone, Rubber
Crimping ferrule	Cu
Plastic housings	PBT, PA, PPE, POM
Secondary lock	PBT, PA, PPE

Platings

Outer contact	Au, Ni, Sn
Center contact	Au

Rosenberger-connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

FAKRA Interface Dimensions



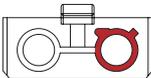
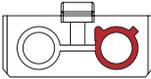
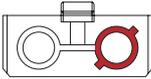
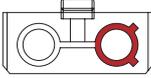
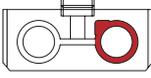
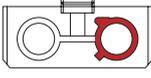
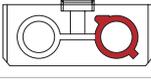
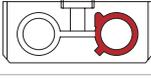
Housing Designs

Single	
Double 8 mm	
Double 12.7 mm	
Quad	

FAKRA Number Code

Connector or Housing only							Connector including Housing
59	K	1	30 -	1	M4	A4	-y
							Coding
							A Black
							B White
							C Blue
							D Bordeaux
							E Green
							F Brown
							G Grey
							H Violet
							I Beige
							K Curry
							L Carmin red
							M Pastel orange
							N Pastel green
							Z Waterblue
							-y Blank coding
							Plating
							01-Z9 Cable group
							00 Blank
							0M Surface mount device
							xx Blank cable group
							1 Crimp
							3 Solder crimp
							4 PCB mounting
							5 Solid center contact
							Successive number
							1 Straight
							2 Right angle
							5 Panel connector with round flange
							K Female, jack
							S Male, plug
							W Tool
							Z Plastic housings and accessories
Connector series, 59 FAKRA							

FAKRA Coding

Coding		Jack		Plug		Color / RAL-No. (Similar)
		Single	Double	Single	Double	
A	Radio without phantom supply					Black/ 9005 
B	Radio with phantom supply					White/ 9001 
C	GPS: telematics or navigation					Blue/ 5005 
D	GSM Cellular phone					Bordeaux/ 4004 
E	TV1					Green/ 6002 
F	TV2					Brown/ 8011 
G	Remote control keyless entry					Grey/ 7031 
H	GPS: telematics and navigation					Violet/ 4003 
I	Radio controlled parking heating					Beige/ 1001 
K	Radio with IF					Curry/ 1027 
L	Not defined					Camine red/ 3002 
M	Not defined					Pastel orange/ 2003 
N	Not defined					Pastel green/ 6019 
Z	Neutral coding					Waterblue/ 5021 

Some of the Rosenberger-FAKRA connectors are available in the above listed codings.

Colors of the plastic housings are in accordance with the listed RAL colours, minor colour differences due to manufacturing are possible.