



### Overview

The AUTOMATE® Mini-FAKRA connector series, the latest in automotive interconnect technology, is a space-conscious, high-performance interface central to the next generation of vehicle applications. Supporting up to 20 Gbps data transmission, AUTOMATE connectors reduce installation space requirements by up to 80% compared to previous FAKRA products. Color coded housings provide visual guidance during the assembly process and mechanical keying options prevent mis-mating of connectors. These connectors are intermateable with all industry standard options.

USCAR compliant options undergo rigorous tests that simulate field performance for approximately 150,000 miles or 15 years as well as environmental testing such as thermal shock, vibration/mechanical shock, temperature/humidity cycling and high temp exposure.

### Features and Benefits

- Compact, modular housing
- Multiport configuration
- Saves installation space by up to 80%
- Low engagement and disengagement forces
- Impact resistance

### Applications

- 360-degree surround view cameras
- ECUs and Compute modules
- Autonomous vehicles
- Advanced Driver Assistance Systems (ADAS)
- GPS navigation
- 3D instrument cluster
- High bandwidth infotainment
- Remote start and vehicle controls
- V2X communication

### Amphenol RF

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For more information visit [www.amphenolrf.com](http://www.amphenolrf.com)  
or call 800.627.7100



### Ordering Information

#### AUTOMATE Type A Mini-FAKRA PCB Connectors

Part Number	Description	USCAR Compliant
FM1-NXRP-PCB-1	Single-Port PCB Right-Angle Plug	No
FM1-NXRP-PCB-3	Single-Port PCB Right-Angle Plug	Yes
FM1-NXSP-PCB-2	Single-Port PCB Straight Plug	Yes
FM2-NXRP-PCB-1	Dual-Port PCB Right-Angle Plug	No
FM2-NXRP-PCB-3	Dual-Port PCB Right-Angle Plug	Yes
FM4-NXSP-PCB-1	Quad-Port PCB Straight Plug	Yes
FM4-NXRP-PCB-1	Quad-Port PCB Right-Angle Plug	No
FM4-NXRP-PCB-2	Quad-Port PCB Straight Plug	Yes

**Note:** See Key Code Chart on reverse side for all available codes.  
Contact factory for mating assembly information.



FM1-NXRP-PCB-1



FM2-NXRP-PCB-1



FM4-NXRP-PCB-1



FM4-NXSP-PCB-1

### Custom Solutions

**AUTOMATE Cable Assemblies** – Application specific solutions designed per customer requirements

**AUTOMATE Sealed Solutions** – Increased protection for harsh environment applications

**Contact Amphenol RF sales for additional information**

# Amphenol® RF

## Technical Specifications

### Electrical

Impedance	50Ω Nominal
Frequency Range	DC – 9 GHz
Return Loss	1.12 (-25dB) Max @ DC – 3 GHz
	1.22 (-20dB) Max @ DC – 3 GHz
	1.67 (-12dB) Max @ DC – 3 GHz
Dielectric Withstanding Voltage	750 VRMS (800 VRMS for Single & Dual Versions)
Current Rating	≤2A DC
Center Contact Resistance	<5mΩ
Outer Contact Resistance	<5mΩ

### Mechanical

Mating Cycles	25 Cycles Min
Engagement Force	≤50N
Disengagement Force	≤5N

### Environmental

Temperature Range	-40°C to +105°C
RoHS	Compliant with exemption 6C

### Materials

Body	Zinc Alloy, Matte Tin Finish
Outer Contact	Brass, Matte Tin Finish
Center Contact	Copper Nickel Alloy, Gold Plated
Housing	PA4T
Insulator	LCP

Note: Technical specifications are typical and may vary by specific part number and design. See component drawing for additional details.

## KEY CODE CHART

Keying							
Code	A	B	C	D	E	F	Z
Color	Jet Black 	Cream 	Signal Blue 	Claret Violet 	Leaf Green 	Nut Brown 	Water Blue 

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