CABLE ASSEMBLIES

FAKRA Cable Assemblies

– Precision for High-Frequency Applications.

With FAKRA cable assemblies from ASSMANN WSW components, you can rely on an industry-recognized standard that combines top electrical performance with mechanical robustness and error-proof handling. Whether in automotive, telematics, robotics, or machine vision—our assembled FAKRA cables deliver precise signal transmission under the most demanding conditions.

Electrical Performance

- **Impedance**: 50 Ω nominal – compliant with ISO 20860 and USCA standards
- **Frequency range**: DC to 6 GHz (typical); up to 9 GHz possible depending on cable and connector type
- **Data rates**: Up to 8 Gbps for high-speed applications such as FPD-Link, GMSL, and MIPI
- **Return loss**: ≥ 18 dB (up to 6 GHz) – optimal signal reflection minimization
- **Insertion loss**: ≤ 0.1 × √f(GHz) dB – low signal loss across the entire frequency bandwidth
- **Insulation resistance**: ≥ 1 GΩ – high electrical safety
- **Contact resistance**: ≤ 5 mΩ (inner conductor), ≤ 2.5 mΩ (outer conductor)

Mechanical reliability

- **Mating cycles**: ≥ 25 (standard), ≥ 5 (waterproof version)
- Actuation force: ≤ 25 N – ergonomic handling with secure locking
- **Cable types**: RG-58, RG-174, RG-316, RTK-031, LEONI Dacar 302-3, TPE/PUR-sheathed coaxial cables
- **Cable diameter**: Standard 3 mm, flexibly adjustable
- **Temperature range**: -40 °C to +105 °C (up to +125 °C depending on version)
- **13 mechanical and color-coded designations** plus one neutral designation (Z)—unambiguous identification and prevention of incorrect connections
- **Color codes**: A, B, C, D, E, F, G, H, I, K, L, M, N, Z—industry-standardized
- **Audible and tactile locking** – clear insertion feedback for installation and maintenance

Applications

- **Automotive & Telematics**: Camera systems, antennas, ADAS and autonomous driving, satellite radio (SDARS), cellular communication

- **Industrial Applications**: Machine vision, real-time transmission of HD video data, robotics, medical technology, and laboratory automation

Custom lengths available upon request

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Coding	Jack	Color	
A		Jet Black	
B		Cream White	
C		Signal Blue	
D		Claret Violet	
E		Leaf Green	
F		Nut Brown	
G		Blue Grey	

Coding	Jack4	Color	
H		Heather Violet	
I		Beige	
K		Curry	
L		Camine Red	
M		Pastel Orange	
N		Pastel Green	
Z		Water Blue	

ASSMANN WSW components

LEADING CUSTOMIZED CONNECTIVITY SOLUTIONS

CONNECTORS | THERMAL MANAGEMENT | CABLE ASSEMBLIES | CAPABILITIES

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