

JRE UFI-1

Universal Filtered Interface

Eight independent filtered lines on screw terminals — one interface for almost anything you need to run through the chamber wall.



Shown with the two supplied pendant cables and terminal blocks

AT A GLANCE

- **Eight independent filtered lines** for virtually any low-voltage connection — DC, audio, serial, sensor, control
- Passes signals from **DC to ~480 MHz** while rejecting cellular, LTE, WiFi and Bluetooth — **>70 dB** above 700 MHz, **>80 dB** from 1 GHz through 6 GHz
- **Removable screw-terminal blocks** (16–30 AWG, solid or stranded) — land any device wiring in seconds, swap blocks for fast reconfiguration
- **No capacitive loading on the signal**, unlike capacitor-filtered DB connectors — stays clean for sensitive analog and higher-rate serial
- Ideal for **automotive Ethernet, CAN, FlexRay, BroadR-Reach, 100/1000BASE-T1, LVDS, RS-232/422/485, TRS/XLR/AES-EBU audio, 20 mA current loop and J/K thermocouples**
- Up to **250 mA per line** at under 1.5 Ω , rated to 60 V
- **Fully passive** · rugged machined-aluminum housing · 100% made in USA

DESCRIPTION

The JRE UFI-1 is eight independently low-pass filtered conductor lines built into a machined-aluminum housing that gives exceptional RF shielding. It passes desired signals from DC to about 480 MHz while rejecting everything above 700 MHz, so you can carry almost any low-voltage signal across the chamber's shielded walls without opening an RF leak. Connection is by removable screw-terminal block — no soldering, no fixed connector to design around.

That freedom from capacitive loading is the UFI-1's real advantage. A capacitor-filtered DB connector shunts each pin to ground through a cap, which loads and rounds off fast or sensitive signals; the UFI-1's inductive low-pass design rejects the wireless RF without hanging that capacitance on

your data. Audio — microphones, speakers, TRS, balanced XLR, AES/EBU — passes easily. So do RS-232/422/485, thermocouples and 20 mA current-loop devices. Automotive Ethernet in its many connector styles is straightforward: a simple swap of the terminal block adapts the interface.

High-performance inductors carry up to 250 mA per path at under 1.5 Ω and a 60 V rating, so the lines handle real working signals, not just instrumentation-level ones. The UFI-1 ships with two 12-inch pendant cables — an RJ-45 modular connector on one end and a removable 8-position screw-terminal block on the other — plus a small flat-bladed screwdriver. Additional terminal blocks are available from JRE or most electronic distributors.

TYPICAL INSERTION LOSS — ALL EIGHT LINES

10 MHz	0.1 dB
150 MHz	1.2 dB
250 MHz	1.5 dB
350 MHz	2.0 dB
480 MHz	3.0 dB
700 MHz	> 70 dB
800 MHz – 6 GHz	> 80 dB

ELECTRICAL

Lines	8, independently filtered
Balanced impedance	100 Ω typ.
Power capability	60 VDC @ 250 mA
Max DC resistance per line	1.5 Ω

CONNECTION

Interface	RJ-45 female jacks
Terminal blocks	8-position, removable
Wire accepted	16–30 AWG, solid or stranded
Supplied	Two 12" pendant cables plus flat-bladed screwdriver

DIMENSIONS & MOUNTING

Outside	2" H × 3.2" W × 0.8" D
Mounting screws	50 × 80 × 20 mm
Clearance hole	4-40, included
Drilling template included for standalone installation.	0.1285" (#30 / 3.3 mm)

COMPATIBILITY

Works with any JRE RF shielded test enclosure or screen room. JRE's enclosure line provides superior RF isolation from 10 MHz to over 6 GHz, covering the full range of commercial, private and government communications systems. For high-speed data — Ethernet, USB, HDMI — use the purpose-built JRE filtered interfaces rather than a general-purpose line filter.