## What does Readily Available Parts mean on the LEMO web site?

Non-standard parts have unique features to meet specific applications, and typically take 6-12 weeks to deliver. Because it takes only one non-standard component to make a product no longer readily available, the less specific you are in the advanced search, the wider the range of search results. The search engine tends to default to readily available parts whenever possible.

# How does the advanced SEARCH apply Volts and Amps to hybrid connectors or those with different pin sizes?

In general, the search engine makes sure that at least one contact meets or exceeds required "Volts" entry, and at least one meets or exceeds the "Amps" criterion.

For example, the 2B.708 insert has one high voltage contact (8,000 Volts, 4 Amps) and eight low voltage contacts (750-1,500 Volts, 10 Amps).

The software will compare your voltage criterion with the best-case voltage specification (in this case, high voltage contact) and the best-case current specification (in this case, low voltage contact). In some hybrids, the same contact exceeds both criteria; in some others, like the example above, two different contacts qualify. For more information, please refer to the pdf catalog document.

# SEARCH did not find a connector based on my entry. How should I modify my entry to increase the likelihood?

It depends on which search you use. Here are some of the more common scenarios:

#### Part Number Search:

Common typographical errors include: Using the digit "5" instead of the letter "S" and vice-versa Using the letter "I" instead of the digit "1" Using the letter "7" instead of the letter "Z" and vice-versa If you cannot resolve this issue, please contact us at **info@lemo.com** for further assistance.

# Advanced (or occasionally basic) Search:

Check your color requirement. Your connector of choice might be in the database in other colors (contact LEMO to get your color). Clear the Cable Ø fields and repeat the search. Do not specify a connector diameter or length unless it is absolutely critical.

Try the S Series instead of B and vice versa (same for E and K).

Choose a different Shell Style.

Try both solder and crimp termination, or printed circuit board (PCB).

You can also use the Connector Design Connector Quote Form for further assistance from LEMO (typically takes one business day).

### **Product Details Page:**

Change the sequence if you want to modify more than one parameter, or go to the advanced search page and start over. The "modify" choices at the end of the product details page include only "adjacent" values (i.e., the search engine looks for parts like the current one, except that they differ in the one aspect you are trying to modify. For example, if you are looking at an F Series connector, then you will see different numbers of low-voltage contact configurations. However, you will not see all the insert styles that LEMO offers in other series.

#### What do the following terms mean in the connector SEARCH?

## Low voltage contact

A low voltage contact has no additional protection, such as an insulating sleeve, and is intended to run low voltages. However, depending on the distance to other contacts and the shell, its breakdown voltage under laboratory conditions can still be hundreds, or even a few thousand volts. LEMO recommends applying only operating voltages low enough to be considered safe in the target application.

## **Download the Concentric Contact Identification Guide**

## **Coaxial contact**

A coaxial contact is a concentric mechanical design to achieve a given electrical impedance. Electrical impedance is the ratio of the electrical field and the magnetic field of a wave traveling in a cable or through a connector and should not be confused with the contact resistance (typically a very small fraction of one ohm). Typical electrical impedances are 75 ohm for audio and video signals (analog radio and television) and 50 ohm for most other applications.

#### Download the Concentric Contact Identification Guide

## Triax contact

A triaxial contact is a coaxial contact with an additional shielding. Triaxial cables and contacts provide better electromagnetic compatibility (EMC) and cause less radio-frequency interference (RFI). Because they are most common in the broadcast industry, they usually have 75 ohm impedance.

#### Quadrax contact

A quadrax connector design has a center contact plus three concentric contacts, allowing connection of four wires. Because you can rotate the connector in any direction it provides convenience. Quadrax designs often are used for audio (stereo) applications. In general they do not have a controlled impedance.

## Download the Concentric Contact Identification Guide

## Thermocouple contact

A thermocouple is an electric temperature sensor consisting of two different metals. In order to reduce measurement errors due to temperature differences in a connector, it is important that connector contact materials match the metals used to make the temperature sensor. LEMO's thermocouple connectors have pairs of thermocouple contacts (enter number of contacts = 2, 4, 6, etc. in "Thermocouple" on the Advanced Search page). To specify a thermocouple connector with a grounding contact, enter 2 in "Thermocouple" and 1 in "Low Voltage".

#### Fluidic/pneumatic contact

Fluidic contacts for medical, dental and industrial applications allow you to connect single or multiple tubes and hybrid electrical/fluidic cables. They can also be used for air.

## **Fiber Optic**

LEMO offers a variety of ceramic and metal ferrules that can accept different fibers. These ferrules are grouped into four categories. Each category has been designed for a certain number of contacts (type F1/F2: multiple fiber optic or electrical/optical hybrids, type F3/F4: connectors with just one fiber optic contact) and ferrule hole sizes (type F2/F4: 125 to 140 um, type F1/F3: 140 to 1650 um).

## **Shell Style**

Shell Style is a way of grouping connectors into categories. The most common shell styles are free (straight or elbow) plugs and fixed (front/rear mount) receptacles.

"Front mount" indicates that the connector normally is mounted from the outside (front side) of a panel. "Rear mount" indicates that the connector normally is mounted from the inside (rear side) of a panel. Printed circuit board connectors in general belong to the "rear mount" style because most of them are soldered in place before the board gets mounted inside a chassis.

## **Insert Style**

Insert Style groups various contact configurations, such as single contact, multiple contact, coaxial, fiber optic, hybrid, etc.

## **Termination Style**

Termination Style describes how you connect your cable or printed circuit board to the connector.

Solder: soldered to a stranded or solid wire. Crimp: used for stranded wires. Printed Circuit Board: has straight leads. Elbow-PCB: has 90 degree elbow leads to a through-hole printed circuit board. Fiber optic terminates, optical fiber, and Fluidic/Pneumatic: intended for tubes. Thermocouple: special solder contacts for sensors based on the thermoelectric effect.

## Explanation of frequently-used acronyms seen in searching connectors:

- LV: Low Voltage contact(s)
- HV: High Voltage contact(s)
- CX: Coaxial contact(s)
- TX: Triaxial contact(s)
- QD: Quadraxial contact(s)
- FO: Fiber optic contact(s)
- ThC: Thermocouple contact(s)
- FI/Pn: Fluidic/pneumatic contact(s) Z: Coaxial or triaxial impedance
- (50 or 75 Ohm)
- Ø Diameter in mm (unless specified otherwise)
- PCB: Printed Circuit Board
- PCB- Elbow (90 degree) design for
- 90: printed circuit board

# The web site displays product details different than the LEMO catalog. Which one is right?

Despite extra care, changes or typographical and other errors may occur after the catalog is printed. Please report a discrepancy by contacting **info@lemo.com**. LEMO will correct the information in the catalogs, and update the web site.

Also, please be advised that specifications, drawings, and other technical information are subject to change at any time and without notice. If you depend on particular features, properties, or performance characteristics, then please contact **info@lemo.com** LEMO to discuss your individual needs.