



# LEMO's Remote Handling Connectors ●

N Series Connectors

for Robotic and

Telemanipulator Applications



## ● N Series Connectors

- LEMO quality, reliability and safety for remote handling applications
- Superior push-pull self-latching system offers unparalleled ease-of use, simplifying robotic connection
- Levered action for low-power manipulators
- 5N Series specifically designed for high-force power manipulators
- Precision construction from stainless steel, for harsh environments
- Chemical and radiation resistant



**LEMO**®

**LEMO's N Series** connectors are designed for safety and reliability in small to large-scale remote manipulation applications. This series is ideal for glove box and hot cell applications, and has a wide range of contact configurations including electronic, fiber optic, and hybrid inserts.

- Remote-handling push-pull latching
- Strong cylindrical shells designed for forceful manipulator grips
- Straight, 90°, or 120° Plugs
- Fixed or free sockets
- Multiple keying options
- Lanyard options for unlatching
- High contrast visible band on plug and receptacle
- Hybrid types (multicontact, single-contact, coaxial, triaxial, high voltage & fiber optic)
- Multicontact types 2-64 contacts
- Up to 50A / 8000V
- IP66/68 sealing when mated (IEC60529)
- Gold plated brass/bronze contacts
- Solder or crimp contacts
- MIL-C-22520F 4 point crimp contacts
- Cable diameters from 7.6mm - 28.5mm (.299 - 1.122")
- Adaptors / Couplers: N Series to K and E Series<sup>1)</sup>
- AISI 304 Stainless-Steel shell

## Model Description

<b>ASG</b>	Fixed adapter to K/E series plug, vacuum tight, nut fixing	<b>FMY</b>	Elbow plug (120°) for lever, with cable clamp
<b>ASY</b>	Fixed adapter to K/E series plug, vacuum tight, nut fixing, with lever	<b>FZG</b>	Straight plug with cable clamp
<b>BZG</b>	Cap for receptacle	<b>FZY</b>	Straight plug for lever, with cable clamp
<b>BZY</b>	Cap for receptacle with lever	<b>HSG</b>	Fixed receptacle, vacuum tight, nut fixing
<b>EDG</b>	Fixed receptacle, square flange, 4 screw fixing	<b>HSY</b>	Fixed receptacle, vacuum tight, nut fixing, with lever
<b>EDY</b>	Fixed receptacle, square flange, with lever, 4 screw fixing	<b>PBG</b>	Fixed receptacle, square flange, 4 screw fixing, with cable clamp
<b>FMG</b>	Elbow plug (120°) with cable clamp		

## Shell Material and Treatment

Component	Material (Standard)	Code		Surface treatment (µm)	
		T	U	Cu	Ni
Outer shell, collet clamp, pre-positioning sleeve, washer	AISI 304 / 304L	●	●	Without treatment	
Latch sleeve	Special stainless steel	●	●	Without treatment	
Pin, screw	Stainless steel	●	●	Without treatment	
Other metallic parts	Brass (UNS C 38500)	●		0.5	3
	AISI 304		●	Without treatment	
O-ring and gasket	EPDM	●	●	Without treatment	
Sealing Resin	Epoxy	●	●	Without treatment	
Insulator	PEEK	●	●	without treatment	

## Cable Range

Series	Cable
2N	7.6 - 10mm
3N	6.1 - 12mm
4N	9.1 - 17mm
5N	9.1 - 28.5mm

**Note:**  
the surface treatment standard is as follows:  
– nickel FS-QQ-N-290A

## Types

Multiple Low Voltage	Hybrid Low Voltage / Coaxial
Coaxial	Hybrid Low Voltage/Fiber Optic
Fiber Optic	Multiple High Voltage
Fluidic / Pneumatic	Thermocouple
Hybrid Low / High Voltage	Custom Designs

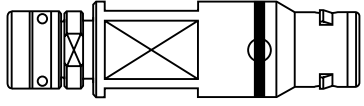
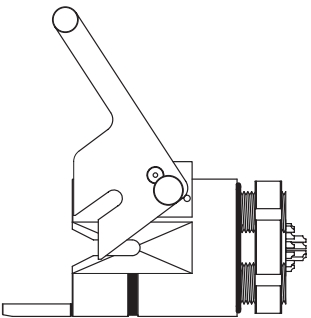
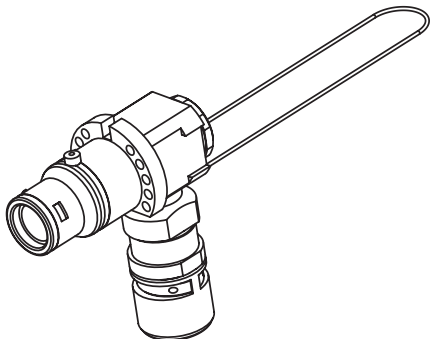
**Note:**  
Contact LEMO for electrical details

**LEMO's 5N Series** connectors are designed with robust customer-configurable keying, minimizing the chance of misconnections. A total of 32 keying options provide connection safety, reduced cost for spares.

The 5N Series also offers an increased jaw grip face (1 inch), for use with large power manipulators.

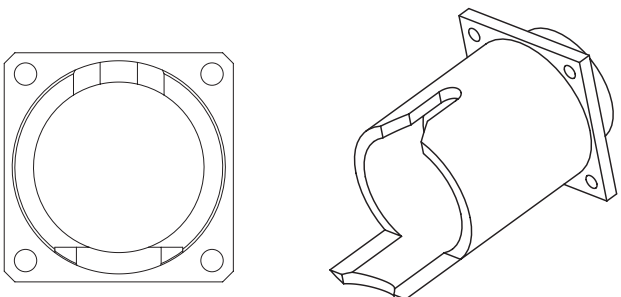
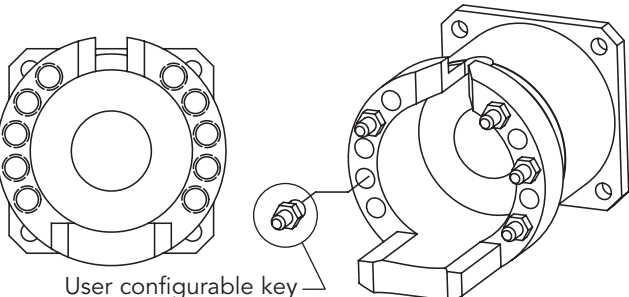
### Latching

Available in 3 options for varying robotic strength and dexterity.

Flat Grip Textured Surface (Standard) - 2N-5N	Lever - 2N-5N	Lanyard - 2N-5N
<ul style="list-style-type: none"> <li>• Standard shell style with flat grip textured surface for remote handling</li> <li>• Jaw grip compliance in mating process</li> <li>• Ideal for high power manipulators</li> </ul> 	<ul style="list-style-type: none"> <li>• Receptacle lever assists in reduced force mating and unmating (ex. 5N series: Standard latching is 40 - 50lbf insertion*. Lever latching is 3 - 17 lbf insertion*.)</li> <li>• Plug provides 2 lever gripped lateral pins</li> <li>• Ideal for low power manipulators</li> </ul>  <p style="text-align: right; font-size: small;">*Without contacts</p>	<ul style="list-style-type: none"> <li>• Ease in unlatching and grip retention in all manipulators</li> </ul> 

### Positioning

Standard positioning offers landing tray and notched entry for self-correcting alignment in robotic applications. Optional user configurable version provides further flexibility.

G-Positioning (Standard) - 2N-5N	U-Keying <sup>2)</sup> (Robust) - 5N only
<ul style="list-style-type: none"> <li>• Standard alignment &amp; positioning for 2N to 5N Series</li> </ul> 	<ul style="list-style-type: none"> <li>• Same features as the standard G-positioning, plus:</li> <li>• 32 user configurable keying options</li> </ul>  <p style="text-align: center; font-size: small;">User configurable key</p>

**Note:**

- 1) N Series to K Series adapters accommodate multiple low voltage contacts; N Series to E Series adapters accommodate coax, triax and unipole contacts. Remote handling connectors also available in other series. Contact LEMO for details.
- 2) Patent Pending



Located 50 miles north of San Francisco, LEMO USA offers a nationwide network of product specialists, sales consultants and distributors, who work closely with customers in offering sales and technical support.



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