

# S SERIES

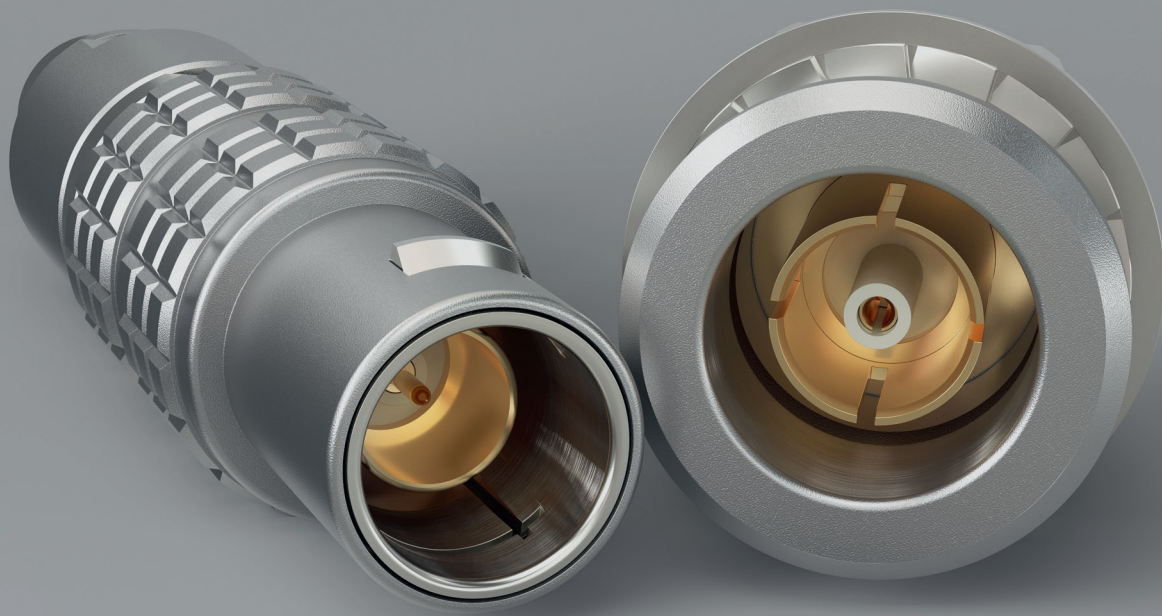
## 12G-SDI 4K UltraHD



12G-SDI 4K UltraHD Single link

Robust Push-Pull connector

Wide range of models for TV and Medical applications



### The unique link to the Ultra High Definition

LEMO launches the new 1S.275 Series for 12G-SDI, 75 Ohm robust push-pull connectors compliant with the SMPTE ST 2082-1 standard for signal/data transmission. The 12G-SDI allows a transmission rate of 12 Gbit/s meeting the 12G-SDI transmission standard and offering eight times the bandwidth of a normal HD-SDI in a single link.

This connector is LEMO's response to the fast-paced technology evolution and market requirements towards high transmission rate, lighter structure, low latency demand in live events for the Audio Video Broadcasting (AVB) market segments as well as other market segments for medical imaging platforms like endoscopy and laparoscopy amongst others.

This connector is optimized to allow a smooth transmission with high accuracy, reliability, low return loss, and can replace a dual 6G or Quad 3G links. Today many 4K professional cameras use Quad link BNC connectors simultaneously to transmit 12G signals for UHD displays. The new LEMO product will allow the transmission of 12G-SDI from a compact single link connection for UHD displays.

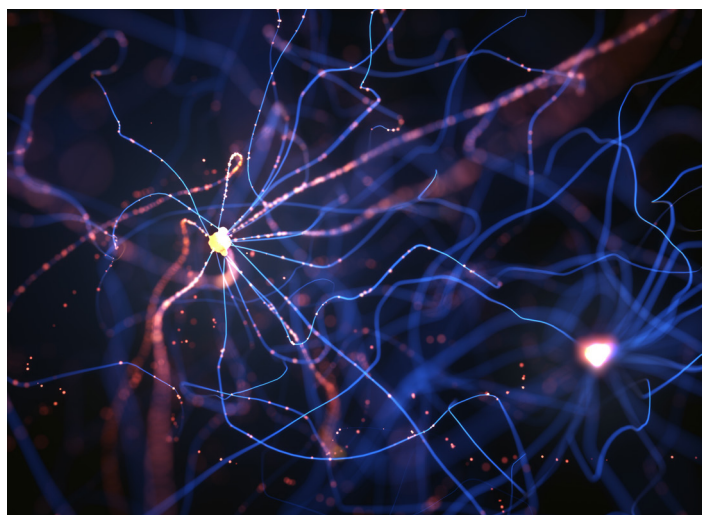
OPTICAL & RF  
YOUR AUDIO VIDEO SOLUTIONS



**Product safety notice & disclaimers:**

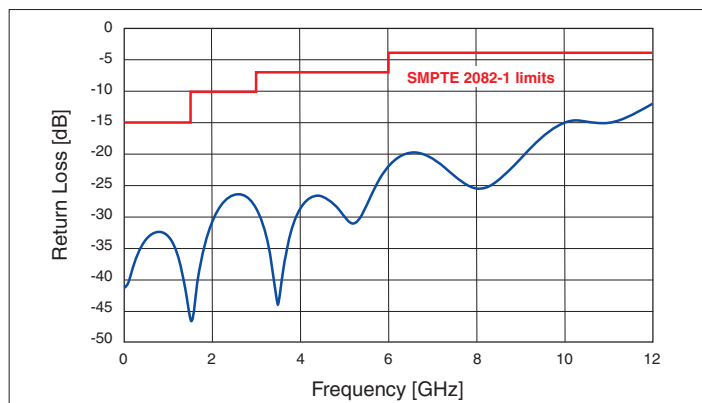
Please read and follow all instructions specified on <https://www.lemo.com/en/about-lemo/product-safety-notice-and-disclaimers>

## Models

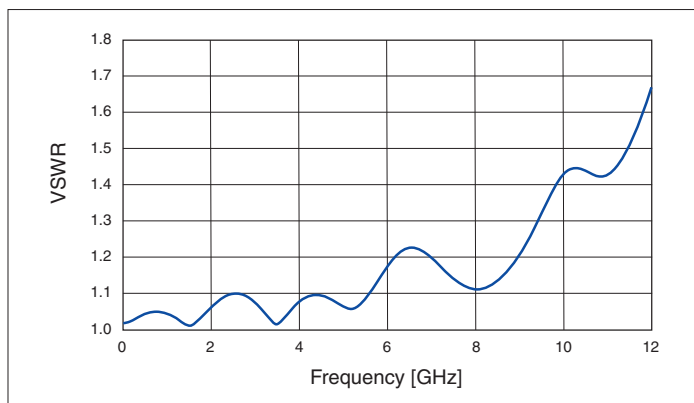


## Electrical characteristics

Characteristics	Values
Impedance	75 $\Omega$
Central contact resistance	$\leq 8 \text{ m}\Omega$
Insulation	$> 10^{12} \Omega$
Test voltage ( Ue )	1.7 kV DC
Rated current	3 A
Shell electrical continuity	$\leq 3.5 \text{ m}\Omega$



Measured return loss against frequency curve for fixed socket and plug



Measured voltage Standing Wave Ratio against frequency curve for fixed socket and plug

## Key features

High quality and highly reliable interconnect solutions are ensured for the broadcasting and medical segments through the following key features :

- Security of the Push-Pull self-latching
- Compact design for space savings
- Coaxial 75  $\Omega$
- 360° screening for full EMC shielding
- Wide temperature range - 55°C / + 260°C<sup>1)</sup>
- Blind mating
- Bend relief colour coding
- Finger proof
- Index protection on mated condition IP50
- Number of mating cycles > 1000
- Latch retention force (average) 250 N
- UL compliant
- Knurled crimping collet for improved cable retention
- Low VSWR/Return loss

<sup>1)</sup> operating temperature for the bridge is: - 20°C, + 90°C

## Main benefits

### Single link

12G-SDI 4K UltraHD

### Push-Pull

- No quarter turn - less space
- High mating cycles > 1000 cycles

### Small diameter (1S Series)

- Ø 12 mm vs. BNC 14.5 mm
- Higher panel density of connector



**Robust** connectors  
(Push-Pull vs. BNC)

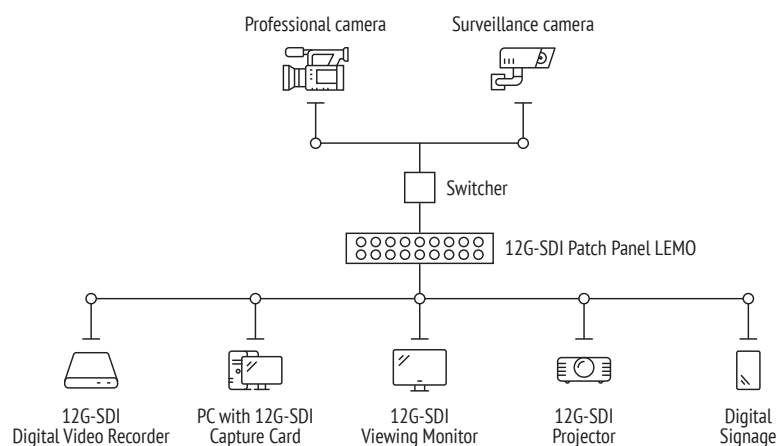
### New S design

(Chocolate bar shape, easy grip & handling)

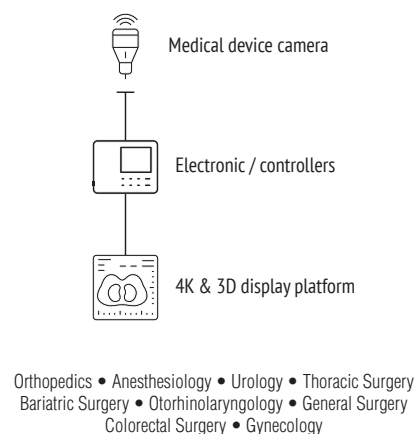
**High lifetime & low maintenance**

## Main applications

### Broadcast and Security



### Medical imaging platform



## Approved cable

To guarantee an optimum performance for the cable-connector solution at high frequencies, LEMO recommends to use 12G-SDI cables which are specifically designed for 12 Gbit/s, 4K (SMPTE 2082) ultra high definition transmission (UHD).

### Matrix to determine max. transmission length

Video cables	Single link 12 Gb/s (m)	Dual link 6 Gb/s (m)	Quad link 3 Gb/s (m)	OD (mm)
BELDEN 4855R-4K UHD <sup>1)</sup>	45	66	94	4.04
DRAKA ULTRA HD PRO 50 UHD <sup>1)</sup>	50	74	108	4.50

<sup>1)</sup> The maximum transmission distances are based on 40 dB maximum loss at half clock frequency.

## Applications



Broadcast



Medical



Medical imaging



Test &  
measurement



Unmanned  
vehicles

## About LEMO

LEMO is the industry pioneer in the design and manufacture of high-quality and high-performance interconnect solutions. LEMO's Push-Pull and ratchet coupling connectors are found in a variety of challenging application environments including medical, industrial & machines, automotive, test & measurement, defense, audio-video and telecommunications.

LEMO has been designing precision connectors for more than 75 years. Offering over 90,000 combinations of product that continue to grow through custom specific designs, LEMO and its brand REDEL, NORTHWIRE and COELVER currently serve more than 150,000 customers in over 80 countries around the world.



## Cable assembly

LEMO is renowned for the quality of its connectors and this is matched by the cable assemblies supplied.

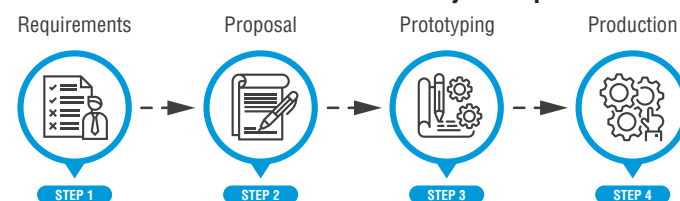
Commitment to quality is supported by 100% testing of all assemblies. Capabilities include potting and overmolding to support rapid prototype and development through to high volume series production. LEMO subsidiaries are equipped with modern equipment, much of it custom built specifically for customer needs. These include cut and strip machinery, robotic assembly and automatic test equipment to ensure maximum reliability and confidence in LEMO cable assemblies.

## Custom solutions

Contacts, connectors and integrated cable assembly solutions meet the most demanding technical market requirements. LEMO's connector solutions and value-added services are characterized by their exclusive focus on meeting the customer's needs.

- Precise implementation of application-specific requirements regarding design, functionality, cost and exclusivity
- Custom connector solutions derived from standard products
- One-to-one local expertise
- Quick prototyping and production turn around

### Custom interconnect solutions based on your requirements



Discover the wide range  
of configurations in our catalog

