## LEGEND





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# **THE WORLD OF LAPP** Machine Tools



### LAPP GROUP



### Reliably connecting the world

Headquartered in Stuttgart, Germany, the Lapp Group is a leading supplier of integrated solutions and branded products in the field of cable and connection technology. The Group's portfolio includes standard and highly flexible cables, industrial connectors, customized system solutions, automation technology and robotics solutions for the intelligent factory of the future, as well as technical accessories.

As a manufacturer with our expertise in the development, design and manufacture of cables, system products and cable accessories, we can guarantee that Lapp will provide you with the quality that you require and demand for.

You can always rely on quality from Lapp wherever you are in the world.

### LAPP INDIA



### Reliably connecting India

Lapp India is a 100% subsidiary of the Lapp Group. Having started its operations in 1996, Lapp India provides about 150,000 km per year of power, control, instrumentation and data cables along with connectors, accessories and EndtoEnd Systems to over 5000 customers pan India. Our customers are spread across different industry segments such as automation, textile, automotive, machine tools, oil and gas, renewable energy, process industries, as well as in the infrastructure and building sectors.

- 23 Sales offices close to customers all over India & 5 service points
- 300 employees committed to best serve customers
- Strong network of 150 dealers
- 2 manufacturing units Bangalore and Bhopal
- 5 Warehouses
- State of the art laboratory
- Fully fledged Innovation and Engineering Centre





- Abrasion-resistant







### **OUR BRANDS**









**UNITRONIC**<sup>®</sup>



















**HITRONIC®** 

### SKINTOP<sup>®</sup> MS-SC-M



- Suitable for cables with and without inner sheath
- Also suitable for continuing the cable screen to another connection
- · Low-resistance screen contact, optimum EMC protection
- · Highly conductive, flexible EMC contact for clamping various screen diameters
- Few operation steps, easy to assemble

### SKINTOP<sup>®</sup> MS-M ATEX BRUSH





SKINTOP® SDV-M ATEX

SKINTOP® SDV-M ATEX

- · Faster and less complicated assembling than any other system
- Optimum, low-resistance 360° screen contact
- · Simple cable adjustment
- · Easy to uninstall
- · Anti-static, safe, and impact-resistant at cold temperatures

### **SKINTOP® CLICK / SKINTOP® CLICK-R**



- Fewer parts, counter nut no longer needed
- Save up to 70% of the time with the innovative CLICK system
- · Simple, free assembly in any position
- Vibration protection
- No thread required

### **SKINTOP® CUBE**





- Variable range of clamping force
- Vibration-safe module fi xation
- Strain relief
- Oil resistance
- Simplifi ed servicing due to easy assembling and disassembling





The machine tool industry is the backbone of the manufacturing industry. The main objective of this industry is to build machines which will work towards reducing operational downtime for its customers. According to IMTMA, the industry is increasingly moving towards sophisticated CNC machines driven by key segments like automobiles and consumer durables. This calls for increased focus on identifying and sourcing the right quality of cabling solutions which enhances the productivity, precision and reliability of the machine tool.

The industry demand for slim, light weight, highly flexible cables which not only meet the global standards but also overcome the challenges faced due to harsh environment conditions, continuous motion and high temperature. Lapp offers its array of cables, connectors, cable glands, conduits, marking systems and accessories for the machine tool industry. In addition, the OLFLEX<sup>®</sup> CONNECT cable assembly solution from Lapp ranges from cable or custom servo assemblies to complex drag chain

### LAPP PROMISES

#### Peace of mind

High German Quality | In Compliance with Global Standards | Over 40000+ Products for various applications

#### Value for money

Low Maintenance | Long Service Life | Durable & Reliable

### We are where you are

23 Sales Offices | 5 Warehouses & 5 Service Points in India | 150 Dealers across India | First online cable store - shopasia.lappgroup.com/in

### Technology leadership

2 Manufacturing Plants in Bangalore & Bhopal | State of the Art Laboratory | Fully Fledged Innovation & Engineering Centre | Over 58 years of Manufacturing Excellence & Application Knowledge







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applications. This plug and play solution displays superior German quality and high competence for the machine tool industry, hence being the best choice for the fast growing industry.

#### Required characteristics of cables and accessories for machine tool industry:

**a.** Cables should be oil resistant. Oil has a tendency to get absorbed into the cable resulting in swelling and softening which eventually degrades the tensile property of the cable.

**b.** Cables must also be able to sustain vibrations.

**c.** The cable glands/connectors must be ingress protected. The cables should be dust resistant and must be protected against temporary/continuous immersion in liquids.

**d.** The cables must comprise of abrasion resistant insulation.

**e.** The cables must possess the right amount of flexibility as most industrial machines have moving parts.



### ÖLFLEX<sup>®</sup> CLASSIC 110

VDE-registered oil-resistant PVC control cable for a wide range of applications



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LAPP KABEL STUTTGART ÖLFLEX" CLASSIC 110 VDE Reg. Nr. 7030 (6

- Flame-retardant according IEC 60332-1-2
- Good chemical resistance, see catalogue appendix T1
- Oil-resistant according to DIN EN 50290-2-22 (TM54)
- Suitable for outdoor application and for direct burial

### ÖLFLEX<sup>®</sup> ROBUST 215 C

Proven all-weather control cable - screened and resistant to a wide range of chemical media

LAPP KABEL STUTTGART ÖLFLEX® ROBUST 215 C (6

- Good chemical resistance to ester-based hydraulic fluids
- Ozone, UV and weather-resistant according to EN 50396 and HD 605 S2
- Flexible down to -40°C
- · Low-capacitance design
- Number-coded cores







• Robust power supply connector

- Straight cable entry into the contacts
- Compact, robust metal housings size H-A 4

**EPIC® POWER LS1 G5 AND D6** Circular connectors for servomotors and power supply





• High power at smallest installation space, Optimal solution for electric motors

- EMC-optimised design
- · Safety use in field environment by high protection class

## ÖLFLEX<sup>®</sup> HEAT 260 C MC

Copper-screened polytetrafl uoroethylene cables for most extreme loads

### **EPIC<sup>®</sup> POWER M17 A1**

Circular connectors for servomotors and power supply



- Version with less contacts for higher current
- Compact design: small space requirements
- EMC protection
- High Power with smallest space requirements

- Copper braiding of screened version complies with EMC requirements and protects against electromagnetic interference
- Outstanding resistance against acids, alkalis, solvents, lacquers, petrol, oils and many other chemical media
- · High dielectric strength and high abrasion resistance with high elongation and tear resistance.
- · Adhesion-free insulation materials Weather and ozone resistant
- Flame retardant acc. to IEC 60332-1-2



## EPIC® HA 4, SEH WITH GLAND, PMB, METALLIC V













### HITRONIC<sup>®</sup> PCF DUPLEX FD cables

LAPP KABEL STUTTGART HITRONIC® PCF DUPLEX FD FRNC-PUR

For highly flexible applications

#### • Flexible PCF cable compatible with all BUS systems

- · For data transmission in fi eld bus systems, such as PROFIBUS, INTERBUS etc.
- Possible transmission wavelengths: 650 nm and 850 nm
- · Complies with requirements for all BUS systems
- Outer sheath fl ame-retardant and halogen-free

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Low capacitive hybrid servo cable with PVC outer sheath for static use - certified for North America

LAPP KABEL STUTTGART ÖLFLEX® SERVO 7DSL CE

- Maximum DSL transmission lenght: 100m
- Flammability: UL/CSA:VW-1, FT1 IEC/EN: 60332-1-2
- Multi stranded certification reduces part varieties and saves costs.
- Low-capacitance design, Oil-resistant & EMC-optimised design

### HITRONIC<sup>®</sup> POF DUPLEX CABLE

For optical signal transmission in industrial applications

LAPP KABEL STUTTGART HITRONIC" POF DUPLEX PE-PUR

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX HEAVY PE-PUR

LAPP KABEL STUTTGART HITRONIC® POF DUPLEX FD PE-PUR

- · Duplex plastic fibre optic cable with strain relief and PUR outer sheath
- FD cable version: for flexible applications (power chains)

HITRONIC<sup>®</sup> HRH Breakout Cable

LAPP KABEL STUTTGART HITRONIC" HRH1700 12G 50/125 OM2

LAPP KABEL STUTIGART HITRONIC" HRH400 2G 50/125 OM3

- · Outer sheath fl ame-retardant and halogenfree
- · Resistant to abrasion, oil, microbes and hydrolysis
- Adhesion-free

For indoor use

• FD cable version: 5.000.000 bending cycles



### ÖLFLEX<sup>®</sup> SERVO FD 798 CP

Screened encoder cable with PUR outer sheath for highly dynamic power chain application - certified

#### LAPP KABEL STUTIGART ÖLFLEX" SERVO FD 798 CP

- Extended line for heavy duty in power chain application
- Flammability: UL/CSA: VW-1, FT1 IEC/EN: 60332-1-2
- Halogen-free materials
- Low-capacitance design, oil, abrasion and notch-resistant
- · Increased durability under harsh conditions, thanks to robust PUR outer sheath

### ÖLFLEX<sup>®</sup> ROBOT F1 (C)

Screened TPE-PUR robot cable for bending and torsion loads, certified

### LAPP KABEL STUTIGART ÖLFLEX® ROBOT F1 (C) CE

- · Flame Retardant and resistant to cold temperatures
- Oil, abrasion and notch-resistant
- Wide temperature range fo applications in harsh climatic environments

- · Breakout cable for direct connector assembly
- Tertiary cabling
- · Installation cable with up to 12 Simplex cables
- Outer sheath flame-retardant and halogen-free
- Mechanically robust









### **UNITRONIC®** LiYCY

Screened data transmission cable with colour code acc. to DIN 47100

LAPP KABEL STUTGART UNITRONIC LIYCY

- Flame-retardant according IEC 60332-1-2
- Based on VDE 0812
- Screened cables with samll dimensions are suitable for use in computer systems, instrumentation technology, office equipment etc.
- Multifunctional application possibilities

### UNITRONIC<sup>®</sup> FD CP (TP) plus

Screened highly fl exible data transmission cable with PUR outer sheath and twisted pairs - UL/CSA-listed

LAPP KABEL STUTTGART UNITRONIC" FD CP (TP) plus



- Halogen-free, has low capacitance and is flexible down to -40°C
- PUR outer sheath, tear and notchresistant, resistant to mineral oils and abrasion when used in power chains
- · Low-adhesive surface, resistant to hydrolysis and microbes, oil resistant
- Flame retardance ratings: IEC 60332-1-2, VW-1 acc. UL 1581, T2 (Horizontal Flame Test)
- Designed for 10 million alternating bending cycles and horizontal travel distances up to 100 meter

### UNITRONIC<sup>®</sup> BUS LD FD P

### LAPP KABEL STUTTGART UNITRONIC® BUS LD FD P

- UL versions with certifi cation: UL/CSA type CMX acc. to UL 444 and CSA C22.2 no. 214-02
- Suitable for multiple Bus systems based on RS485 / RS422

### UNITRONIC<sup>®</sup> BUS PB TORSION

Highly flexible application

#### LAPP KABEL STUTIGART UNITRONIC" BUS PB TORSION

- + TORSION: for torsional stress, e.g. robot application;  $\pm$  180° per 1 m
- Flame-retardant according IEC 60332-1-2

### **UNITRONIC<sup>®</sup> BUS PB HEAT 180**

LAPP KABEL STUTTGART UNITRONIC® BUS PB HEAT 180

- No need of additional cable protection against high temperatures
- High oil-resistance



## ETHERLINE<sup>®</sup> ROBUST

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#### LAPP KABEL STUTTGART ETHERLINE® ROBUST PN Cat.5

#### LAPP KABEL STUTIGART ETHERLINE® ROBUST PN Cat.7

- Halogen-free materials
- Good chemical resistance to ester-based hydraulic fl uids
- Ozone, UV and weather-resistant according to EN 50396
- Low smoke density according to IEC 61034-2
- ETHERLINE<sup>®</sup> TORSION Cat.6<sub>A</sub> Highly flexible application

#### LAPP KABEL STUTIGART ETHERLINE" TORSION P Cat.6, 4x2xAWG24/7

- PUR version is halogen-free according to IEC 60754
- Oil-resistant acc. IEC 60811-2-1
- Cable suitable for high torsion stress. Tested with more than 1 million bending cycles and a right/left movement of 180° per metre.
- Meets the requirements according to CAT.6 A, ISO/IEC 11801 and EN 50173

### ETHERLINE<sup>®</sup> HEAT 6722

LAPP KABEL STUTTGART ETHERLINE® HEAT Cat.5e FL9YBC11Y 4x2x0,22snv

LAPP KABEL STUTTGART ETHERLINE" HEAT Cat.7 FL09YBC11Y 4x2x0.2

- Halogen-free according to VDE 0472-815
- Good chemical resistance
- Flame retardant acc. to ISO 6722-1
- Temperature class B on the basis of ISO 6722-1















