LAPP GROUP

Reliably connecting the world

ELECTROUSTIC
DISTRIBUTION OF CONNECTIVITY SOLUTIONS

FOOD AND BEVERAGE

The Essential Ingredients for a Quality Solution

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INTRODUCTION

There are few industries as multifaceted and demanding as the food and beverage industry, as a result the strict hygiene and cleanliness requirements also apply to electrical components.

Lapp Group's complete connectivity solutions for food & beverage applications include a full suite of power and control cables, connectors, accessories and systems. Each is specifically designed to meet the industry's stringent hygiene requirements, and helps to prevent thermal and hydrolytic degradation.

Food and beverage manufacturers deal with all types of challenging environments that put power and connectivity products to the ultimate test.
Lapp products have a time-proven record of standing up to the most demanding environments and helping our customers achieve high levels of productivity through decreased down time and increased up time.

HYDROLYSIS-RESISTANCE

Steam cleaning is good for hygiene but bad for most cables and components.

The Solution:
Across the food industries steam jet cleaners are used for cleaning to meet the hygiene requirements. If, however, cables come into contact with steam or hot water, the hydrolysis phenomenon will appear. This means that substances are flushed out of the sheaths, initiating degradation reactions. The insulating material will become brittle, the speed at which this process progresses depends on the temperature prevailing in the cable.
Lapp has created cables and components with hydrolysis-resistant polymers that can withstand harsh wash-down conditions.

BENEFITS

- Reduce downtime
- Increase productivity
- Increase product line components longevity
- Reduce labour cost

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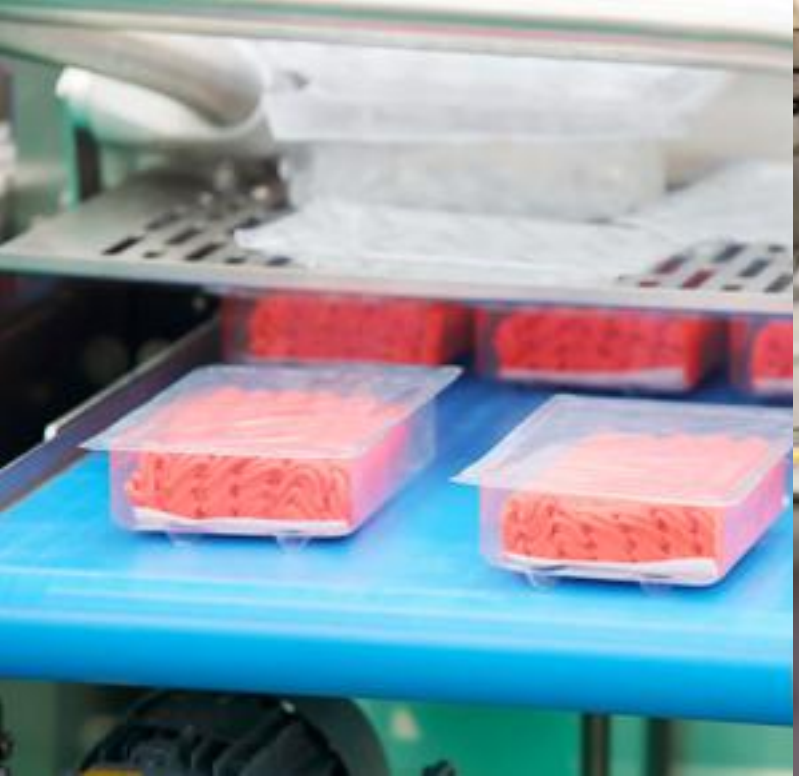

MICROBIAL GROWTH RESISTANCE

The decomposition of organic substances is caused by microbes and bacteria. Despite sufficient cleanliness, this natural process cannot be completely avoided.

This typically occurs in agriculture, slaughterhouses, waste disposals etc. Provided that sufficient temperature and humidity are available, cable sheaths can also become a nutrient medium for microbes and bacteria. The degradation of the insulation material will be the consequence.
To comply with stringent hygiene requirements, every part of a food and beverage line has to be evaluated for its potential to support microbial growth. This evaluation includes the cables and related electrical components. Bacteria and other microbes can actually feed on cable's polymeric components, causing not just contamination but also a degradation of the cable's insulation. Costly results of cable failure include lower production levels, failure to meet hygiene standards or extended downtime.
Lapp delivers a variety of cables and components that resist microbial growth and therefore reduce the risk of failure.

BENEFITS

- Optimise production
- Reduce downtime
- Increase product line components longevity
- Reduce labour cost
- Maintain food standards

TEMPERATURE RESISTANCE

From freezers to ovens, food and beverage equipment often has to withstand temperature extremes. Extreme cold temperatures would cause cables to break and therefore disrupt the production line. The installation of cables not designed for extremely hot environments could result in regular replacement.
To make sure the control systems for these machines work reliably in hot and cold conditions, Lapp have engineered a wide variety of temperature-resistant cables, components, and systems.

BENEFITS

- Reduce downtime
- Increase productivity
- Increase product line components longevity
- Reduce labour cost

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ÖLFLEX® ROBUST

The ÖLFLEX® ROBUST range is a generation of flexible control and connection cable.
Manufactured with Lapp TPE outer sheath compound P4/11, highly resistant to vegetable-based oils, these cables are flexible, UV resistant, tough and manufactured with RoHS compliant materials. They are resistant when exposed to fresh, processed and sewage water also beverages such as fruit juices, wine, beer, lemonades. This range of cables is ideal for applications where they are in contact with vegetables, animal fats and oils, i.e. dairy products such as milk, butter, cheese or fish and meat processing. Furthermore, OLFLEX Robust range will withstand the harsh cleaning processes used in the food industry. All these products will be subject to high pressure cleaning, often using strong detergents, steam jets and water. It is these processes that cause the cable degradation.

ÖLFLEX® ROBUST cables show repeated longer service life, when exposed to heated steam, up to more than ten times when compared to a standard rubber outer sheath. Moreover, for hygiene and cleaning efficiency reasons, detergents and/or disinfectants are added to the water, which can accelerate the destruction.

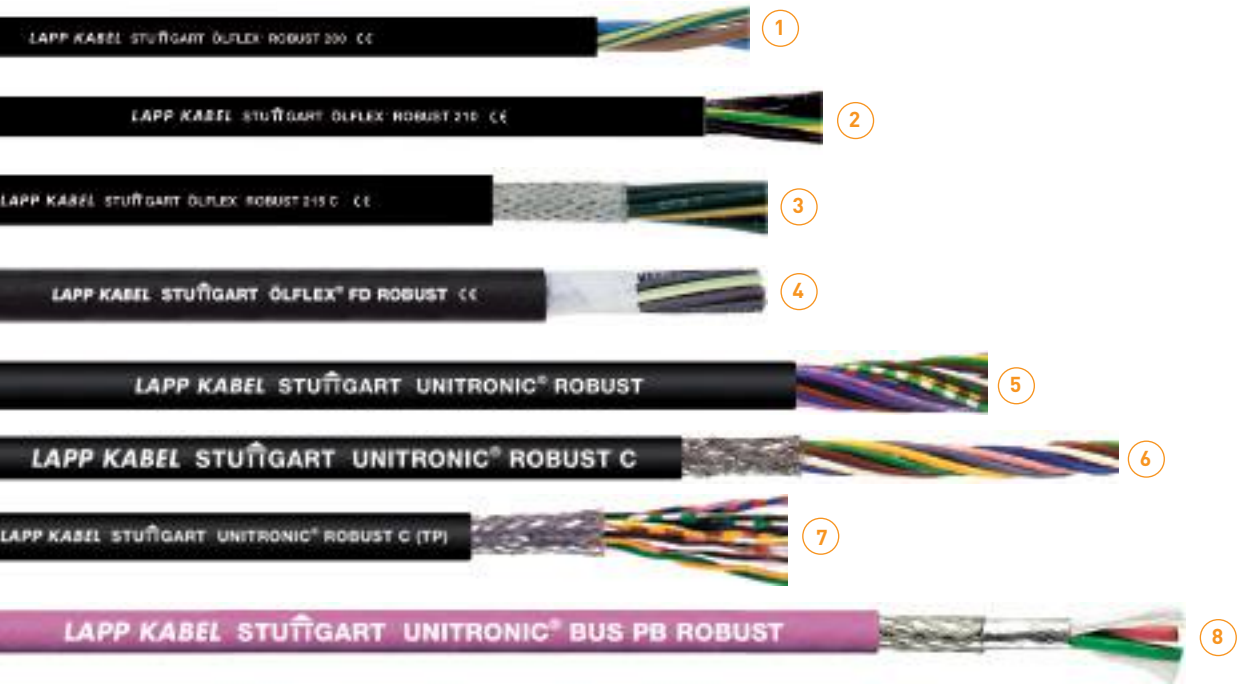
ÖLFLEX® ROBUST cables are harmless when exposed to various foodstuffs. They are without evaporating substances such as softening agents. Furthermore, they do not contain heavy metals or other substances which are part of the European RoHS directive black list.

The ÖLFLEX® ROBUST family consists of:

1. ÖLFLEX® ROBUST 200 colour coded power cable
2. ÖLFLEX® ROBUST 210 number coded control cable
3. ÖLFLEX® ROBUST 215C number coded control cable with a copper braided screen.
4. ÖLFLEX® ROBUST FD a highly flexible version for constantly moving applications, e.g. in drag chains.

The newly added UNITRONIC® ROBUST range of data and Bus cables consists of:

5. UNITRONIC® ROBUST a data transmission cable with DIN 47100 colour code
6. UNITRONIC® ROBUST C a screened data transmission cable with DIN 47100 colour code
7. UNITRONIC® ROBUST C (TP) a twisted pair screened data transmission cable with DIN 47100 colour code
8. UNITRONIC® ROBUST PROFIBUS for use on PROFIBUS-DP or FIP and industrial environments



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ÖLFLEX® POLYURETHANE Cables

Lapp offers an extensive range of Polyurethane sheathed cables suitable for a wide range of applications where flexible cable with very high resistance to both mechanical and chemical damage is required. Polyurethane sheathing offers a tear resistant material with high tensile strength combined with a high resistance to tangling and knotting. All Lapp Polyurethane cables are microbe and hydrolysis resistant.

ÖLFLEX® CLASSIC 400P

ÖLFLEX 400P features fine wire stranded copper conductors and a PVC core insulation with a grey Polyurethane outer sheath. ÖLFLEX 400P offers a high resistance to chemicals, oils, greases and other aggressive substances found in industrial environments. Also available is ÖLFLEX 400 CP which contains a tinned copper wire braid for EMC regulations. Temperature range of -5°C to +70°C.

ÖLFLEX® CLASSIC 440P

This is a similar cable make up to 400P but with TPE core insulation allowing for a wider temperature range of -40°C to +90°C. It offers the same mechanical and chemical resistance as 400P and also available with a tinned copper wire braid for EMC regulations

ÖLFLEX® CLASSIC 450P

ÖLFLEX 450P features the addition of a special red PVC inner sheath to increase durability, ensuring that the cable provides an optimum service life. The flame retardant yellow Polyurethane outer sheath is also resistant to chemical agents, diluted acids and aqueous alkaline solutions.

ROBOTICS Cable

The ÖLFLEX® FD range of cables offer one of the most flexible cable types available. They are specially designed for high technology applications, notably in areas where automation is at an advanced level and where the stresses placed on conventional cables can cause fatigue.
Where automatic handling equipment and robotics are in constant use the extra flexible qualities of the range will withstand more rigorous and heavy duty operations. At each stage of the cable construction attention has been paid to the areas where stress could have a detrimental effect. The make-up includes very fine wire conductor stranding with a high rate of twist on the strands and also in the twist of the conductors forming the core bundle. The increased rate of twisting reduces stress on the conductors at the point of bending. Other features of the range include extra chalk, textile separator tapes, and a specially formulated Polyurethane sheath for hydrolysis and microbe resistance.

ÖLFLEX®-FD CLASSIC 810 P - Polyurethane sheathed for harsh areas

ÖLFLEX®-FD CLASSIC 810 CP - Additional copper braid screen and Polyurethane sheath

ÖLFLEX®-FD 855 P - With a very small bend radius for restricted areas and Polyurethane sheath

ÖLFLEX®-FD 855 CP - With a very small bend radiusfor restricted areas, copper braid screen & Polyurethane sheath

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SKINTOP® CABLE GLANDS

The world renowned cable gland is now approved to IP69K in accordance to DIN 40 050. The IP69K rating enables the use of SKINTOP® even under the harshest cleaning procedures with high pressure cleaners and hot water. The glands are exposed to 80°C water vapour and 100 bars pressure from various directions at a close distance.

The SKINTOP® ST-M range of glands are manufactured from Glass Reinforced Nylon, and available in 3 colours - Silver Grey, Light Grey and Black. They are available in a range of thread sizes from 12mm to 63mm and can accommodate cable with outer diameters from 1mm to 45mm.

The SKINTOP® MS-M range of glands are a Nickel Plated Brass for use in areas where there is a high mechanical demand and a need for chemical resistance. They are available in a range of thread sizes from 12mm to 75mm and can accommodate cable with outer diameters from 1mm to 68mm.

SKINTOP® INOX/INOX-R

Hygienically designed cable gland manufactured from high-grade stainless steel is suitable for an extremely wide variety of applications including the food and pharmaceutical industries. The material and shape meet the high requirements of these sectors. The smooth design minimizes the accumulation of moisture, dust, contamination or food residue.
The cable gland also offers great benefits for other applications, where the ambient conditions are harsh, such as those sited offshore.
The compact design, the variable clamping range and the same wrench sizes simplify installation. The INOX-R has a reduction sealing insert for clamping smaller cable diameters.

Material

- Gland Body: Stainless Steel – V4A(1.4404/316L)
- Insert: Polyamide
- Seal: Silicone
- O Ring: Silicone

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SILVYN® SSUE

Halogen free stainless steel, grade 316 helically wound flexible conduit for applications in the range of measurement, instrumentation and safety within the food and beverage industry.

Material:

- stainless steel 316

Characteristics:

- high mechanical strength
- highly flexible
- high tensile strength 170kg for 20mm size
- high compression strength 400kg / 100mm for 20mm size
- corrosion resistant
- inherently low fire hazard

Temperature range:

- -100°C up to +400°C

SILVYN® FD-PU

SILVYN® FD-PU is a coiled corrugated plastic conduit, inside a helix of plastic-sheathed steel wire and a fixed PUR jacket. For highly flexible and liquid proof installations for protection against oil, grease and benzene at high temperatures.

Resistant against:

- oil
- petrol
- grease
- widely resistant to solvents and acids
- microbe resistant
- weather-proof
- saltwater-proof

Temperature range:

- from - 40° to + 80°C

FLEXIMARK®

The stainless steel kit is an industrial system for marking cables, components, pipes and devices in demanding and aggressive environments. This system contains stainless steel character holders, character strips and cable ties, everything produced in stainless steel SISSS2348 (AISI-316). All characters are embossed and convex making them easy to read even when painted. We can also supply all the accessories separately to refill your kit.

Character size – 6mm(w) x 9.5mm(h)

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