



LAPP GROUP

Power Cables for Building Services and Industrial Applications

The More Flexible Approach to Power!

The modern UK standards and regulations for electrical wiring no longer differ substantially from those in the rest of Europe. The regulations have been updated to further harmonize with International and European standards. The process of European Harmonization has already begun with the previous amendments to the 16th Edition, most notably the changes in cable insulation colours. Another area under review is the need to use armoured cables, especially in areas where protective containment is used which is in line with European and International regulations.

As one of Europe's largest cable suppliers, the Lapp Group takes pride in not only leading the market with the best in Quality, but a commitment to our customers in supplying the right products for the right applications. All our cables have been approved and conform to both the IEC and VDE certifications.



Lapp's flexible UV Resistant Power cable – 0.6/1kV

ÖLFLEX CLASSIC 110 Black is a flexible PVC cable for use in both power and control applications. This cable can be installed in dry, damp or wet rooms, as well as outside. The cores are class 5 stranded to maximise flexibility and reduce installation time.

LAPP KABEL STUTTGART ÖLFLEX® CLASSIC 110 black 0,6/1 kV CE

ÖLFLEX CLASSIC 110 CY Black is manufactured with a copper braid for EMC applications, as well as to increase the mechanical strength of the cable. The sheath is made from a special PVC formula which has very good resistance to acids, caustic solutions and certain oils.

LAPP KABEL STUTTGART ÖLFLEX® CLASSIC 110CY Black 0,6/1kV CE

Lapp NYY and NYCY

Lapp's standard UV Resistant Power cable – 0.6/1kV

Lapp NYY and NYCY cables are VDE approved, black PVC jacketed, power and control cables, with single and multi-wire conductors. These power cables are designed for energy supply in cable ducts, power stations, distribution boards, industrial applications and subscriber networks. They may also be used in brickwork and in concrete. NYY cables can be installed in open air, underground, in water and indoors. Available in single and multi core variants.



NYN vs SWA

NYN and NYCY cables are loosely referred to, in the industry as a general mains power cable. The armoured equivalent of this range is more commonly known as an SWA (Steel Wire Armoured) cable. The UK market is perhaps slightly different to other markets in the world in that SWA cables have been adopted into UK specifications for almost all commercial and industrial applications. While SWA cables provide increased mechanical protection, it is in many cases viewed as not necessary and over specified. We at the Lappgroup believe that we can provide sound justifications, in offering better and more cost effective solutions for most applications where SWA may not be required;

Advantages of using NYN as opposed to SWA

- Cost of cable installation (Labour time)
The estimated installation time of an NYN and NYCY is between 10 -15% quicker than that of SWA
- Lighter in weight than SWA
Lapp NYN and NYCY are between 10-20% lighter than the equivalent size of SWA
- Overall cost of cable (Total cost of ownership)
Lapp NYN is between 4-10% cheaper than that of SWA
- Lapp Power cables are not affected by Steel prices



The Main Determining Factors for specifying the right Power cable!

Modern power cables come in a variety of sizes, materials, and types, each particularly adapted to its uses. When specifying the right cable for the application, there are three major factors to consider;

1. Environmental conditions such as temperature, water, chemical or sunlight exposure as well as any other conditions that may affect the characteristics of the cable determining the form and composition of the outer cable jacket.
2. Working voltage, determining the thickness of the insulation.
3. Current-carrying capacity, determining the cross-sectional size of the conductors.

Resistance to Environmental conditions - Insulation Materials

P.V.C. - Polyvinyl chloride is now the most usual low voltage cable insulation. It is clean to handle and is reasonably resistant to oils and other chemicals. However the physical characteristics of the material change with temperature: when cold it becomes hard and difficult to strip, and is not recommended for applications with extreme temperature variations. However for standard indoor & outdoor applications, the Lapp NYN/NYCY as well the OLFEX 110 Black are ideal, they are far more flexible and therefore much easier to handle than SWA.

Rubber compounds like EPR (Ethylene Propylene Rubber) insulation and PCP (Polychloroprene) are used in some power cables, specifically designed to operate in tough weather conditions and under high mechanical and thermal stresses. Cables like the Lapp H07RN-F & H07BN4-F are heavy wearing cables which are to be suitable for use in a whole range of different applications – including handling equipment, mobile power supplies and stage and audio visual equipment.

Halogen Free compounds are now used on certain applications where fire safety is essential; the three main drivers for using Halogen Free cables are;

- I. Fire Safety – Smoke toxicity and flame propagation
- II. Fire Damage Prevention – Severe corrosive effects of halogenated smoke
- III. Higher Application Temperatures

STANDARD POWER CABLES 0.6/1kV UV Resistant

OLFLEX 110/CY BLACK (PVC)
Highly Flexible for Standard Power Applications



Lapp NYY-J and NYY-O (PVC)
Standard Power Applications - Unarmoured



Lapp NYCY and NYCWY (PVC)
Standard Power Applications – Copper armour



Lapp NAYY (Aluminium Cores – PVC)
Standard Power Applications - Unarmoured



Lapp H07RN-F and H07BN4-F (Rubber)
Highly Flexible for Standard Power Applications



HALOGEN FREE POWER CABLES 0.6/1kV

OLFLEX 130H/135CH BLACK – Halogen Free Highly Flexible for Standard Power Applications



Lapp NHXH(FRNC-compound HM1)
Standard Power Applications - Unarmoured



Lapp NHXCH(FRNC-compound HM1)
Standard Power Applications – Copper armour



Lapp JEH(St)H (FRNC-compound HM2)
Data cable



Lapp H07ZZ-F (Rubber)
Highly Flexible for Standard Power Applications





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Lapp Product Comparison & Lapp Cable Glands to suit.

Lapp Product Specification	ÖLFLEX 110 BLACK	NY Y	NYCY & NYCWY	NAYY	HO7RN-F & HO7BN4-F	ÖLFLEX 130H & 135CH	NHXH & NHXCH
Minimum Bend Radius	4 X O/D	12 X O/D	12 X O/D	12 X O/D	6 X O/D	4 X O/D	12 X O/D
Colour Coded	X	✓	✓	✓	✓	✓	✓
Temperature Range Fixed	-40 °C +80 °C	-40 °C +70 °C	-40 °C +70 °C	-40 °C +70 °C	-25 °C +60 °C	-40 °C +70 °C	-40 °C +70 °C
UV Resistance	✓	✓	✓	✓	✓	✓	✓
Conductor Stranding	Class 5	Class 2	Class 2	Solid	Class 5	Class 5	Class 2
Flame Resistance	X	X	X	X	X	✓	✓
HALOGEN FREE	X	X	X	X	X	✓	✓
Lapp Product Specification	SKINTOP ST-M	SKINTOP BS	SKINTOP HF	SKINTOP MS-M	SKINTOP MS-SC	SKINTOP CLICK	SKINDICHT CN
Material	Polyamide	Polyamide	Halogen Free Polyamide UL94 V0	Nickel Plated Brass	Nickel Plated Brass	Polyamide	Chrome Nickel Steel
IP Rating	IP69K	IP69K	IP68	IP69K	IP68	IP68	IP68
EMC Protection	X	X	X	X	✓	X	X
Temperature Range	-40 °C +100 °C	-20 °C +100 °C	-20 °C +100 °C	-30 °C +100 °C	-30 °C +100 °C	-20 °C +100 °C	-25 °C +200 °C

For more information on all our products suitable for building services and industrial applications, please visit our website

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