

**N**exans



**Nexans Switzerland,  
Breitenbach Plant  
Product Range**

## The Nexans group

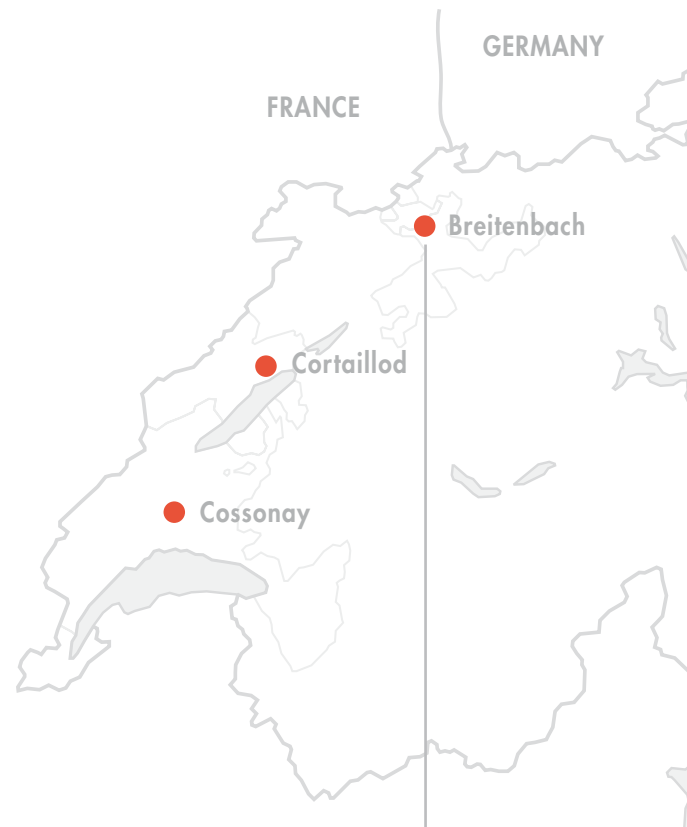
**N**exans, the global leader in the cable industry, has an industrial presence in 30 countries and a commercial presence throughout the world. The group has an annual turnover of 7.5 billion Euros and employs 21,000 persons. As a major player in the infrastructure, industrial and building markets, Nexans develops solutions for energy, transport and telecommunications networks, as well as for shipbuilding, petrochemicals and nuclear power, automobiles, railway equipment, electronics, aeronautics, materials handling and automatic control systems. ■



## Nexans Switzerland in Breitenbach

**T**he Breitenbach factory has been producing cables since 1938.

Situated 30km south of Basle, where the German, French and Swiss borders meet, the factory employs around 190 people. ■



Breitenbach factory





## Production range

- Installation / building cables, for the Swiss and international markets.
- Telephone cables for internal and external installations.
- Special cables for the international market.

With the exception of the SIWO-KUL family of Medium-Voltage cables up to 15 kV, the remainder of the cables manufactured at the Breitenbach factory are in the Low-Voltage range up to 1000V. ■



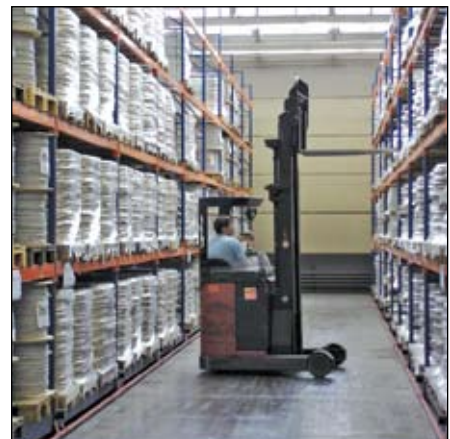
SIWO-KUL cable



## Our departments

The factory is divided into three departments:

1. «**Metallurgy**»: drawing of copper wire up to a diameter of 0.05 mm; and manufacture of strands up to 630mm<sup>2</sup> (CEI 60228, Classes 1 to 6).
2. «**Synthetic materials**», where most of the insulation and jacketing compounds are mixed and prepared.
3. «**Extrusion**» where single-conductor wires and multi-conductor cables of all dimensions are produced. ■



## Low-Voltage installation wires and cables

Two types of insulation, PVC and halogen-free (HFFR), meet the requirements of the building sector.

HFFR cables conform to the following international and European standards:

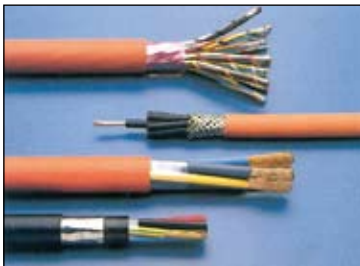
- CEI 60 332-1 TT and FEO «**NOhal**»
- CEI 60 332-3 FE05 «**NOflamm**»
- CEI 60 331 FE180 «**NOflamm Plus**»
- NE 50200
- German standard DIN 4102/12 FE180 E30 on request

Different types of cable with anti-rodent protection; iron banding, steel wire or other types of sheathing can be manufactured according to customer specifications.

Certain cables are designed for applications in road and rail tunnels and in public address systems in stadiums and concert halls, etc.



Installation cables



PVC and HFFR installation cables



Cables protected against EMR

## Cable conductors for telecommunications

Cables with twisted pairs and quads are produced with wire diameters of 0.40, 0.50, 0.60 and 0.80mm. They are used in telephone exchanges and conform to international standards. These types of cables are produced with various shieldings (aluminium tape, copper tape, copper braiding, spiral shielding).



Telephone cables

## Ribbon cables for insulation-piercing contact

Several types of flat cables are provided for use with insulation-piercing connection boxes. They find applications in the BT circuits in large administrative and industrial buildings and in the shipbuilding sector.



Ribbon cables for insulation-piercing contact

## Control, signalling and Sensor cables

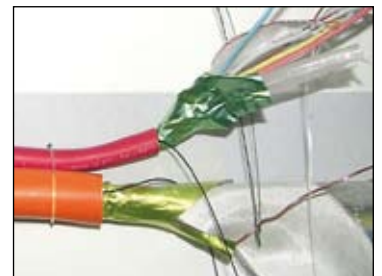
These control cables are produced to individual specifications.



Signalling cables



Coax-sheathed HFFR control cables, for applications in the London Underground (LUL)



Signalling cable, HFFR (orange) and fire-resistant (red)

## Network cables and subscriber cables for telecommunications

Network cables are produced with wire diameters of 0.40, 0.60, 0.80 and 1.00mm. Also available in «dry sealing» form (non jelly-filled).



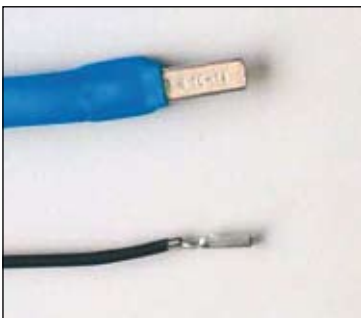
PE-ALT network cables

## Solid and multi-core connecting wires

The standard range consists of PVC 70°C and PVC 105°C insulated copper strands with dimensions ranging from 0.05 mm<sup>2</sup> to 240 mm<sup>2</sup>. Halogen-free compounds and Silicone insulation are also used.



UL/CSA 105°C 600 V AWG 4/0 cables



Flexible strand



Flexible strand

### UL and CSA approvals

The wires and cables have the following approvals:

- **UL AWM 300 V mono-conductor**, 70°C and 105°C model 1007, 1569
- **UL AWM 600 V mono-conductor**, 105°C Model 1015
- **UL MTW 1063,600V mono-conductor**, 90°C
- **UL MTW 1063,600 V multi-conductors**, with external sheath and shielded
- **CSA AWM 300 V monoc-conductor**, 90°C TR 64 / TR 32
- **CSA TEW 600 V mono-conductor**, 105°C TEW
- **CSA TEW 600 V multi-conductor**, with external sheath and shielded

## Flexible cables and cords

In addition to the harmonized cables

**H05VV-F**  
**H05VVH2-F**  
**H03VVH2-F**  
**H03VH-H**

other, more specific, cables can be produced on request.



Flexible cables, various



Flexible cable, with transparent sheath



SIWO-KUL cable, installed, very flexible and resistant to temperatures down to -50°C

## Flexible connection cables, -50°C, +180°C

### SIWO-KUL and SIWO-SCREEN

These mono-conductor cables with Silicone insulation are protected by a braid.

**SIWO-KUL** cables are used, among other applications, for connections to motors, generators, switchgear, converters, etc., in the following voltage ranges:

**1.1 kV a.c.**  
**3.3-4.2 kV a.c.**  
**6.6-7.2 kV a.c.**  
**13.8-15.0 kV a.c.**



SIWOKUL cables 1.1 – 15.0 kV

The standard range extends from 4 to 240 mm<sup>2</sup>.

**SIWO-SCREEN** cables with copper shielding.



SIWO-SCREEN cables

The **SIWO-KUL**, **SIWO-SCREEN** ranges are approved by UL, Lloyds and BV.

## Winding wires for submerged motors, UWM

These wires with special PVC, XLPE and XLPE/PA insulation are used for windings of «wet type» pump motors.



UWM winding wires



Motor with UWM winding wires

## Loudspeaker cables

These cables are used for the connection of standard loudspeakers and for high-performance hi-fi installations.

The range also includes: round, halogen-free HFFR cables according to DIN 4102/12 E30.

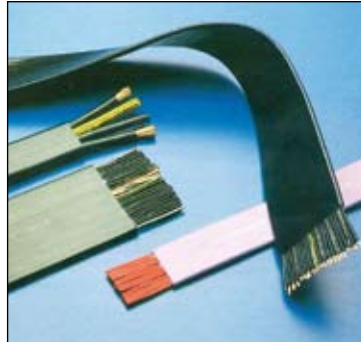


HP cable

## Flat cables for lifts and conveyor installations

These cables are used in suspended mode for lifts and are available in cross sections of 0.75 mm<sup>2</sup> and 1.00 mm<sup>2</sup> with 6 to 24 conductors, in PVC or HFFR versions.

Other flat cables comprising coaxial cables, twisted pairs (Can Bus...), optical fibres, etc., can also be supplied.



Multi-conductor flexible cables



Installation cable, for specific use

Certain flat cables with different cross sections and dimensions are used for conveyor systems.

## Welding stations cables

Coaxial cables for welding torches, with dimensions ranging from 12 mm<sup>2</sup> to 95 mm<sup>2</sup>.

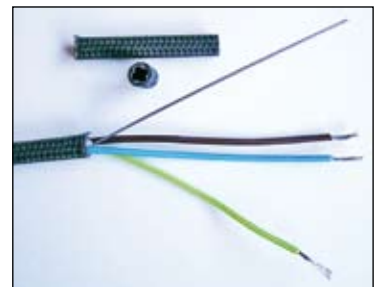


Cables for welding torches

## Various



HF cables, enamelled wires



Extra-flexible cables with supporting steel wire for light fittings

### Materials

The following are the most common insulating materials used in Breitenbach:

• PVC	70°C, 90°C and 105°C
• PE / XLPE	80°C and 90°C
• PA (nylon)	80°C
• Cross-linked compounds	90°C and 105°C
• Halogen-free compounds	70°C, 90°C and 105°C
• Silicone (SI)	180°C

More information is available at

[www.nexans.ch](http://www.nexans.ch)

## ■ Facts and figures

• Copper consumption	<b>775 t per month</b>
• Insulation materials	<b>600 t per month</b>
• Employees (November 2007)	<b>190</b>
• Number of products	<b>1400 per month</b>
• Operations	<b>2400 per month</b>
• Delivery notes	<b>3500 per month</b>
• Cuts	<b>1200 per month</b>
• Number of current items	<b>11,000</b>
• New items	<b>300 per year</b>
• Number of items in stock	<b>1800</b>
• Number of clients	<b>600</b>
• Number of orders	<b>13,000 per year</b>
• Average delivery time (specific cables)	<b>6-8 weeks</b>
• Number of drums and pallets	<b>40,000 per year</b>
• Production area	<b>30,000 m<sup>2</sup></b>
• Warehouse area	<b>14,000 m<sup>2</sup></b>



## A competent and comprehensive service

**N**exans Switzerland offers its customers a comprehensive range of services, from engineering services to the laying and installation of high voltage cables.

Thanks to high levels of training and a state-of-the-art technical environment, our specialized technicians are able to install connections throughout the world. Our extensive laying and installation equipment, combined with measurement and testing apparatus adapted to a variety of needs, enable installations to be carried out under optimal technical and commercial conditions.

A cable delivered by **Nexans Switzerland** and installed by our specialized service provides a reliable guarantee for many years to come. Our considerable experience with Low- and Medium-Voltage cables enables **Nexans Switzerland** to offer its know-how to its customers to assist them in resolving their problems, by identifying and implementing appropriate solutions. ■



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**We offer you personalized solutions.**



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