



ICON® Flex Flexible Control Cable

The Quality Connection

LEONI

The LEONI Group

Concentrated competence in cables



LEONI is a leading supplier of cable systems and related services for the automotive industry and many other industrial sectors.

Our group of companies employs over 77,000 people in 32 countries. Entrepreneurial insight, first-class quality and the power to innovate have secured us our position as one of Europe's leading cable manufacturers. LEONI not only develops and manufactures a portfolio of technically sophisticated products that extends from wire and optical fiber to cables, cable systems and services, but also offers its customers a range of bespoke services.

Our full range of products and services also includes strands, standardised cables, hybrid/optical fiber and special cables, cable harnesses and wiring system components, as well as turnkey, assembled systems for applications in various industrial markets.

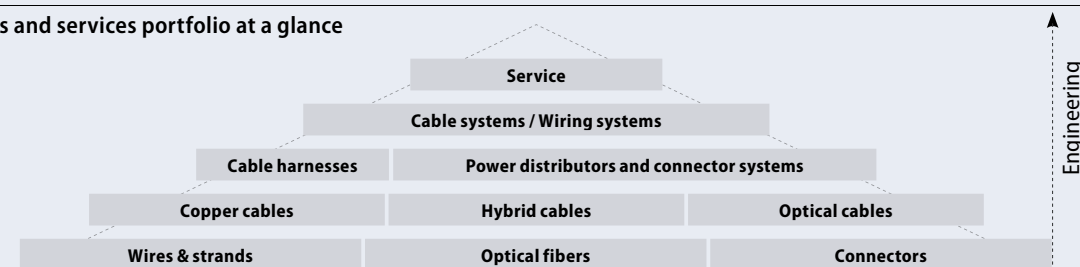
Your markets – our strength.

The breadth of LEONI's spectrum of products and services is matched by the markets and segments we supply. We focus our activities on customers in the sectors Automotive & Commercial Vehicles, Industrial Solutions, Electrical Appliances and Conductors & Copper Solutions.

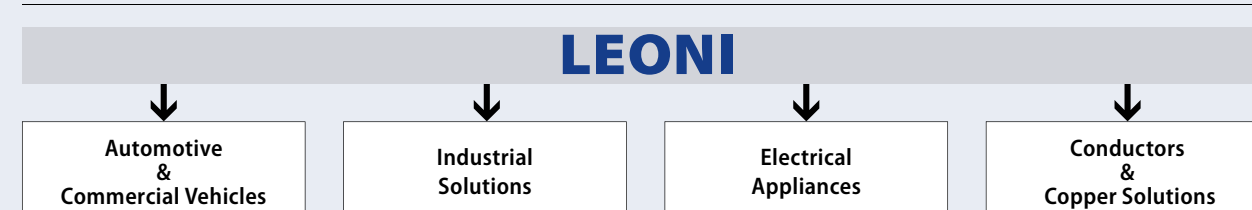
In the Industrial Solutions market, we are one of Europe's leading providers. Acting as both a cable manufacturer and a dedicated solution provider, we work in fields as diverse as telecommunications systems, fiber optic cable, data communications, manufacturing projects, solar and wind power, energy and infrastructure, building services, bespoke product and robotics solutions, healthcare, traffic systems and automation technologies. Customers worldwide benefit from our innovative, high-quality products that are both reliable and long-lasting. LEONI – we create the best connection for your future.

For further information, please visit www.leoni.com

Products and services portfolio at a glance



LEONI's core markets



The Business Unit Industrial Projects

Our products have maximum quality in common



We, the Business Unit Industrial Projects...

... give our customers access to the entire competence of a worldwide corporation, focused to meet the needs of industrial applications.

We supply our products and solutions wherever everything depends on maximum reliability, quality and durability, such as in oil and gas extraction and processing as well as in the petrochemical and energy production industries.

LEONI products are to be found in many other applications such as the pulp and paper, cement and pharmaceutical industries and in waste management, in which processes have to run in a controlled way via sensors and actuators. For us reliability doesn't just mean keeping the right product available for you as a standard product or developing a project solution for you – it also means supplying it at precisely the agreed time. Safety, availability and reliability are vital in industrial

plant engineering and energy provision. This is because these are fields in which unexpected breakdowns are very expensive and have critical effects on the environment.

Companies are asking for solutions which are perfectly tailored to meet the application in question as well as the plant itself. 70 % of the cables leaving our company are developed, manufactured and assembled according to customer specifications. We produce quantities depending on the requirements of the projects and supply according to cable drumming schedules.

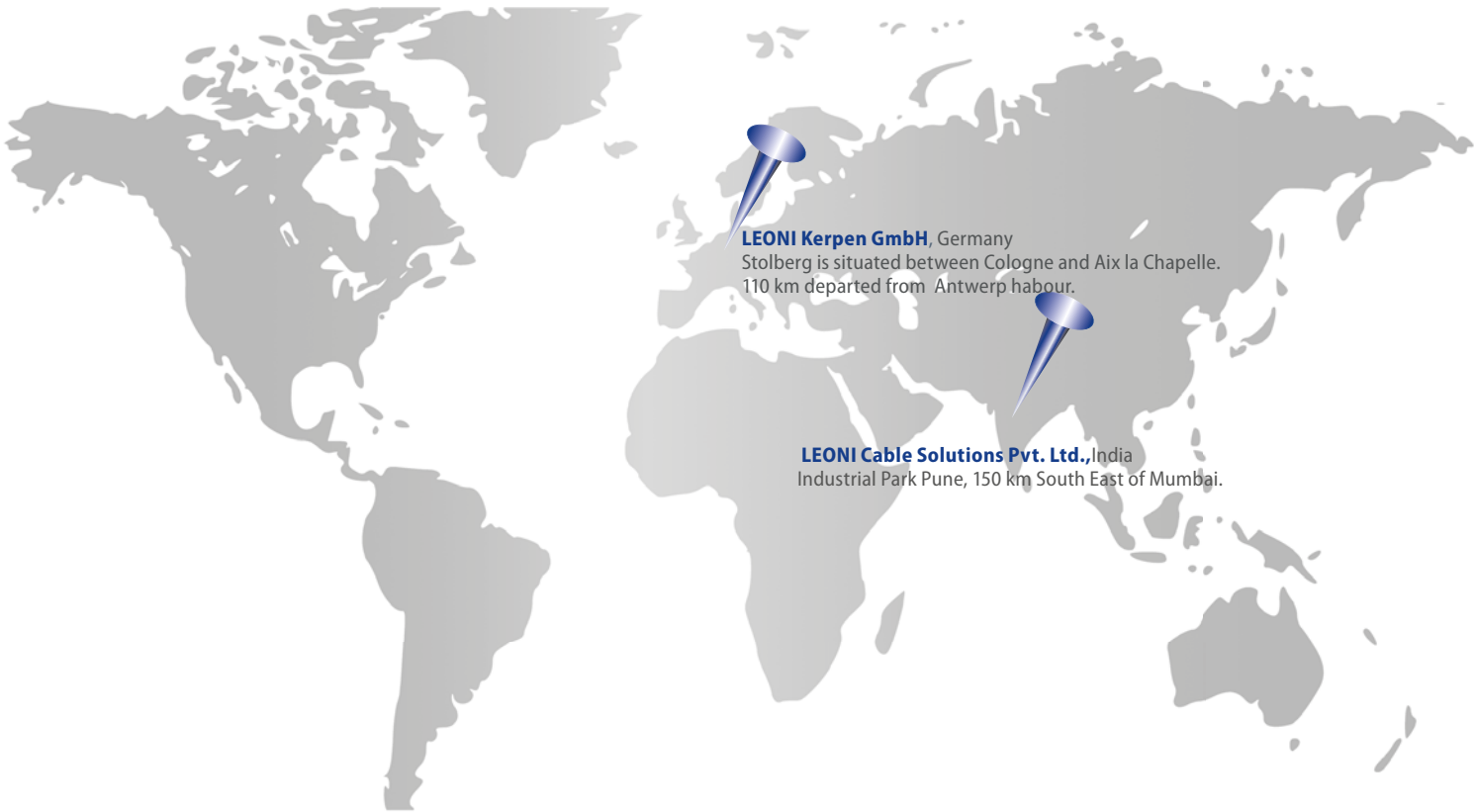
We are also equipped to provide project quantities in a considerable two-digit million euro range. We take company specific standards as well as all important industrial and environmental standards on the national and international level into account.



Please visit our website
www.leoni-industrial-projects.com

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We reserve the right to make technical modifications; typographical errors and mistakes excepted.

Locations



LEONI Kerpen GmbH, Germany
Stolberg is situated between Cologne and Aix la Chapelle.
110 km departed from Antwerp harbour.

LEONI Cable Solutions Pvt. Ltd., India
Industrial Park Pune, 150 km South East of Mumbai.

Headquarter & Production facility
LEONI Kerpen GmbH
Zweifaller Str. 275–287
52224 Stolberg
Germany
Phone +49 (0)24 02-17-307
Fax +49 (0)24 02-7 55 90
E-mail industrial-projects@leoni.com

Production facility
LEONI Cable Solutions (India) Pvt. Ltd.
Indospace Rohan Industrial Park
Gut No-428, Village Mahalunge,
Off Chakan Talegaon Road,
Taluka: Khed, District: Pune, Pin - 410 501
India
Phone +91 2135-391600
Fax +91 2135-391650
E-mail leoni-cables-india@leoni.com

Explanation of used pictograms & abbreviations in data sheets

Pictogram / Abbreviation	Explanation
	Number of elements
	Radial thickness of insulation
	Radial thickness of inner sheath
	Diameter over inner sheath
	Radial thickness of metal sheath
	Diameter over metal sheath
	Radial thickness of inner sheath 2
	Diameter armour wire
	Radial thickness of outer sheath
	Overall diameter
	Weight
IS	Individually screened
OS	Overall screened

Pictogram / Abbreviation	Explanation
	Flame retardant (FR)
	Reduced flame propagation (RP)
	UV protection (UV)
	Low smoke, zero halogen (LSZH)
	Vapour tight outer sheath
	Circuit integrity (CI)
	Circuit integrity (CI)
	Oil resistant
	Chemical resistant
	Cold resistant
	Rodent protection
	Flexible

The ICON® brands



ICON® Flex

... ensures reliable function in usual conditions.

ICON Flex cables comprise of flexible control cables for all kinds of control applications of machines and tools. Their design is based on the recognized standard EN 50525-2-51. The cables are reliable, tried and tested quality products, which have proven their suitability for this application since many years.

The range of these flexible control cables covers all common industry applications for such products.



ICON® Base

... ensures reliable performance in all usual conditions.

ICON Base comprises instrumentation and control cables according to the recognized standards EN 50288-7, UL 13/2250 and UL 1277. ICON Base cables are extremely reliable, tried and tested quality products which have proven their practical worth for many years now. Our products form a comprehensive range providing suitable cables for all standard industrial applications.



ICON® Safe

... offers protection for saving lives and safeguarding investments.

In case of fire, your applications require, i.e. the protection of human life and high-value material assets as well as the maintenance of functionality. ICON Safe quality products guarantee these requirements with a high degree of reliability thanks to well-tested designs and high-tech LSZH (low smoke zero halogen) compounds especially developed by the Industrial Projects Business Unit.



ICON® Chem

... ensures the safety and functionality of your plant in aggressive environments.

ICON Chem instrumentation cables for applications involving aggressive media such as oil and chemicals reliably protect the functioning of a system, even (and in particular) under extreme conditions. ICON Chem quality products can be equipped with the tried and tested lead sheath and with the ecologically sound laminated ALNYC sheath consisting of aluminium tape in conjunction with a PE and polyamide sheath.



ICON® Arctic

... offers excellent properties for applications in extremely cold environments.

The range of ICON Arctic instrumentation cables includes cables dedicated to arctic conditions. FRILON is a PVC compound specially developed by LEONI. Among other outstanding properties ICON Arctic cables are suited for installation down to -30 °C and permanent operating temperatures down to -60 °C.

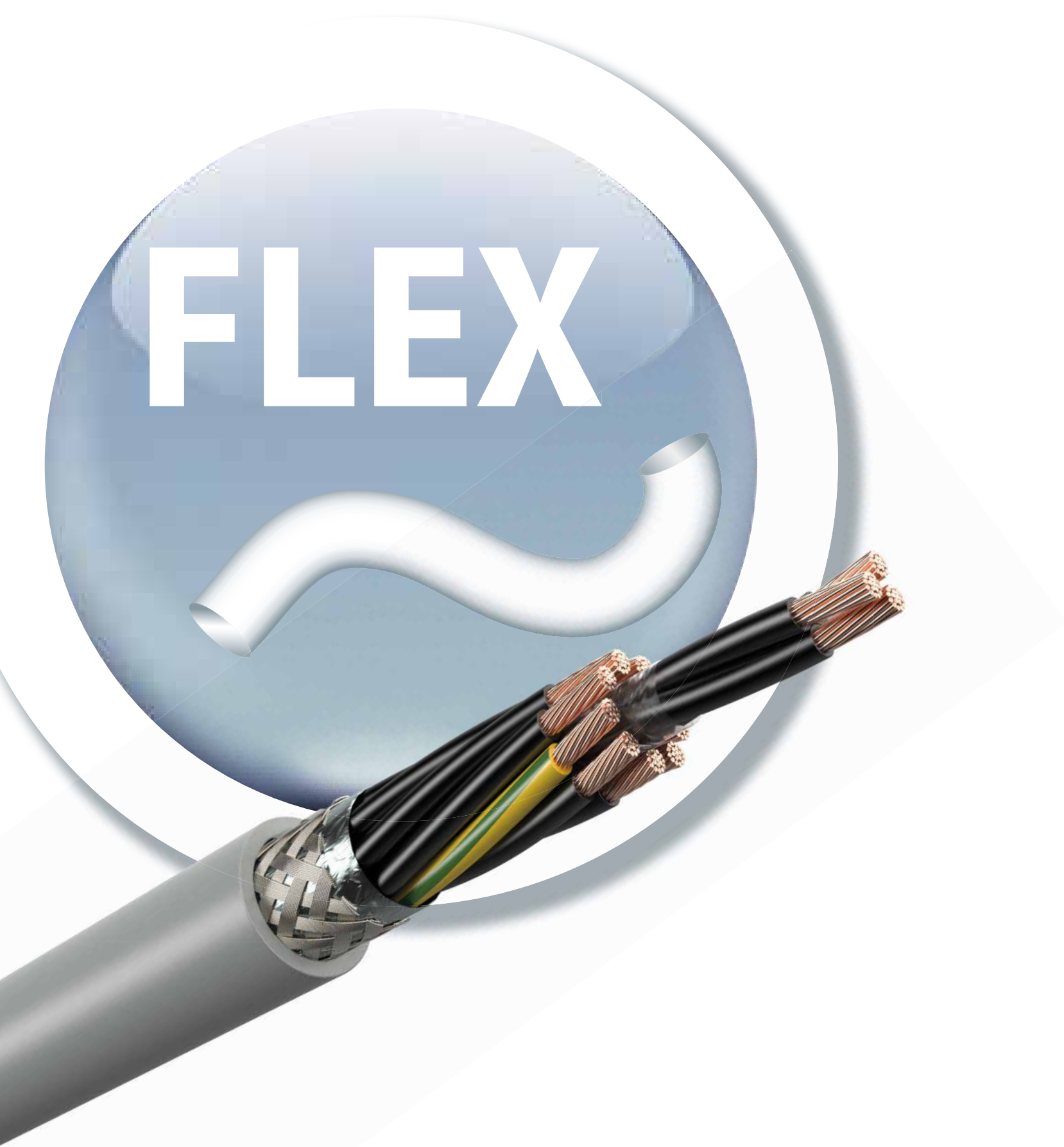


ICON® Bus

... meets or exceeds the increased requirements of state-of-the-art automation technology.

ICON Bus offers a wide range of bus cable types designed for various bus systems and is available in standard and special designs which meet ICON Base, ICON®Safe, ICON®Chem and ICON Arctic requirements.

The ICON Bus product family includes all bus cables used in automation technology such as Foundation™ Fieldbus, Profibus DP and PA, CAN and Modbus.



ICON® Flex

ICON Flex control cables offer excellent properties for the control of machines and tools of all kind.

The application of ICON Flex is everywhere, where sure and reliable transmission of control signals is necessary in the low voltage area.

ICON Flex distinguishes itself by a quality profile especially for industrial atmosphere with mechanical robustness and high flexibility by well-chosen compounds. In addition, the cables are flame retardant and oil-resistant.

The design of the cables is based on the European standard EN 50525-2-51. ICON Flex is available in different voltage classes.

Beside the standard base types, customized designs can be offered for special applications. These constructions will be made based on special customer requirements, like additional mechanical protection, extended chemical and environmental resistance.

Other colour codes for insulation and sheathes are available, too.

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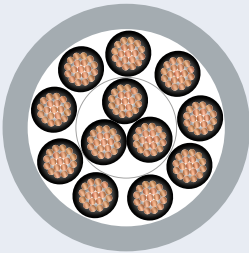
Flexible Control cables

ICON Flex control cables consist of cores with multistranded conductors twisted in layers.

ICON Flex is available with different colour codes, with or without screen.

ICON Flex is planned on account of constructive interpretation for fixed installation as well as occasional flexible application. ICON Flex is not suitable for direct burial.

ICON® Flexible Control Cable gen. to EN 50525-2-51
PVC-Insulation, PVC-Sheath



Characteristics

indoor installation
on racks, trays, in conduits

ICON Flex 10000 M0

U₀/U = 300 / 500 V

Construction

Conductor plain annealed copper wire, size 0.5 mm², 0.75 mm², 1.0 mm², 1.5 mm², 2.5 mm²
class 5: circular multistranded (RF)
according to IEC 60228

Insulation special polyvinyl chloride PVC

Colour code black, continuously numbered
* (other colours on request)

Laying up cores twisted in layers

Outer sheath polyvinyl chloride PVC, type TM 2 acc. to EN 50363-4-1, and oil resistant type TM 54 according to EN 50290-2-22, grey, (~ RAL 7001)

Technical data

Flame propagation
- Test on single cable IEC 60332-1-2

Flammability temperature (FT) ISO 4589-3 ann. A (min. +250 °C)

Oil resistance EN 50290-2-22 (type TM 54)

Temperature range -30°C up to +70°C (during operation)
-5°C up to +50°C (during installation)

Minimum bending radius 5 x cable diameter

Cable marking

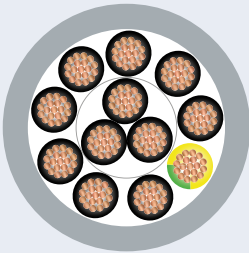
LEONI KERPEN ICON FLEX 10000 M0 Size 300/500V
CE PRODUCTION LOT CODE LENGTH MARKING

Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1.0 mm²	1.5 mm²	2.5 mm²
Test voltage U _{rms} (core : core)		2000 V				

					Part number
	nom.	nom.	approx.	approx.	grey
	mm	mm	mm	kg/km	
0.5 mm²					
2 x 0.5 RF	0.4	0.7	4.9	32	LKX 5176 0100 0000
3 x 0.5 RF	0.4	0.7	5.2	40	LKX 5176 0103 0000
0.75 mm²					
2 x 0.75 RF	0.4	0.7	5.4	40	LKX 5176 0102 0000
3 x 0.75 RF	0.4	0.7	5.9	52	LKX 5176 0104 0000
1.0 mm²					
2 x 1.0 RF	0.4	0.7	5.6	47	LKX 5176 0101 0000
3 x 1.0 RF	0.4	0.7	5.9	60	LKX 5176 0105 0000
4 x 1.0 RF	0.4	0.8	6.7	76	LKX 5176 0106 0000
7 x 1.0 RF	0.4	0.9	8.1	123	LKX 5176 0107 0000
10 x 1.0 RF	0.4	1.0	10.4	184	LKX 5176 0108 0000
16 x 1.0 RF	0.4	1.1	12.1	272	LKX 5176 0109 0000
18 x 1.0 RF	0.4	1.2	12.9	307	LKX 5176 0110 0000
21 x 1.0 RF	0.4	1.2	13.6	350	LKX 5176 0111 0000
30 x 1.0 RF	0.4	1.4	16.3	495	LKX 5176 0112 0000
40 x 1.0 RF	0.4	1.5	18.4	686	LKX 5176 0113 0000
1.5 mm²					
2 x 1.5 RF	0.4	0.8	6.8	65	LKX 5176 0114 0000
3 x 1.5 RF	0.4	0.8	6.8	79	LKX 5176 0115 0000
4 x 1.5 RF	0.4	0.8	7.4	97	LKX 5176 0116 0000
7 x 1.5 RF	0.4	0.9	9.0	155	LKX 5176 0117 0000
10 x 1.5 RF	0.4	1.1	11.8	228	LKX 5176 0118 0000
16 x 1.5 RF	0.4	1.2	13.7	329	LKX 5176 0119 0000
18 x 1.5 RF	0.4	1.3	14.6	391	LKX 5176 0120 0000
21 x 1.5 RF	0.4	1.3	15.4	451	LKX 5176 0121 0000
30 x 1.5 RF	0.4	1.5	18.4	638	LKX 5176 0122 0000
40 x 1.5 RF	0.4	1.7	21.0	860	LKX 5176 0123 0000
2.5 mm²					
2 x 2.5 RF	0.5	0.8	7.6	95	LKX 5176 0124 0000
3 x 2.5 RF	0.5	0.8	8.1	119	LKX 5176 0125 0000

ICON Flexible Control Cable gen. to EN 50525-2-51
PVC-Insulation, PVC-Sheath



Characteristics

indoor installation
on racks, trays, in conduits

ICON Flex 10010 M0

U₀/U = 300 / 500 V

Construction

Conductor	plain annealed copper wire, size 0.5 mm², 0.75 mm², 1.0 mm², 1.5 mm², 2.5 mm² class 5: circular multistranded (RF) according to IEC 60228
Insulation	special polyvinyl chloride PVC
Colour code	black, continuously numbered, one core green-yellow * (other colours on request)
Laying up	cores twisted in layers
Outer sheath	polyvinyl chloride PVC, type TM 2 acc. to EN 50363-4-1, and oil resistant type TM 54 according to EN 50290-2-22, grey, (~ RAL 7001)

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Oil resistance	EN 50290-2-22 (type TM 54)
Temperature range	-30°C up to +70°C (during operation) -5°C up to +50°C (during installation)
Minimum bending radius	5 x cable diameter

Cable marking

LEONI KERPEN ICON FLEX 10010 M0 Size 300/500V
CE PRODUCTION LOT CODE LENGTH MARKING

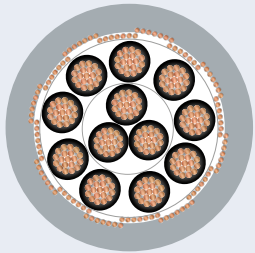
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1.0 mm²	1.5 mm²	2.5 mm²
Test voltage U _{rms} (core : core)		2000 V				

					Part number
	nom.	nom.	approx.	approx.	grey
	mm	mm	mm	kg/km	
0.5 mm²					
3 x 0.5 RF	0.4	0.7	5.2	40	LKX 5175 0100 0000
4 x 0.5 RF	0.4	0.7	5.6	48	LKX 5175 0101 0000
5 x 0.5 RF	0.4	0.7	6.1	58	LKX 5175 0150 0000
7 x 0.5 RF	0.4	0.8	6.8	75	LKX 5175 0151 0000
8 x 0.5 RF	0.4	0.8	7.4	94	LKX 5175 0152 0000
10 x 0.5 RF	0.4	0.9	8.8	101	LKX 5175 0153 0000
12 x 0.5 RF	0.4	0.9	9.1	125	LKX 5175 0102 0000
16 x 0.5 RF	0.4	1.0	10.2	153	LKX 5175 0154 0000
18 x 0.5 RF	0.4	1.0	10.7	183	LKX 5175 0155 0000
21 x 0.5 RF	0.4	1.1	11.5	200	LKX 5175 0156 0000
30 x 0.5 RF	0.4	1.2	13.6	297	LKX 5175 0157 0000
0.75 mm²					
3 x 0.75 RF	0.4	0.7	5.7	51	LKX 5175 0103 0000
4 x 0.75 RF	0.4	0.7	6.2	61	LKX 5175 0104 0000
5 x 0.75 RF	0.4	0.8	7.0	79	LKX 5175 0159 0000
7 x 0.75 RF	0.4	0.8	7.6	100	LKX 5175 0160 0000
8 x 0.75 RF	0.4	0.8	8.3	123	LKX 5175 0161 0000
10 x 0.75 RF	0.4	1.0	10.0	149	LKX 5175 0162 0000
12 x 0.75 RF	0.4	1.0	10.3	167	LKX 5175 0163 0000
16 x 0.75 RF	0.4	1.1	11.6	221	LKX 5175 0164 0000
18 x 0.75 RF	0.4	1.1	12.2	245	LKX 5175 0165 0000
21 x 0.75 RF	0.4	1.2	13.1	287	LKX 5175 0166 0000
25 x 0.75 RF	0.4	1.3	14.9	344	LKX 5175 0167 0000
30 x 0.75 RF	0.4	1.5	15.8	419	LKX 5175 0168 0000
34 x 0.75 RF	0.4	1.3	16.6	454	LKX 5175 0169 0000
40 x 0.75 RF	0.4	1.4	17.5	526	LKX 5175 0170 0000
42 x 0.75 RF	0.4	1.5	18.3	562	LKX 5175 0171 0000
1.0 mm²					
3 x 1.0 RF	0.4	0.7	5.9	60	LKX 5175 0105 0000
4 x 1.0 RF	0.4	0.8	6.7	77	LKX 5175 0106 0000
5 x 1.0 RF	0.4	0.8	7.3	95	LKX 5175 0172 0000
8 x 1.0 RF	0.4	0.9	8.8	155	LKX 5175 0173 0000
12 x 1.0 RF	0.4	1.0	10.7	204	LKX 5175 0174 0000
25 x 1.0 RF	0.4	1.3	15.5	420	LKX 5175 0175 0000
1.5 mm²					
3 x 1.5 RF	0.4	0.8	6.8	79	LKX 5175 0107 0000
4 x 1.5 RF	0.4	0.8	7.4	97	LKX 5175 0108 0000
7 x 1.5 RF	0.4	0.9	9.0	155	LKX 5175 0109 0000
8 x 1.5 RF	0.4	1.0	10.0	200	LKX 5175 0176 0000
12 x 1.5 RF	0.4	1.1	12.2	264	LKX 5175 0177 0000
14 x 1.5 RF	0.4	1.2	13.0	306	LKX 5175 0178 0000
25 x 1.5 RF	0.4	1.5	17.8	520	LKX 5175 0179 0000
32 x 1.5 RF	0.4	1.6	19.3	694	LKX 5175 0180 0000
34 x 1.5 RF	0.4	1.6	20.0	737	LKX 5175 0181 0000
42 x 1.5 RF	0.4	1.8	22.0	912	LKX 5175 0182 0000
61 x 1.5 RF	0.4	2.0	25.6	1289	LKX 5175 0183 0000
2.5 mm²					
3 x 2.5 RF	0.5	0.9	8.3	123	LKX 5175 0110 0000
4 x 2.5 RF	0.5	0.9	9.0	152	LKX 5175 0111 0000
5 x 2.5 RF	0.5	1.0	10.1	191	LKX 5175 0112 0000
6 x 2.5 RF	0.5	1.1	11.2	216	LKX 5175 0184 0000
7 x 2.5 RF	0.5	1.1	11.2	252	LKX 5175 0185 0000
8 x 2.5 RF	0.5	1.2	12.5	324	LKX 5175 0186 0000
10 x 2.5 RF	0.5	1.3	14.6	373	LKX 5175 0187 0000
12 x 2.5 RF	0.5	1.3	15.1	447	LKX 5175 0188 0000
15 x 2.5 RF	0.5	1.5	17.1	514	LKX 5175 0189 0000
16 x 2.5 RF	0.5	1.5	17.1	564	LKX 5175 0190 0000
18 x 2.5 RF	0.5	1.5	18.0	631	LKX 5175 0191 0000
21 x 2.5 RF	0.5	1.6	19.2	735	LKX 5175 0192 0000
25 x 2.5 RF	0.5	1.7	21.9	908	LKX 5175 0193 0000
30 x 2.5 RF	0.5	1.8	22.8	986	LKX 5175 0194 0000
34 x 2.5 RF	0.5	2.0	25.0	1200	LKX 5175 0195 0000
40 x 2.5 RF	0.5	2.0	26.0	1390	LKX 5175 0196 0000
50 x 2.5 RF	0.5	2.2	29.6	1687	LKX 5175 0197 0000

ICON Flexible Control Cable gen. to EN 50525-2-51

PVC-Insulation, Copper Braid, PVC-Sheath



Characteristics

indoor installation
on racks, trays, in conduits

ICON Flex 10001 M0

U₀/U = 300 / 500 V

Construction

Conductor	plain annealed copper wire, size 0.5 mm², 0.75 mm², 1.0 mm², 1.5 mm², 2.5 mm² class 5: circular multistranded (RF) according to IEC 60228
Insulation	special polyvinyl chloride PVC
Colour code	black, continuously numbered * (other colours on request)
Laying up	cores twisted in layers
Wrapping	at least 1 layer of plastic tape
Collective screen	tinned copper wire braid, opt. coverage approx. 85 %
Outer sheath	polyvinyl chloride PVC, type TM 2 acc. to EN 50363-4-1, and oil resistant type TM 54 according to EN 50290-2-22, grey, (~ RAL 7001)

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Oil resistance	EN 50290-2-22 (type TM 54)
Temperature range	-30°C up to +70°C (during operation) -5°C up to +50°C (during installation)
Minimum bending radius	5 x cable diameter

Cable marking

LEONI KERPEN ICON FLEX 10001 M0 Size 300/500V
CE PRODUCTION LOT CODE LENGTH MARKING

Electrical Properties at 20 °C






Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1.0 mm²	1.5 mm²	2.5 mm²
Test voltage U _{rms} (core : core)		2000 V				

					Part number
	nom.	nom.	approx.	approx.	
	mm	mm	mm	kg/km	grey
0.5 mm²					
2 x 0.5 RF	0.4	0.6	5.2	37	LKX 5180 0003 0000
3 x 0.5 RF	0.4	0.7	5.7	48	LKX 5180 0002 0000
4 x 0.5 RF	0.4	0.7	6.1	57	LKX 5180 0012 0000
5 x 0.5 RF	0.4	0.8	6.8	72	LKX 5180 0013 0000
7 x 0.5 RF	0.4	0.8	7.3	88	LKX 5180 0014 0000
8 x 0.5 RF	0.4	0.8	7.9	101	LKX 5180 0015 0000
10 x 0.5 RF	0.4	0.9	9.4	136	LKX 5180 0016 0000
12 x 0.5 RF	0.4	0.9	9.8	153	LKX 5180 0017 0000
16 x 0.5 RF	0.4	1.0	10.8	184	LKX 5180 0018 0000
18 x 0.5 RF	0.4	1.3	12.3	241	LKX 5180 0019 0000
21 x 0.5 RF	0.4	1.1	12.3	246	LKX 5180 0020 0000
25 x 0.5 RF	0.4	1.2	14.0	308	LKX 5180 0021 0000
30 x 0.5 RF	0.4	1.2	14.6	350	LKX 5180 0022 0000
40 x 0.5 RF	0.4	1.3	16.4	448	LKX 5180 0023 0000
0.75 mm²					
2 x 0.75 RF	0.4	0.7	6.1	49	LKX 5180 0005 0000
3 x 0.75 RF	0.4	0.7	6.3	60	LKX 5180 0004 0000
4 x 0.75 RF	0.4	0.7	7.0	80	LKX 5180 0024 0000
5 x 0.75 RF	0.4	0.8	7.8	100	LKX 5180 0025 0000
7 x 0.75 RF	0.4	0.8	8.4	122	LKX 5180 0026 0000
8 x 0.75 RF	0.4	0.9	9.3	144	LKX 5180 0027 0000
10 x 0.75 RF	0.4	1.0	10.8	179	LKX 5180 0028 0000
12 x 0.75 RF	0.4	1.0	11.3	210	LKX 5180 0029 0000
16 x 0.75 RF	0.4	1.1	12.6	267	LKX 5180 0030 0000
18 x 0.75 RF	0.4	1.1	13.2	294	LKX 5180 0031 0000
21 x 0.75 RF	0.4	1.2	14.1	338	LKX 5180 0032 0000
25 x 0.75 RF	0.4	1.3	15.9	400	LKX 5180 0033 0000
30 x 0.75 RF	0.4	1.3	16.4	457	LKX 5180 0034 0000
34 x 0.75 RF	0.4	1.3	17.6	518	LKX 5180 0035 0000
40 x 0.75 RF	0.4	1.4	18.7	610	LKX 5180 0036 0000
42 x 0.75 RF	0.4	1.4	19.3	643	LKX 5180 0037 0000
1.0 mm²					
2 x 1.0 RF	0.4	0.7	6.1	54	LKX 5180 0007 0000
3 x 1.0 RF	0.4	0.7	6.7	76	LKX 5180 0006 0000
4 x 1.0 RF	0.4	0.8	7.5	96	LKX 5180 0038 0000
5 x 1.0 RF	0.4	0.8	8.1	116	LKX 5180 0039 0000
7 x 1.0 RF	0.4	0.9	8.9	147	LKX 5180 0040 0000
8 x 1.0 RF	0.4	0.9	9.6	182	LKX 5180 0041 0000
10 x 1.0 RF	0.4	1.0	11.4	227	LKX 5180 0042 0000
12 x 1.0 RF	0.4	1.1	11.9	254	LKX 5180 0043 0000
16 x 1.0 RF	0.4	1.1	13.1	321	LKX 5180 0044 0000
18 x 1.0 RF	0.4	1.2	13.9	357	LKX 5180 0045 0000
21 x 1.0 RF	0.4	1.2	14.6	402	LKX 5180 0046 0000
25 x 1.0 RF	0.4	1.3	16.5	478	LKX 5180 0047 0000
30 x 1.0 RF	0.4	1.4	17.3	554	LKX 5180 0048 0000
34 x 1.0 RF	0.4	1.5	18.7	640	LKX 5180 0049 0000
40 x 1.0 RF	0.4	1.5	19.6	755	LKX 5180 0050 0000
42 x 1.0 RF	0.4	1.5	20.3	776	LKX 5180 0051 0000

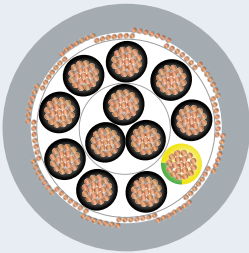
ICON[®]Flexible Control Cable

gen. to EN 50525-2-51

PVC-Insulation, Copper Braid, PVC-Sheath

					Part number
	nom.	nom.	approx.	approx.	
	mm	mm	mm	kg/km	
1.5 mm ²					
2 x 1.5 RF	0.4	0.8	6.9	68	LKX 5180 0009 0000
3 x 1.5 RF	0.4	0.8	7.3	87	LKX 5180 0008 0000
4 x 1.5 RF	0.4	0.8	8.2	117	LKX 5180 0053 0000
5 x 1.5 RF	0.4	0.9	9.1	144	LKX 5180 0054 0000
7 x 1.5 RF	0.4	1.0	10.0	186	LKX 5180 0055 0000
8 x 1.5 RF	0.4	1.0	10.8	239	LKX 5180 0056 0000
10 x 1.5 RF	0.4	1.1	12.8	289	LKX 5180 0057 0000
12 x 1.5 RF	0.4	1.1	13.2	329	LKX 5180 0058 0000
16 x 1.5 RF	0.4	1.2	14.7	400	LKX 5180 0059 0000
18 x 1.5 RF	0.4	1.3	15.6	466	LKX 5180 0060 0000
21 x 1.5 RF	0.4	1.3	16.4	507	LKX 5180 0061 0000
25 x 1.5 RF	0.4	1.8	19.3	632	LKX 5180 0062 0000
30 x 1.5 RF	0.4	1.5	19.5	719	LKX 5180 0063 0000
40 x 1.5 RF	0.4	1.7	22.2	953	LKX 5180 0064 0000
2.5 mm ²					
2 x 2.5 RF	0.5	0.9	8.6	112	LKX 5180 0011 0000
3 x 2.5 RF	0.5	0.9	9.1	142	LKX 5180 0010 0000
4 x 2.5 RF	0.5	1.0	10.0	179	LKX 5180 0065 0000
5 x 2.5 RF	0.5	1.1	11.1	221	LKX 5180 0066 0000
7 x 2.5 RF	0.5	1.2	12.4	300	LKX 5180 0067 0000
8 x 2.5 RF	0.5	1.3	13.7	378	LKX 5180 0068 0000
10 x 2.5 RF	0.5	1.4	15.8	426	LKX 5180 0069 0000
12 x 2.5 RF	0.5	1.4	16.3	485	LKX 5180 0070 0000
16 x 2.5 RF	0.5	1.6	18.3	628	LKX 5180 0071 0000
18 x 2.5 RF	0.5	1.6	19.2	698	LKX 5180 0072 0000
21 x 2.5 RF	0.5	1.7	20.6	828	LKX 5180 0073 0000
25 x 2.5 RF	0.5	1.8	23.5	1016	LKX 5180 0074 0000
30 x 2.5 RF	0.5	2.0	24.6	1183	LKX 5180 0075 0000

ICON Flexible Control Cable gen. to EN 50525-2-51
PVC-Insulation, Copper Braid, PVC-Sheath



ICON Flex 10011 M0 U₀/U = 300 / 500 V

Characteristics

indoor installation
on racks, trays, in conduits

Construction

Conductor	plain annealed copper wire, size 0.5 mm ² , 0.75 mm ² , 1.0 mm ² , 1.5 mm ² , 2.5 mm ² class 5: circular multistranded (RF) according to IEC 60228
Insulation	special polyvinyl chloride PVC
Colour code	black, continuously numbered, one core green-yellow * (other colours on request)
Laying up	cores twisted in layers
Wrapping	at least 1 layer of plastic tape
Collective screen	tinned copper wire braid, opt. coverage approx. 85 %
Outer sheath	polyvinyl chloride PVC, type TM 2 acc. to EN 50363-4-1, and oil resistant type TM 54 according to EN 50290-2-22, grey, (~ RAL 7001)

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Oil resistance	EN 50290-2-22 (type TM 54)
Temperature range	-30°C up to +70°C (during operation) -5°C up to +50°C (during installation)
Minimum bending radius	5 x cable diameter

Cable marking

LEONI KERPEN ICON FLEX 10011 M0 Size 300/500V
CE PRODUCTION LOT CODE LENGTH MARKING

Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm ²	0.75 mm ²	1.0 mm ²	1.5 mm ²	2.5 mm ²
Test voltage U _{rms} (core : core)		2000 V				

					Part number
	nom.	nom.	approx.	approx.	grey
	mm	mm	mm	kg/km	
0.5 mm ²					
3	0.40	0.7	5.7	48	LKX 5177 0052 0000
4	0.40	0.7	6.1	57	LKX 5177 0000 0000
5	0.40	0.8	6.8	72	LKX 5177 0001 0000
7	0.40	0.8	7.3	88	LKX 5177 0002 0000
8	0.40	0.8	7.9	101	LKX 5177 0003 0000
10	0.40	0.9	9.4	136	LKX 5177 0004 0000
12	0.40	0.9	9.8	153	LKX 5177 0005 0000
16	0.40	1.0	10.8	184	LKX 5177 0006 0000
18	0.40	1.3	12.3	241	LKX 5177 0007 0000
21	0.40	1.1	12.3	246	LKX 5177 0008 0000
25	0.40	1.2	14.0	308	LKX 5177 0009 0000
30	0.40	1.2	14.6	350	LKX 5177 0010 0000
40	0.40	1.3	16.4	448	LKX 5177 0011 0000

					Part number
	nom.	nom.	approx.	approx.	grey
	mm	mm	mm	kg/km	
0.75 mm ²					
3	0.40	0.7	6.5	67	LKX 5177 0053 0000
4	0.40	0.7	7.0	80	LKX 5177 0012 0000
5	0.40	0.8	7.8	100	LKX 5177 0013 0000
7	0.40	0.8	8.4	122	LKX 5177 0014 0000
8	0.40	0.9	9.3	144	LKX 5177 0015 0000
10	0.40	1.0	10.8	179	LKX 5177 0016 0000
12	0.40	1.0	11.3	210	LKX 5177 0017 0000
16	0.40	1.1	12.6	267	LKX 5177 0018 0000
18	0.40	1.1	13.2	294	LKX 5177 0019 0000
21	0.40	1.2	14.1	338	LKX 5177 0020 0000
25	0.40	1.3	15.9	400	LKX 5177 0021 0000
30	0.40	1.3	16.4	457	LKX 5177 0022 0000
34	0.40	1.3	17.6	518	LKX 5177 0023 0000
40	0.40	1.4	18.7	610	LKX 5177 0024 0000
42	0.40	1.4	19.3	643	LKX 5177 0025 0000
1.0 mm ²					
3	0.40	0.7	6.7	76	LKX 5177 0054 0000
4	0.40	0.8	7.5	96	LKX 5177 0026 0000
5	0.40	0.8	8.1	116	LKX 5177 0027 0000
7	0.40	0.9	8.9	147	LKX 5177 0028 0000
8	0.40	0.9	9.6	182	LKX 5177 0029 0000
10	0.40	1.0	11.4	227	LKX 5177 0030 0000
12	0.40	1.1	11.9	254	LKX 5177 0031 0000
16	0.40	1.1	13.1	321	LKX 5177 0032 0000
18	0.40	1.2	13.9	357	LKX 5177 0033 0000
21	0.40	1.2	14.6	402	LKX 5177 0034 0000
25	0.40	1.3	16.5	478	LKX 5177 0035 0000
30	0.40	1.4	17.3	554	LKX 5177 0036 0000
34	0.40	1.5	18.7	640	LKX 5177 0037 0000
40	0.40	1.5	19.6	755	LKX 5177 0038 0000
42	0.40	1.5	20.3	776	LKX 5177 0039 0000
1.5 mm ²					
3	0.40	0.8	7.3	103	LKX 5177 0055 0000
4	0.40	0.8	8.2	117	LKX 5177 0040 0000
5	0.40	0.9	9.1	144	LKX 5177 0041 0000
7	0.40	1.0	10.0	186	LKX 5177 0042 0000
8	0.40	1.0	10.8	239	LKX 5177 0043 0000
10	0.40	1.1	12.8	289	LKX 5177 0044 0000
12	0.40	1.1	13.2	329	LKX 5177 0045 0000
16	0.40	1.2	14.7	400	LKX 5177 0046 0000
18	0.40	1.3	15.6	466	LKX 5177 0047 0000
21	0.40	1.3	16.4	507	LKX 5177 0048 0000
25	0.40	1.8	19.3	632	LKX 5177 0049 0000
30	0.40	1.5	19.5	719	LKX 5177 0050 0000
40	0.40	1.7	22.2	953	LKX 5177 0051 0000
2.5 mm ²					
3	0.50	0.9	9.1	142	LKX 5177 0056 0000
4	0.50	1.0	10.0	179	LKX 5177 0057 0000
5	0.50	1.1	11.1	221	LKX 5177 0058 0000
7	0.50	1.2	12.4	300	LKX 5177 0059 0000
8	0.50	1.3	13.7	378	LKX 5177 0060 0000
10	0.50	1.4	15.8	426	LKX 5177 0061 0000
12	0.50	1.4	16.3	485	LKX 5177 0062 0000
16	0.50	1.6	18.3	628	LKX 5177 0063 0000
18	0.50	1.6	19.2	698	LKX 5177 0064 0000
21	0.50	1.7	20.6	828	LKX 5177 0065 0000
25	0.50	1.8	23.5	1016	LKX 5177 0066 0000
30	0.50	2.0	24.6	1183	LKX 5177 0067 0000

The ICON® Flex product range

		Ranking for marked criteria as								
		excellent	+++	limited						○
		improved	++	depending on national regulations						■
		good	+							
		complied	●	on request						✉
Properties	Sheath	PVC								
	Insulation	PVC								
		ICONFlex 10010 M0	ICONFlex 10000 M0	ICONFlex 20010 M0	ICONFlex 20000 M0	ICONFlex 10011 M0	ICONFlex 10001 M0	ICONFlex 20011 M0	ICONFlex 20001 M0	
Electrical properties										
nominal voltage U ₀ /U	300 V / 500 V	●	●			●	●			
	450 V / 750 V			●	●			●	●	
insulation resistance	100 MΩ x km	●	●	●	●	●	●	●	●	
Temperature range – installation										
	–5 °C up to +50 °C	●	●	●	●	●	●	●	●	
Temperature range – operation										
	–30 °C up to +70 °C	●	●	●	●	●	●	●	●	
Chemical and physical properties										
oil resistance		+	+	+	+	+	+	+	+	
UV resistance		+	+	+	+	+	+	+	+	
Reaction to fire										
single cable burning test	IEC 60332-1-2	●	●	●	●	●	●	●	●	
Installation & environmental properties										
cable bending radius	5 x diameter	●	●	●	●	●	●	●	●	

General units

Length							
1 mil	=	0.0254	mm				
1 inch (in")	=	25.4	mm				
1 foot (ft.)	=	0.305	m				
1 yard (yd)	=	0.914	m				
1 mile (mi.)	=	1.61	km				
1 statute mile (mi.)	=	1.61	km				
1 intern. naut. mile (sm)	=	1.85	km				
Volume							
1 cubic inch (in³)	=	16.39	cm³				
1 cubic foot (ft³)	=	0.0283	m³				
1 cubic yard (yd³)	=	0.765	m³				
1 barrel	=	159	l				
1 US gallon (US gal)	=	3.79	l				
1 UK gallon (UK gal)	=	4.55	l				
Force							
1 poundal (pdl)	=	0.1 38	N				
1 pound-force (lbf)	=	4.448	N				
1 Brit. ton-force	=	9964	N				
Power							
1 horsepower (H.P.)	=	0.746	kW				
Pressure0							
1 bf/in² (psi)	=	0.06895	bar				
1 lbf/ft²	=	0.000479	bar				
1 lbf/yd²	=	0.0000532	bar				
1 lbf/in² (psi)	=	0.703	kp/cm²				
Abbreviations for multiples and submultiples							
prefix	abridged	multiple		prefix	abridged	sub multiple	
	mark	power	name		mark	power	name
Tera	T	10 ¹²	billion *	Piko	p	10 ⁻¹²	billionth *
Giga	G	10 ⁹	milliard *	Nano	n	10 ⁻⁹	milliardth*
Mega	M	10 ⁶	million	Mikro	μ	10 ⁻⁶	millionth
Kilo	k	10 ³	thousandth	Milli	m	10 ⁻³	thousandth
Hekto	h	10 ²	hundred	Zenti	c	10 ⁻²	hundredth
Deka	da	10 ¹	ten	Dezi	d	10 ⁻¹	tenth

Area			
1 circ. mil (CM)	=	0.0005067	mm²
1 MCM	=	0.5067	mm²
1 square inch (in²)	=	645.16	mm²
1 square foot (ft²)	=	0.0929	m²
1 square yard (yd²)	=	0.836	m²
1 square mile (sq.mi.)	=	2.59	km²
Electrical Unit per length			
1 μF per mile	=	0.62	μF/km
1 MΩ x mile	=	1.62	MΩ km
1 decibel per mile	=	0.62	dB/km
1 pF per foot	=	3.28	pF/m
1 decibel per 1000 ft.	=	3.28	dB/km
1 Ω per 1000 ft.	=	3.28	Ω/km
Mass			
1 ounce (oz)	=	0.0284	kg
1 pound (lb)	=	0.454	kg
1 Brit. ton (long ton)	=	1016	kg
1 US ton (short ton)	=	907	kg
Energy			
1 Brit. therm. unit (BU)	=	1055	J
1 Brit. therm. unit	=	0.000293	kWh

Find out more:

Business Unit Industrial Projects

www.leoni-industrial-projects.com

Headquarter & Production facility

LEONI Kerpen GmbH

Zweifaller Str. 275–287

52224 Stolberg

Germany

Phone +49 (0)24 02-17-307

Fax +49 (0)24 02-7 55 90

E-mail industrial-projects@leoni.com

Production facility

LEONI Cable Solutions (India) Pvt. Ltd.

Indospace Rohan Industrial Park

Gut No-428, Village Mahalunge,

Off Chakan Talegaon Road,

Taluka: Khed, District: Pune, Pin - 410 501

India

Phone +91 2135-391600

Fax +91 2135-391650

E-mail leoni-cables-india@leoni.com