ICON® Base
Instrumentation cable

The Quality Connection

LEONI

ICON® Pro for the green world of tomorrow

All ICON PRO products are generally to EN 50288-7 with special project applications.

Saving the environment & cutting costs

Our ICON product family offers instrument cables conforming to EN 50288-7, UL 13/2250 and UL 1277.

Do you need an applications-based, cost- and environmentally-optimised solution? If so, our ICON Pro products are the right choice, and can be customised to your individual requirements. For the manufacture of our ICON products, we have significantly reduced energy consumption by optimising material usage – while naturally making no compromises on quality.

We reduce today ...

... less CO_2 reduced material consumption and lower energy requirements.

... in detail: 15 t less CO_2 at approx. 200 km of cable.

... in a nutshell: 15 t of CO_2 are equivalent to 113,000 km driven in a medium-sized passenger car.

ICON® Base

ICON Base comprises instrumentation and control cables according to the recognized standards EN 50288-7, UL 13/2250 and UL 1277. This catalogue covers ICON Base products acc. to EN 50288-7. UL products are described in a separate catalogue.

ICON Base cables are extremely reliable, tried and tested quality products which have proven their practical worth for many years now. ICON Base products form a comprehensive range providing suitable cables for all standard industrial applications. On the solid basis of many years of experience in international business (either project-oriented or geared to the site requirements of the customers) in conjunction with the above mentioned standards, we have defined a very wide product range designed to meet all field-driven product requirements. We have selected and elaborated a product programme designed to cover all usual applications. As a matter of course, ICON Base includes a large number of products with various forms of certification such as UL or EAC. Project requirements can thus generally be met with short delivery times and without the necessity of further certification.

For example, ICON Base is the ideal product for conventional analog 4…20 mA technology and for systems using the HART protocol. The typical feature of ICON Base is the rapid availability of most types as they are available from stock worldwild.

Cable design & materials

All ICON Base cables and materials used meet or exceed the requirements of EN 50288-7 and of the material standards cited there. All design options fulfill these requirements. This ensures state-of-the-art cable design and avoids use of low quality or recycled materials. For insulation most common materials today are cross-linked polyethylene (XLPE), polyethylene (PE) and polyvinyl chloride (PVC). Due to their superior electrical properties XLPE and PE are the best suited insulation materials. They have a lower dielectric constant compared to PVC, thus allowing lower mutual capacitance values. Main difference is the allowed 90 °C maximum operating temperature for XLPE compared to 70 °C for normal PE. For ICON Base only XLPE is used to benefit of its higher maximum operating temperature range.

Beside XLPE and PE, PVC is a common insulation material. The type of PVC is selected depending on the operating temperature. Due to its minor electrical properties the use of PVC is decreasing compared to XLPE. Today, the most common cable sheath material in industrial environments is polyvinyl chloride (PVC). Its major benefits are good flame retardancy, environmental and mechanical stability.
The PVC compounds used for ICON Base are highly stabilized, UV protected and suitable for all normal conditions, which cover more than 80 % of worldwide applications in oil & gas refineries and other environments.

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The LEONI Group

Cable expertise for the most various industrial markets.

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.

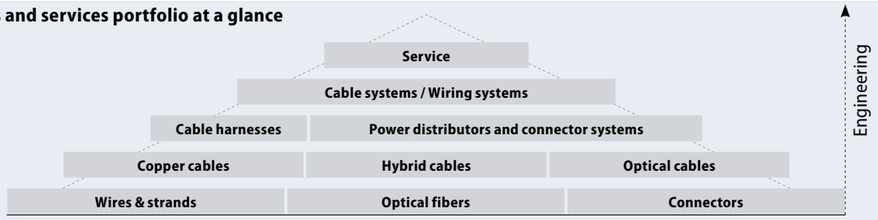
Your markets – our strength.

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.

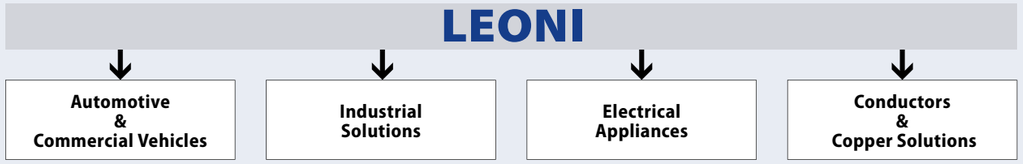
In the Industrial Solutions market, we are one of Europe's leading providers. Acting as both a cable manufacturer and a dedicated solution provider, we work in fields as diverse as telecommunications systems, fiber optic cable, data communications, manufacturing projects, solar and wind power, energy 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

Relied on worldwide

We are your specialist manufacturer of choice for standardised, preassembled cable systems used in instrumentation and control technology. We are one of the leading companies in this market, with over 40 years of experience. Customers rely on our solutions the world over – from Chile to Japan and from South Africa to Scandinavia. Support is provided by a network that spans 49 countries throughout the world – to guarantee maximum availability.

Our maxim: first the customer, then the cable

Bespoke solutions are standard at LEONI and therefore always cost-optimised. Of the cables that leave our factories, 70% are individually designed, manufactured and assembled. To date, we have manufactured over 40,000 cable designs, carefully tailored both to our company-internal guidelines and applicable international standards. Our strength is tailor-made customer service.

Every cable is a promise

The durability – even under adverse conditions – the reliability and the quality of our products form the cornerstones of our success as a company. As a customer, you naturally expect to see a return on your valuable investment. Which is why we make every effort to offer you guaranteed quality every step of the way. For systems in use all day, every day.

Perfection – but only with the right compounds

Compounds are the final touch that makes an ideal cable even possible. The combination of our expertise as a compounder and our technical know-how in cable manufacturing creates synergy effects that directly benefit our customers.

We don't simply develop and produce tailor-made insulation and jacket materials but are also seasoned experts in their industrial deployment. Draw on our comprehensive wealth of experience to optimise your own cable production.

Our compounds are designed and tested in our internal chemicals lab in accordance with the latest standards. We manufacture around 150 separate compounds at present. Our ultra-modern production facilities enable us to respond quickly and flexibly to customer requirements.

Comprehensive quality management ensures a consistently high level of quality. Our company is of course certified according to ISO 9001, ISO 14001 and OHSAS 18001.

Our goal: reliability for systems in use all day, every day

For us, reliability means delivering the right product at the right point in time. Our solutions are used in these industries to ensure 24/7 service reliability:

- Oil and gas (onshore/offshore)
- Petrochemicals
- Chemicals
- Iron and steel
- Paper and cellulose
- Generating station construction
- Pharmaceuticals
- Food and beverages
- Water/wastewater management
- Waste incineration
- Cement
- Mining

Locations

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and mistakes excepted.

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® 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® 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® 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 proucts 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® 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.

Our markets

Oil & gas

Keeping pace with market growth and costs

Innovations power the engine of growth in the oil and gas industry. Today, fossil fuels are being harvested that would have been thought inaccessible just 20 years ago. For cable solutions, costs are a top priority, alongside safety and efficiency. Requirements for which we have the perfect answer, after 40 years in cable production.

Measure, control and calibrate in extreme conditions

Major fluctuations in temperature, oil-based compounds and acids all require safe solutions – and cables that offer 100% performance 24/7 even under these harsh conditions. All this is offered by our ICON series, developed for onshore and offshore energy production and produced according to national and international standards.

Generating station & power distribution

Stability and reliability

Stability and reliability around the clock is what your customers expect.
For us, these aspects start with optimal cable solutions – flame-retardant and halogen-free – that guarantee the uninterrupted operation of your stations.

Our programme offers you the products you need: class 1 power distribution cables up to 30 kV in accordance with international standards, and IEC 60502 in particular.

Chemical industry

Aggressive media require stringent safety standards

In the chemicals industry, the be-all and end-all is chemical and thermal stability. Aggressive media mean cable characteristics have to meet stringent safety standards.

Apart from these specialised requirements, electrical parameters are another key priority. Our ICON products – and specifically our ICON Chem cable solutions – guarantee the functionality of plant in this challenging environment while assuring stable operation 24/7.

Mining

Safe solutions for surface and sub-surface mining

Nature is unpredictable. Unlike our cable solutions. Requirements for safety management are a priority here. Which is why many mining sector companies source their cables from LEONI.

Our mission: keeping functionality functional. Our pit and telecommunications cables fully meet your requirements for electrical systems quality and mechanical robustness, as well as your individual criteria for cable routing.

Thanks to our long-standing experience, we can offer special cables for roadways and shafts – customised to your specifications.

Other applications

Our wiring solutions for industrial applications

From semiconductors to water purification, cement and metal production to mechanical engineering or metalworking, we have the right cable solution for your requirements in the field of instrument and control engineering.

We work with you to identify the best, most cost-effective solution for your needs: after all, it's what we've been doing for the last 40 years.

Compound

Perfection – but only with the right compounds

Compounds are the final touch that makes an ideal cable even possible.
The combination of our expertise as a compounder and our technical know-how in cable manufacturing creates synergy effects that directly benefit our customers. We don't simply develop and produce tailor-made insulation and jacket materials but are also seasoned experts in their industrial deployment. Draw on our comprehensive wealth of experience to optimise your own cable production.

Our compounds are designed and tested in our internal chemicals lab in accordance with the latest standards. We manufacture around 150 separate compounds at present. Our ultra-modern production facilities enable us to respond quickly and flexibly to customer requirements.

From small quantities to silo deliveries – we make it all possible.

Comprehensive quality management ensures a consistently high level of quality. Our company is of course certified according to ISO 9001, ISO 14001 and OHSAS 18001.

Oil & gas

Generating station & power distribution

Chemical industry

Mining

Other applications

Compound

Instrumentation cables 300 V

Instrumentation cables of this section consist of conductors grouped in pairs, screened pairs, triples or screened triples.

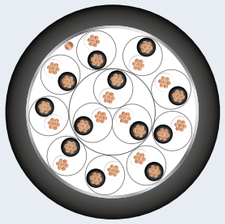
All cables have an overall screen, a PVC sheath and are rated 300 V.

Constructions rated for 500 V, as well as cables with blue outer sheath for intrinsically safe applications are available on request.

Regarding direct burial installation please note possible additional local and legal requirements.

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, PVC-Insulation, Collective Screen, PVC-Sheath



ICON Base 10200 M0 OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking:

LEONI KERPEN ICON BASE 10200 M0 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

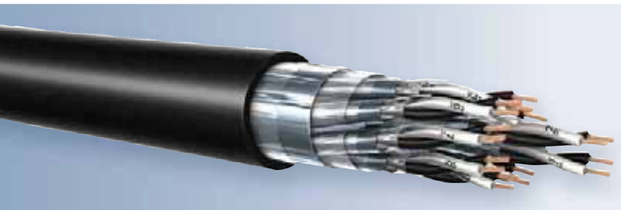
Electrical Properties at 20 °C

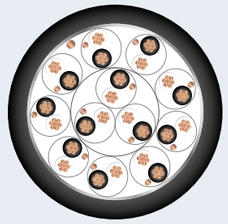
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number black
	mm	mm	mm	kg/km	
0.5 mm²/7					
1	0.26	0.8	5.2	40	LKX 7774 E001 0000
2	0.26	0.9	7.6	69	LKX 7774 E004 0000
4	0.26	0.9	8.8	98	LKX 7774 E007 0000
5	0.26	1.0	9.8	124	LKX 7774 E151 0000
6	0.26	1.0	10.6	146	LKX 7774 E010 0000
8	0.26	1.0	11.3	171	LKX 7774 E013 0000
10	0.26	1.1	12.9	214	LKX 7774 E016 0000
12	0.26	1.1	13.5	244	LKX 7774 E019 0000
16	0.26	1.1	15.2	312	LKX 7774 E022 0000
20	0.26	1.2	16.9	391	LKX 7774 E025 0000
24	0.26	1.2	18.3	447	LKX 7774 E028 0000
0.75 mm²/7					
1	0.26	0.8	5.8	47	LKX 7774 E031 0000
2	0.26	0.9	8.5	87	LKX 7774 E034 0000
4	0.26	1.0	10.0	128	LKX 7774 E037 0000
5	0.26	1.0	10.9	155	LKX 7774 E154 0000
6	0.26	1.0	11.8	182	LKX 7774 E040 0000
8	0.26	1.1	12.8	222	LKX 7774 E043 0000
10	0.26	1.1	14.5	271	LKX 7774 E046 0000
12	0.26	1.1	15.1	311	LKX 7774 E049 0000
16	0.26	1.2	17.3	409	LKX 7774 E052 0000
20	0.26	1.3	19.2	504	LKX 7774 E055 0000
24	0.26	1.3	20.8	588	LKX 7774 E058 0000
1 mm²/7					
1	0.26	0.9	6.3	59	LKX 7774 E061 0000
2	0.26	0.9	9.2	103	LKX 7774 E064 0000
4	0.26	1.0	10.9	158	LKX 7774 E067 0000
5	0.26	1.0	11.9	193	LKX 7774 E157 0000
6	0.26	1.0	13.0	229	LKX 7774 E070 0000
8	0.26	1.1	14.0	281	LKX 7774 E073 0000
10	0.26	1.1	15.9	343	LKX 7774 E076 0000
12	0.26	1.2	16.8	407	LKX 7774 E079 0000
16	0.26	1.2	19.0	525	LKX 7774 E082 0000
20	0.26	1.3	21.1	644	LKX 7774 E085 0000
24	0.26	1.4	23.1	771	LKX 7774 E088 0000
1.3 mm²/7					
1	0.35	0.9	6.8	70	LKX 7774 E091 0000
2	0.35	1.0	10.4	131	LKX 7774 E094 0000
4	0.35	1.0	12.0	197	LKX 7774 E097 0000
5	0.35	1.1	13.4	251	LKX 7774 E160 0000
6	0.35	1.1	14.6	303	LKX 7774 E100 0000
8	0.35	1.2	15.7	366	LKX 7774 E103 0000
10	0.35	1.2	17.9	456	LKX 7774 E106 0000
12	0.35	1.3	18.9	539	LKX 7774 E109 0000
16	0.35	1.3	21.4	706	LKX 7774 E112 0000
20	0.35	1.5	24.0	855	LKX 7774 E115 0000
24	0.35	1.5	25.9	1002	LKX 7774 E118 0000
1.5 mm²/7					
1	0.35	0.9	7.1	74	LKX 7774 E121 0000
2	0.35	1.0	10.8	141	LKX 7774 E124 0000
4	0.35	1.1	12.7	223	LKX 7774 E127 0000
5	0.35	1.1	14.0	275	LKX 7774 E163 0000
6	0.35	1.1	15.2	323	LKX 7774 E130 0000
8	0.35	1.2	16.4	401	LKX 7774 E133 0000
10	0.35	1.3	18.8	490	LKX 7774 E136 0000
12	0.35	1.3	19.7	585	LKX 7774 E139 0000
16	0.35	1.4	22.5	766	LKX 7774 E142 0000
20	0.35	1.5	25.0	919	LKX 7774 E145 0000
24	0.35	1.5	27.1	1114	LKX 7774 E148 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, PVC-Insulation, Individual & Collective Screen, PVC-Sheath





UV Oil FR RP

ICON Base 10200 M0 IS/OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10200 M0 IS/OS SIZE 300 V RP

EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

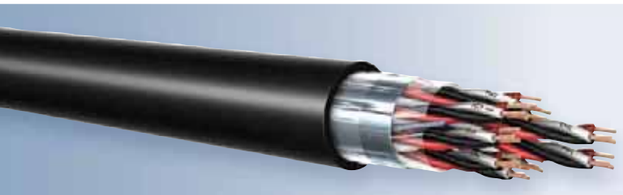
Electrical Properties at 20 °C

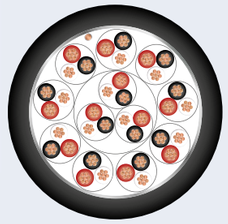
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.26	0.9	8.7	83	LKX 7774 E166 0000
4	0.26	1.0	10.2	126	LKX 7774 E169 0000
5	0.26	1.0	11.2	153	LKX 7774 E172 0000
6	0.26	1.0	12.1	186	LKX 7774 E175 0000
8	0.26	1.1	13.1	223	LKX 7774 E178 0000
10	0.26	1.2	15.1	281	LKX 7774 E181 0000
12	0.26	1.2	15.7	323	LKX 7774 E184 0000
16	0.26	1.2	17.8	411	LKX 7774 E187 0000
20	0.26	1.3	19.7	494	LKX 7774 E190 0000
24	0.26	1.4	21.5	606	LKX 7774 E193 0000
0.75 mm²/7					
2	0.26	1.0	9.7	104	LKX 7774 E196 0000
4	0.26	1.0	11.2	151	LKX 7774 E199 0000
5	0.26	1.1	12.5	191	LKX 7774 E202 0000
6	0.26	1.1	13.6	226	LKX 7774 E205 0000
8	0.26	1.1	14.4	271	LKX 7774 E208 0000
10	0.26	1.2	16.6	349	LKX 7774 E211 0000
12	0.26	1.2	17.3	384	LKX 7774 E214 0000
16	0.26	1.3	19.8	504	LKX 7774 E217 0000
20	0.26	1.4	22.0	620	LKX 7774 E220 0000
24	0.26	1.5	24.0	745	LKX 7774 E223 0000
1 mm²/7					
2	0.26	1.0	10.4	123	LKX 7774 E226 0000
4	0.26	1.0	12.1	184	LKX 7774 E229 0000
5	0.26	1.1	13.5	233	LKX 7774 E232 0000
6	0.26	1.1	14.7	272	LKX 7774 E235 0000
8	0.26	1.2	15.8	342	LKX 7774 E238 0000
10	0.26	1.2	18.0	420	LKX 7774 E241 0000
12	0.26	1.3	19.0	488	LKX 7774 E244 0000
16	0.26	1.3	21.5	627	LKX 7774 E247 0000
20	0.26	1.4	23.9	773	LKX 7774 E250 0000
24	0.26	1.5	26.1	917	LKX 7774 E253 0000
1.3 mm²/7					
2	0.35	1.0	11.4	145	LKX 7774 E256 0000
4	0.35	1.1	13.4	231	LKX 7774 E259 0000
5	0.35	1.1	14.8	291	LKX 7774 E262 0000
6	0.35	1.2	16.3	351	LKX 7774 E265 0000
8	0.35	1.3	17.6	430	LKX 7774 E268 0000
10	0.35	1.3	20.0	539	LKX 7774 E271 0000
12	0.35	1.4	21.1	611	LKX 7774 E274 0000
16	0.35	1.5	24.1	804	LKX 7774 E277 0000
20	0.35	1.6	26.8	988	LKX 7774 E280 0000
24	0.35	1.7	29.2	1184	LKX 7774 E283 0000
1.5 mm²/7					
2	0.35	1.0	11.8	161	LKX 7774 E286 0000
4	0.35	1.1	13.9	245	LKX 7774 E289 0000
5	0.35	1.2	15.5	311	LKX 7774 E292 0000
6	0.35	1.2	16.9	363	LKX 7774 E295 0000
8	0.35	1.3	18.2	458	LKX 7774 E298 0000
10	0.35	1.4	21.0	576	LKX 7774 E301 0000
12	0.35	1.4	21.9	669	LKX 7774 E304 0000
16	0.35	1.5	25.1	877	LKX 7774 E307 0000
20	0.35	1.6	27.8	1083	LKX 7774 E310 0000
24	0.35	1.7	30.3	1301	LKX 7774 E313 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, PVC-Insulation, Collective Screen, PVC-Sheath





ICON Base 10200 M0 OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10200 M0 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

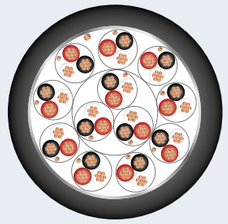
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
1	0.26	0.8	5.4	49	LKX 7774 E316 0000
2	0.26	0.9	8.4	96	LKX 7774 E319 0000
4	0.26	1.0	9.8	131	LKX 7774 E322 0000
5	0.26	1.0	10.8	171	LKX 7774 E325 0000
6	0.26	1.0	12.1	203	LKX 7774 E328 0000
8	0.26	1.1	13.1	243	LKX 7774 E331 0000
10	0.26	1.1	14.7	303	LKX 7774 E334 0000
12	0.26	1.1	15.2	339	LKX 7774 E337 0000
16	0.26	1.2	17.4	457	LKX 7774 E340 0000
20	0.26	1.2	19.1	559	LKX 7774 E343 0000
24	0.26	1.3	20.9	654	LKX 7774 E346 0000
0.75 mm²/7					
1	0.26	0.9	6.1	62	LKX 7774 E349 0000
2	0.26	1.0	9.5	114	LKX 7774 E352 0000
4	0.26	1.1	11.1	171	LKX 7774 E355 0000
5	0.26	1.1	12.2	208	LKX 7774 E358 0000
6	0.26	1.2	13.9	256	LKX 7774 E361 0000
8	0.26	1.2	14.9	318	LKX 7774 E364 0000
10	0.26	1.3	16.9	394	LKX 7774 E367 0000
12	0.26	1.3	17.5	455	LKX 7774 E370 0000
16	0.26	1.4	19.9	585	LKX 7774 E373 0000
20	0.26	1.5	22.1	718	LKX 7774 E376 0000
24	0.26	1.5	23.9	860	LKX 7774 E379 0000
1 mm²/7					
1	0.26	0.9	6.6	76	LKX 7774 E382 0000
2	0.26	1.0	10.4	138	LKX 7774 E385 0000
4	0.26	1.1	12.1	220	LKX 7774 E388 0000
5	0.26	1.1	13.4	270	LKX 7774 E391 0000
6	0.26	1.2	15.2	330	LKX 7774 E394 0000
8	0.26	1.3	16.5	412	LKX 7774 E397 0000
10	0.26	1.3	18.6	503	LKX 7774 E400 0000
12	0.26	1.4	19.4	592	LKX 7774 E403 0000
16	0.26	1.5	22.1	778	LKX 7774 E406 0000
20	0.26	1.6	24.5	961	LKX 7774 E409 0000
24	0.26	1.6	26.5	1128	LKX 7774 E412 0000
1.3 mm²/7					
1	0.35	0.9	7.2	93	LKX 7774 E415 0000
2	0.35	1.1	11.7	180	LKX 7774 E418 0000
4	0.35	1.1	13.4	279	LKX 7774 E421 0000
5	0.35	1.2	15.0	349	LKX 7774 E424 0000
6	0.35	1.3	17.1	430	LKX 7774 E427 0000
8	0.35	1.3	18.3	527	LKX 7774 E430 0000
10	0.35	1.4	20.9	655	LKX 7774 E433 0000
12	0.35	1.5	21.8	773	LKX 7774 E436 0000
16	0.35	1.6	24.8	1018	LKX 7774 E439 0000
20	0.35	1.7	27.5	1250	LKX 7774 E442 0000
24	0.35	1.8	30.0	1486	LKX 7774 E445 0000
1.5 mm²/7					
1	0.35	0.9	7.5	102	LKX 7774 E448 0000
2	0.35	1.1	12.1	191	LKX 7774 E451 0000
4	0.35	1.2	14.2	298	LKX 7774 E454 0000
5	0.35	1.2	15.6	369	LKX 7774 E457 0000
6	0.35	1.3	17.8	460	LKX 7774 E460 0000
8	0.35	1.4	19.3	563	LKX 7774 E463 0000
10	0.35	1.5	22.0	700	LKX 7774 E466 0000
12	0.35	1.5	22.7	826	LKX 7774 E469 0000
16	0.35	1.6	25.9	1075	LKX 7774 E472 0000
20	0.35	1.7	28.7	1320	LKX 7774 E475 0000
24	0.35	1.8	31.3	1574	LKX 7774 E478 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, PVC-Insulation, Individual & Collective Screen, PVC-Sheath



ICON Base 10200 M0 IS/OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10200 M0 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

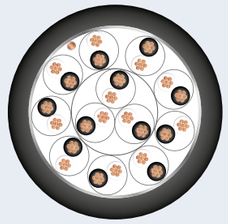
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.26	1.0	9.2	105	LKX 7774 E481 0000
4	0.26	1.0	11.1	165	LKX 7774 E484 0000
5	0.26	1.1	12.4	200	LKX 7774 E487 0000
6	0.26	1.1	14.0	247	LKX 7774 E490 0000
8	0.26	1.1	14.9	301	LKX 7774 E493 0000
10	0.26	1.2	17.0	364	LKX 7774 E496 0000
12	0.26	1.2	17.6	412	LKX 7774 E499 0000
16	0.26	1.3	20.1	552	LKX 7774 E502 0000
20	0.26	1.4	22.3	674	LKX 7774 E505 0000
24	0.26	1.5	24.3	811	LKX 7774 E508 0000
0.75 mm²/7					
2	0.26	1.0	10.0	126	LKX 7774 E511 0000
4	0.26	1.1	12.4	201	LKX 7774 E514 0000
5	0.26	1.2	13.9	253	LKX 7774 E517 0000
6	0.26	1.2	15.6	303	LKX 7774 E520 0000
8	0.26	1.3	16.9	382	LKX 7774 E523 0000
10	0.26	1.4	19.2	471	LKX 7774 E526 0000
12	0.26	1.4	19.8	533	LKX 7774 E529 0000
16	0.26	1.5	22.7	700	LKX 7774 E532 0000
20	0.26	1.6	25.1	858	LKX 7774 E535 0000
24	0.26	1.7	27.4	1026	LKX 7774 E538 0000
1 mm²/7					
2	0.26	1.1	11.0	149	LKX 7774 E541 0000
4	0.26	1.1	13.4	248	LKX 7774 E544 0000
5	0.26	1.2	15.0	309	LKX 7774 E547 0000
6	0.26	1.3	17.1	390	LKX 7774 E550 0000
8	0.26	1.3	18.3	470	LKX 7774 E553 0000
10	0.26	1.4	20.9	582	LKX 7774 E556 0000
12	0.26	1.5	21.8	673	LKX 7774 E559 0000
16	0.26	1.6	24.8	890	LKX 7774 E562 0000
20	0.26	1.7	27.5	1090	LKX 7774 E565 0000
24	0.26	1.8	30.0	1301	LKX 7774 E568 0000
1.3 mm²/7					
2	0.35	1.1	12.0	192	LKX 7774 E571 0000
4	0.35	1.2	14.9	315	LKX 7774 E574 0000
5	0.35	1.3	16.7	393	LKX 7774 E577 0000
6	0.35	1.3	18.8	472	LKX 7774 E580 0000
8	0.35	1.4	20.3	595	LKX 7774 E583 0000
10	0.35	1.5	23.2	743	LKX 7774 E586 0000
12	0.35	1.5	23.9	849	LKX 7774 E589 0000
16	0.35	1.7	27.6	1135	LKX 7774 E592 0000
20	0.35	1.8	30.6	1391	LKX 7774 E595 0000
24	0.35	1.9	33.3	1665	LKX 7774 E598 0000
1.5 mm²/7					
2	0.35	1.1	12.5	206	LKX 7774 E601 0000
4	0.35	1.2	15.4	335	LKX 7774 E604 0000
5	0.35	1.3	17.3	424	LKX 7774 E607 0000
6	0.35	1.4	19.7	514	LKX 7774 E610 0000
8	0.35	1.4	21.1	641	LKX 7774 E613 0000
10	0.35	1.5	24.1	800	LKX 7774 E616 0000
12	0.35	1.6	25.1	946	LKX 7774 E619 0000
16	0.35	1.7	28.6	1214	LKX 7774 E622 0000
20	0.35	1.8	31.8	1526	LKX 7774 E625 0000
24	0.35	1.9	34.6	1826	LKX 7774 E628 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, PVC-Sheath



ICON Base 10100 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10100 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

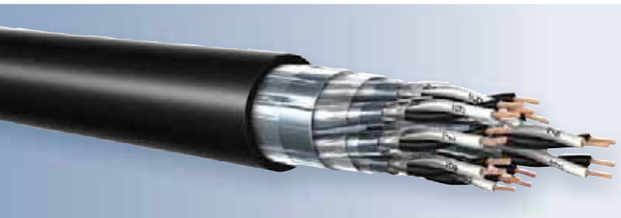
Electrical Properties at 20 °C

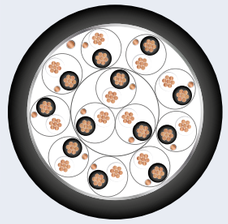
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
Capacitance unbalance	max.	500 pF/500 m					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
1	0.26	0.8	5.2	38	LKX 7128 E001 0000
2	0.26	0.9	7.6	66	LKX 7128 E004 0000
4	0.26	0.9	8.8	93	LKX 7128 E007 0000
5	0.26	1.0	9.8	116	LKX 7128 E151 0000
6	0.26	1.0	10.6	136	LKX 7128 E010 0000
8	0.26	1.1	11.5	164	LKX 7128 E013 0000
10	0.26	1.1	12.9	198	LKX 7128 E016 0000
12	0.26	1.2	13.7	233	LKX 7128 E019 0000
16	0.26	1.1	15.2	291	LKX 7128 E022 0000
20	0.26	1.2	16.9	356	LKX 7128 E025 0000
24	0.26	1.3	18.5	428	LKX 7128 E028 0000
0.75 mm²/7					
1	0.26	0.8	5.8	45	LKX 7128 E031 0000
2	0.26	0.9	8.5	82	LKX 7128 E034 0000
4	0.26	1.0	10.0	122	LKX 7128 E037 0000
5	0.26	1.0	10.9	147	LKX 7128 E154 0000
6	0.26	1.0	11.8	174	LKX 7128 E040 0000
8	0.26	1.1	12.8	211	LKX 7128 E043 0000
10	0.26	1.1	14.5	256	LKX 7128 E046 0000
12	0.26	1.1	15.1	294	LKX 7128 E049 0000
16	0.26	1.2	17.3	388	LKX 7128 E052 0000
20	0.26	1.4	19.4	486	LKX 7128 E055 0000
24	0.26	1.3	20.8	572	LKX 7128 E058 0000
1 mm²/7					
1	0.26	0.9	6.3	55	LKX 7128 E061 0000
2	0.26	1.0	9.4	102	LKX 7128 E064 0000
4	0.26	1.1	11.1	155	LKX 7128 E067 0000
5	0.26	1.0	11.9	183	LKX 7128 E157 0000
6	0.26	1.0	13.0	224	LKX 7128 E070 0000
8	0.26	1.2	14.2	270	LKX 7128 E073 0000
10	0.26	1.1	15.9	333	LKX 7128 E076 0000
12	0.26	1.3	17.0	379	LKX 7128 E079 0000
16	0.26	1.4	19.4	504	LKX 7128 E082 0000
20	0.26	1.3	21.1	605	LKX 7128 E085 0000
24	0.26	1.4	23.1	719	LKX 7128 E088 0000
1.3 mm²/7					
1	0.35	0.9	6.8	64	LKX 7128 E091 0000
2	0.35	1.0	10.4	123	LKX 7128 E094 0000
4	0.35	1.1	12.2	189	LKX 7128 E097 0000
5	0.35	1.1	13.4	230	LKX 7128 E160 0000
6	0.35	1.1	14.6	288	LKX 7128 E100 0000
8	0.35	1.2	15.7	335	LKX 7128 E103 0000
10	0.35	1.2	17.9	412	LKX 7128 E106 0000
12	0.35	1.4	19.1	494	LKX 7128 E109 0000
16	0.35	1.3	21.4	624	LKX 7128 E112 0000
20	0.35	1.4	23.8	774	LKX 7128 E115 0000
24	0.35	1.5	25.9	917	LKX 7128 E118 0000
1.5 mm²/7					
1	0.35	0.9	7.1	70	LKX 7128 E121 0000
2	0.35	1.0	10.8	136	LKX 7128 E124 0000
4	0.35	1.1	12.7	209	LKX 7128 E127 0000
5	0.35	1.2	14.2	264	LKX 7128 E163 0000
6	0.35	1.1	15.2	306	LKX 7128 E130 0000
8	0.35	1.2	16.4	378	LKX 7128 E133 0000
10	0.35	1.4	18.8	469	LKX 7128 E136 0000
12	0.35	1.3	19.7	573	LKX 7128 E139 0000
16	0.35	1.4	22.5	714	LKX 7128 E142 0000
20	0.35	1.6	25.2	889	LKX 7128 E145 0000
24	0.35	1.5	27.1	1050	LKX 7128 E148 0000
2.5 mm²/7					
1	0.44	0.9	8.3	101	LKX 7128 E955 0000
4	0.44	1.1	15.3	310	LKX 7128 E957 0000
12	0.44	1.5	24.3	853	LKX 7128 E962 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, PVC-Sheath





ICON Base 10100 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking Base

LEONI KERPEN ICON BASE 10100 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

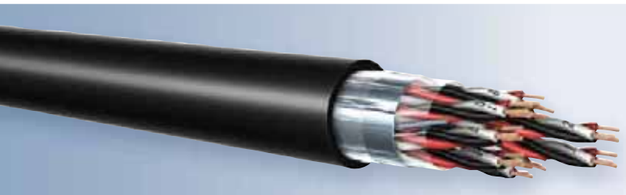
Electrical Properties at 20 °C

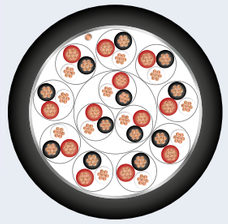
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.26	0.9	8.7	81	LKX 7128 E166 0000
4	0.26	1.0	10.2	121	LKX 7128 E169 0000
5	0.26	1.1	11.4	150	LKX 7128 E172 0000
6	0.26	1.1	12.3	171	LKX 7128 E175 0000
8	0.26	1.1	13.1	211	LKX 7128 E178 0000
10	0.26	1.2	15.1	269	LKX 7128 E181 0000
12	0.26	1.2	15.7	299	LKX 7128 E184 0000
16	0.26	1.2	17.8	377	LKX 7128 E187 0000
20	0.26	1.4	19.9	478	LKX 7128 E190 0000
24	0.26	1.4	21.5	554	LKX 7128 E193 0000
0.75 mm²/7					
2	0.26	1.0	9.7	102	LKX 7128 E196 0000
4	0.26	1.0	11.2	146	LKX 7128 E199 0000
5	0.26	1.1	12.5	184	LKX 7128 E202 0000
6	0.26	1.2	13.8	222	LKX 7128 E205 0000
8	0.26	1.1	14.4	265	LKX 7128 E208 0000
10	0.26	1.2	16.6	328	LKX 7128 E211 0000
12	0.26	1.2	17.3	369	LKX 7128 E214 0000
16	0.26	1.3	19.8	484	LKX 7128 E217 0000
20	0.26	1.4	22.0	594	LKX 7128 E220 0000
24	0.26	1.5	24.0	714	LKX 7128 E223 0000
1 mm²/7					
2	0.26	1.0	10.4	117	LKX 7128 E226 0000
4	0.26	1.1	12.3	178	LKX 7128 E229 0000
5	0.26	1.2	13.7	227	LKX 7128 E232 0000
6	0.26	1.2	14.9	269	LKX 7128 E235 0000
8	0.26	1.2	15.9	331	LKX 7128 E238 0000
10	0.26	1.3	18.2	408	LKX 7128 E241 0000
12	0.26	1.4	19.2	463	LKX 7128 E244 0000
16	0.26	1.3	21.6	593	LKX 7128 E247 0000
20	0.26	1.5	24.1	721	LKX 7128 E250 0000
24	0.26	1.6	26.3	878	LKX 7128 E253 0000
1.3 mm²/7					
2	0.35	1.0	11.4	138	LKX 7128 E256 0000
4	0.35	1.1	13.4	213	LKX 7128 E259 0000
5	0.35	1.2	15.0	269	LKX 7128 E262 0000
6	0.35	1.3	16.5	319	LKX 7128 E265 0000
8	0.35	1.3	17.6	398	LKX 7128 E268 0000
10	0.35	1.4	20.2	497	LKX 7128 E271 0000
12	0.35	1.4	21.1	566	LKX 7128 E274 0000
16	0.35	1.5	24.1	739	LKX 7128 E277 0000
20	0.35	1.6	26.8	905	LKX 7128 E280 0000
24	0.35	1.7	29.2	1090	LKX 7128 E283 0000
1.5 mm²/7					
2	0.35	1.1	12.0	157	LKX 7128 E286 0000
4	0.35	1.2	14.1	241	LKX 7128 E289 0000
5	0.35	1.2	15.5	299	LKX 7128 E292 0000
6	0.35	1.3	17.1	368	LKX 7128 E295 0000
8	0.35	1.3	18.2	438	LKX 7128 E298 0000
10	0.35	1.4	21.0	550	LKX 7128 E301 0000
12	0.35	1.5	22.1	635	LKX 7128 E304 0000
16	0.35	1.6	25.3	836	LKX 7128 E307 0000
20	0.35	1.7	28.0	1021	LKX 7128 E310 0000
24	0.35	1.8	30.5	1224	LKX 7128 E313 0000
2.5 mm²/7					
2	0.44	1.1	14.1	226	LKX 7128 E966 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, XLPE-Insulation, Collective Screen, PVC-Sheath





ICON Base 10100 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to + 90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10100 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

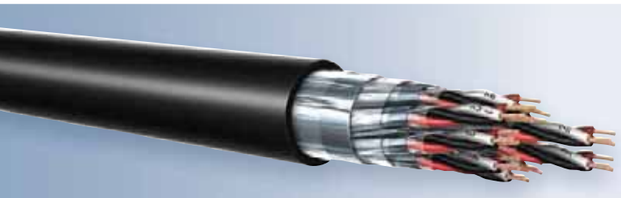
Electrical Properties at 20 °C

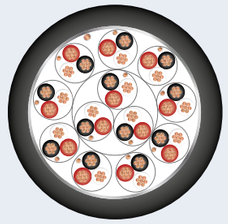
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
1	0.26	0.9	5.6	48	LKX 7128 E316 0000
2	0.26	1.0	8.6	92	LKX 7128 E319 0000
4	0.26	1.0	9.8	124	LKX 7128 E322 0000
5	0.26	1.1	11.0	155	LKX 7128 E325 0000
6	0.26	1.1	12.3	186	LKX 7128 E328 0000
8	0.26	1.1	13.1	226	LKX 7128 E331 0000
10	0.26	1.2	14.9	284	LKX 7128 E334 0000
12	0.26	1.1	15.2	313	LKX 7128 E337 0000
16	0.26	1.3	17.6	416	LKX 7128 E340 0000
20	0.26	1.4	19.5	509	LKX 7128 E343 0000
24	0.26	1.4	21.1	595	LKX 7128 E346 0000
0.75 mm²/7					
1	0.26	0.9	6.1	61	LKX 7128 E349 0000
2	0.26	1.0	9.5	114	LKX 7128 E352 0000
4	0.26	1.1	11.1	164	LKX 7128 E355 0000
5	0.26	1.1	12.2	199	LKX 7128 E358 0000
6	0.26	1.2	13.9	246	LKX 7128 E361 0000
8	0.26	1.2	14.9	297	LKX 7128 E364 0000
10	0.26	1.3	16.9	373	LKX 7128 E367 0000
12	0.26	1.3	17.5	425	LKX 7128 E370 0000
16	0.26	1.4	19.9	557	LKX 7128 E373 0000
20	0.26	1.5	22.1	683	LKX 7128 E376 0000
24	0.26	1.5	23.9	804	LKX 7128 E379 0000
1 mm²/7					
1	0.26	0.9	6.6	73	LKX 7128 E382 0000
2	0.26	1.0	10.4	136	LKX 7128 E385 0000
4	0.26	1.1	12.1	203	LKX 7128 E388 0000
5	0.26	1.1	13.4	252	LKX 7128 E391 0000
6	0.26	1.2	15.2	304	LKX 7128 E394 0000
8	0.26	1.3	16.5	379	LKX 7128 E397 0000
10	0.26	1.3	18.6	463	LKX 7128 E400 0000
12	0.26	1.4	19.4	546	LKX 7128 E403 0000
16	0.26	1.5	22.1	719	LKX 7128 E406 0000
20	0.26	1.6	24.5	883	LKX 7128 E409 0000
24	0.26	1.6	26.5	1051	LKX 7128 E412 0000
1.3 mm²/7					
1	0.35	0.9	7.2	87	LKX 7128 E415 0000
2	0.35	1.1	11.7	176	LKX 7128 E418 0000
4	0.35	1.1	13.4	252	LKX 7128 E421 0000
5	0.35	1.2	15.0	319	LKX 7128 E424 0000
6	0.35	1.3	17.1	400	LKX 7128 E427 0000
8	0.35	1.2	18.1	471	LKX 7128 E430 0000
10	0.35	1.3	20.7	587	LKX 7128 E433 0000
12	0.35	1.5	21.8	696	LKX 7128 E436 0000
16	0.35	1.6	24.8	920	LKX 7128 E439 0000
20	0.35	1.7	27.5	1127	LKX 7128 E442 0000
24	0.35	1.8	30.0	1339	LKX 7128 E445 0000
1.5 mm²/7					
1	0.35	0.9	7.5	97	LKX 7128 E448 0000
2	0.35	1.1	12.1	186	LKX 7128 E451 0000
4	0.35	1.2	14.2	288	LKX 7128 E454 0000
5	0.35	1.2	15.6	356	LKX 7128 E457 0000
6	0.35	1.3	17.8	433	LKX 7128 E460 0000
8	0.35	1.4	19.3	542	LKX 7128 E463 0000
10	0.35	1.5	22.0	689	LKX 7128 E466 0000
12	0.35	1.5	22.7	781	LKX 7128 E469 0000
16	0.35	1.6	25.9	1033	LKX 7128 E472 0000
20	0.35	1.7	28.7	1268	LKX 7128 E475 0000
24	0.35	1.8	31.3	1511	LKX 7128 E478 0000
2.5 mm²/7					
1	0.44	1.0	9.0	131	LKX 7128 E976 0000
4	0.44	1.3	17.2	440	LKX 7128 E978 0000
12	0.44	1.6	27.7	1220	LKX 7128 E983 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, XLPE-Insulation, Individual & Collective Screen, PVC-Sheath





ICON Base 10100 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10100 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

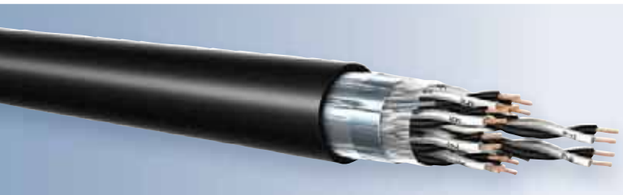
Electrical Properties at 20 °C

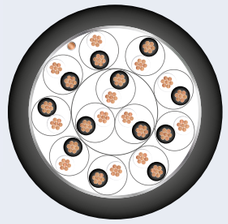
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.35	1.0	9.2	104	LKX 7128 E481 0000
4	0.35	1.0	11.1	150	LKX 7128 E484 0000
5	0.35	1.1	12.4	184	LKX 7128 E487 0000
6	0.35	1.2	14.2	235	LKX 7128 E490 0000
8	0.35	1.2	15.1	282	LKX 7128 E493 0000
10	0.35	1.3	17.2	350	LKX 7128 E496 0000
12	0.35	1.3	17.8	386	LKX 7128 E499 0000
16	0.35	1.3	20.1	509	LKX 7128 E502 0000
20	0.35	1.5	22.5	618	LKX 7128 E505 0000
24	0.35	1.6	24.5	752	LKX 7128 E508 0000
0.75 mm²/7					
2	0.26	1.0	10.6	124	LKX 7128 E511 0000
4	0.26	1.1	12.4	192	LKX 7128 E514 0000
5	0.26	1.1	13.7	235	LKX 7128 E517 0000
6	0.26	1.2	15.6	281	LKX 7128 E520 0000
8	0.26	1.2	16.7	357	LKX 7128 E523 0000
10	0.26	1.3	19.0	441	LKX 7128 E526 0000
12	0.26	1.4	19.8	497	LKX 7128 E529 0000
16	0.26	1.4	22.5	656	LKX 7128 E532 0000
20	0.26	1.5	24.9	808	LKX 7128 E535 0000
24	0.26	1.7	27.4	968	LKX 7128 E538 0000
1 mm²/7					
2	0.26	1.1	11.0	147	LKX 7128 E541 0000
4	0.26	1.1	13.4	232	LKX 7128 E544 0000
5	0.26	1.2	15.0	287	LKX 7128 E547 0000
6	0.26	1.3	17.1	362	LKX 7128 E550 0000
8	0.26	1.3	18.3	442	LKX 7128 E553 0000
10	0.26	1.4	20.9	547	LKX 7128 E556 0000
12	0.26	1.5	21.8	650	LKX 7128 E559 0000
16	0.26	1.6	24.8	856	LKX 7128 E562 0000
20	0.26	1.7	27.5	1004	LKX 7128 E565 0000
24	0.26	1.8	30.0	1239	LKX 7128 E568 0000
1.3 mm²/7					
2	0.35	1.1	12.0	186	LKX 7128 E571 0000
4	0.35	1.2	14.9	284	LKX 7128 E574 0000
5	0.35	1.3	16.7	358	LKX 7128 E577 0000
6	0.35	1.3	18.8	437	LKX 7128 E580 0000
8	0.35	1.3	20.1	544	LKX 7128 E583 0000
10	0.35	1.4	23.0	678	LKX 7128 E586 0000
12	0.35	1.5	23.9	768	LKX 7128 E589 0000
16	0.35	1.7	27.6	1024	LKX 7128 E592 0000
20	0.35	1.8	30.6	1254	LKX 7128 E595 0000
24	0.35	1.9	33.3	1515	LKX 7128 E598 0000
1.5 mm²/7					
2	0.35	1.1	12.5	200	LKX 7128 E601 0000
4	0.35	1.2	15.4	321	LKX 7128 E604 0000
5	0.35	1.2	17.1	396	LKX 7128 E607 0000
6	0.35	1.4	19.7	484	LKX 7128 E610 0000
8	0.35	1.4	21.1	619	LKX 7128 E613 0000
10	0.35	1.5	24.1	764	LKX 7128 E616 0000
12	0.35	1.6	25.1	869	LKX 7128 E619 0000
16	0.35	1.7	28.6	1143	LKX 7128 E622 0000
20	0.35	1.8	31.8	1417	LKX 7128 E625 0000
24	0.35	1.9	34.6	1695	LKX 7128 E628 0000
2.5 mm²/7					
2	0.44	1.2	15.8	295	LKX 7128 E987 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, PVC-Sheath





ICON Base 10104 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available
- reinforced

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, reinforced, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10104 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

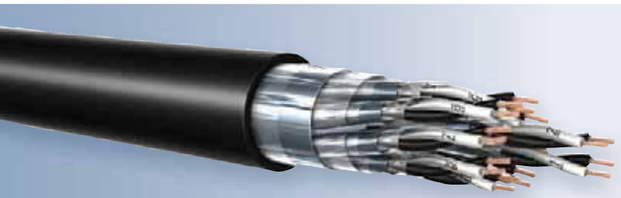
Electrical Properties at 20 °C

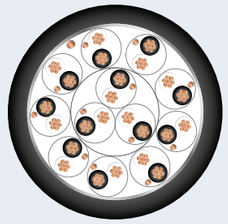
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
Capacitance unbalance	max.	500 pF/500 m					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
1	0.26	1.8	7.2	71	LKX 7328 E001 0000
2	0.26	1.8	9.4	108	LKX 7328 E004 0000
4	0.26	1.8	10.6	140	LKX 7328 E007 0000
5	0.26	1.8	11.4	163	LKX 7328 E151 0000
6	0.26	1.8	12.2	187	LKX 7328 E010 0000
8	0.26	1.8	12.9	213	LKX 7328 E013 0000
10	0.26	1.8	14.3	252	LKX 7328 E016 0000
12	0.26	1.8	14.9	283	LKX 7328 E019 0000
16	0.26	1.8	16.6	353	LKX 7328 E022 0000
20	0.26	1.8	18.1	406	LKX 7328 E025 0000
24	0.26	1.8	19.5	483	LKX 7328 E028 0000
0.75 mm²/7					
1	0.26	1.8	7.7	78	LKX 7328 E031 0000
2	0.26	1.8	10.3	128	LKX 7328 E034 0000
4	0.26	1.8	11.6	165	LKX 7328 E037 0000
5	0.26	1.8	12.5	199	LKX 7328 E154 0000
6	0.26	1.8	13.4	229	LKX 7328 E040 0000
8	0.26	1.8	14.2	265	LKX 7328 E043 0000
10	0.26	1.8	15.9	317	LKX 7328 E046 0000
12	0.26	1.8	16.5	358	LKX 7328 E049 0000
16	0.26	1.8	18.5	441	LKX 7328 E052 0000
20	0.26	1.8	20.2	536	LKX 7328 E055 0000
24	0.26	1.8	21.8	610	LKX 7328 E058 0000
1 mm²/7					
1	0.26	1.8	8.1	90	LKX 7328 E061 0000
2	0.26	1.8	11.0	146	LKX 7328 E064 0000
4	0.26	1.8	12.5	200	LKX 7328 E067 0000
5	0.26	1.8	13.5	236	LKX 7328 E157 0000
6	0.26	1.8	14.6	276	LKX 7328 E070 0000
8	0.26	1.8	15.4	321	LKX 7328 E073 0000
10	0.26	1.8	17.3	386	LKX 7328 E076 0000
12	0.26	1.8	18.0	442	LKX 7328 E079 0000
16	0.26	1.8	20.2	558	LKX 7328 E082 0000
20	0.26	1.8	22.1	666	LKX 7328 E085 0000
24	0.26	1.8	23.9	778	LKX 7328 E088 0000
1.3 mm²/7					
1	0.35	1.8	8.6	101	LKX 7328 E091 0000
2	0.35	1.8	12.0	171	LKX 7328 E094 0000
4	0.35	1.8	13.6	239	LKX 7328 E097 0000
5	0.35	1.8	14.8	286	LKX 7328 E160 0000
6	0.35	1.8	16.0	332	LKX 7328 E100 0000
8	0.35	1.8	16.9	391	LKX 7328 E103 0000
10	0.35	1.8	19.1	474	LKX 7328 E106 0000
12	0.35	1.8	19.9	541	LKX 7328 E109 0000
16	0.35	1.8	22.4	679	LKX 7328 E112 0000
20	0.35	1.8	24.6	832	LKX 7328 E115 0000
24	0.35	1.8	26.5	954	LKX 7328 E118 0000
1.5 mm²/7					
1	0.35	1.8	8.9	109	LKX 7328 E121 0000
2	0.35	1.8	12.4	188	LKX 7328 E124 0000
4	0.35	1.8	14.1	261	LKX 7328 E127 0000
5	0.35	1.8	15.4	313	LKX 7328 E163 0000
6	0.35	1.8	16.6	364	LKX 7328 E130 0000
8	0.35	1.8	17.6	433	LKX 7328 E133 0000
10	0.35	1.8	19.8	526	LKX 7328 E136 0000
12	0.35	1.8	20.7	605	LKX 7328 E139 0000
16	0.35	1.8	23.3	772	LKX 7328 E142 0000
20	0.35	1.8	25.6	933	LKX 7328 E145 0000
24	0.35	1.8	27.7	1091	LKX 7328 E148 0000
2.5 mm²/7					
1	0.44	1.8	10.1	142	LKX 7328 E955 0000
4	0.44	1.8	16.7	361	LKX 7328 E957 0000
12	0.44	1.8	24.9	877	LKX 7328 E962 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, PVC-Sheath





ICON Base 10104 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available
- reinforced

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, reinforced, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10104 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

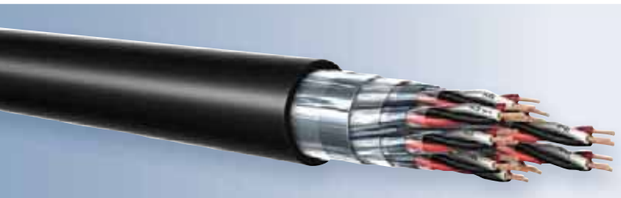
Electrical Properties at 20 °C

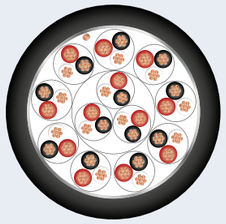
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.26	1.8	10.5	125	LKX 7328 E166 0000
4	0.26	1.8	11.8	169	LKX 7328 E169 0000
5	0.26	1.8	12.8	195	LKX 7328 E172 0000
6	0.26	1.8	13.7	227	LKX 7328 E175 0000
8	0.26	1.8	14.5	269	LKX 7328 E178 0000
10	0.26	1.8	16.3	319	LKX 7328 E181 0000
12	0.26	1.8	16.9	355	LKX 7328 E184 0000
16	0.26	1.8	19.0	445	LKX 7328 E187 0000
20	0.26	1.8	20.7	525	LKX 7328 E190 0000
24	0.26	1.8	22.3	617	LKX 7328 E193 0000
0.75 mm²/7					
2	0.26	1.8	11.3	141	LKX 7328 E195 0000
4	0.26	1.8	12.8	200	LKX 7328 E199 0000
5	0.26	1.8	13.9	234	LKX 7328 E202 0000
6	0.26	1.8	15.0	274	LKX 7328 E205 0000
8	0.26	1.8	15.8	323	LKX 7328 E208 0000
10	0.26	1.8	17.8	385	LKX 7328 E211 0000
12	0.26	1.8	18.6	423	LKX 7328 E214 0000
16	0.26	1.8	20.8	543	LKX 7328 E217 0000
20	0.26	1.8	22.8	647	LKX 7328 E220 0000
24	0.26	1.8	24.6	749	LKX 7328 E223 0000
1 mm²/7					
2	0.26	1.8	12.0	166	LKX 7328 E226 0000
4	0.26	1.8	13.7	230	LKX 7328 E229 0000
5	0.26	1.8	14.9	273	LKX 7328 E232 0000
6	0.26	1.8	16.1	316	LKX 7328 E235 0000
8	0.26	1.8	17.0	378	LKX 7328 E238 0000
10	0.26	1.8	19.2	457	LKX 7328 E241 0000
12	0.26	1.8	20.0	515	LKX 7328 E244 0000
16	0.26	1.8	22.5	652	LKX 7328 E247 0000
20	0.26	1.8	24.7	785	LKX 7328 E250 0000
24	0.26	1.8	26.7	916	LKX 7328 E253 0000
1.3 mm²/7					
2	0.35	1.8	13.0	192	LKX 7328 E256 0000
4	0.35	1.8	14.8	271	LKX 7328 E259 0000
5	0.35	1.8	16.2	324	LKX 7328 E262 0000
6	0.35	1.8	17.5	378	LKX 7328 E265 0000
8	0.35	1.8	18.6	455	LKX 7328 E268 0000
10	0.35	1.8	21.0	552	LKX 7328 E271 0000
12	0.35	1.8	21.9	620	LKX 7328 E274 0000
16	0.35	1.8	24.7	792	LKX 7328 E277 0000
20	0.35	1.8	27.2	954	LKX 7328 E280 0000
24	0.35	1.8	29.4	1109	LKX 7328 E283 0000
1.5 mm²/7					
2	0.35	1.8	13.4	207	LKX 7328 E286 0000
4	0.35	1.8	15.3	293	LKX 7328 E289 0000
5	0.35	1.8	16.7	354	LKX 7328 E292 0000
6	0.35	1.8	18.1	410	LKX 7328 E295 0000
8	0.35	1.8	19.2	497	LKX 7328 E298 0000
10	0.35	1.8	21.8	604	LKX 7328 E301 0000
12	0.35	1.8	22.7	685	LKX 7328 E304 0000
16	0.35	1.8	25.7	882	LKX 7328 E307 0000
20	0.35	1.8	28.2	1055	LKX 7328 E310 0000
24	0.35	1.8	30.6	1252	LKX 7328 E313 0000
2.5 mm²/7					
2	0.44	1.8	14.1	273	LKX 7328 E966 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, XLPE-Insulation, Collective Screen, PVC-Sheath





ICON Base 10104 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available
- reinforced

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, reinforced, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10104 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

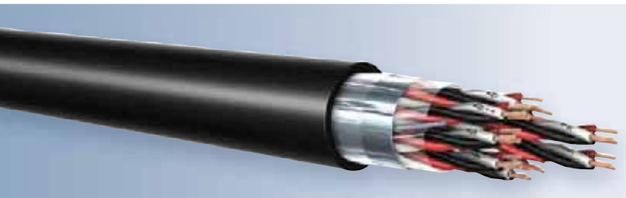
Electrical Properties at 20 °C

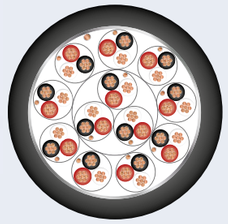
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number black
	mm	mm	mm	kg/km	
0.5 mm²/7					
1	0.26	1.8	7.4	78	LKX 7328 E316 0000
2	0.26	1.8	10.2	126	LKX 7328 E319 0000
4	0.26	1.8	11.4	173	LKX 7328 E322 0000
5	0.26	1.8	12.4	203	LKX 7328 E325 0000
6	0.26	1.8	13.7	237	LKX 7328 E328 0000
8	0.26	1.8	14.5	280	LKX 7328 E331 0000
10	0.26	1.8	16.1	334	LKX 7328 E334 0000
12	0.26	1.8	16.6	373	LKX 7328 E337 0000
16	0.26	1.8	18.6	476	LKX 7328 E340 0000
20	0.26	1.8	20.3	559	LKX 7328 E343 0000
24	0.26	1.8	21.9	657	LKX 7328 E346 0000
0.75 mm²/7					
1	0.26	1.8	7.9	92	LKX 7328 E349 0000
2	0.26	1.8	11.1	155	LKX 7328 E352 0000
4	0.26	1.8	12.5	212	LKX 7328 E355 0000
5	0.26	1.8	13.6	253	LKX 7328 E358 0000
6	0.26	1.8	15.1	302	LKX 7328 E361 0000
8	0.26	1.8	16.1	355	LKX 7328 E364 0000
10	0.26	1.8	17.9	425	LKX 7328 E367 0000
12	0.26	1.8	18.5	483	LKX 7328 E370 0000
16	0.26	1.8	20.7	615	LKX 7328 E373 0000
20	0.26	1.8	22.7	736	LKX 7328 E376 0000
24	0.26	1.8	24.5	862	LKX 7328 E379 0000
1 mm²/7					
1	0.26	1.8	8.4	106	LKX 7328 E382 0000
2	0.26	1.8	12.0	180	LKX 7328 E385 0000
4	0.26	1.8	13.5	256	LKX 7328 E388 0000
5	0.26	1.8	14.8	307	LKX 7328 E391 0000
6	0.26	1.8	16.4	377	LKX 7328 E394 0000
8	0.26	1.8	17.5	435	LKX 7328 E397 0000
10	0.26	1.8	20.0	524	LKX 7328 E400 0000
12	0.26	1.8	20.2	601	LKX 7328 E403 0000
16	0.26	1.8	22.7	770	LKX 7328 E406 0000
20	0.26	1.8	24.9	930	LKX 7328 E409 0000
24	0.26	1.8	26.9	1111	LKX 7328 E412 0000
1.3 mm²/7					
1	0.35	1.8	9.0	121	LKX 7328 E415 0000
2	0.35	1.8	13.1	216	LKX 7328 E418 0000
4	0.35	1.8	14.8	311	LKX 7328 E421 0000
5	0.35	1.8	16.2	374	LKX 7328 E424 0000
6	0.35	1.8	18.1	447	LKX 7328 E427 0000
8	0.35	1.8	19.3	552	LKX 7328 E430 0000
10	0.35	1.8	21.7	651	LKX 7328 E433 0000
12	0.35	1.8	22.4	749	LKX 7328 E436 0000
16	0.35	1.8	25.2	969	LKX 7328 E439 0000
20	0.35	1.8	27.7	1165	LKX 7328 E442 0000
24	0.35	1.8	30.0	1369	LKX 7328 E445 0000
1.5 mm²/7					
1	0.35	1.8	9.3	134	LKX 7328 E448 0000
2	0.35	1.8	13.5	233	LKX 7328 E451 0000
4	0.35	1.8	15.4	343	LKX 7328 E454 0000
5	0.35	1.8	16.8	412	LKX 7328 E457 0000
6	0.35	1.8	18.8	494	LKX 7328 E460 0000
8	0.35	1.8	20.1	597	LKX 7328 E463 0000
10	0.35	1.8	22.6	727	LKX 7328 E466 0000
12	0.35	1.8	23.3	834	LKX 7328 E469 0000
16	0.35	1.8	26.3	1087	LKX 7328 E472 0000
20	0.35	1.8	28.9	1308	LKX 7328 E475 0000
24	0.35	1.8	31.3	1541	LKX 7328 E478 0000
2.5 mm²/7					
1	0.44	1.8	10.6	184	LKX 7328 0000 0000
4	0.44	1.8	18.2	484	LKX 7328 E978 0000
12	0.44	1.8	28.1	1237	LKX 7328 E983 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, XLPE-Insulation, Individual & Collective Screen, PVC-Sheath





ICON Base 10104 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available
- reinforced

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, reinforced

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10104 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

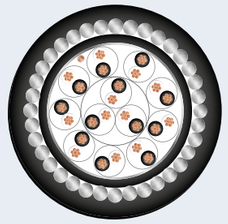
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	approx.	Part number black
	mm	mm	mm	kg/km	
0.5 mm²/7					
2	0.26	1.8	10.8	143	LKX 7328 E481 0000
4	0.26	1.8	12.7	202	LKX 7328 E484 0000
5	0.26	1.8	13.8	240	LKX 7328 E487 0000
6	0.26	1.8	15.4	284	LKX 7328 E490 0000
8	0.26	1.8	16.3	339	LKX 7328 E493 0000
10	0.26	1.8	18.2	403	LKX 7328 E496 0000
12	0.26	1.8	18.8	451	LKX 7328 E499 0000
16	0.26	1.8	21.1	571	LKX 7328 E502 0000
20	0.26	1.8	23.1	677	LKX 7328 E505 0000
24	0.26	1.8	24.9	786	LKX 7328 E508 0000
0.75 mm²/7					
2	0.26	1.8	11.6	169	LKX 7328 E511 0000
4	0.26	1.8	13.8	244	LKX 7328 E514 0000
5	0.26	1.8	15.1	291	LKX 7328 E517 0000
6	0.26	1.8	16.8	345	LKX 7328 E520 0000
8	0.26	1.8	17.9	417	LKX 7328 E523 0000
10	0.26	1.8	20.0	498	LKX 7328 E526 0000
12	0.26	1.8	20.6	557	LKX 7328 E529 0000
16	0.26	1.8	23.3	710	LKX 7328 E532 0000
20	0.26	1.8	25.5	853	LKX 7328 E535 0000
24	0.26	1.8	27.6	1024	LKX 7328 E538 0000
1 mm²/7					
2	0.26	1.8	12.4	194	LKX 7328 E541 0000
4	0.26	1.8	14.8	287	LKX 7328 E544 0000
5	0.26	1.8	16.2	343	LKX 7328 E547 0000
6	0.26	1.8	18.1	411	LKX 7328 E550 0000
8	0.26	1.8	19.3	499	LKX 7328 E553 0000
10	0.26	1.8	21.7	600	LKX 7328 E556 0000
12	0.26	1.8	22.4	680	LKX 7328 E559 0000
16	0.26	1.8	25.2	874	LKX 7328 E562 0000
20	0.26	1.8	27.7	1047	LKX 7328 E565 0000
24	0.26	1.8	30.0	1238	LKX 7328 E568 0000
1.3 mm²/7					
2	0.35	1.8	13.4	229	LKX 7328 E571 0000
4	0.35	1.8	16.1	345	LKX 7328 E574 0000
5	0.35	1.8	17.7	414	LKX 7328 E577 0000
6	0.35	1.8	19.8	494	LKX 7328 E580 0000
8	0.35	1.8	21.1	607	LKX 7328 E583 0000
10	0.35	1.8	23.8	733	LKX 7328 E586 0000
12	0.35	1.8	24.5	831	LKX 7328 E589 0000
16	0.35	1.8	27.8	1074	LKX 7328 E592 0000
20	0.35	1.8	30.6	1291	LKX 7328 E595 0000
24	0.35	1.9	33.3	1552	LKX 7328 E598 0000
1.5 mm²/7					
2	0.35	1.8	13.9	250	LKX 7328 E601 0000
4	0.35	1.8	16.6	376	LKX 7328 E604 0000
5	0.35	1.8	18.3	460	LKX 7328 E607 0000
6	0.35	1.8	20.5	533	LKX 7328 E610 0000
8	0.35	1.8	21.9	666	LKX 7328 E613 0000
10	0.35	1.8	24.7	816	LKX 7328 E616 0000
12	0.35	1.8	25.5	921	LKX 7328 E619 0000
16	0.35	1.8	28.8	1195	LKX 7328 E622 0000
20	0.35	1.8	31.9	1439	LKX 7328 E625 0000
24	0.35	1.9	34.6	1728	LKX 7328 E628 0000
2.5 mm²/7					
2	0.44	1.8	17.0	327	LKX 7328 E987 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, PVC-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10210 M0 OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10210 M0 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

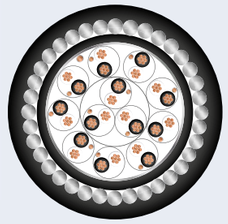
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	0.8	5.2	0.9	1.3	9.6	179	LKX 7776 E001 0000
2	0.26	0.9	7.6	0.9	1.4	12.2	265	LKX 7776 E004 0000
4	0.26	1.0	9.0	0.9	1.4	13.6	331	LKX 7776 E007 0000
5	0.26	1.0	9.8	0.9	1.4	14.4	371	LKX 7776 E151 0000
6	0.26	1.0	10.6	0.9	1.5	15.4	419	LKX 7776 E010 0000
8	0.26	1.1	11.5	0.9	1.5	16.3	470	LKX 7776 E013 0000
10	0.26	1.1	12.9	0.9	1.5	17.7	535	LKX 7776 E016 0000
12	0.26	1.2	13.7	0.9	1.5	18.5	591	LKX 7776 E019 0000
16	0.26	1.2	15.4	1.25	1.6	21.1	816	LKX 7776 E022 0000
20	0.26	1.3	17.1	1.25	1.7	23.0	946	LKX 7776 E025 0000
24	0.26	1.3	18.5	1.25	1.7	24.4	1060	LKX 7776 E028 0000
0.75 mm²/7								
1	0.26	0.8	5.6	0.9	1.3	10.0	197	LKX 7776 E031 0000
2	0.26	0.9	8.5	0.9	1.4	13.1	301	LKX 7776 E034 0000
4	0.26	1.0	10.0	0.9	1.4	14.6	376	LKX 7776 E037 0000
5	0.26	1.0	10.9	0.9	1.4	15.5	428	LKX 7776 E154 0000
6	0.26	1.0	11.8	0.9	1.4	16.4	475	LKX 7776 E040 0000
8	0.26	1.1	12.8	0.9	1.5	17.6	543	LKX 7776 E043 0000
10	0.26	1.1	14.5	0.9	1.5	19.3	630	LKX 7776 E046 0000
12	0.26	1.1	15.1	0.9	1.5	19.9	684	LKX 7776 E049 0000
16	0.26	1.2	17.3	0.9	1.6	22.3	841	LKX 7776 E052 0000
20	0.26	1.3	19.2	1.25	1.6	24.9	1109	LKX 7776 E055 0000
24	0.26	1.3	20.8	1.25	1.7	26.7	1254	LKX 7776 E058 0000
1 mm²/7								
1	0.26	0.9	6.3	0.9	1.3	10.7	222	LKX 7776 E061 0000
2	0.26	0.9	9.2	0.9	1.4	13.8	336	LKX 7776 E064 0000
4	0.26	1.1	11.1	0.9	1.5	15.9	445	LKX 7776 E067 0000
5	0.26	1.0	11.9	0.9	1.4	16.5	487	LKX 7776 E157 0000
6	0.26	1.1	13.2	0.9	1.5	18.0	564	LKX 7776 E070 0000
8	0.26	1.2	14.2	0.9	1.6	19.2	650	LKX 7776 E073 0000
10	0.26	1.1	15.9	1.25	1.5	21.4	844	LKX 7776 E076 0000
12	0.26	1.2	16.8	1.25	1.5	22.5	940	LKX 7776 E079 0000
16	0.26	1.2	19.0	1.25	1.6	24.7	1131	LKX 7776 E082 0000
20	0.26	1.4	21.3	1.25	1.8	27.4	1356	LKX 7776 E085 0000
24	0.26	1.5	23.3	1.25	1.8	29.4	1536	LKX 7776 E088 0000
1.3 mm²/7								
1	0.35	0.9	6.8	0.9	1.3	11.2	245	LKX 7776 E091 0000
2	0.35	1.0	10.4	0.9	1.4	15.0	390	LKX 7776 E094 0000
4	0.35	1.0	12.0	0.9	1.4	16.6	492	LKX 7776 E097 0000
5	0.35	1.2	13.6	0.9	1.5	18.4	597	LKX 7776 E160 0000
6	0.35	1.2	14.8	0.9	1.6	19.8	678	LKX 7776 E100 0000
8	0.35	1.2	15.7	1.25	1.6	21.4	873	LKX 7776 E103 0000
10	0.35	1.3	18.1	1.25	1.7	24.0	1049	LKX 7776 E106 0000
12	0.35	1.3	18.9	1.25	1.6	24.6	1131	LKX 7776 E109 0000
16	0.35	1.5	21.8	1.25	1.8	27.9	1419	LKX 7776 E112 0000
20	0.35	1.5	24.0	1.25	1.8	30.1	1632	LKX 7776 E115 0000
24	0.35	1.6	26.1	1.6	1.9	33.1	2044	LKX 7776 E118 0000
1.5 mm²/7								
1	0.35	0.9	7.1	0.9	1.3	11.5	257	LKX 7776 E121 0000
2	0.35	1.0	10.8	0.9	1.4	15.4	408	LKX 7776 E124 0000
4	0.35	1.1	12.7	0.9	1.5	17.5	542	LKX 7776 E127 0000
5	0.35	1.1	14.0	0.9	1.5	18.8	622	LKX 7776 E163 0000
6	0.35	1.1	15.2	0.9	1.5	20.0	689	LKX 7776 E130 0000
8	0.35	1.2	16.4	0.9	1.6	21.4	813	LKX 7776 E133 0000
10	0.35	1.3	18.8	1.25	1.6	24.5	1096	LKX 7776 E136 0000
12	0.35	1.3	19.7	1.25	1.7	25.6	1224	LKX 7776 E139 0000
16	0.35	1.4	22.5	1.25	1.7	28.4	1462	LKX 7776 E142 0000
20	0.35	1.5	25.0	1.25	1.9	32.2	1765	LKX 7776 E145 0000
24	0.35	1.5	27.1	1.25	2.0	34.7	2013	LKX 7776 E148 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, PVC-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10210 M0 IS/OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10210 M0 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

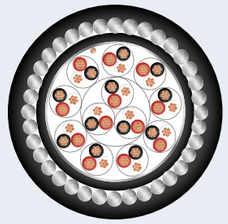
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	0.9	8.7	0.9	1.4	13.3	305	LKX 7776 E166 0000
4	0.26	1.0	10.2	0.9	1.4	14.8	381	LKX 7776 E169 0000
5	0.26	1.0	11.2	0.9	1.4	15.8	446	LKX 7776 E172 0000
6	0.26	1.0	12.1	0.9	1.5	16.9	488	LKX 7776 E175 0000
8	0.26	1.1	13.1	0.9	1.5	17.9	551	LKX 7776 E178 0000
10	0.26	1.2	15.1	0.9	1.5	19.9	766	LKX 7776 E181 0000
12	0.26	1.2	15.7	1.25	1.5	20.5	812	LKX 7776 E184 0000
16	0.26	1.2	17.8	1.25	1.6	23.5	992	LKX 7776 E187 0000
20	0.26	1.3	19.7	1.25	1.7	25.6	1134	LKX 7776 E190 0000
24	0.26	1.4	21.5	1.25	1.7	27.4	1282	LKX 7776 E193 0000
0.75 mm²/7								
2	0.26	1.0	9.7	0.9	1.4	14.3	345	LKX 7776 E196 0000
4	0.26	1.0	11.2	0.9	1.4	15.8	431	LKX 7776 E199 0000
5	0.26	1.1	12.5	0.9	1.5	17.3	505	LKX 7776 E202 0000
6	0.26	1.1	13.6	0.9	1.5	18.4	566	LKX 7776 E205 0000
8	0.26	1.1	14.4	0.9	1.5	19.2	628	LKX 7776 E208 0000
10	0.26	1.2	16.6	1.25	1.6	22.3	873	LKX 7776 E211 0000
12	0.26	1.2	17.3	1.25	1.6	23.0	940	LKX 7776 E214 0000
16	0.26	1.3	19.8	1.25	1.7	25.7	1145	LKX 7776 E217 0000
20	0.26	1.4	22.0	1.25	1.7	27.9	1322	LKX 7776 E220 0000
24	0.26	1.5	24.0	1.25	1.8	30.1	1520	LKX 7776 E223 0000
1 mm²/7								
2	0.26	1.0	10.4	0.9	1.4	15.0	383	LKX 7776 E226 0000
4	0.26	1.0	12.1	0.9	1.4	16.7	483	LKX 7776 E229 0000
5	0.26	1.1	13.5	0.9	1.5	18.3	566	LKX 7776 E232 0000
6	0.26	1.1	14.7	0.9	1.5	19.5	634	LKX 7776 E235 0000
8	0.26	1.2	15.8	0.9	1.5	20.6	849	LKX 7776 E238 0000
10	0.26	1.2	18.0	1.25	1.6	23.7	987	LKX 7776 E241 0000
12	0.26	1.3	19.0	1.25	1.6	24.7	1089	LKX 7776 E244 0000
16	0.26	1.3	21.5	1.25	1.7	27.4	1313	LKX 7776 E247 0000
20	0.26	1.4	23.9	1.25	1.7	29.8	1531	LKX 7776 E250 0000
24	0.26	1.5	26.1	1.25	1.8	32.2	1757	LKX 7776 E253 0000
1.3 mm²/7								
2	0.35	1.0	11.9	0.9	1.4	16.5	441	LKX 7776 E256 0000
4	0.35	1.1	13.4	0.9	1.5	18.2	565	LKX 7776 E259 0000
5	0.35	1.1	14.8	0.9	1.5	19.6	667	LKX 7776 E262 0000
6	0.35	1.2	16.3	0.9	1.6	21.3	881	LKX 7776 E265 0000
8	0.35	1.3	17.6	1.25	1.6	23.3	998	LKX 7776 E268 0000
10	0.35	1.3	20.0	1.25	1.7	25.9	1191	LKX 7776 E271 0000
12	0.35	1.4	21.1	1.25	1.7	27.0	1301	LKX 7776 E274 0000
16	0.35	1.5	24.1	1.25	1.8	30.2	1580	LKX 7776 E277 0000
20	0.35	1.6	26.8	1.25	1.9	33.1	1858	LKX 7776 E280 0000
24	0.35	1.7	29.2	1.6	2.0	36.4	2338	LKX 7776 E283 0000
1.5 mm²/7								
2	0.35	1.0	11.8	0.9	1.5	16.6	461	LKX 7776 E286 0000
4	0.35	1.1	13.9	0.9	1.5	18.7	598	LKX 7776 E289 0000
5	0.35	1.2	15.5	0.9	1.5	20.3	808	LKX 7776 E292 0000
6	0.35	1.2	16.9	1.25	1.6	22.6	915	LKX 7776 E295 0000
8	0.35	1.3	18.2	1.25	1.7	24.1	1060	LKX 7776 E298 0000
10	0.35	1.4	21.0	1.25	1.7	26.9	1267	LKX 7776 E301 0000
12	0.35	1.4	21.9	1.25	1.7	27.8	1370	LKX 7776 E304 0000
16	0.35	1.5	25.1	1.25	1.8	31.2	1699	LKX 7776 E307 0000
20	0.35	1.6	27.9	1.6	1.9	34.9	2174	LKX 7776 E310 0000
24	0.35	1.7	30.3	1.6	2.0	37.5	2504	LKX 7776 E313 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, PVC-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10210 M0 OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10210 M0 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

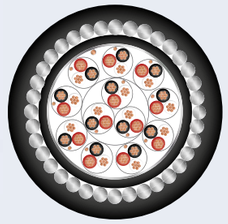
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	0.9	5.6	0.9	1.3	10.0	203	LKX 7776 E316 0000
2	0.26	1.0	8.6	0.9	1.4	13.2	330	LKX 7776 E319 0000
4	0.26	1.0	9.8	0.9	1.4	14.4	394	LKX 7776 E322 0000
5	0.26	1.1	11.0	0.9	1.5	15.8	452	LKX 7776 E325 0000
6	0.26	1.1	12.3	0.9	1.5	17.1	511	LKX 7776 E328 0000
8	0.26	1.1	13.1	0.9	1.5	17.9	571	LKX 7776 E331 0000
10	0.26	1.2	14.9	0.9	1.6	19.9	678	LKX 7776 E334 0000
12	0.26	1.2	15.4	1.25	1.6	21.1	844	LKX 7776 E337 0000
16	0.26	1.3	17.6	1.25	1.7	23.5	1034	LKX 7776 E340 0000
20	0.26	1.4	19.5	1.25	1.7	25.4	1186	LKX 7776 E343 0000
24	0.26	1.4	21.1	1.25	1.8	27.2	1344	LKX 7776 E346 0000
0.75 mm²/7								
1	0.26	0.9	6.1	0.9	1.3	10.5	216	LKX 7776 E349 0000
2	0.26	1.0	9.5	0.9	1.4	14.1	355	LKX 7776 E352 0000
4	0.26	1.1	11.1	0.9	1.5	15.9	456	LKX 7776 E355 0000
5	0.26	1.1	12.2	0.9	1.5	17.0	536	LKX 7776 E358 0000
6	0.26	1.2	13.9	0.9	1.5	18.7	626	LKX 7776 E361 0000
8	0.26	1.2	14.9	0.9	1.6	19.9	694	LKX 7776 E364 0000
10	0.26	1.2	16.7	0.9	1.5	21.5	798	LKX 7776 E367 0000
12	0.26	1.3	17.5	1.25	1.7	23.4	1021	LKX 7776 E370 0000
16	0.26	1.4	19.9	1.25	1.7	25.8	1268	LKX 7776 E373 0000
20	0.26	1.5	22.1	1.25	1.8	28.2	1481	LKX 7776 E376 0000
24	0.26	1.5	23.9	1.25	1.8	30.0	1635	LKX 7776 E379 0000
1 mm²/7								
1	0.26	0.9	6.6	0.9	1.3	11.0	247	LKX 7776 E382 0000
2	0.26	1.0	10.4	0.9	1.4	15.0	398	LKX 7776 E385 0000
4	0.26	1.1	12.1	0.9	1.5	16.9	527	LKX 7776 E388 0000
5	0.26	1.2	13.6	0.9	1.5	18.4	616	LKX 7776 E391 0000
6	0.26	1.2	15.2	1.25	1.6	20.9	825	LKX 7776 E394 0000
8	0.26	1.3	16.5	1.25	1.6	22.2	943	LKX 7776 E397 0000
10	0.26	1.3	18.6	1.25	1.7	24.5	1106	LKX 7776 E400 0000
12	0.26	1.4	19.4	1.25	1.7	25.3	1219	LKX 7776 E403 0000
16	0.26	1.5	22.1	1.25	1.8	28.2	1493	LKX 7776 E406 0000
20	0.26	1.6	24.5	1.25	1.9	30.8	1763	LKX 7776 E409 0000
24	0.26	1.6	26.5	1.6	1.9	33.5	2175	LKX 7776 E412 0000
1.3 mm²/7								
1	0.35	0.9	7.2	0.9	1.4	11.8	283	LKX 7776 E415 0000
2	0.35	1.1	11.7	0.9	1.5	16.5	474	LKX 7776 E418 0000
4	0.35	1.2	13.6	0.9	1.5	18.4	625	LKX 7776 E421 0000
5	0.35	1.2	15.0	0.9	1.6	20.0	726	LKX 7776 E424 0000
6	0.35	1.3	17.1	1.25	1.7	23.0	984	LKX 7776 E427 0000
8	0.35	1.3	18.3	1.25	1.7	24.2	1120	LKX 7776 E430 0000
10	0.35	1.4	20.9	1.25	1.8	27.0	1341	LKX 7776 E433 0000
12	0.35	1.3	21.4	1.25	1.7	27.3	1438	LKX 7776 E436 0000
16	0.35	1.6	24.8	1.25	1.9	31.1	1834	LKX 7776 E439 0000
20	0.35	1.7	27.5	1.6	2.0	34.7	2343	LKX 7776 E442 0000
24	0.35	1.8	30.0	1.6	2.0	37.2	2666	LKX 7776 E445 0000
1.5 mm²/7								
1	0.35	0.9	7.5	0.9	1.3	11.9	293	LKX 7776 E448 0000
2	0.35	1.1	12.1	0.9	1.5	16.9	501	LKX 7776 E451 0000
4	0.35	1.2	14.2	0.9	1.6	19.2	675	LKX 7776 E454 0000
5	0.35	1.2	15.6	1.25	1.6	21.3	889	LKX 7776 E457 0000
6	0.35	1.3	17.8	1.25	1.7	23.7	1039	LKX 7776 E460 0000
8	0.35	1.3	19.1	1.25	1.6	24.8	1184	LKX 7776 E463 0000
10	0.35	1.5	22.0	1.25	1.8	28.1	1445	LKX 7776 E466 0000
12	0.35	1.5	22.7	1.25	1.8	28.8	1587	LKX 7776 E469 0000
16	0.35	1.6	25.9	1.6	1.9	32.9	2203	LKX 7776 E472 0000
20	0.35	1.7	28.7	1.6	2.0	35.9	2511	LKX 7776 E475 0000
24	0.35	1.8	31.3	1.6	2.1	38.7	2837	LKX 7776 E478 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, PVC-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10210 M0 IS/OS **70 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10210 M0 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

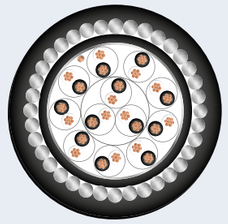
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	1.0	9.7	0.9	1.4	14.3	350	LKX 7776 E481 0000
4	0.26	1.1	11.3	0.9	1.5	16.1	452	LKX 7776 E484 0000
5	0.26	1.1	12.4	0.9	1.5	17.2	514	LKX 7776 E487 0000
6	0.26	1.2	14.2	0.9	1.6	19.2	609	LKX 7776 E490 0000
8	0.26	1.2	15.1	1.25	1.6	20.8	787	LKX 7776 E493 0000
10	0.26	1.3	17.2	1.25	1.7	23.1	938	LKX 7776 E496 0000
12	0.26	1.2	17.6	1.25	1.6	23.3	980	LKX 7776 E499 0000
16	0.26	1.4	20.3	1.25	1.7	26.2	1204	LKX 7776 E502 0000
20	0.26	1.5	22.5	1.25	1.8	28.6	1402	LKX 7776 E505 0000
24	0.26	1.6	24.5	1.25	1.9	30.8	1613	LKX 7776 E508 0000
0.75 mm²/7								
2	0.26	1.0	10.6	0.9	1.5	15.4	402	LKX 7776 E511 0000
4	0.26	1.1	12.4	0.9	1.5	17.2	515	LKX 7776 E514 0000
5	0.26	1.2	13.9	0.9	1.5	18.7	599	LKX 7776 E517 0000
6	0.26	1.2	15.6	1.25	1.6	21.3	810	LKX 7776 E520 0000
8	0.26	1.3	16.9	1.25	1.6	22.6	924	LKX 7776 E523 0000
10	0.26	1.4	19.2	1.25	1.7	25.1	1088	LKX 7776 E526 0000
12	0.26	1.4	19.8	1.25	1.7	25.7	1173	LKX 7776 E529 0000
16	0.26	1.5	22.7	1.25	1.8	28.8	1439	LKX 7776 E532 0000
20	0.26	1.6	25.1	1.6	1.9	32.1	1847	LKX 7776 E535 0000
24	0.26	1.7	27.4	1.6	2.0	34.6	2118	LKX 7776 E538 0000
1 mm²/7								
2	0.26	1.0	11.5	0.9	1.4	16.1	445	LKX 7776 E541 0000
4	0.26	1.2	13.6	0.9	1.5	18.4	593	LKX 7776 E544 0000
5	0.26	1.2	15.0	0.9	1.6	20.0	686	LKX 7776 E547 0000
6	0.26	1.3	17.1	1.25	1.7	23.0	935	LKX 7776 E550 0000
8	0.26	1.3	18.3	1.25	1.7	24.2	1062	LKX 7776 E553 0000
10	0.26	1.4	20.9	1.25	1.8	27.0	1272	LKX 7776 E556 0000
12	0.26	1.3	21.4	1.25	1.7	27.3	1345	LKX 7776 E559 0000
16	0.26	1.6	24.8	1.25	1.9	31.1	1704	LKX 7776 E562 0000
20	0.26	1.7	27.5	1.6	2.0	34.7	2182	LKX 7776 E565 0000
24	0.26	1.8	30.0	1.6	2.0	37.2	2481	LKX 7776 E568 0000
1.3 mm²/7								
2	0.35	1.1	12.8	0.9	1.5	17.6	518	LKX 7776 E571 0000
4	0.35	1.2	14.9	0.9	1.6	19.9	706	LKX 7776 E574 0000
5	0.35	1.3	16.7	1.25	1.6	22.4	952	LKX 7776 E577 0000
6	0.35	1.4	19.0	1.25	1.7	24.9	1122	LKX 7776 E580 0000
8	0.35	1.4	20.3	1.25	1.7	26.2	1292	LKX 7776 E583 0000
10	0.35	1.5	23.2	1.25	1.8	29.3	1494	LKX 7776 E586 0000
12	0.35	1.5	23.9	1.25	1.8	30.0	1624	LKX 7776 E589 0000
16	0.35	1.7	27.6	1.6	2.0	34.8	2307	LKX 7776 E592 0000
20	0.35	1.8	30.6	1.6	2.1	38.0	2698	LKX 7776 E595 0000
24	0.35	1.9	33.3	1.6	2.1	40.7	3084	LKX 7776 E598 0000
1.5 mm²/7								
2	0.35	1.1	13.2	0.9	1.5	18.0	539	LKX 7776 E601 0000
4	0.35	1.2	15.4	1.25	1.6	21.1	839	LKX 7776 E604 0000
5	0.35	1.3	17.3	1.25	1.7	23.2	989	LKX 7776 E607 0000
6	0.35	1.4	19.7	1.25	1.7	25.6	1153	LKX 7776 E610 0000
8	0.35	1.4	21.1	1.25	1.8	27.2	1333	LKX 7776 E613 0000
10	0.35	1.5	24.1	1.25	1.8	30.2	1574	LKX 7776 E616 0000
12	0.35	1.5	24.9	1.25	1.8	31.0	1736	LKX 7776 E619 0000
16	0.35	1.7	28.6	1.6	2.0	35.8	2378	LKX 7776 E622 0000
20	0.35	1.7	31.6	1.6	2.0	38.8	2725	LKX 7776 E625 0000
24	0.35	1.9	34.6	1.6	2.2	42.2	3175	LKX 7776 E628 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10110 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10110 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

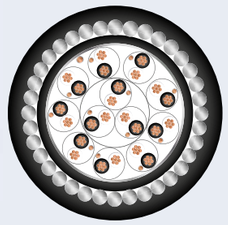
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
Capacitance unbalance	max.	500 pF/500 m					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	0.8	5.2	0.9	1.3	9.6	176	LKX 7068 E001 0000
2	0.26	0.9	7.6	0.9	1.3	12.0	254	LKX 7068 E004 0000
4	0.26	0.9	8.8	0.9	1.4	13.4	313	LKX 7068 E007 0000
5	0.26	1.0	9.8	0.9	1.4	14.4	361	LKX 7068 E151 0000
6	0.26	1.0	10.6	0.9	1.4	15.2	400	LKX 7068 E010 0000
8	0.26	1.0	11.3	0.9	1.4	15.9	436	LKX 7068 E013 0000
10	0.26	1.1	12.9	0.9	1.5	17.7	517	LKX 7068 E016 0000
12	0.26	1.1	13.5	0.9	1.5	18.3	558	LKX 7068 E019 0000
16	0.26	1.1	15.2	0.9	1.5	20.0	659	LKX 7068 E022 0000
20	0.26	1.2	16.9	0.9	1.6	21.9	772	LKX 7068 E025 0000
24	0.26	1.2	18.3	1.25	1.6	24.0	991	LKX 7068 E028 0000
0.75 mm²/7								
1	0.26	0.8	5.6	0.9	1.3	10.0	194	LKX 7068 E031 0000
2	0.26	0.9	8.5	0.9	1.4	13.1	295	LKX 7068 E034 0000
4	0.26	1.0	10.0	0.9	1.4	14.6	368	LKX 7068 E037 0000
5	0.26	1.0	10.9	0.9	1.4	15.5	418	LKX 7068 E154 0000
6	0.26	1.0	11.8	0.9	1.4	16.4	464	LKX 7068 E040 0000
8	0.26	1.1	12.8	0.9	1.5	17.6	529	LKX 7068 E043 0000
10	0.26	1.1	14.5	0.9	1.5	19.3	613	LKX 7068 E046 0000
12	0.26	1.1	15.1	0.9	1.5	19.9	665	LKX 7068 E049 0000
16	0.26	1.2	17.3	0.9	1.6	22.3	817	LKX 7068 E052 0000
20	0.26	1.3	19.2	1.25	1.6	24.9	1077	LKX 7068 E055 0000
24	0.26	1.3	20.8	1.25	1.7	26.7	1216	LKX 7068 E058 0000
1 mm²/7								
1	0.26	0.9	6.3	0.9	1.3	10.7	218	LKX 7068 E061 0000
2	0.26	0.9	9.2	0.9	1.4	13.8	329	LKX 7068 E064 0000
4	0.26	1.0	10.9	0.9	1.4	15.5	419	LKX 7068 E067 0000
5	0.26	1.0	11.9	0.9	1.4	16.5	471	LKX 7068 E157 0000
6	0.26	1.0	13.0	0.9	1.4	17.6	531	LKX 7068 E070 0000
8	0.26	1.1	14.0	0.9	1.5	18.8	607	LKX 7068 E073 0000
10	0.26	1.1	15.9	0.9	1.5	20.7	714	LKX 7068 E076 0000
12	0.26	1.2	16.8	0.9	1.5	21.6	903	LKX 7068 E079 0000
16	0.26	1.4	19.4	1.25	1.7	25.3	1129	LKX 7068 E082 0000
20	0.26	1.3	21.1	1.25	1.7	27.0	1272	LKX 7068 E085 0000
24	0.26	1.4	23.1	1.25	1.7	29.0	1450	LKX 7068 E088 0000
1.3 mm²/7								
1	0.35	0.9	6.8	0.9	1.3	11.2	240	LKX 7068 E091 0000
2	0.35	1.0	10.4	0.9	1.4	15.0	384	LKX 7068 E094 0000
4	0.35	1.0	12.0	0.9	1.4	16.6	474	LKX 7068 E097 0000
5	0.35	1.1	13.4	0.9	1.5	18.2	561	LKX 7068 E160 0000
6	0.35	1.2	14.8	0.9	1.6	19.8	653	LKX 7068 E100 0000
8	0.35	1.2	15.7	1.25	1.6	21.4	838	LKX 7068 E103 0000
10	0.35	1.2	17.9	1.25	1.6	23.8	974	LKX 7068 E106 0000
12	0.35	1.3	18.9	1.25	1.6	24.6	1084	LKX 7068 E109 0000
16	0.35	1.5	21.8	1.25	1.8	27.9	1407	LKX 7068 E112 0000
20	0.35	1.5	24.0	1.25	1.8	30.1	1552	LKX 7068 E115 0000
24	0.35	1.5	25.9	1.25	1.8	32.0	1737	LKX 7068 E118 0000
1.5 mm²/7								
1	0.35	0.9	7.1	0.9	1.3	11.5	252	LKX 7068 E121 0000
2	0.35	1.0	10.8	0.9	1.4	15.4	398	LKX 7068 E124 0000
4	0.35	1.1	12.7	0.9	1.5	17.5	525	LKX 7068 E127 0000
5	0.35	1.1	14.0	0.9	1.5	18.8	601	LKX 7068 E163 0000
6	0.35	1.1	15.2	0.9	1.5	20.0	673	LKX 7068 E130 0000
8	0.35	1.2	16.4	0.9	1.6	21.4	784	LKX 7068 E133 0000
10	0.35	1.3	18.8	1.25	1.6	24.5	1057	LKX 7068 E136 0000
12	0.35	1.3	19.7	1.25	1.7	25.6	1179	LKX 7068 E139 0000
16	0.35	1.4	22.5	1.25	1.7	28.4	1424	LKX 7068 E142 0000
20	0.35	1.5	25.0	1.25	1.8	31.1	1677	LKX 7068 E145 0000
24	0.35	1.5	27.1	1.25	2.0	34.7	1925	LKX 7068 E148 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10110 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10110 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

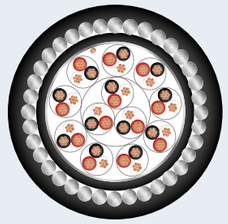
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	0.9	8.7	0.9	1.4	13.3	300	LKX 7068 E166 0000
4	0.26	1.0	10.2	0.9	1.4	14.8	371	LKX 7068 E169 0000
5	0.26	1.0	11.2	0.9	1.4	15.8	420	LKX 7068 E172 0000
6	0.26	1.0	12.1	0.9	1.5	16.9	476	LKX 7068 E175 0000
8	0.26	1.1	13.1	0.9	1.5	17.9	540	LKX 7068 E178 0000
10	0.26	1.2	15.1	0.9	1.5	19.9	637	LKX 7068 E181 0000
12	0.26	1.2	15.7	0.9	1.5	20.5	679	LKX 7068 E184 0000
16	0.26	1.2	17.8	1.25	1.6	23.5	970	LKX 7068 E187 0000
20	0.26	1.3	19.7	1.25	1.7	25.6	1096	LKX 7068 E190 0000
24	0.26	1.4	21.5	1.25	1.7	27.4	1245	LKX 7068 E193 0000
0.75 mm²/7								
2	0.26	1.0	9.7	0.9	1.4	14.3	340	LKX 7068 E196 0000
4	0.26	1.0	11.2	0.9	1.4	15.8	423	LKX 7068 E199 0000
5	0.26	1.1	12.5	0.9	1.5	17.3	495	LKX 7068 E202 0000
6	0.26	1.1	13.6	0.9	1.5	18.4	555	LKX 7068 E205 0000
8	0.26	1.1	14.4	0.9	1.5	19.2	615	LKX 7068 E208 0000
10	0.26	1.2	16.6	1.25	1.6	22.3	856	LKX 7068 E211 0000
12	0.26	1.2	17.3	1.25	1.6	23.0	921	LKX 7068 E214 0000
16	0.26	1.3	19.8	1.25	1.7	25.7	1118	LKX 7068 E217 0000
20	0.26	1.4	22.0	1.25	1.7	27.9	1290	LKX 7068 E220 0000
24	0.26	1.5	24.0	1.25	1.8	30.1	1483	LKX 7068 E223 0000
1 mm²/7								
2	0.26	1.0	10.4	0.9	1.4	15.0	376	LKX 7068 E226 0000
4	0.26	1.1	12.3	0.9	1.5	17.1	483	LKX 7068 E229 0000
5	0.26	1.1	13.5	0.9	1.5	18.3	552	LKX 7068 E232 0000
6	0.26	1.1	14.7	0.9	1.5	19.5	617	LKX 7068 E235 0000
8	0.26	1.2	15.9	0.9	1.5	20.7	715	LKX 7068 E238 0000
10	0.26	1.3	18.2	1.25	1.7	24.1	988	LKX 7068 E241 0000
12	0.26	1.3	19.0	1.25	1.6	24.7	1059	LKX 7068 E244 0000
16	0.26	1.3	21.6	1.25	1.7	27.5	1278	LKX 7068 E247 0000
20	0.26	1.5	24.1	1.25	1.8	30.2	1502	LKX 7068 E250 0000
24	0.26	1.5	26.1	1.25	1.8	32.2	1706	LKX 7068 E253 0000
1.3 mm²/7								
2	0.35	1.1	12.1	0.9	1.5	16.9	449	LKX 7068 E256 0000
4	0.35	1.2	13.6	0.9	1.5	18.4	556	LKX 7068 E259 0000
5	0.35	1.2	15.0	0.9	1.6	20.0	642	LKX 7068 E262 0000
6	0.35	1.3	16.5	1.25	1.6	22.2	851	LKX 7068 E265 0000
8	0.35	1.3	17.6	1.25	1.6	23.3	964	LKX 7068 E268 0000
10	0.35	1.4	20.2	1.25	1.7	26.1	1143	LKX 7068 E271 0000
12	0.35	1.4	21.1	1.25	1.7	27.0	1238	LKX 7068 E274 0000
16	0.35	1.5	24.1	1.25	1.8	30.2	1507	LKX 7068 E277 0000
20	0.35	1.6	26.8	1.6	1.9	33.8	1946	LKX 7068 E280 0000
24	0.35	1.7	29.2	1.6	2.0	36.4	2239	LKX 7068 E283 0000
1.5 mm²/7								
2	0.35	1.0	12.3	0.9	1.5	17.1	461	LKX 7068 E286 0000
4	0.35	1.2	14.1	0.9	1.6	19.1	596	LKX 7068 E289 0000
5	0.35	1.2	15.5	0.9	1.5	20.3	677	LKX 7068 E292 0000
6	0.35	1.3	17.1	1.25	1.7	23.0	909	LKX 7068 E295 0000
8	0.35	1.3	18.2	1.25	1.7	24.1	1029	LKX 7068 E298 0000
10	0.35	1.4	21.0	1.25	1.8	27.1	1240	LKX 7068 E301 0000
12	0.35	1.5	22.1	1.25	1.8	28.2	1341	LKX 7068 E304 0000
16	0.35	1.6	25.3	1.6	1.9	32.3	1834	LKX 7068 E307 0000
20	0.35	1.7	28.0	1.6	2.0	35.2	2124	LKX 7068 E310 0000
24	0.35	1.8	30.5	1.6	2.0	37.7	2440	LKX 7068 E313 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10110 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10110 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

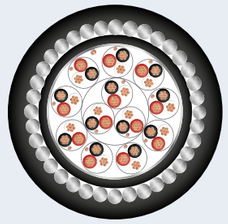
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	0.8	5.4	0.9	1.3	9.8	190	LKX 7068 E316 0000
2	0.26	0.9	8.4	0.9	1.4	13.0	327	LKX 7068 E319 0000
4	0.26	1.0	9.8	0.9	1.4	14.4	375	LKX 7068 E322 0000
5	0.26	1.0	10.8	0.9	1.4	15.4	419	LKX 7068 E325 0000
6	0.26	1.0	12.1	0.9	1.4	16.7	479	LKX 7068 E328 0000
8	0.26	1.1	13.1	0.9	1.5	17.9	550	LKX 7068 E331 0000
10	0.26	1.1	14.7	0.9	1.5	19.5	631	LKX 7068 E334 0000
12	0.26	1.1	15.2	0.9	1.5	20.0	685	LKX 7068 E337 0000
16	0.26	1.2	17.4	0.9	1.6	22.4	844	LKX 7068 E340 0000
20	0.26	1.2	19.1	1.25	1.6	24.8	1097	LKX 7068 E343 0000
24	0.35	1.3	20.9	1.25	1.7	26.8	1330	LKX 7068 E346 0000
0.75 mm²/7								
1	0.26	0.9	6.1	0.9	1.3	10.5	211	LKX 7068 E349 0000
2	0.26	1.0	9.5	0.9	1.4	14.1	370	LKX 7068 E352 0000
4	0.26	1.1	11.1	0.9	1.5	15.9	463	LKX 7068 E355 0000
5	0.26	1.1	12.2	0.9	1.5	17.0	513	LKX 7068 E358 0000
6	0.26	1.1	13.7	0.9	1.5	18.5	582	LKX 7068 E361 0000
8	0.26	1.2	14.9	0.9	1.6	19.9	681	LKX 7068 E364 0000
10	0.26	1.3	16.9	1.25	1.6	22.6	912	LKX 7068 E367 0000
12	0.26	1.3	17.5	1.25	1.7	23.4	992	LKX 7068 E370 0000
16	0.26	1.4	19.9	1.25	1.7	25.8	1240	LKX 7068 E373 0000
20	0.26	1.5	22.1	1.25	1.8	28.2	1399	LKX 7068 E376 0000
24	0.26	1.5	23.9	1.25	1.8	30.0	1631	LKX 7068 E379 0000
1 mm²/7								
1	0.26	0.9	6.6	0.9	1.3	11.0	242	LKX 7068 E382 0000
2	0.26	1.0	10.4	0.9	1.4	15.0	388	LKX 7068 E385 0000
4	0.26	1.1	12.1	0.9	1.5	16.9	530	LKX 7068 E388 0000
5	0.26	1.2	13.6	0.9	1.5	18.4	595	LKX 7068 E391 0000
6	0.26	1.2	15.2	1.25	1.6	20.9	801	LKX 7068 E394 0000
8	0.26	1.3	16.5	1.25	1.6	22.2	912	LKX 7068 E397 0000
10	0.26	1.3	18.6	1.25	1.7	24.5	1066	LKX 7068 E400 0000
12	0.26	1.4	19.4	1.25	1.7	25.3	1173	LKX 7068 E403 0000
16	0.26	1.5	22.1	1.25	1.8	28.2	1481	LKX 7068 E406 0000
20	0.26	1.6	24.5	1.25	1.9	30.8	1739	LKX 7068 E409 0000
24	0.26	1.6	26.5	1.6	1.9	33.5	2085	LKX 7068 E412 0000
1.3 mm²/7								
1	0.35	0.9	7.2	0.9	1.3	11.6	260	LKX 7068 E415 0000
2	0.35	1.1	11.7	0.9	1.5	16.5	464	LKX 7068 E418 0000
4	0.35	1.2	13.6	0.9	1.5	18.4	599	LKX 7068 E421 0000
5	0.35	1.2	15.0	0.9	1.6	20.0	722	LKX 7068 E424 0000
6	0.35	1.3	17.1	1.25	1.7	23.0	980	LKX 7068 E427 0000
8	0.35	1.3	18.3	1.25	1.7	24.2	1079	LKX 7068 E430 0000
10	0.35	1.4	20.9	1.25	1.8	27.0	1291	LKX 7068 E433 0000
12	0.35	1.5	21.8	1.25	1.8	27.9	1456	LKX 7068 E436 0000
16	0.35	1.6	24.8	1.25	1.9	31.1	1788	LKX 7068 E439 0000
20	0.35	1.7	27.5	1.6	2.0	34.7	2327	LKX 7068 E442 0000
24	0.35	1.8	30.0	1.6	2.0	37.2	2523	LKX 7068 E445 0000
1.5 mm²/7								
1	0.35	0.9	7.5	0.9	1.3	11.9	285	LKX 7068 E448 0000
2	0.35	1.1	12.1	0.9	1.5	16.9	487	LKX 7068 E451 0000
4	0.35	1.2	14.2	0.9	1.6	19.2	658	LKX 7068 E454 0000
5	0.35	1.2	15.6	1.25	1.6	21.3	859	LKX 7068 E457 0000
6	0.35	1.3	17.8	1.25	1.7	23.7	1014	LKX 7068 E460 0000
8	0.35	1.3	19.1	1.25	1.6	24.8	1137	LKX 7068 E463 0000
10	0.35	1.5	22.0	1.25	1.8	28.1	1390	LKX 7068 E466 0000
12	0.35	1.5	22.7	1.25	1.8	28.8	1568	LKX 7068 E469 0000
16	0.35	1.6	25.9	1.6	1.9	32.9	2161	LKX 7068 E472 0000
20	0.35	1.7	28.7	1.6	2.0	35.9	2423	LKX 7068 E475 0000
24	0.35	1.8	31.3	1.6	2.1	38.7	2877	LKX 7068 E478 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, XLPE-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10110 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10110 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

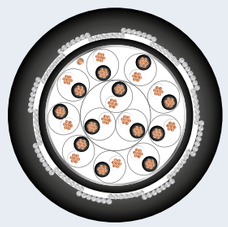
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	1.0	9.7	0.9	1.4	14.3	364	LKX 7068 E481 0000
4	0.26	1.1	11.3	0.9	1.5	16.1	457	LKX 7068 E484 0000
5	0.26	1.1	12.4	0.9	1.5	17.2	498	LKX 7068 E487 0000
6	0.26	1.2	14.2	0.9	1.6	19.2	590	LKX 7068 E490 0000
8	0.26	1.2	15.1	1.25	1.6	20.8	771	LKX 7068 E493 0000
10	0.26	1.3	17.2	1.25	1.7	23.1	913	LKX 7068 E496 0000
12	0.26	1.3	17.8	1.25	1.7	23.7	969	LKX 7068 E499 0000
16	0.26	1.4	20.3	1.25	1.7	26.2	1161	LKX 7068 E502 0000
20	0.26	1.5	22.5	1.25	1.8	28.6	1361	LKX 7068 E505 0000
24	0.26	1.6	24.5	1.25	1.9	30.8	1608	LKX 7068 E508 0000
0.75 mm²/7								
2	0.26	1.0	10.6	0.9	1.4	15.2	388	LKX 7068 E511 0000
4	0.26	1.1	12.4	0.9	1.5	17.2	504	LKX 7068 E514 0000
5	0.26	1.1	13.7	0.9	1.5	18.5	572	LKX 7068 E517 0000
6	0.26	1.1	15.4	0.9	1.5	20.2	656	LKX 7068 E520 0000
8	0.26	1.2	16.7	1.25	1.6	22.4	769	LKX 7068 E523 0000
10	0.26	1.3	19.0	1.25	1.6	24.7	1040	LKX 7068 E526 0000
12	0.26	1.4	19.8	1.25	1.7	25.7	1179	LKX 7068 E529 0000
16	0.26	1.5	22.7	1.25	1.8	28.8	1442	LKX 7068 E532 0000
20	0.26	1.6	25.1	1.6	1.9	32.1	1801	LKX 7068 E535 0000
24	0.26	1.7	27.4	1.6	2.0	34.6	2168	LKX 7068 E538 0000
1 mm²/7								
2	0.26	1.0	11.5	0.9	1.4	16.1	431	LKX 7068 E541 0000
4	0.26	1.1	13.4	0.9	1.5	18.2	563	LKX 7068 E544 0000
5	0.26	1.1	14.8	0.9	1.5	19.6	647	LKX 7068 E547 0000
6	0.26	1.2	16.9	0.9	1.5	21.7	766	LKX 7068 E550 0000
8	0.26	1.2	18.1	1.25	1.6	23.8	1008	LKX 7068 E553 0000
10	0.26	1.3	20.7	1.25	1.7	26.6	1196	LKX 7068 E556 0000
12	0.26	1.3	21.4	1.25	1.7	27.3	1295	LKX 7068 E559 0000
16	0.26	1.4	24.4	1.25	1.7	30.3	1579	LKX 7068 E562 0000
20	0.26	1.5	27.1	1.25	2.0	34.7	1885	LKX 7068 E565 0000
24	0.26	1.6	29.6	1.6	1.9	36.6	2344	LKX 7068 E568 0000
1.3 mm²/7								
2	0.35	1.1	12.8	0.9	1.5	17.6	501	LKX 7068 E571 0000
4	0.35	1.2	14.9	0.9	1.6	19.9	686	LKX 7068 E574 0000
5	0.35	1.3	16.7	1.25	1.6	22.4	926	LKX 7068 E577 0000
6	0.35	1.3	18.8	1.25	1.6	24.5	1025	LKX 7068 E580 0000
8	0.35	1.3	20.1	1.25	1.7	26.0	1191	LKX 7068 E583 0000
10	0.35	1.5	23.2	1.25	1.8	29.3	1427	LKX 7068 E586 0000
12	0.35	1.5	23.9	1.25	1.8	30.0	1551	LKX 7068 E589 0000
16	0.35	1.7	27.6	1.6	2.0	34.8	2226	LKX 7068 E592 0000
20	0.35	1.8	30.6	1.6	2.1	38.0	2596	LKX 7068 E595 0000
24	0.35	1.9	33.3	1.6	2.1	40.7	2962	LKX 7068 E598 0000
1.5 mm²/7								
2	0.35	1.1	13.2	0.9	1.5	18.0	529	LKX 7068 E601 0000
4	0.35	1.2	15.4	0.9	1.6	20.4	703	LKX 7068 E604 0000
5	0.35	1.2	17.1	1.25	1.6	22.8	939	LKX 7068 E607 0000
6	0.35	1.4	19.7	1.25	1.7	25.6	1123	LKX 7068 E610 0000
8	0.35	1.4	21.1	1.25	1.7	27.0	1290	LKX 7068 E613 0000
10	0.35	1.5	24.1	1.25	1.8	30.2	1539	LKX 7068 E616 0000
12	0.35	1.6	25.1	1.6	1.9	32.1	1861	LKX 7068 E619 0000
16	0.35	1.7	28.6	1.6	2.0	35.8	2388	LKX 7068 E622 0000
20	0.35	1.8	31.8	1.6	2.1	39.2	2687	LKX 7068 E625 0000
24	0.35	1.9	34.6	1.6	2.2	42.2	3096	LKX 7068 E628 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10120 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised steel wire braid, opt. coverage 80% (min.)
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10120 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

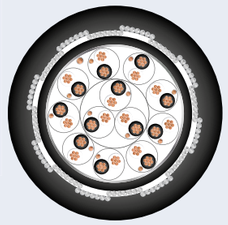
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
Capacitance unbalance	max.	500 pF/500 m					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	0.8	5.2	0.3	1.3	9.1	123	LKX 7331 E001 0000
4	0.26	1.0	9.0	0.3	1.4	13.1	235	LKX 7331 E007 0000
12	0.26	1.2	13.7	0.3	1.5	18.0	437	LKX 7331 E019 0000
0.75 mm²/7								
1	0.26	0.8	5.6	0.3	1.3	9.5	135	LKX 7331 E031 0000
4	0.26	1.0	10.0	0.3	1.4	14.1	272	LKX 7331 E037 0000
12	0.26	1.2	15.3	0.3	1.6	19.8	537	LKX 7331 E049 0000
1 mm²/7								
1	0.26	0.9	6.3	0.3	1.3	10.2	153	LKX 7331 E061 0000
4	0.26	1.1	11.1	0.3	1.4	15.2	318	LKX 7331 E067 0000
12	0.26	1.3	17.0	0.3	1.6	21.5	643	LKX 7331 E079 0000
1.3 mm²/7								
1	0.35	0.9	6.8	0.3	1.3	10.7	169	LKX 7331 E091 0000
4	0.35	1.1	12.2	0.3	1.5	16.5	374	LKX 7331 E097 0000
12	0.35	1.4	19.1	0.3	1.7	23.8	169	LKX 7331 E109 0000
1.5 mm²/7								
1	0.35	0.9	7.1	0.3	1.3	11.0	181	LKX 7331 E121 0000
4	0.35	1.1	12.7	0.3	1.5	17.0	402	LKX 7331 E127 0000
12	0.35	1.4	19.9	0.3	1.7	24.6	856	LKX 7331 E139 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10120 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised steel wire braid, opt. coverage 80% (min.)
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10120 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

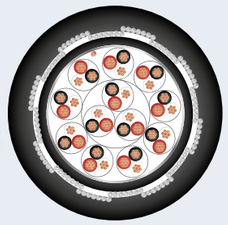
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	0.9	8.7	0.3	1.4	12.8	219	LKX 7331 E166 0000
0.75 mm²/7								
2	0.26	1.0	9.7	0.3	1.4	13.8	249	LKX 7331 E196 0000
1 mm²/7								
2	0.26	1.0	10.4	0.3	1.4	14.5	274	LKX 7331 E226 0000
1.3 mm²/7								
2	0.35	1.0	11.4	0.3	1.4	15.5	311	LKX 7331 E256 0000
1.5 mm²/7								
2	0.35	1.1	12.0	0.3	1.5	16.3	341	LKX 7331 E286 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10120 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised steel wire braid, opt. coverage 80% (min.)
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10120 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

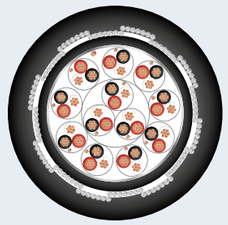
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

							kg	Part number
	min.	nom.	approx.	nom.	nom.	approx.	approx.	black
	mm	mm	mm	mm	mm	mm	kg/km	
0.5 mm²/7								
1	0.26	0.8	5.4	0.3	1.3	9.3	135	LKX 7331 E316 0000
4	0.26	1.0	9.8	0.3	1.4	13.9	277	LKX 7331 E322 0000
12	0.26	1.2	15.4	0.3	1.6	19.9	557	LKX 7331 E337 0000
0.75 mm²/7								
1	0.26	0.9	6.1	0.3	1.3	10.0	163	LKX 7331 E349 0000
4	0.26	1.1	11.1	0.3	1.4	15.2	330	LKX 7331 E355 0000
12	0.26	1.3	17.5	0.3	1.6	22.0	705	LKX 7331 E370 0000
1 mm²/7								
1	0.26	0.9	6.6	0.3	1.3	10.5	176	LKX 7331 E382 0000
4	0.26	1.1	12.1	0.3	1.5	16.4	392	LKX 7331 E388 0000
12	0.26	1.4	19.4	0.3	1.7	24.1	850	LKX 7331 E403 0000
1.3 mm²/7								
1	0.35	0.9	7.2	0.3	1.3	11.1	186	LKX 7331 E415 0000
4	0.35	1.2	13.4	0.3	1.5	17.7	455	LKX 7331 E421 0000
12	0.35	1.5	21.8	0.3	1.7	26.0	1074	LKX 7331 E436 0000
1.5 mm²/7								
1	0.35	0.9	7.5	0.3	1.3	11.4	210	LKX 7331 E448 0000
4	0.35	1.2	14.2	0.3	1.5	18.5	504	LKX 7331 E454 0000
12	0.35	1.5	22.7	0.3	1.8	28.1	1205	LKX 7331 E469 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10120 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised steel wire braid, opt. coverage 80% (min.)
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsic safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10120 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

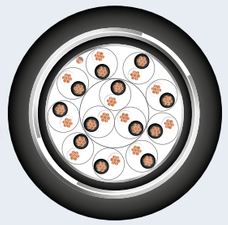
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	1.0	9.7	0.3	1.4	13.8	251	LKX 7331 E481 0000
0.75 mm²/7								
2	0.26	1.0	10.6	0.3	1.4	14.7	279	LKX 7331 E511 0000
1 mm²/7								
2	0.26	1.1	11.7	0.3	1.5	16.0	331	LKX 7331 E541 0000
1.3 mm²/7								
2	0.35	1.1	12.8	0.3	1.5	17.1	379	LKX 7331 E571 0000
1.5 mm²/7								
2	0.35	1.1	13.2	0.3	1.5	17.6	404	LKX 7331 E601 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10130 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	double layer of galvanised steel tapes
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10130 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

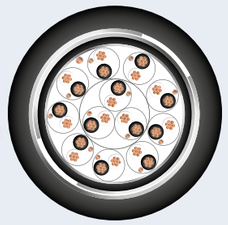
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
Capacitance unbalance	max.	500 pF/500 m					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.		nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	1.6	6.7	0.2	1.3	10.1	160	LKX 7794 E001 0000
4	0.26	1.0	9.0	0.2	1.4	12.6	233	LKX 7794 E007 0000
12	0.26	1.2	13.7	0.2	1.5	17.5	438	LKX 7794 E019 0000
0.75 mm²/7								
1	0.26	1.4	6.7	0.2	1.3	10.1	162	LKX 7794 E031 0000
4	0.26	1.0	10.0	0.2	1.4	13.6	271	LKX 7794 E037 0000
12	0.26	1.2	15.3	0.2	1.6	19.3	536	LKX 7794 E049 0000
1 mm²/7								
1	0.26	1.1	6.7	0.2	1.3	10.1	163	LKX 7794 E061 0000
4	0.26	1.1	11.1	0.2	1.4	14.7	318	LKX 7794 E067 0000
12	0.26	1.3	17.0	0.2	1.6	21.0	644	LKX 7794 E079 0000
1.3 mm²/7								
1	0.35	0.9	6.8	0.2	1.3	10.2	167	LKX 7794 E091 0000
4	0.35	1.1	12.2	0.2	1.5	16.0	373	LKX 7794 E097 0000
12	0.35	1.4	19.1	0.2	1.7	23.3	789	LKX 7794 E109 0000
1.5 mm²/7								
1	0.35	0.9	7.1	0.2	1.3	10.5	179	LKX 7794 E121 0000
4	0.35	1.1	12.7	0.2	1.5	16.5	400	LKX 7794 E127 0000
12	0.35	1.4	19.9	0.2	1.7	24.1	860	LKX 7794 E139 0000

ICON Instrumentation Cable EN 50288-7

Multi-Pair, XLPE-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10130 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	double layer of galvanised steel tapes
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation)
	-5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10130 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

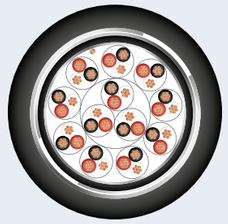
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.		nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	1.0	8.9	0.2	1.4	12.5	219	LKX 7794 E166 0000
0.75 mm²/7								
2	0.26	1.0	9.7	0.2	1.4	13.3	245	LKX 7794 E196 0000
1 mm²/7								
2	0.26	1.0	10.4	0.2	1.4	14.0	272	LKX 7794 E226 0000
1.3 mm²/7								
2	0.35	1.1	11.6	0.2	1.4	15.2	316	LKX 7794 E256 0000
1.5 mm²/7								
2	0.35	1.1	12.0	0.2	1.5	15.8	341	LKX 7794 E286 0000

ICON Instrumentation Cable EN 50288-7

Single & Multi-Triple, XLPE-Insulation, Collective Screen, Armour, PVC Sheath



ICON Base 10130 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	double layer of galvanised steel tapes
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10130 M1 OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

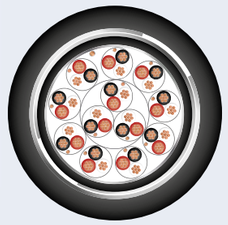
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.		nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
1	0.26	1.5	6.7	0.2	1.3	10.1	167	LKX 7794 E316 0000
4	0.26	1.0	9.8	0.2	1.4	13.4	273	LKX 7794 E322 0000
12	0.26	1.2	15.4	0.2	1.6	19.4	556	LKX 7794 E337 0000
0.75 mm²/7								
1	0.26	1.2	6.7	0.2	1.3	10.1	165	LKX 7794 E349 0000
4	0.26	1.1	11.1	0.2	1.4	14.7	330	LKX 7794 E355 0000
12	0.26	1.3	17.5	0.2	1.6	21.5	692	LKX 7794 E370 0000
1 mm²/7								
1	0.26	1.6	8.0	0.2	1.3	11.4	210	LKX 7794 E382 0000
4	0.26	1.1	12.1	0.2	1.5	15.9	389	LKX 7794 E388 0000
12	0.26	1.4	19.4	0.2	1.7	23.6	851	LKX 7794 E403 0000
1.3 mm²/7								
1	0.35	0.9	7.2	0.2	1.3	10.6	187	LKX 7794 E415 0000
4	0.35	1.2	13.4	0.2	1.5	17.2	456	LKX 7794 E421 0000
12	0.35	1.5	21.8	0.2	1.7	26.0	1045	LKX 7794 E436 0000
1.5 mm²/7								
1	0.35	0.9	7.5	0.2	1.3	10.9	209	LKX 7794 E448 0000
4	0.35	1.2	14.2	0.2	1.5	18.0	503	LKX 7794 E454 0000
12	0.35	1.5	22.7	0.2	1.8	27.1	1148	LKX 7794 E469 0000

ICON Instrumentation Cable EN 50288-7

Multi-Triple, XLPE-Insulation, Individual & Collective Screen, Armour, PVC-Sheath



ICON Base 10130 M1 IS/OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black / white / red, continuously numbered on white core (1, 2, 3...) for multi-element
Individual screen	aluminium / PETP tape over tinned copper drain wire, plastic tape under and above screen
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	double layer of galvanised steel tapes
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10130 M1 IS/OS SIZE 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.7 Ω/km	25.0 Ω/km	18.5 Ω/km	14.2 Ω/km	12.3 Ω/km	7.6 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		1500 V					
Test voltage U_{rms} (core : screen)		1500 V					
Operating voltage		300 V					

	min.	nom.	approx.		nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.26	1.0	9.7	0.2	1.4	13.3	248	LKX 7794 E481 0000
0.75 mm²/7								
2	0.26	1.0	10.6	0.2	1.4	14.2	282	LKX 7794 E511 0000
1 mm²/7								
2	0.26	1.1	11.7	0.2	1.5	15.3	323	LKX 7794 E541 0000
1.3 mm²/7								
2	0.35	1.1	12.8	0.2	1.5	16.6	378	LKX 7794 E571 0000
1.5 mm²/7								
2	0.35	1.1	13.2	0.2	1.5	17.0	401	LKX 7794 E601 0000

Oil & gas

Generating station & power distribution

Chemical industry

Mining

Other applications

Compound

Instrumentation control cables

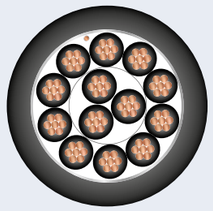
Instrumentation control cables of this section consist of conductors in cores. All cables have an overall screen, a PVC sheath and are rated 500 V.

Constructions with blue outer sheath for intrinsically safe applications are available on request.

Regarding direct burial installation please note possible additional local and legal requirements.

ICON Instrumentation Control Cable EN 50288-7

Multi-Core, PVC-Insulation, Collective Screen, PVC-Sheath



ICON Base 10200 M0 OS **70 °C / 500 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black, continuously numbered
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10200 M0 OS SIZE 500 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

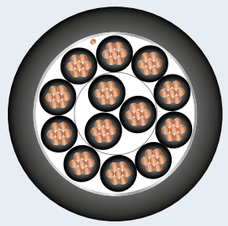
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.0 Ω/km	24.5 Ω/km	18.1 Ω/km	13.9 Ω/km	12.1 Ω/km	7.4 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		2000 V					
Test voltage U_{rms} (core : screen)		2000 V					
Operating voltage		500 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.44	0.9	6.2	50	LKX 7774 C001 0000
4	0.44	0.9	7.0	65	LKX 7774 C007 0000
5	0.44	0.9	7.6	81	LKX 7774 C010 0000
8	0.44	1.0	9.0	121	LKX 7774 C016 0000
10	0.44	1.0	10.4	141	LKX 7774 C019 0000
12	0.44	1.0	10.7	161	LKX 7774 C022 0000
16	0.44	1.0	11.8	200	LKX 7774 C028 0000
20	0.44	1.1	13.3	240	LKX 7774 C034 0000
24	0.44	1.1	14.7	289	LKX 7774 C037 0000
0.75 mm²/7					
2	0.44	0.9	6.5	57	LKX 7774 C052 0000
4	0.44	0.9	7.4	81	LKX 7774 C058 0000
5	0.44	0.9	8.1	102	LKX 7774 C061 0000
8	0.44	1.0	9.7	144	LKX 7774 C067 0000
10	0.44	1.0	11.1	176	LKX 7774 C070 0000
12	0.44	1.0	11.5	201	LKX 7774 C073 0000
16	0.44	1.1	12.9	255	LKX 7774 C079 0000
20	0.44	1.1	14.3	306	LKX 7774 C085 0000
24	0.44	1.2	16.0	369	LKX 7774 C088 0000
1 mm²/7					
2	0.44	0.9	6.9	64	LKX 7774 C103 0000
4	0.44	0.9	7.9	96	LKX 7774 C109 0000
5	0.44	0.9	8.6	118	LKX 7774 C112 0000
8	0.44	1.0	10.3	173	LKX 7774 C118 0000
10	0.44	1.0	11.9	205	LKX 7774 C121 0000
12	0.44	1.0	12.2	235	LKX 7774 C124 0000
16	0.44	1.1	13.7	306	LKX 7774 C130 0000
20	0.44	1.1	15.2	370	LKX 7774 C136 0000
24	0.44	1.2	17.0	445	LKX 7774 C139 0000
1.3 mm²/7					
2	0.44	0.9	7.4	76	LKX 7774 C154 0000
4	0.44	0.9	8.5	112	LKX 7774 C160 0000
5	0.44	1.0	9.5	142	LKX 7774 C163 0000
8	0.44	1.0	11.2	200	LKX 7774 C169 0000
10	0.44	1.1	13.2	246	LKX 7774 C172 0000
12	0.44	1.1	13.6	290	LKX 7774 C175 0000
16	0.44	1.1	15.0	379	LKX 7774 C181 0000
20	0.44	1.2	16.9	458	LKX 7774 C187 0000
24	0.44	1.2	18.7	549	LKX 7774 C190 0000
1.5 mm²/7					
2	0.44	0.9	7.7	81	LKX 7774 C205 0000
4	0.44	0.9	8.8	126	LKX 7774 C211 0000
5	0.44	1.0	9.8	155	LKX 7774 C214 0000
8	0.44	1.0	11.7	224	LKX 7774 C220 0000
10	0.44	1.1	13.7	281	LKX 7774 C223 0000
12	0.44	1.1	14.1	323	LKX 7774 C226 0000
16	0.44	1.1	15.6	414	LKX 7774 C232 0000
20	0.44	1.2	17.6	511	LKX 7774 C238 0000
24	0.44	1.3	19.6	614	LKX 7774 C241 0000
2.5 mm²/7					
2	0.53	0.9	8.9	112	LKX 7774 C256 0000
4	0.53	1.0	10.5	182	LKX 7774 C262 0000
5	0.53	1.0	12.0	222	LKX 7774 C265 0000
8	0.53	1.1	13.9	339	LKX 7774 C271 0000
10	0.53	1.2	16.3	414	LKX 7774 C274 0000
12	0.53	1.2	16.9	480	LKX 7774 C277 0000
16	0.53	1.3	18.9	630	LKX 7774 C283 0000
20	0.53	1.3	21.1	766	LKX 7774 C289 0000
24	0.53	1.5	23.8	935	LKX 7774 C292 0000

ICON Instrumentation Control Cable EN 50288-7

Multi-Core, XLPE-Insulation, Collective Screen, PVC-Sheath



ICON Base 10100 M1 OS **90 °C / 500 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black, continuously numbered
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10100 M1 OS SIZE 500 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

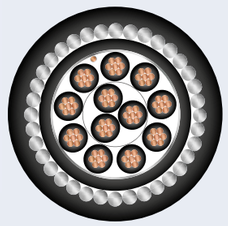
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.0 Ω/km	24.5 Ω/km	18.1 Ω/km	13.9 Ω/km	12.1 Ω/km	7.4 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		2000 V					
Test voltage U_{rms} (core : screen)		2000 V					
Operating voltage		500 V					

	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	black
0.5 mm²/7					
2	0.44	0.9	6.2	46	LKX 7128 C001 0000
4	0.44	0.9	7.0	62	LKX 7128 C007 0000
5	0.44	0.9	7.6	74	LKX 7128 C010 0000
8	0.44	1.0	9.0	96	LKX 7128 C016 0000
10	0.44	1.0	10.4	123	LKX 7128 C019 0000
12	0.44	1.1	10.9	145	LKX 7128 C022 0000
16	0.44	1.1	12.0	188	LKX 7128 C028 0000
20	0.44	1.1	13.3	215	LKX 7128 C034 0000
24	0.44	1.2	14.9	259	LKX 7128 C037 0000
0.75 mm²/7					
2	0.44	0.9	6.5	52	LKX 7128 C052 0000
4	0.44	0.9	7.4	74	LKX 7128 C058 0000
5	0.44	1.0	8.3	93	LKX 7128 C061 0000
8	0.44	1.0	9.7	130	LKX 7128 C067 0000
10	0.44	1.1	11.3	157	LKX 7128 C070 0000
12	0.44	1.1	11.7	178	LKX 7128 C073 0000
16	0.44	1.1	12.9	229	LKX 7128 C079 0000
20	0.44	1.2	14.5	277	LKX 7128 C085 0000
24	0.44	1.2	16.0	326	LKX 7128 C088 0000
1 mm²/7					
2	0.44	0.9	6.9	60	LKX 7128 C103 0000
4	0.44	0.9	7.9	87	LKX 7128 C109 0000
5	0.44	1.0	8.8	108	LKX 7128 C112 0000
8	0.44	1.0	10.3	155	LKX 7128 C118 0000
10	0.44	1.1	12.1	192	LKX 7128 C121 0000
12	0.44	1.1	12.4	221	LKX 7128 C124 0000
16	0.44	1.2	13.9	285	LKX 7128 C130 0000
20	0.44	1.2	15.4	342	LKX 7128 C136 0000
24	0.44	1.3	17.2	411	LKX 7128 C139 0000
1.3 mm²/7					
2	0.44	0.9	7.4	69	LKX 7128 C154 0000
4	0.44	1.0	8.7	106	LKX 7128 C160 0000
5	0.44	1.0	9.5	135	LKX 7128 C163 0000
8	0.44	1.0	11.2	186	LKX 7128 C169 0000
10	0.44	1.1	13.2	229	LKX 7128 C172 0000
12	0.44	1.2	13.8	270	LKX 7128 C175 0000
16	0.44	1.2	15.2	352	LKX 7128 C181 0000
20	0.44	1.3	17.1	425	LKX 7128 C187 0000
24	0.44	1.4	19.1	509	LKX 7128 C190 0000
1.5 mm²/7					
2	0.44	0.9	7.7	77	LKX 7128 C205 0000
4	0.44	0.9	8.8	115	LKX 7128 C211 0000
5	0.44	1.0	9.8	156	LKX 7128 C214 0000
8	0.44	1.1	11.9	216	LKX 7128 C220 0000
10	0.44	1.2	13.9	267	LKX 7128 C223 0000
12	0.44	1.2	14.3	306	LKX 7128 C226 0000
16	0.44	1.2	15.8	403	LKX 7128 C232 0000
20	0.44	1.3	17.8	486	LKX 7128 C238 0000
24	0.44	1.4	19.8	576	LKX 7128 C241 0000
2.5 mm²/7					
2	0.53	1.0	9.1	110	LKX 7128 C256 0000
4	0.53	1.0	10.5	168	LKX 7128 C262 0000
5	0.53	1.1	12.2	210	LKX 7128 C265 0000
8	0.53	1.2	14.1	319	LKX 7128 C271 0000
10	0.53	1.3	16.5	393	LKX 7128 C274 0000
12	0.53	1.3	17.1	455	LKX 7128 C277 0000
16	0.53	1.4	19.1	587	LKX 7128 C283 0000
20	0.53	1.4	21.3	722	LKX 7128 C289 0000
24	0.53	1.5	23.8	867	LKX 7128 C292 0000

ICON Instrumentation Control Cable EN 50288-7

Multi-Core, PVC-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10210 M0 OS **70 °C / 500 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	polyvinyl chloride PVC
Colour code	black, continuously numbered
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 17 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +70 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10210 M0 OS SIZE 500 V RP
EN50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

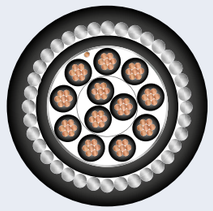
Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.0 Ω/km	24.5 Ω/km	18.1 Ω/km	13.9 Ω/km	12.1 Ω/km	7.4 Ω/km
Insulation resistance	min.	100 MΩ x km					
Mutual capacitance	max.	250 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		2000 V					
Test voltage U_{rms} (core : screen)		2000 V					
Operating voltage		500 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.44	0.9	6.2	0.9	1.3	10.6	213	LKX 7776 C001 0000
4	0.44	0.9	7.0	0.9	1.3	11.4	246	LKX 7776 C007 0000
5	0.44	0.9	7.6	0.9	1.3	12.0	290	LKX 7776 C010 0000
8	0.90	1.0	9.0	0.9	1.4	13.6	357	LKX 7776 C016 0000
10	0.44	1.0	10.4	0.9	1.4	15.0	401	LKX 7776 C019 0000
12	0.44	1.0	10.7	0.9	1.4	15.3	428	LKX 7776 C022 0000
16	0.44	1.0	11.8	0.9	1.4	16.4	526	LKX 7776 C028 0000
20	0.44	1.1	13.3	0.9	1.5	18.1	582	LKX 7776 C034 0000
24	0.44	1.1	14.7	0.9	1.5	19.5	654	LKX 7776 C037 0000
0.75 mm²/7								
2	0.44	0.9	6.5	0.9	1.3	10.9	234	LKX 7776 C052 0000
4	0.44	0.9	7.4	0.9	1.3	11.8	284	LKX 7776 C058 0000
5	0.44	0.9	8.1	0.9	1.4	12.7	330	LKX 7776 C061 0000
8	0.44	1.0	9.7	0.9	1.4	14.3	397	LKX 7776 C067 0000
10	0.44	1.0	11.1	0.9	1.4	15.7	477	LKX 7776 C070 0000
12	0.44	1.0	11.5	0.9	1.4	16.1	481	LKX 7776 C073 0000
16	0.44	1.1	12.9	0.9	1.5	17.7	582	LKX 7776 C079 0000
20	0.44	1.1	14.3	0.9	1.5	19.1	660	LKX 7776 C085 0000
24	0.44	1.2	16.0	0.9	1.5	20.8	758	LKX 7776 C088 0000
1 mm²/7								
2	0.44	0.9	6.9	0.9	1.3	11.3	243	LKX 7776 C103 0000
4	0.44	0.9	7.9	0.9	1.4	12.5	298	LKX 7776 C109 0000
5	0.44	0.9	8.6	0.9	1.4	13.2	336	LKX 7776 C112 0000
8	0.44	1.0	10.3	0.9	1.4	14.9	439	LKX 7776 C118 0000
10	0.44	1.0	11.9	0.9	1.4	16.5	498	LKX 7776 C121 0000
12	0.44	1.0	12.2	0.9	1.5	17.0	542	LKX 7776 C124 0000
16	0.44	1.1	13.7	0.9	1.5	18.5	676	LKX 7776 C130 0000
20	0.44	1.1	15.2	0.9	1.5	20.0	744	LKX 7776 C136 0000
24	0.44	1.2	17.0	0.9	1.6	22.0	867	LKX 7776 C139 0000
1.3 mm²/7								
2	0.44	0.9	7.4	0.9	1.3	11.8	270	LKX 7776 C154 0000
4	0.44	0.9	8.5	0.9	1.4	13.1	348	LKX 7776 C160 0000
5	0.44	1.0	9.5	0.9	1.4	14.1	398	LKX 7776 C163 0000
8	0.44	1.0	11.2	0.9	1.4	15.8	498	LKX 7776 C169 0000
10	0.44	1.1	13.2	0.9	1.5	18.0	596	LKX 7776 C172 0000
12	0.44	1.1	13.6	0.9	1.5	18.4	655	LKX 7776 C175 0000
16	0.44	1.1	15.0	0.9	1.5	19.8	904	LKX 7776 C181 0000
20	0.44	1.2	16.9	0.9	1.6	21.9	1050	LKX 7776 C187 0000
24	0.44	1.2	18.7	1.25	1.6	24.4	1205	LKX 7776 C190 0000
1.5 mm²/7								
2	0.44	0.9	7.7	0.9	1.3	12.1	279	LKX 7776 C205 0000
4	0.44	0.9	8.8	0.9	1.4	13.4	346	LKX 7776 C211 0000
5	0.44	1.0	9.8	0.9	1.4	14.4	402	LKX 7776 C214 0000
8	0.44	1.0	11.7	0.9	1.4	16.3	511	LKX 7776 C220 0000
10	0.44	1.1	13.7	0.9	1.5	18.5	621	LKX 7776 C223 0000
12	0.44	1.1	14.1	0.9	1.5	18.9	671	LKX 7776 C226 0000
16	0.44	1.1	15.6	0.9	1.5	20.4	797	LKX 7776 C232 0000
20	0.44	1.2	17.6	1.25	1.6	23.3	1080	LKX 7776 C238 0000
24	0.44	1.3	19.6	1.25	1.6	25.3	1231	LKX 7776 C241 0000
2.5 mm²/7								
2	0.53	0.9	8.9	0.9	1.4	13.5	336	LKX 7776 C256 0000
4	0.53	1.0	10.5	0.9	1.4	15.1	443	LKX 7776 C262 0000
5	0.53	1.0	12.0	0.9	1.4	16.6	526	LKX 7776 C265 0000
8	0.53	1.1	13.9	0.9	1.5	18.7	687	LKX 7776 C271 0000
10	0.53	1.2	16.3	0.9	1.6	21.3	953	LKX 7776 C274 0000
12	0.53	1.2	16.9	0.9	1.6	21.9	902	LKX 7776 C277 0000
16	0.53	1.3	18.9	1.25	1.6	24.6	1243	LKX 7776 C283 0000
20	0.53	1.3	21.1	1.25	1.7	27.0	1509	LKX 7776 C289 0000
24	0.53	1.5	23.8	1.25	1.8	29.9	1710	LKX 7776 C292 0000

ICON Instrumentation Control Cable EN 50288-7

Multi-Core, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath



ICON Base 10110 M1 OS **90 °C / 500 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	plain annealed copper wire, stranded, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm², 2.5 mm²
Insulation	cross-linked polyethylene XLPE
Colour code	black, continuously numbered
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, black, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 10110 M1 OS SIZE 500 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²	2.5 mm²
Conductor resistance	max.	36.0 Ω/km	24.5 Ω/km	18.1 Ω/km	13.9 Ω/km	12.1 Ω/km	7.4 Ω/km
Insulation resistance	min.	5000 MΩ x km					
Mutual capacitance	max.	150 nF/km					
Inductance	max.	1 mH/km					
L/R ratio	max.	25 µH/Ω			40 µH/Ω		60 µH/Ω
Test voltage U_{rms} (core : core)		2000 V					
Test voltage U_{rms} (core : screen)		2000 V					
Operating voltage		500 V					

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	black
0.5 mm²/7								
2	0.44	0.9	6.2	0.9	1.3	10.6	211	LKX 7068 C001 0000
4	0.44	0.9	7.0	0.9	1.4	11.6	254	LKX 7068 C007 0000
5	0.44	0.9	7.6	0.9	1.4	12.2	276	LKX 7068 C010 0000
8	0.44	1.0	9.0	0.9	1.4	9.0	344	LKX 7068 C016 0000
10	0.44	1.0	10.4	0.9	1.4	15.0	400	LKX 7068 C019 0000
12	0.44	1.1	10.9	0.9	1.5	15.7	426	LKX 7068 C022 0000
16	0.44	1.1	12.0	0.9	1.5	16.8	506	LKX 7068 C028 0000
20	0.44	1.1	13.3	0.9	1.5	18.1	571	LKX 7068 C034 0000
24	0.44	1.2	14.9	0.9	1.6	19.9	646	LKX 7068 C037 0000
0.75 mm²/7								
2	0.44	0.9	6.5	0.9	1.3	10.9	223	LKX 7068 C052 0000
4	0.44	0.9	7.4	0.9	1.4	12.0	270	LKX 7068 C058 0000
5	0.44	1.0	8.3	0.9	1.4	12.9	323	LKX 7068 C061 0000
8	0.44	1.0	9.7	0.9	1.4	14.3	384	LKX 7068 C067 0000
10	0.44	1.1	11.3	0.9	1.5	16.1	444	LKX 7068 C070 0000
12	0.44	1.1	11.7	0.9	1.5	16.5	479	LKX 7068 C073 0000
16	0.44	1.1	12.9	0.9	1.5	17.7	553	LKX 7068 C079 0000
20	0.44	1.2	14.5	0.9	1.6	19.5	671	LKX 7068 C085 0000
24	0.44	1.2	16.0	1.25	1.6	21.7	845	LKX 7068 C088 0000
1 mm²/7								
2	0.44	0.9	6.9	0.9	1.3	11.3	237	LKX 7068 C103 0000
4	0.44	0.9	7.9	0.9	1.4	12.5	288	LKX 7068 C109 0000
5	0.44	1.0	8.8	0.9	1.4	13.4	329	LKX 7068 C112 0000
8	0.44	1.0	10.3	0.9	1.4	14.9	409	LKX 7068 C118 0000
10	0.44	1.1	12.1	0.9	1.5	16.9	496	LKX 7068 C121 0000
12	0.44	1.1	12.4	0.9	1.5	17.2	530	LKX 7068 C124 0000
16	0.44	1.2	13.9	0.9	1.5	18.7	628	LKX 7068 C130 0000
20	0.44	1.2	15.4	1.25	1.6	21.1	835	LKX 7068 C136 0000
24	0.44	1.3	17.2	1.25	1.7	23.1	971	LKX 7068 C139 0000
1.3 mm²/7								
2	0.44	0.9	7.4	0.9	1.4	12.0	265	LKX 7068 C154 0000
4	0.44	1.0	8.7	0.9	1.4	13.3	327	LKX 7068 C160 0000
5	0.44	1.0	9.5	0.9	1.4	14.1	373	LKX 7068 C163 0000
8	0.44	1.0	11.2	0.9	1.4	15.8	471	LKX 7068 C169 0000
10	0.44	1.1	13.2	0.9	1.5	18.0	564	LKX 7068 C172 0000
12	0.44	1.2	13.8	0.9	1.5	18.6	635	LKX 7068 C175 0000
16	0.44	1.2	15.2	1.25	1.6	20.9	872	LKX 7068 C181 0000
20	0.44	1.3	17.1	1.25	1.7	23.0	1016	LKX 7068 C187 0000
24	0.44	1.4	19.1	1.25	1.7	25.0	1166	LKX 7068 C190 0000
1.5 mm²/7								
2	0.44	0.9	7.7	0.9	1.3	12.1	271	LKX 7068 C205 0000
4	0.44	0.9	8.8	0.9	1.4	13.4	334	LKX 7068 C211 0000
5	0.44	1.0	9.8	0.9	1.4	14.4	389	LKX 7068 C214 0000
8	0.44	1.0	11.6	0.9	1.4	16.2	494	LKX 7068 C220 0000
10	0.44	1.2	13.9	0.9	1.5	18.7	610	LKX 7068 C223 0000
12	0.44	1.1	14.1	0.9	1.5	18.9	643	LKX 7068 C226 0000
16	0.44	1.1	15.6	0.9	1.5	20.4	762	LKX 7068 C232 0000
20	0.44	1.3	17.8	1.25	1.7	23.7	1055	LKX 7068 C238 0000
24	0.44	1.4	19.8	1.25	1.7	25.7	1210	LKX 7068 C241 0000
2.5 mm²/7								
2	0.53	1.0	9.2	0.9	1.4	13.8	342	LKX 7068 C256 0000
4	0.53	1.0	10.5	0.9	1.4	15.1	428	LKX 7068 C262 0000
5	0.53	1.1	12.2	0.9	1.5	17.0	528	LKX 7068 C265 0000
8	0.53	1.2	14.1	0.9	1.5	18.9	675	LKX 7068 C271 0000
10	0.53	1.3	16.5	1.25	1.6	22.2	920	LKX 7068 C274 0000
12	0.53	1.3	17.1	1.25	1.7	23.0	1005	LKX 7068 C277 0000
16	0.53	1.4	19.1	1.25	1.7	25.0	1225	LKX 7068 C283 0000
20	0.53	1.4	21.3	1.25	1.8	27.4	1414	LKX 7068 C289 0000
24	0.53	1.5	23.8	1.25	1.8	29.9	1634	LKX 7068 C292 0000

Oil & gas

Generating station & power distribution

Chemical industry

Mining

Other applications

Compound

Thermocouple extension & compensating cables

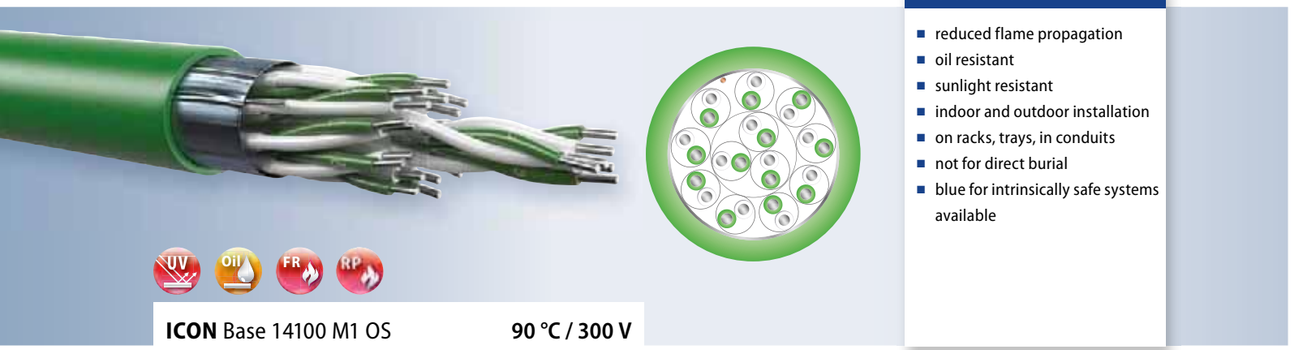
Thermocouple extension & compensating cables of this section consist of conductors grouped in pairs and are based on thermocouple type KX according to IEC 60584.

Cables with other types of thermocouple materials, constructions with screened pairs and cables with blue marked outer sheath for intrinsically safe applications are available on request.

Regarding direct burial installation please note possible additional local and legal requirements.

ICON Thermocouple Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, PVC-Sheath



ICON Base 14100 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- not for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	thermocouple conductor, solid, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm²
Conductor description	Type KX, class 2, according to IEC 60584, (+) Nickel/Chromium, (-) Nickel/Aluminium Tolerance: ± 100µV / ± 2.5 °C, -25 °C to +200 °C
Insulation	cross-linked polyethylene XLPE
Colour code	(+) - leg green, (-) - leg white, continuously numbered on + core (1, 2...) for multipairs
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Outer sheath	polyvinyl chloride PVC, green, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	7.5 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 14100 M1 OS SIZE KX 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

Electrical Properties at 20 °C

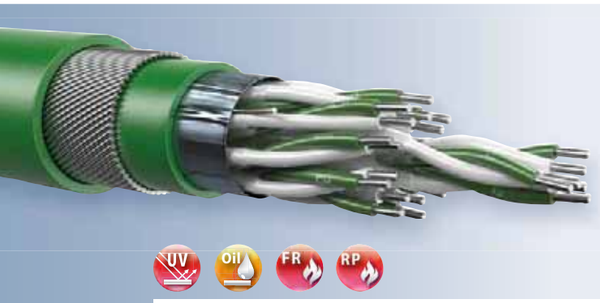
Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²
Conductor resistance (loop)	approx.	2039 Ω/km	1248 Ω/km	1020 Ω/km	785 Ω/km	680 Ω/km
Insulation resistance	min.	5000 MΩ x km				
Mutual capacitance	max.	150 nF/km				
Inductance	nom.	3 mH/km				
Capacitance unbalance	max.	500 pF/500 m				
Test voltage U_{rms} (core : core)		1500 V				
Test voltage U_{rms} (core : screen)		1500 V				
Operating voltage		300 V				

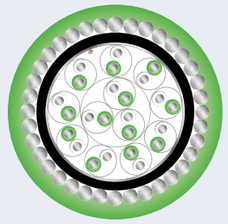
	min.	nom.	approx.	approx.	Part number
	mm	mm	mm	kg/km	green
0.5 mm2/1					
1	0.26	0.8	5.2	38	
2	0.26	0.9	7.6	66	
4	0.26	0.9	8.8	93	
5	0.26	1.0	9.8	116	
6	0.26	1.0	10.6	136	
8	0.26	1.1	11.5	164	
10	0.26	1.1	12.9	198	
12	0.26	1.2	13.7	233	
16	0.26	1.1	15.2	291	
20	0.26	1.2	16.9	356	
24	0.26	1.3	18.5	428	
0.75 mm2/1					
1	0.26	0.8	5.8	45	
2	0.26	0.9	8.5	82	
4	0.26	1.0	10.0	122	
5	0.26	1.0	10.9	147	
6	0.26	1.0	11.8	174	
8	0.26	1.1	12.8	211	
10	0.26	1.1	14.5	256	
12	0.26	1.1	15.1	294	
16	0.26	1.2	17.3	388	
20	0.26	1.4	19.4	486	
24	0.26	1.3	20.8	572	
1 mm²/1					
1	0.26	0.9	6.3	55	
2	0.26	1.0	9.4	102	
4	0.26	1.1	11.1	155	
5	0.26	1.0	11.9	183	
6	0.26	1.0	13.0	224	
8	0.26	1.2	14.2	270	
10	0.26	1.1	15.9	333	
12	0.26	1.3	17.0	379	
16	0.26	1.4	19.4	504	
20	0.26	1.3	21.1	605	
24	0.26	1.4	23.1	719	
1.3 mm²/1					
1	0.35	0.9	6.8	64	
2	0.35	1.0	10.4	122	
4	0.35	1.1	12.2	189	
5	0.35	1.1	13.4	230	
6	0.35	1.1	14.6	288	
8	0.35	1.2	15.7	335	
10	0.35	1.2	17.9	412	
12	0.35	1.4	19.1	494	
16	0.35	1.3	21.4	624	
20	0.35	1.4	23.8	774	
24	0.35	1.5	25.9	920	
1.5 mm²/1					
1	0.35	0.9	7.1	70	
2	0.35	1.0	10.8	136	
4	0.35	1.1	12.7	209	
5	0.35	1.2	14.2	264	
6	0.35	1.1	15.2	306	
8	0.35	1.2	16.4	378	
10	0.35	1.4	18.8	469	
12	0.35	1.3	19.7	573	
16	0.35	1.4	22.5	714	
20	0.35	1.6	25.2	889	
24	0.35	1.5	27.1	1050	

Part numbers and other types of thermocouple cables on request.

ICON Thermocouple Cable EN 50288-7

Single & Multi-Pair, XLPE-Insulation, Collective Screen, Armour, PVC-Sheath





ICON Base 14110 M1 OS **90 °C / 300 V**

Characteristics

- reduced flame propagation
- oil resistant
- sunlight resistant
- indoor and outdoor installation
- on racks, trays, in conduits
- for direct burial
- blue for intrinsically safe systems available

Construction

Conductor	thermocouple conductor, solid, size: 0.5 mm², 0.75 mm², 1 mm², 1.3 mm², 1.5 mm²
Conductor description	Type KX, class 2, according to IEC 60584, (+) Nickel/Chromium, (-) Nickel/Aluminium Tolerance: ± 100µV / ± 2.5 °C, -25 °C to +200 °C
Insulation	cross-linked polyethylene XLPE
Colour code	(+) - leg green, (-) - leg white, continuously numbered on + core (1, 2...) for multipairs
Wrapping	at least 1 layer of plastic tape
Collective screen	aluminium / PETP tape over tinned copper drain wire
Inner sheath	polyvinyl chloride PVC, black
Armour	galvanised round steel wires
Outer sheath	polyvinyl chloride PVC, green, blue for intrinsically safe systems

Technical data

Flame propagation	
- Test on single cable	IEC 60332-1-2
- Test on bunched cables	IEC 60332-3-24 (Cat. C)
Limiting Oxygen Index (LOI)	ASTM D 2863 (min. 30 %)
Flammability temperature (FT)	ISO 4589-3 ann. A (min. +250 °C)
Amount of halogen acid gas	IEC 60754-1 (max. 23 %)
Oil resistance	ICEA S-73-532
Sunlight resistance	UL 1581 section 1200
Temperature range	-30 °C up to +90 °C (during operation) -5 °C up to +50 °C (during installation)
Minimum bending radius	10 x cable diameter

Cable marking

LEONI KERPEN ICON BASE 14110 M1 OS SIZE KX 300 V RP
EN 50288-7 CE PRODUCTION LOT CODE YEAR LENGTH MARKING

Electrical Properties at 20 °C

Conductor cross-section	nom.	0.5 mm²	0.75 mm²	1 mm²	1.3 mm²	1.5 mm²
Conductor resistance (loop)	approx.	2039 Ω/km	1248 Ω/km	1020 Ω/km	785 Ω/km	680 Ω/km
Insulation resistance	min.	5000 MΩ x km				
Mutual capacitance	max.	150 nF/km				
Inductance	nom.	3 mH/km				
Capacitance unbalance	max.	500 pF/500 m				
Test voltage U_{rms} (core : core)		1500 V				
Test voltage U_{rms} (core : screen)		1500 V				
Operating voltage		300 V				

	min.	nom.	approx.	nom.	nom.	approx.	approx.	Part number
	mm	mm	mm	mm	mm	mm	kg/km	green
0.5 mm²/1								
1	0.26	0.8	5.2	0.9	1.3	9.6	175	
2	0.26	0.9	7.6	0.9	1.3	12.0	254	
4	0.26	0.9	8.8	0.9	1.4	13.4	313	
5	0.26	1.0	9.8	0.9	1.4	14.4	361	
6	0.26	1.0	10.6	0.9	1.4	15.2	400	
8	0.26	1.0	11.3	0.9	1.4	15.9	436	
10	0.26	1.1	12.9	0.9	1.5	17.7	517	
12	0.26	1.1	13.5	0.9	1.5	18.3	558	
16	0.26	1.1	15.2	0.9	1.5	20.0	659	
20	0.26	1.2	16.9	0.9	1.6	21.9	772	
24	0.26	1.2	18.3	1.25	1.6	24.0	991	
0.75 mm²/1								
1	0.26	0.8	5.6	0.9	1.3	10.0	194	
2	0.26	0.9	8.5	0.9	1.4	13.1	295	
4	0.26	1.0	10.0	0.9	1.4	14.6	368	
5	0.26	1.0	10.9	0.9	1.4	15.5	418	
6	0.26	1.0	11.8	0.9	1.4	16.4	464	
8	0.26	1.1	12.8	0.9	1.5	17.6	529	
10	0.26	1.1	14.5	0.9	1.5	19.3	613	
12	0.26	1.1	15.1	0.9	1.5	19.9	665	
16	0.26	1.2	17.3	0.9	1.6	22.3	817	
20	0.26	1.3	19.2	1.25	1.6	24.9	1077	
24	0.26	1.3	20.8	1.25	1.7	26.7	1216	
1 mm²/1								
1	0.26	0.9	6.3	0.9	1.3	10.7	218	
2	0.26	0.9	9.2	0.9	1.4	13.8	329	
4	0.26	1.0	10.9	0.9	1.4	15.5	419	
5	0.26	1.0	11.9	0.9	1.4	16.5	471	
6	0.26	1.0	13.0	0.9	1.4	17.6	531	
8	0.26	1.1	14.0	0.9	1.5	18.8	607	
10	0.26	1.1	15.9	0.9	1.5	20.7	714	
12	0.26	1.2	16.8	0.9	1.5	21.6	903	
16	0.26	1.4	19.4	1.25	1.7	25.3	1129	
20	0.26	1.3	21.1	1.25	1.7	27.0	1272	
24	0.26	1.4	23.1	1.25	1.7	29.0	1450	
1.3 mm²/1								
1	0.35	0.9	6.8	0.9	1.3	11.2	239	
2	0.35	1.0	10.4	0.9	1.4	15.0	384	
4	0.35	1.0	12.0	0.9	1.4	16.6	474	
5	0.35	1.1	13.4	0.9	1.5	18.2	561	
6	0.35	1.2	14.8	0.9	1.6	19.8	653	
8	0.35	1.2	15.7	1.25	1.6	21.4	838	
10	0.35	1.2	17.9	1.25	1.6	23.8	974	
12	0.35	1.3	18.9	1.25	1.6	24.6	1084	
16	0.35	1.5	21.8	1.25	1.8	27.9	1407	
20	0.35	1.5	24.0	1.25	1.8	30.1	1552	
24	0.35	1.5	25.9	1.25	1.8	32.0	1737	
1.5 mm²/1								
1	0.35	0.9	6.8	0.9	1.3	11.2	253	
2	0.35	1.0	10.8	0.9	1.4	15.4	398	
4	0.35	1.1	12.7	0.9	1.5	17.5	525	
5	0.35	1.1	14.0	0.9	1.5	18.8	601	
6	0.35	1.1	15.2	0.9	1.5	20.0	673	
8	0.35	1.2	16.4	0.9	1.6	21.4	784	
10	0.35	1.3	18.8	1.25	1.6	24.5	1057	
12	0.35	1.3	19.7	1.25	1.7	25.6	1179	
16	0.35	1.4	22.5	1.25	1.7	28.4	1424	
20	0.35	1.5	25.0	1.25	1.8	31.1	1677	
24	0.35	1.5	27.1	1.25	2.0	34.7	1925	

Part numbers and other types of thermocouple cables on request.

Oil & gas

Generating station & power distribution

Chemical industry

Mining

Other applications

Compound

General information

Thermocouple extension & compensating conductors

Overview ICON product range

The EN 50288-7 standard

Design options and construction details

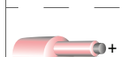
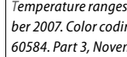
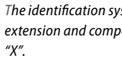
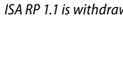
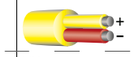
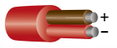
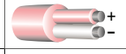
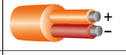
Mechanical and chemical protection

General units

Stock types list

Standards for thermocouple extension & compensating cables

Table 1: Temperature ranges and tolerances of conductors. Colour codes of insulations and outer sheaths.

Type	Thermocouple material	IEC 60584 [1) 2)]		ASTM E 230 [1) 3)]	
R	+ Platinum–13 % Rhodium – Platinum	RCA/SCA 0 °C up to +100 °C	Copper/Copper-Nickel (Class 1:----------) (Class 2: ±30 µV/ ±2.5 °C)	RX 0 °C up to +200 °C	Copper/Copper-Nickel (±5 °C)
		RCB/SCB 0 °C up to +200 °C	Copper/Copper-Nickel (Class 1:----------) (Class 2: ±60 µV/ ±5 °C)	SX 0 °C up to +200 °C	Copper/Copper-Nickel (±5 °C)
S	+ Platinum–10 % Rhodium – Platinum		Cu CuNi		Cu CuNi
B	+ Platinum–30 % Rhodium – Platinum–6 % Rhodium	BC 0 °C up to +100 °C	Copper/Copper (± 40 µV/ ± 3.5 °C)	BX 0 °C up to +200 °C	Copper-alloy/Copper (+0.0 µV/+0 °C) (–33 µV/–4.2 °C)
			Cu Cu		Cu-alloy (Cu) Cu (Cu)
J	+ Iron – Copper–Nickel	JX –25 °C up to +200 °C	Iron/Copper-Nickel (Class 1: ±85 µV/ ±1.5 °C (Class 2: ±140 µV/ ±2.5°C)	JX 0 °C up to +200 °C	Iron/Copper-Nickel (special: ±1.1 °C) (standard: ±2.2 °C)
			Fe CuNi		Fe CuN
T	+ Copper – Copper–Nickel	TX –25 °C up to + 100 °C	Copper/Copper-Nickel (Class 1: ±30 µV/ ±0.5 °C) (Class 2: ±60 µV/ ±1.0 °C)	TX -60 °C up to +100 °C	Copper/Copper-Nickel (special: ±0.5 °C) (standard: ±1.0 °C)
			Cu CuNi		Cu CuNi
E	+ Nickel–Chromium – Copper–Nickel	EX –25 °C up to + 200 °C	Nickel-Chromium/Copper-Nickel (Class 1: ±120 µV/ ±1.5 °C) (Class 2: ±200 µV/ ±2.5°C)	EX 0 °C up to +200 °C	Nickel-Chromium/ Copper-Nickel (special: ±1.1 °C) (standard: ±1.7 °C)
			NiCr CuNi		NiCr CuNi
K	+ Nickel–Chromium – Nickel–Aluminum	KX –25 °C up to +200 °C	Nickel-Chromium/ Nickel-Aluminium (Class 1: ± 60 µV/ ±1.5 °C) (Class 2: ±100 µV/ ±2.5 °C)	KX 0 °C up to +200 °C	Nickel-Chromium/ Nickel-Aluminium (special: ±1.1 °C) (standard: ±2.2 °C)
		KCB 0 °C up to +100 °C	Copper/Copper-Nickel (Class 1:----------) (Class 2: ±100µV/ ±2.5 °C)		NiCr NiAl
		KCA 0 °C up to +150 °C	Iron/Copper-Nickel (Class 1:----------) (Class 2: ±100µV/ ±2.5 °C)	VX ISA RP 1.1 0 °C up to +100 °C	Copper/Copper-Nickel (±2.2 °C)
		 KX NiCr NiAl KCB Cu CuNi KCA Fe CuNi		 Cu CuNi	
N	+ Nickel–Chromium–Silicon – Nickel–Silicon	NX –25 °C up to +200 °C	Nickel-Chromium-Silicon/ Nickel-Silicon (Class 1: ± 60 µV/ ±1.5 °C) (Class 2: ± 100 µV/ ±2.5 °C)	NX 0 °C up to +200 °C	Nickel-Chromium-Silicon/ Nickel-Silicon (special: ±1.1 °C) (standard: ±2.2 °C)
		NC 0 °C up to +150 °C	Copper/Copper-Nickel (Class 1:----------) (Class 2: ±100 µV/ ±2.5 °C)		
		 NX NiCrSi NiSi NC Cu CuNi		 NiCrSi NiSi	

1) *In all standards the basic EMF values of the same thermocouple type are identical.*
2) *Following standards are corresponding with the IEC-Standard 60584 DIN 43722 and JIS C 1610 section 1*
3) *Requirements as ANSI MC 96.1 (withdrawn), today ISA MC96.1*

Temperature ranges and tolerances to IEC 60584. Part 3, November 2007. Color coding for conductors and outer sheaths to IEC 60584. Part 3, November 2007.
Besides the identification letter of the thermocouple type, extension cables are identified by "X" compensating cables by "C"
The color coding of BC, NX and NC is according to DIN 43722.

The identification system of ASTM does not differ between extension and compensating cables; all materials are marked "X".
For BX the temperature range and tolerance have to be agreed upon between end-user and manufacturer.
ISA RP 1.1 is withdrawn; VX material is still available.

Table 2: Electrical characteristics of conductors (approx. values)

Standard	Code		Volume resistivity m Ω x mm		Loop inductance mH/km
	(+) leg	(–) leg	(+) leg	(–) leg	
IEC	RPCA/SPCA	RNCA/SNCA	0.017	0.12	1
IEC	RPCB/SPCB	RNCA/SNCA	0.017	0.12	1
ASTM	SPX	SNX	0.017	0.12	1
IEC	BPC	BNC	0.017	0.017	1
ASTM	BPX	BNX	0.125	0.017	1
IEC	JPX	JNX	0.12	0.49	8
ASTM	JPX	JNX	0.12	0.49	8
IEC	TPC	TNC	0.017	0.49	1
ASTM	TPX	TNX	0.017	0.49	1
IEC	EPX	ENX	0.72	0.49	3
ASTM	EPX	ENX	0.72	0.49	3
IEC	KPX	KNX	0.72	0.27	3
IEC	KPCB	KNCB	0.017	0.49	1
IEC	KPCA	KNCA	0.12	0.51	8
ASTM	KPX	KNX	0.72	0.27	3
ISA	VPX	VNX	0.017	0.49	1
IEC	NPX	NNX	0.98	0.34	3
IEC	NPC	NNC	0.017	0.52	1
ASTM	NPX	NNX	0.98	0.34	3

Table 3: Loop resistance at 20 °C (approx. value in Ω/km)

Thermo-couple	Conductor material		Conductor size				
	IEC 60584	ASTM E 230	0.5 mm²	0.75 mm²	1.0 mm²	1.3 mm²	1.5 mm²
	solid		0.8 mm Ø	1.02 mm Ø	1.13 mm Ø	1.29 mm Ø	1.38 mm Ø
R/S	RC/SC	SX	282	173	141	109	94
B	…	BX	293	179	148	112	98
B	BC	…	70	43	35	27	23
J	JX	JX	1257	769	628	483	418
T	TX	TX	1044	639	522	402	348
E	EX	Ex	2493	1550	1246	958	831
K	KX	KX	2039	1248	1020	785	680
K	KCB	VX*	1044	639	522	402	348
K	KCA	…	1298	794	649	499	433
N	NX	…	2719	1663	1359	1046	906
N	NC	…	1106	677	553	425	369

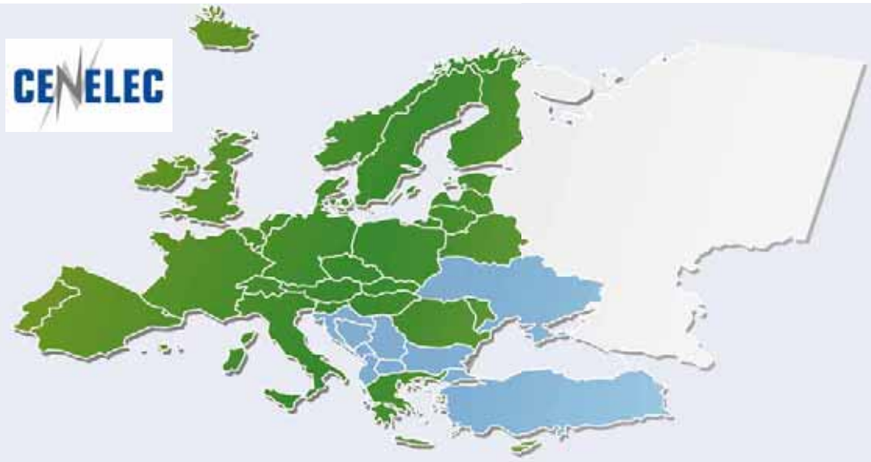
** VX according to ISA RP 1.1*

The ICON® product range

Ranking for marked criteria as			
excellent	+++	limited	○
improved	++	depending on national regulations	■
good	+		
complied	●	on request	✉

Properties		Sheath	PVC						PVC arctic grade				PVC								LSZH				PE	LSZH			
		Insulation	PVC						PVC		XLPE		XLPE								XLPE					XLPE + MICA		Silicone	
			ICON Base 10200 M0	ICON Chem 30200 MH	ICON Base 10204 M0	ICON Base 10210 M0	ICON Chem 30211 M0	ICON Base Pro 60400 M2	ICON Base Pro 60410 M2	ICON Arctic 40200 MN	ICON Arctic 40210 MN	ICON Arctic 40100 MN	ICON Arctic 40110 MN	ICON Base 10100 M1	ICON Chem 30100 MH	ICON Base 10104 M1	ICON Base 10110 M1	ICON Base 10120 M1	ICON Base 30131 M1	ICON Chem 30111 M1	ICON Chem 30113 M1	ICON Safe 20100 M3	ICON Safe 20110 M3	ICON Safe 20120 M3	ICON Chem 30113	ICON Safe 20B10 M3	ICON Safe 20B10 M3	ICON Safe 20510 M3	ICON Safe 20B10 M3
Electrical properties																													
operating voltage	300 V		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●				
	500 V		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
insulation resistance	100 MΩ x km		●	●	●	●	●	●	●	●	●																		
	300 MΩ x km																											●	●
	5000 MΩ x km											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		
Temperature range – installation																													
	–30 °C up to +50 °C								●	●	●	●																	
	–5 °C up to +50 °C		●	●	●	●	●	●	●					●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Temperature range – operation																													
	–60 °C up to +70 °C								●	●	●	●																	
	–30 °C up to +70 °C		●	●	●	●	●																						
	–30 °C up to +80 °C																			●				●					
	–30 °C up to +90 °C												●	●	●	●	●	●	●		●	●			●	●	●	●	
	–30 °C up to +105 °C						●	●																					
Chemical and physical properties																													
oil resistance			+	+++	+	+	+++	+	+	+	+	+	+	+	+++	+	+	+	+	+++	+++	○	○	○	+++	○	○	○	○
zero halogen																						●	●	●	●	●	●	●	●
resistance to chemicals			+	+	+	+	+++	+	+	+	+	+	+	+	+	+	+	+	+	+++	+++	+	+	+	+++	+	+	+	+
Reaction to fire																													
single cable burning test	IEC 60332-1-2		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●	●
bunched cable test	IEC 60332-3-24 (Cat. C)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●		●	●	●		●	●	●	●
smoke density	IEC 61034, <40 %																					●	●	●		●	●	●	●
light transmittance	IEC 61034, >60 %																					●	●	●		●	●	●	●
fire resistance acc. to	IEC 60331-21																									●	●	●	●
	BS 6387 Cat. CWZ																									✉	✉	●	●
Installation & environmental properties																													
suitable for direct burial					■	++	++		++		++		++			■	++	++	++	++	++		++	++	++		++		++
cable bending radius	7.5 x diameter		●	●	●			●		●		●		●	●	●		●				●		●		●		●	
	10 x diameter					●			●		●		●				●		●				●				●		●
	15 x diameter						●													●	●					●				
suitability for tensile loads			○	○	○	+++	+++	○	+++	○	+++	○	+++	○	○	○	○	+	+++	+++	+++	○	+++	+	+++	○	+++	○	+++
suitability for pressure and impact loads						+++	+++		+++		+++		+++				+++	+	+++	+++	+++		+++	+	+++		+++		+++
resistance against rodents						++	++		++		++		+++				+++		++	++	++		++		++		++		++
protection against inducing currents						++	++		++		++		+++				+++		++	++	++		++		++		++		++

The EN 50288-7 standard



The EN 50288-7 standard

The European standard EN 50288-7 published in September 2005 is the first ever standard governing instrumentation cables for onshore applications to have been prepared by an established international standardisation body.

The following features distinguish this standard from the wide variety of existing product specifications:

- it is complemented by the relevant standards for materials and testing
- it includes a wide range of design options
- it effectively matches design regulations with test requirements

This standard thus enables the user to convert all demands with regard to systems, security, the environment, climate and installation into appropriate products in an efficient way.

The standard has been implemented in the form of national standards by all Cenelec members (28 countries at present). Its future significance is underlined by the fact that all former national standards which conflict with the EN standard had been withdrawn after a transitional period in April 2008 latest.

This standard also meets the requirements of the "European Low Voltage Directive".

The advantages

The application of this standard offers a number of advantages:

- it was prepared by a recognized standardisation body
- it represents the "state of the art" throughout
- it is available to everyone everywhere
- it specifies products easily, quickly, clearly and without ambiguity
- it includes a wide range of design options

It thus allows consultants, engineers, manufacturers and others to save time and money when

- preparing specifications
- dealing with inquiries, offers and orders
- organizing product programmes

Summary:

The application of the standard EN 50288-7 should become as logical and widespread as the application of the IEC 60502 standard for power cables.

The product programme

The EN 50288-7 standard does not comprise specific products; instead it "merely" describes the individual cable elements and their design (including options and the relevant rules), defines materials, dimensions and test requirements and cites the relevant standards.

On the basis of more than thirty years of experience in the international instrumentation cable business, the Business Unit Industrial Projects has seized the opportunity and defined the EN 50288-7-based ICON product programme, which consists of two sections:

"Standard types" and"Customised types"

The „Standard types" section presents a comprehensive range of products of the main types used in the market. A few thousand products are described in detail complete with geometrical data and design data, information on mechanical, thermal and flame behaviour properties and electrical data.

The "Customised types" section gives an overview of the entire range of design options covered by the standard and adds explanations and selection criteria. It thus provides optimum support for selecting and specifying products required. Product documentations and quotations are available on request.

Summary of the structure

Well-known quality from reliable project partners based on the international safety regulations.

The Standard EN 50288-7

The ICON Products

Standard types	Customised types
■ Thousands of conventionally used products ■ Complete technical documentation ■ Available immediately ■ Quotes provided rapidly ■ Cost-effective ■ Short delivery time	■ Technical basis for entire market demand ■ Allows specifications and products to be tailor-made ■ Clear and unambiguous design rules ■ Fast and flexible handling of products ■ Documentation on request ■ Modular design concept

Design options & construction details according to EN 50288-7

Conductor
- Copper, plain or tinned
- Conductor sizes: 0.5 mm^2 up to 2.5 mm^2
- Conductor shape: solid, stranded or flexible.
- Thermocouple & extension cables

Insulation
- PVC, PE (solid and foam), XLPE, PP (solid and foam), zero halogen, flame-retardant compounds
- Additional materials under preparation

Cabling elements
- Cores, pairs, triples, quads

Individual screen
- Plastic laminated metal foil with drain wire
- Plain or coated metal braid
- Combination of a braid and a foil

Assembling
- Directly or in units in concentric layers
- With or without moisture barrier

Moisture barriers
- Dry: swellable tapes, and/or cords, swellable powder
- Wet: petrojelly filling compound

Overall screen
- Plastic laminated metal foil with drain wire
- Plain or coated metal braid
- Combination of a braid and a foil
- Laminated sheath

Multi-element metallic cables for analogue and digital communication and control systems

Inner sheath
- PVC, PE, zero halogen, flame retardant compounds
- Additional materials under preparation

Protection against chemicals

a) Lead sheath or

b) Multi layer sheath

One or both side laminated aluminium tape (ongitudinally) overlapped, bonded to the inner surface of an extruded HDPE sheath and an additional polyamid covering, thickness of aluminium tape min 0.15 mm without coating.

Bedding
- Extruded layer of PVC, PE or zero halogen, flame retardant compounds or
- Helically applied tape(s)

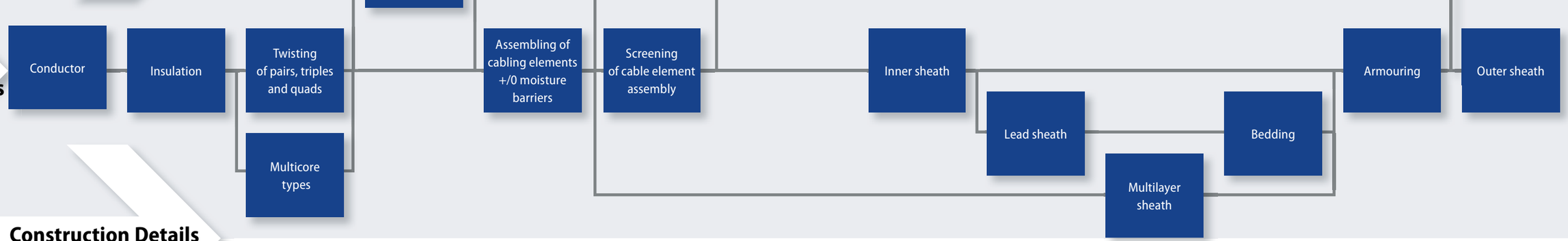
Armour
- Single layer of round steel wires (SWA)
- Single or double layer of steel or brass tapes (B)
- Metal braid (Q)

Outer sheath
- PVC, PE, or zero halogen, flame retardant compounds
- Additional materials under preparation

Design Options

Voltage rating 300 V or 500 V

Type Options



Construction Details

Reference Standards

Conductor
- According to EN 60228, class 1, 2 or 5
- Max. conductor resistance for multi-element cables (beside cores): Standard value +2 %
- Thermocouple & extension cables see to IEC 60584-3

Insulation
- Acc. to EN 50290-2-21, 23, 25, 26 a. 29
- Concentricity of insulation: min. 75 %
- Min. insulation thickness depending on voltage rating and conductor size

Cabling elements
- Max. length of lay: up to 1.5 mm^2 ≤ 100 mm
  2.5 mm^2 ≤ 150 mm
- Ident.: numbered cores or tapes or acc. to IEC 60189-2 or IEC 60708-1

Individual screen
- Overlapping of the foil: min. 20 %
- Filling factor of the braid 0.6 and 0.3 resp. when combined with a foil

Assembling
- Wrappings of non hygroscopic tapes
- Interstitial fillers, where neccessary
- Moisture barriers
- Petrojelly according to EN 50290-2-29

Overall screen
- Overlapping of the foil min. 20 %
- Filling factor of the braid >0.6 and >0.3 resp. when combined with a foil
- One or both side laminated aluminum tape longitudinally overlapped, bonded to the inner surface of an extruded sheath, thickness of alum. tape: min. 0.15 mm without coating

Inner sheath
- According to EN 50290-2-22 and 27
- Optional under lead sheath
- Thickness: 0.04 x D*+0.7 mm (min. 0.8 mm)

*(D = Diameter under inner sheath)

a) Lead sheath
- According to EN 50307
- Thickness: 0.03 x D*+0.7 mm (min. 0.8 mm)

*(D = Diameter under lead sheath)

b) **Multi layer sheath**
- Thickness of polyamid covering: min. 0.3

Bedding
- According to EN 50290-2-22, 24 and 27
- Thickness: depending on diameter under bedding; min.1.0 mm

Armour
- SWA: acc. to EN 10257-1; min. Ø 0.9 mm
- B: min. thickness of brass tape: 0.2 mm a. 0.075 mm resp.
- Q: Filling factor: min. 0.57, wire Ø min. 0.3. mm

Outer sheath
- According to EN 50290-2-22, 24 and 27
- Thickness for unarmoured types: 0.04 x D* + 0.7 mm (min. 0.8 mm)
- Thickness for armoured types: 0.028 x D* + 1.1 mm (min. 1.3 mm)

*(D = diameter under outer sheath)

Mechanical and chemical protection

Mechanical protection

The primary purpose of armour is to protect the cable against mechanical damage during installation and operation.The most common armour designs with their most important features are the following:

Armour of galvanised round steel wires

Very good mechanical protection; reasonably good flexibility; suitable for tensile loads; coverage of over 90 %.

Armour of galvanised steel wire braid

Lightweight armour to withstand tensile loads; permits the smallest bending radii of all armour designs; used mainly for small cable diameters; a coverage of at least 80 % and a wire diameter of 0.3 mm are recommended to achieve sufficient mechanical protection.

Armour of corrugated steel tape

100 % covering of the cable assembly; good protection against rodents.

Armour of galvanized steel tapes

Double layer, lapped steel tapes, 100 % covering of the cable assembly. Good protection against pressure, impact loads and rodents, not suitable for tensile loads. Best inductive protection of all armours listed.

Chemical protection

If the risk of oil and chemicals affecting the installed cable cannot be excluded this may affect the operation of the cables in long term.

The extent of the risk is determined by type, agressive nature, condition and quantity of the medium, the duration of immersion and the temperature.

Lead sheath

The safest, though most expensive protection against aromatic hydrocarbons and active chemicals.

Multilayer sheath

Same as lead protection against aromatic hydrocarbons and active chemicals. This design combining aluminium tape and high density polyethylene HDPE sheath with a covering of polyamide PA (Nylon), represents an excellent barrier against penetrating chemicals and can be used as an alternative to lead sheath. Advantage: lighter, smaller diameter.

Oil resistant PVC sheath

In contrast to standard PVC this compound is more resistant to oils and aliphatic hydrocarbons. It passes the oil resistance test according to IEC 60811-2-1.

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

Area				
1	circ. mil (CM)	=	0.0005067	mm^2
1	MCM	=	0.5067	mm^2
1	square inch (in^2)	=	645.16	mm^2
1	square foot (ft^2)	=	0.0929	m^2
1	square yard (yd^2)	=	0.836	m^2
1	square mile (sq.mi.)	=	2.59	km^2

Volume				
1	cubic inch (in^3)	=	16.39	cm^3
1	cubic foot (ft^3)	=	0.0283	m^3
1	cubic yard (yd^3)	=	0.765	m^3
1	barrel	=	159	l
1	US gallon (US gal)	=	3.79	l
1	UK gallon (UK gal)	=	4.55	l

Electrical Unit per length			
1	µF per mile	=	0.62	µF/km
1	MΩ per 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

Force				
1	poundal (pdl)	=	0.1 38	N
1	pound-force (lbf)	=	4.448	N
1	Brit. ton-force	=	9964	N

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

Power				
1	horsepower (H.P.)	=	0.746	kW

Energy				
1	Brit. therm. unit (BU)	=	1055	J
1	Brit. therm. unit	=	0.000293	kWh

Pressure						
1	bf/in^2 (psi)	=	0.06895	bar	=	6.895 N/m^2
1	lbf/ft^2	=	0.000479	bar	=	47.9 N/m^2
1	lbf/yd^2	=	0.0000532	bar	=	5.32 N/m^2
1	lbf/in^2 (psi)	=	0.703	kp/cm^2	=	0.0703 at

Abbreviations for multiples and submultiples

prefix	abridged mark	multiple power	name	prefix	abridged mark	sub multiple 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

**In USA 10^9 indicates a billion and 10^{12} indicates a trillion*

Stock types - part numbers

Part number, colour		Type	Size		Overall diameter	Cable weight
black	blue				approx. mm	approx. kg/km
Single & multi-pair, Single triple, XLPE insulation, collective screen, PVC sheath						
LKX 7128E001 0000	-	**ICON** Base 10100 M1	1 x 2 x 0.5 mm²/7	OS	5.2	38
LKX 7128E031 0000	LKX 7128D031 0000		1 x 2 x 0.75 mm²/7		5.6	45
LKX 7128E034 0000	-		2 x 2 x 0.75 mm²/7		8.5	83
LKX 7128E091 0000	LKX 7128D091 0000		1 x 2 x 1.3 mm²/7		10.0	124
LKX 7128E349 0000	-		1 x 3 x 0.75 mm²/7		6.8	66
LKX 7128E415 0000	-		1 x 3 x 1.3 mm²/7		7.2	87
Single & multi-pair, Single triple, XLPE insulation, collective screen, PVC sheath reinforced						
LKX 7328E001 0000	LKX7328D0010000	**ICON** Base 10104 M1	1 x 2 x 0.5 mm²/7	OS	7.2	71
LKX 7328E004 0000	LKX7328D0040000		2 x 2 x 0.5 mm²/7		9.4	107
LKX 7328E007 0000	LKX 7328D007 0000		4 x 2 x 0.5 mm²/7		10.6	140
LKX 7328E013 0000	LKX 7328D013 0000		8 x 2 x 0.5 mm²/7		12.9	212
LKX 7328E019 0000	LKX 7328D019 0000		12 x 2 x 0.5 mm²/7		14.9	283
LKX 7328E028 0000	LKX 7328D028 0000		24 x 2 x 0.5 mm²/7		19.5	484
LKX 7328E031 0000	LKX 7328D031 0000		1 x 2 x 0.75 mm²/7		7.6	81
LKX 7328E034 0000	LKX 7328D034 0000		2 x 2 x 0.75 mm²/7		10.3	128
LKX 7328E037 0000	LKX 7328D037 0000		4 x 2 x 0.75 mm²/7		11.6	169
LKX 7328E043 0000	LKX 7328D043 0000		8 x 2 x 0.75 mm²/7		14.2	264
LKX 7328E049 0000	LKX 7328D049 0000		12 x 2 x 0.75 mm²/7		16.5	359
LKX 7328E058 0000	-		24 x 2 x 0.75 mm²/7		21.8	619
LKX 7328E091 0000	LKX 7328D0910000		1 x 2 x 1.3 mm²/7		8.6	102
LKX 7328E094 0000	LKX 7328D094 0000		2 x 2 x 1.3 mm²/7		12.0	171
LKX 7328E097 0000	LKX 7328D097 0000		4 x 2 x 1.3 mm²/7		13.6	238
LKX 7328E103 0000	LKX 7328D103 0000		8 x 2 x 1.3 mm²/7		16.9	390
LKX 7328E109 0000	LKX 7328D109 0000		12 x 2 x 1.3 mm²/7		19.9	540
LKX 7328E118 0000	LKX 7328D118 0000		24 x 2 x 1.3 mm²/7		26.5	968
LKX 7328E415 0000	LKX 7328D415 0000		1 x 3 x 1.3 mm² /7		9.0	121
Multi-pair, XLPE insulation, individual and collective screen, PVC sheath reinforced						
LKX 7328E166 0000	LKX 7328D166 0000	**ICON** Base 10104 M1	2 x 2 x 0.5 mm²/7	IS / OS	10.5	128
LKX 7328E169 0000	LKX 7328D169 0000		4 x 2 x 0.5 mm²/7		11.8	169
LKX 7328E178 0000	-		8 x 2 x 0.5 mm²/7		14.5	268
LKX 7328E184 0000	LKX 7328D184 0000		12 x 2 x 0.5 mm²/7		16.9	354
LKX 7328E187 0000	-		16 x 2 x 0.5 mm²/7		19.0	442
LKX 7328E193 0000	LKX 7328D193 0000		24 x 2 x 0.5 mm²/7		22.3	615
LKX 7328E196 0000	LKX 7328D196 0000		2 x 2 x 0.75 mm²/7		11.3	146
LKX 7328E199 0000	LKX 7328D199 0000		4 x 2 x 0.75 mm²/7		12.8	199
LKX 7328E208 0000	LKX 7328D208 0000		8 x 2 x 0.75 mm²/7		15.8	322
LKX 7328E214 0000	LKX 7328D214 0000		12 x 2 x 0.75 mm²/7		18.6	430
LKX 7328E217 0000	LKX 7328D217 0000		16 x 2 x 0.75 mm²/7		20.8	541
LKX 7328E223 0000	LKX 7328D223 0000		24 x 2 x 0.75 mm²/7		24.6	762
LKX 7328E256 0000	LKX 7328D256 0000		2 x 2 x 1.3 mm²/7		13.0	191
LKX 7328E259 0000	LKX 7328D259 0000		4 x 2 x 1.3 mm²/7		14.8	270
LKX 7328E268 0000	LKX 7328D268 0000		8 x 2 x 1.3 mm²/7		18.6	454
LKX 7328E274 0000	LKX 7328D274 0000		12 x 2 x 1.3 mm²/7		21.9	619
LKX 7328E283 0000	-		24 x 2 x 1.3 mm²/7		29.4	1125

Part number, colour		Type	Size		Overall diameter	Cable weight
black	blue				approx. mm	approx. kg/km
Single & Multi-pair, Single triple, XLPE insulation, collective screen, SWA armour, PVC sheath						
LKX 7068E031 0000	LKX 7068D031 0000	**ICON** Base 10110 M1	1 x 2 x 0.75 mm²/7	OS	10.0	196
LKX 7068E034 0000	LKX 7068034D 0000		2 x 2 x 0.75 mm²/7		13.1 / 14.9	296 / 380
LKX 7068E037 0000	-		4 x 2 x 0.75 mm²/7		14.6	372
LKX 7068E043 0000	LKX 7068043D 0000		8 x 2 x 0.75 mm²/7		17.6 / 19.0	529 / 616
LKX 7068E049 0000	-		12 x 2 x 0.75 mm²/7		19.9	673
LKX 7068058E 0000	LKX 7068058D 0000		24 x 2 x 0.75 mm²/7		27.9	1327
LKX 7068E091 0000	LKX 7068D091 0000		1 x 2 x 1.3 mm²/7		11.2	242
LKX 7068E094 0000	LKX 7068D094 0000		2 x 2 x 1.3 mm²/7		15.0	384
LKX 7068E097 0000	LKX 7068D097 0000		4 x 2 x 1.3 mm²/7		16.6	479
LKX 7068E103 0000	LKX 7068D103 0000		8 x 2 x 1.3 mm²/7		20.5	721
LKX 7068E109 0000	-		12 x 2 x 1.3 mm²/7		24.6	1093
LKX 7068E118 0000	-		24 x 2 x 1.3 mm²/7		32.0	1779
LKX 7068E415 0000	LKX 7068D415 0000		1 x 3 x 1.3 mm²//7		11.6	260
Single & Multi-pair, Single triple, XLPE insulation, individual and collective screen, SWA armour, PVC sheath						
LKX 7068E196 0000	LKX 7068D196 0000	**ICON** Base 10110 M1	2 x 2 x 0.75 mm²/7	IS / OS	14.3	367
LKX 7068199E 0000	LKX 7068199D 0000		4 x 2 x 0.75 mm²/7		17.6	517
LKX 7068E208 0000	LKX 7068D208 0000		8 x 2 x 0.75 mm²/7		19.2	814
LKX 7068214E 0000	LKX 7068214D 0000		12 x 2 x 0.75 mm²/7		24.5	1031
LKX 7068217E 0000	LKX 7068217D 0000		16 x 2 x 0.75 mm²/7		26.9	1218
LKX7068E223 0000	LKX 7068223D 0000		24 x 2 x 0.75 mm²/7		30.1 / 30.9	1479 / 1570
LKX 7068E256 0000	LKX 7068D256 0000		2 x 2 x 1.3 mm²/7		16.0	459
LKX 7068E259 0000	LKX 7068D259 0000		4 x 2 x 1.3 mm²/7		18.2	665
LKX 7068E268 0000	LKX 7068D268 0000		8 x 2 x 1.3 mm²/7		23.3	950
LKX 7068E274 0000	LKX 7068D274 0000		12 x 2 x 1.3 mm²/7		27.0	1400
LKX 7068283E 0000	-		24 x 2 x 1.3 mm²/7		36.6	2269

Available from current production.

Find out more:

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