

FIRE RESISTANCE CABLE NON-ARMoured LK FR (SINGLE-CORE/MULTI-CORE)

0.6/1KV CU/MICA-TAPE/XLPE/LSZH
IEC 60502/IEC 60331/BS6387 Cat. CWZ

LEONI
KERPEN

LEONI KERPEN FR CU/MICA TAPE/XLPE/LSZH 0.6/1KV IEC 331 SIZE XXXXM



Application

Special designed to be used in wiring applications in critical life safety systems (eg. Building Management Systems –BMS , emergency lightings, standby power supplies, lifts & elevators) in public and industrial buildings such as airports, hotels, hospitals, railway station, etc.,

In areas whereby there is a need to maintain circuit integrity for prolonged period of time in a fire situation, these cables provides vital additional time to accomplish the evacuation of personnel, to contain and minimize the damage to equipment, plant and buildings, and to mount an effective fire fighting operation.

Cables are suitable for continuous operation at a maximum conductor temperature up to 90°C.

Special Feature

Sheathed with low smoke halogen free compound ensures flame retardant, low toxicity, low formulation of acid gases and low smoke emission thereby increasing chances of survival during fire breakout.

Construction

Conductor	: Annealed copper wire, stranded or compact round stranded, class 2 reference to IEC 60228
Fire proof tape	: Fire proof mica tape
Insulation	: Cross-linked Polyethylene (XLPE)
Core Identity	: Single core - Natural Two cores - Red, Black Three cores - Red, Yellow, Blue Four cores - Red, Yellow, Blue, Black Five cores & more - Black printed no. 1,2..etc. on white insulation
Filler	: PP yarn
Binder tape	: Plastic tape
Outer Sheath	: Flame retardant low smoke zero halogen free (LSZH)
Colour (*)	: Orange
Cable Marking	: LEONI KERPEN FR CU/MICA TAPE/XLPE/LSZH 0.6/1KV IEC 331 "no. of core &size" XXXXXM (XXXX: Length Marking)

(*): Desired colour to be specified in purchase order

Technical Data

Voltage rating	: 600/1000V
Test Voltage	: 3.5kV
Temperature	: Max. 90°C
Cable construction in acc. to	: IEC 60502
Fire resistance tests	: IEC 60331 ; BS 6387 Cat. C,W,Z or BS 7846 Cat. F2
Reduced flame propagation	: IEC 60332 part 3 Cat. A, B, C
Low smoke emission	: IEC 61034
Low acid gas emission	: IEC 60754 part 1: : <0.5% acid gas.

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(BS 6387 Cat. C,W & Z for overall diameter <20mm)
(BS 7846 Cat. F2 for overall diameter >20mm)

Category	Test method	Performance requirement
C	Flame of 90°C and test voltage of the rated voltage of the cable shall be applied for 3 hours	No failure of any of the 3A fuses occurs, nor any lamp extinguished and capable of withstanding the rated voltage of the cable
W	Flame of 650°C and test voltage of the rated voltage of the cable shall be applied for 15 min. Water shall be sprayed on burnt area and flame shall be applied for a further 15 min.	
Z, F2	Flame of 950°C and test voltage of the rated voltage of the cable shall be applied for 15 min. During this duration a shock producing device is applied for striking the wall on which the cable is mounted	

SINGLE CORE, NON-ARMoured

Part Number	No. of cores	Conductor			Nominal thickness of insulation (mm)	Nominal thickness of sheath (mm)	Approx. overall diameter (mm)	Test voltage (kV/5min.)	Maximum conductor resistance @ 20°C (Ω/km)	Minimum insulation resistance @ 20°C (MΩ/km)
		Nominal sectional area (mm²)	No./Dia of wire (No./mm)	Approx. outer diameter (mm)						
		(mm²)	(No./mm)	(mm)						
LKFR00115	1	1.5	7/0.53	-	0.7	-	7.5	3.5	12.1	2200
LKFR00116		2.5	7/0.67	-	0.7	-	8	3.5	7.41	2100
LKFR00117		4	7/0.85	-	0.7	-	8.5	3.5	4.61	1800
LKFR00118		6	7/1.04	-	0.7	-	9	3.5	3.08	1500
LKFR00119		10	7/1.35	-	0.7	-	11	3.5	1.83	1200
LKFR00120		16	*	-	0.7	-	12	3.5	1.15	1100
LKFR00121		25	*	-	0.9	-	13	3.5	0.727	1100
LKFR00122		35	*	-	0.9	-	14	3.5	0.524	1000
LKFR00123		50	*	-	1.0	-	15	3.5	0.387	900
LKFR00124		70	*	-	1.1	-	17	3.5	0.268	900
LKFR00125		95	*	-	1.1	-	19	3.5	0.193	800
LKFR00126		120	*	-	1.2	-	21	3.5	0.153	700
LKFR00127		150	*	-	1.4	-	23	3.5	0.124	800
LKFR00128		185	*	-	1.6	-	25	3.5	0.0991	800
LKFR00129		240	*	-	1.7	-	27	3.5	0.0754	700
LKFR00130		300	*	-	1.8	-	30	3.5	0.0601	700
LKFR00131		400	*	-	2.0	-	33	3.5	0.0470	700
LKFR00132		500	*	-	2.2	-	37	3.5	0.0366	700
LKFR00133		630	127/2.52	-	2.4	-	44	3.5	0.0283	600
LKFR00134		800	127/2.85	-	2.6	-	49	3.5	0.0221	600
LKFR00135		1000	127/3.2	-	2.8	-	54	3.5	0.0176	600

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MULTICORES, NON-ARMOURED

Part Number	No. of cores	Conductor			Nominal thickness of insulation (mm)	Nominal thickness of sheath (mm)	Approx. overall diameter (mm)	Test voltage (kV/5min)	Maximum conductor resistance @ 20°C (Ω/km)	Minimum insulation resistance @ 20°C (MΩ/km)
		Nominal sectional area (mm ²)	No./Dia of wire (No./mm)	Approx. outer diameter (mm)						
LKFR00215	2	1.5	7/0.53	1.59	0.7	1.8	12.2	3.5	12.1	2200
LKFR00216		2.5	7/0.67	2.01	0.7	1.8	13	3.5	7.41	2100
LKFR00217		4	7/0.85	2.55	0.7	1.8	14.2	3.5	4.61	1800
LKFR00218		6	7/1.04	3.12	0.7	1.8	15.2	3.5	3.08	1500
LKFR00219		10	7/1.35	4.05	0.7	1.8	17.1	3.5	1.83	1200
LKFR00220		16	*	4.7	0.7	1.8	19	3.5	1.15	1100
LKFR00221		25	*	5.9	0.7	1.8	21.8	3.5	0.727	1100
LKFR00222		35	*	7.0	0.7	1.8	23.7	3.5	0.524	1000
LKFR00223		50	*	8.0	1.0	1.8	26.6	3.5	0.387	900
LKFR00224		70	*	9.7	1.1	1.8	29.4	3.5	0.268	900
LKFR00225		95	*	11.4	1.1	2.0	33.2	3.5	0.193	800
LKFR00226		120	*	12.8	1.2	2.1	37.1	3.5	0.153	700
LKFR00227		150	*	14.3	1.4	2.2	40.8	3.5	0.124	800
LKFR00228		185	*	15.8	1.6	2.3	44.6	3.5	0.0991	800
LKFR00229		240	*	18.3	1.7	2.5	50.3	3.5	0.0754	700
LKFR00230		300	*	20.5	1.8	2.7	55.7	3.5	0.0601	700
LKFR00231		400	*	23.3	2.0	2.9	62.4	3.5	0.0470	700
LKFR00315	3	1.5	7/0.53	1.59	0.7	1.8	12.8	3.5	12.1	2200
LKFR00316		2.5	7/0.67	2.01	0.7	1.8	13.7	3.5	7.41	2100
LKFR00317		4	7/0.85	2.55	0.7	1.8	15	3.5	4.61	1800
LKFR00318		6	7/1.04	3.12	0.7	1.8	16.1	3.5	3.08	1500
LKFR00319		10	7/1.35	4.05	0.7	1.8	18	3.5	1.83	1200
LKFR00320		16	*	4.7	0.7	1.8	19.9	3.5	1.15	1100
LKFR00321		25	*	5.9	0.9	1.8	22.7	3.5	0.727	1100
LKFR00322		35	*	7.0	0.9	1.8	25.5	3.5	0.524	1000
LKFR00323		50	*	8.0	1.0	1.8	27.4	3.5	0.387	900
LKFR00324		70	*	9.7	1.1	1.9	32.1	3.5	0.268	900
LKFR00325		95	*	11.4	1.1	2.0	34.9	3.5	0.193	800
LKFR00326		120	*	12.8	1.2	2.1	38.7	3.5	0.153	700
LKFR00327		150	*	14.3	1.4	2.3	43.4	3.5	0.124	800
LKFR00328		185	*	15.8	1.6	2.4	48.2	3.5	0.0991	800
LKFR00329		240	*	18.3	1.7	2.6	53.9	3.5	0.0754	700
LKFR00330		300	*	20.5	1.8	2.8	58.6	3.5	0.0601	700
LKFR00331		400	*	23.3	2.0	3.1	66.2	3.5	0.0470	700
LKFR00415	4	1.5	7/0.53	1.59	0.7	1.8	13.8	3.5	12.1	2200
LKFR00416		2.5	7/0.67	2.01	0.7	1.8	14.8	3.5	7.41	2100
LKFR00417		4	7/0.85	2.55	0.7	1.8	16.3	3.5	4.61	1800
LKFR00418		6	7/1.04	3.12	0.7	1.8	17.5	3.5	3.08	1500
LKFR00419		10	7/1.35	4.05	0.7	1.8	20.4	3.5	1.83	1200
LKFR00420		16	*	4.7	0.7	1.8	22.3	3.5	1.15	1100
LKFR00421		25	*	5.9	0.9	1.8	26.2	3.5	0.727	1100
LKFR00422		35	*	7.0	0.9	1.8	28.1	3.5	0.524	1000
LKFR00423		50	*	8.0	1.0	1.9	31.9	3.5	0.387	900
LKFR00424		70	*	9.7	1.1	2.0	35.8	3.5	0.268	900
LKFR00425		95	*	11.4	1.1	2.1	40.6	3.5	0.193	800
LKFR00426		120	*	12.8	1.2	2.3	44.5	3.5	0.153	700
LKFR00427		150	*	14.3	1.4	2.4	49.3	3.5	0.124	800
LKFR00428		185	*	15.8	1.6	2.6	55.1	3.5	0.0991	800
LKFR00429		240	*	18.3	1.7	2.8	60.9	3.5	0.0754	700
LKFR00430		300	*	20.5	1.8	3.0	67.7	3.5	0.0601	700
LKFR00431		400	*	23.3	2.0	3.3	75.4	3.5	0.0470	700

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Part Number	No. of core	Conductor			Nom. Thick. of insul.	Nom thick of sheath	Approx overall dia	Test voltage	Max conductor resistance @ 20°C	Min insul. Resist. @ 20°C
		Nom sec. area	No./Dia of wire	Approx outer dia.						
		mm ²	No./mm	mm	(mm)	(mm)	(mm)	kV/5min	(Ω/km)	(MΩ/km)
LKFR00515	5	1.5	7/0.53	1.59	0.7	1.8	14.7	3.5	12.1	2200
LKFR00516		2.5	7/0.67	2.01	0.7	1.8	15.8	3.5	7.41	2100
LKFR00517		4	7/0.85	2.55	0.7	1.8	17.8	3.5	4.61	1800
LKFR00518		6	7/1.04	3.12	0.7	1.8	19.2	3.5	3.08	1500
LKFR00715	7	1.5	7/0.53	1.59	0.7	1.8	15.8	3.5	12.1	2200
LKFR00716		2.5	7/0.67	2.01	0.7	1.8	17	3.5	7.41	2100
LKFR01015	10	1.5	7/0.53	1.59	0.7	1.8	22	3.5	12.1	2200
LKFR01016		2.5	7/0.67	2.01	0.7	1.8	23.9	3.5	7.41	2100
LKFR01215	12	1.5	7/0.53	1.59	0.7	1.8	22.6	3.5	12.1	2200
LKFR01216		2.5	7/0.67	2.01	0.7	1.8	24.6	3.5	7.41	2100
LKFR01915	19	1.5	7/0.53	1.59	0.7	1.8	25.9	3.5	12.1	2200
LKFR01916		2.5	7/0.67	2.01	0.7	1.8	29.3	3.5	7.41	2100
LKFR02715	27	1.5	7/0.53	1.59	0.7	1.8	31.3	3.5	12.1	2200
LKFR02716		2.5	7/0.67	2.01	0.7	1.8	34.1	3.5	7.41	2100
LKFR03715	37	1.5	7/0.53	1.59	0.7	1.8	34.6	3.5	12.1	2200
LKFR03716		2.5	7/0.67	2.01	0.7	1.8	37.7	3.5	7.41	2100
LKFR04815	48	1.5	7/0.53	1.59	0.7	1.8	38.8	3.5	12.1	2200
LKFR04816		2.5	7/0.67	2.01	0.7	1.8	46	3.5	7.41	2100

* Other core numbers and nominal sectional areas available on request

Note: Dimensions provided are approximate values and could differ from the actual values upon production. We reserve the right to make any changes to the information provided here, without prior notice.