FIRE RESISTANCE CABLE ARMOURED LK FR

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

LEONI KERPEN FR CU/MICA TAPE/XLPE/LSZH/SWA/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 90^0C.

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 (*)	:	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
Bedding (**)	:	Flame retardant low smoke zero halogen free (LSZH)
Amour	:	Galvanized Steel Wire
Outer Sheath (**)	:	Flame retardant low smoke zero halogen free (LSZH)
Colour (***)	:	Orange
Cable Marking	:	LK FR CU/MICA TAPE/XLPE/LSZH/SWA/LSZH 0.6/1KV IEC 331 “no. of core &size” XXXXXM (XXXX: Length Marking)

(*),(**), (***): to be specified in purchase order

Technical Data

Voltage rating (****)	:	600/1000V
Test Voltage	:	3.5kV
Temperature	:	Max. 90^0C
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.

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

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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^{0}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^{0}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^{0}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	

Part Number	No. of core	Conductor			Nom. Thick. of insul.	Nom thick of inner sheath	Amour wire dia.	Nom thick of outer sheath	Approx overall dia	Test voltage	Max conductor resistance @ 20^{0}C	Min insul. Resist. @ 20^{0}C	A.C resist. @ 90^{0}C	React. @ 60Hz	Capacitance
		Nom sec. area	No./Dia of wire	Approx outer dia.											
		mm^2	No./mm	mm	(mm)	(mm)	(mm)	(mm)	(mm)	kV/5min	(Ω/km)	(MΩ/km)	(Ω/km)	(Ω/km)	(μF/km)
LKFR10215	2	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	15.2	3.5	12.1	2200	15.43	0.119	0.23
LKFR10216		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	15.8	3.5	7.41	2100	9.45	0.112	0.25
LKFR10217		4	7/0.85	2.55	0.7	1.2	0.9	1.8	17.2	3.5	4.61	1800	5.88	0.105	0.27
LKFR10218		6	7/1.04	3.12	0.7	1.2	1.25	1.8	18	3.5	3.08	1500	3.93	0.100	0.30
LKFR10219		10	7/1.35	4.05	0.7	1.2	1.25	1.8	19.7	3.5	1.83	1200	2.33	0.0942	0.32
LKFR10220		16	*	4.7	0.7	1.2	1.25	1.8	21.4	3.5	1.15	1100	1.47	0.0913	0.35
LKFR10221		25	*	5.9	0.9	1.2	1.6	1.8	23.1	3.5	0.727	1100	0.927	0.0922	0.38
LKFR10222		35	*	7.0	0.9	1.2	1.6	1.8	25.7	3.5	0.524	1000	0.669	0.0892	0.42
LKFR10223		50	*	8.0	1.0	1.2	1.6	1.9	28.3	3.5	0.387	900	0.494	0.0887	0.45
LKFR10224		70	*	9.7	1.1	1.2	2.0	2.0	31.7	3.5	0.268	900	0.343	0.0872	0.49
LKFR10225		95	*	11.4	1.1	1.2	2.0	2.1	35.1	3.5	0.193	800	0.248	0.0850	0.55
LKFR10226		120	*	12.8	1.2	1.2	2.0	2.3	38.5	3.5	0.153	700	0.197	0.0846	0.57
LKFR10227		150	*	14.3	1.4	1.3	2.5	2.4	42.8	3.5	0.124	800	0.160	0.0850	0.57
LKFR10228		185	*	15.8	1.6	1.3	2.5	2.6	47.1	3.5	0.0991	800	0.129	0.0854	0.55
LKFR10229		240	*	18.3	1.7	1.4	2.5	2.7	53.1	3.5	0.0754	700	0.0998	0.0843	0.60
LKFR10230		300	*	20.5	1.8	1.5	2.5	2.9	58.8	3.5	0.0601	700	0.0812	0.0836	0.62
LKFR10231		400	*	23.3	2.0	1.7	2.5	3.2	65.9	3.5	0.0470	700	0.0657	0.0833	0.64
LKFR10315	3	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	15.8	3.5	12.1	2400	15.43	0.119	0.23
LKFR10316		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	16.5	3.5	7.41	2100	9.45	0.112	0.25
LKFR10317		4	7/0.85	2.55	0.7	1.2	1.25	1.8	18	3.5	4.61	1800	5.88	0.105	0.27
LKFR10318		6	7/1.04	3.12	0.7	1.2	1.25	1.8	19.1	3.5	3.08	1500	3.93	0.100	0.30
LKFR10319		10	7/1.35	4.05	0.7	1.2	1.25	1.8	21.4	3.5	1.83	1200	2.33	0.0942	0.32
LKFR10320		16	*	4.7	0.7	1.2	1.6	1.8	23.6	3.5	1.15	1100	1.47	0.0913	0.35
LKFR10321		25	*	5.9	0.9	1.2	1.6	1.8	26.9	3.5	0.727	1100	0.927	0.0922	0.38
LKFR10322		35	*	7.0	0.9	1.2	1.6	1.8	30.2	3.5	0.524	1000	0.669	0.0892	0.42
LKFR10323		50	*	8.0	1.0	1.2	1.6	1.8	32.5	3.5	0.387	900	0.494	0.0887	0.45
LKFR10324		70	*	9.7	1.1	1.2	2.0	1.9	38.1	3.5	0.268	900	0.343	0.0872	0.49
LKFR10325		95	*	11.4	1.1	1.2	2.0	2.0	41.4	3.5	0.193	800	0.248	0.0850	0.55
LKFR10326		120	*	12.8	1.2	1.2	2.0	2.1	45.9	3.5	0.153	700	0.197	0.0846	0.57
LKFR10327		150	*	14.3	1.4	1.3	2.5	2.3	51.5	3.5	0.124	800	0.160	0.0850	0.57
LKFR10328		185	*	15.8	1.6	1.4	2.5	2.4	57.2	3.5	0.0991	800	0.129	0.0854	0.55
LKFR10329		240	*	18.3	1.7	1.5	2.5	2.6	63.9	3.5	0.0754	700	0.0998	0.0843	0.60
LKFR10330		300	*	20.5	1.8	1.6	2.5	2.8	69.5	3.5	0.0601	700	0.0812	0.0836	0.62
LKFR10331		400	*	23.3	2.0	1.8	3.15	3.1	78.5	3.5	0.0470	700	0.0657	0.0833	0.64
LKFR10415	4	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	16.6	3.5	12.1	2400	15.43	0.119	0.23
LKFR10416		2.5	7/0.67	2.01	0.7	1.2	1.25	1.8	17.6	3.5	7.41	2100	9.45	0.112	0.25
LKFR10417		4	7/0.85	2.55	0.7	1.2	1.25	1.8	19.2	3.5	4.61	1800	5.88	0.105	0.27
LKFR10418		6	7/1.04	3.12	0.7	1.2	1.25	1.8	21.1	3.5	3.08	1500	3.93	0.100	0.30
LKFR10419		10	7/1.35	4.05	0.7	1.2	1.25	1.8	24.6	3.5	1.83	1200	2.33	0.0942	0.32
LKFR10420		16	*	4.7	0.7	1.2	1.6	1.8	26.9	3.5	1.15	1100	1.47	0.0913	0.35
LKFR10421		25	*	5.9	0.9	1.2	1.6	1.8	31.6	3.5	0.727	1100	0.927	0.0922	0.38
LKFR10422		35	*	7.0	0.9	1.2	1.6	1.8	33.9	3.5	0.524	1000	0.669	0.0892	0.42
LKFR10423		50	*	8.0	1.0	1.2	1.6	1.9	38.5	3.5	0.387	900	0.494	0.0887	0.45
LKFR10424		70	*	9.7	1.1	1.2	2.0	2.0	43.2	3.5	0.268	900	0.343	0.0872	0.49
LKFR10425		95	*	11.4	1.1	1.2	2.0	2.1	49	3.5	0.193	800	0.248	0.0850	0.55
LKFR10426		120	*	12.8	1.2	1.3	2.5	2.3	53.7	3.5	0.153	700	0.197	0.0846	0.57
LKFR10427		150	*	14.3	1.4	1.4	2.5	2.4	59.5	3.5	0.124	800	0.160	0.0850	0.57
LKFR10428		185	*	15.8	1.6	1.5	2.5	2.6	66.5	3.5	0.0991	800	0.129	0.0854	0.55
LKFR10429		240	*	18.3	1.7	1.6	2.5	2.8	73.5	3.5	0.0754	700	0.0998	0.0843	0.60
LKFR10430		300	*	20.5	1.8	1.7	2.5	3.0	81.7	3.5	0.0601	700	0.0812	0.0836	0.62
LKFR10431		400	*	23.3	2.0	1.9	3.15	3.3	91	3.5	0.0470	700	0.0657	0.0833	0.64

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Part Number	No. of core	Conductor			Nom. Thick. of insul.	Nom thick of inner sheath	Amour wire dia.	Nom thick of outer sheath	Approx overall dia	Test voltage	Max conductor resistance @ 20°C	Min insul. Resist. @ 20°C	A.C resist. @ 90°C	React. @ 60Hz	Capacitance
		Nom sec. area	No./Dia of wire	Approx outer dia.											
		mm^2	No./mm	mm	(mm)	(mm)	(mm)	(mm)	(mm)	kV/5min	(Ω/km)	(MΩ/km)	(Ω/km)	(Ω/km)	(μF/km)
LKFR10515	5	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	17.8	3.5	12.1	2200	15.43	0.119	0.23
LKFR10516		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	18.9	3.5	7.41	2100	9.45	0.112	0.25
LKFR10715	7	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	19.2	3.5	12.1	2400	15.43	0.119	0.23
LKFR10716		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	21.3	3.5	7.41	2100	9.45	0.112	0.25
LKFR11015	10	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	23.9	3.5	12.1	2400	15.43	0.119	0.23
LKFR11016		2.5	7/0.67	2.01	0.7	1.2	1.25	1.8	25.6	3.5	7.41	2100	9.45	0.112	0.25
LKFR11215	12	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	24.6	3.5	12.1	2200	15.43	0.119	0.23
LKFR11216		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	26.3	3.5	7.41	2100	9.45	0.112	0.25
LKFR11915	19	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	28	3.5	12.1	2200	15.43	0.119	0.23
LKFR11916		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	31.2	3.5	7.41	2100	9.45	0.112	0.25
LKFR12715	27	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	33.6	3.5	12.1	2200	15.43	0.119	0.23
LKFR12716		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	36.2	3.5	7.41	2100	9.45	0.112	0.25
LKFR13715	37	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	37	3.5	12.1	2200	15.43	0.119	0.23
LKFR13716		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	40.3	3.5	7.41	2100	9.45	0.112	0.25
LKFR14815	48	1.5	7/0.53	1.59	0.7	1.2	0.9	1.8	41.9	3.5	12.1	2200	15.43	0.119	0.23
LKFR14816		2.5	7/0.67	2.01	0.7	1.2	0.9	1.8	46.9	3.5	7.41	2100	9.45	0.112	0.25

** 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.