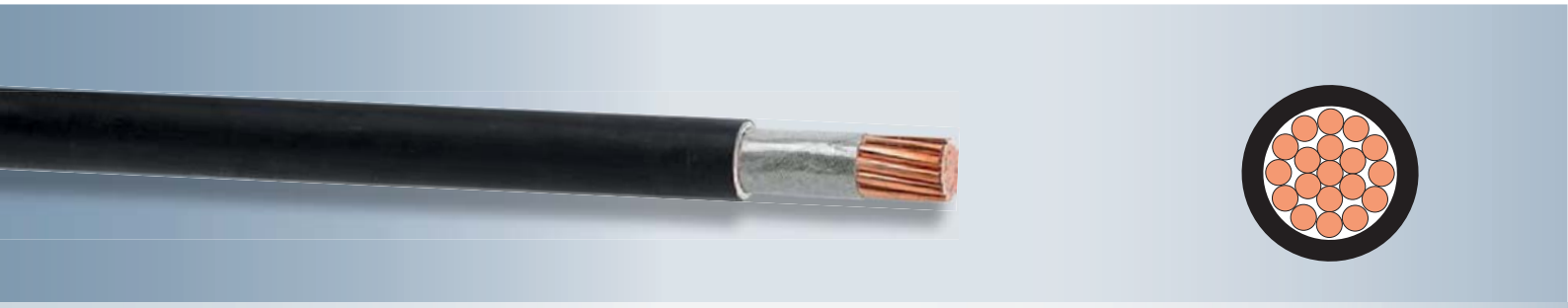
FR-MI 90 / Single Core / Single Insulated

BETAflam® Fire Resistant Safety Cables 0.6 /1 kV, acc. to BS 6387 C.W.Z., LSOH



Advantages

- **High safety standard: BS 6387 C.W.Z, fully tested by LPCB**
- **Halogen and silicone free**
- **Operating temperature 90 °C**
- **In compliance with RoHS directive**
- **Mineral filled fire resistant materials**
- **Space saving installation due to small outer diameter**

Application

Single cores for use in cable wiring systems with improved fire performance and circuit integrity.
Use for: Fire Alarm circuits, Fire Detection circuits, Emergency signal / Control circuits, Fire fighting systems (water pumps), Smoke Exhaust Systems etc. Especially recommended in areas where human and animal live as well as valuable property are exposed to high risk in case of fire.

Construction

- **Conductor:** Bare annealed copper, acc. IEC 60228 class 2
- **Flame barrier:** MICA tape
- **Insulation:** BETAflam® mineral copolymer
- **Core identification:** Red, Black or Green-Yellow (other colours on request)

Technical specification

- **Rated voltage:** U_0/U 0.6 / 1 kV
- **Test voltage:** 4 kV / 50 Hz
- **Temperature range:**
  Operation temperature from – 30 °C to + 90 °C
  Laying temperature from – 5 °C to + 70 °C
  Short circuit temperature + 250 °C (temperature peak ≤ 5 s)
- **Bending radius:**
  During laying > 10 × outer ∅
  Fixed installed > 6 × outer ∅
- **Laying conditions:** Use for electrical installations in control cabinets, switchboards, or other closed cable wiring systems.

Material properties

- **Halogen free:** IEC 60754-1; BS EN 50267-2-1; VDE 0482-267-2-1
- **No corrosive gases:** IEC 60754-2; BS EN 50267-2-2; VDE 0482-267-2-2
- **No toxic gases:** NES 02-713; NF C20-454; BS EN 50267-2-1
- **Low smoke density:** IEC 61034-1 & -2; BS EN 61034-2; VDE 0482-1034-1 & -2

Fire performance

- **Flame retardant:** IEC 60332-1; BS EN 60332-1; VDE 0482-332-1
- **No flame propagation:** IEC 60332-3-24; EN 60332-3-24; VDE 0482-266-1 & -2-4
- **Circuit integrity:**
  BS 6387 C.W.Z. / ∅ ≤ 20 mm
  IEC 60331-21; VDE 0472-814

Cross section	Part no.	Core colour	Conductor stranding	Nominal thickness insulation	Nominal diameter core	Approx. weight	Current Rating[1]		AC Voltage Drop		Fire Load
							1 phase[2]	3 phase[3]	1 phase system	3 phase system	
mm²	LSA		n×∅mm	mm	∅mm	kg / km	A	A	mV / Am	mV / Am	kWh / m
1.5	301789	red	7×0.53	0.60	3.45	25	26	24	25.05	21.60	0.03
1.5	301790	black	7×0.53	0.60	3.45	25	26	24	25.05	21.60	0.03
1.5	301791	g/y	7×0.53	0.60	3.45	25	26	24	25.05	21.60	0.03
2.5	301792	red	7×0.68	0.68	4.00	37	35	33	15.47	13.30	0.04
2.5	301793	black	7×0.68	0.68	4.00	37	35	33	15.47	13.30	0.04
2.5	301794	g/y	7×0.68	0.68	4.00	37	35	33	15.47	13.30	0.04
4	301795	red	7×0.85	0.78	4.65	55	47	44	9.74	8.34	0.05
4	301796	black	7×0.85	0.78	4.65	55	47	44	9.74	8.34	0.05
4	301797	g/y	7×0.85	0.78	4.65	55	47	44	9.74	8.34	0.05
6	301798	red	7×1.04	0.83	5.15	75	61	57	6.61	5.63	0.06
6	301799	black	7×1.04	0.83	5.15	75	61	57	6.61	5.63	0.06
6	301800	g/y	7×1.04	0.83	5.15	75	61	57	6.61	5.63	0.06
10	301801	red	7×1.32	1.05	6.65	121	86	79	4.05	3.42	0.11
10	301802	black	7×1.32	1.05	6.65	121	86	79	4.05	3.42	0.11
10	301803	g/y	7×1.32	1.05	6.65	121	86	79	4.05	3.42	0.11
16	301805	red	7×1.72	1.05	7.50	181	115	105	2.66	2.21	0.12
16	301806	black	7×1.72	1.05	7.50	181	115	105	2.66	2.21	0.12
16	301807	g/y	7×1.72	1.05	7.50	181	115	105	2.66	2.21	0.12
25	301808	red	7×2.15	1.20	9.05	276	156	141	1.79	1.46	0.17
25	301809	black	7×2.15	1.20	9.05	276	156	141	1.79	1.46	0.17
25	301810	g/y	7×2.15	1.20	9.05	276	156	141	1.79	1.46	0.17
35	301811	red	7×2.52	1.20	10.20	369	194	174	1.37	1.10	0.19
35	301812	black	7×2.52	1.20	10.20	369	194	174	1.37	1.10	0.19
35	301813	g/y	7×2.52	1.20	10.20	369	194	174	1.37	1.10	0.19
50	301814	red	19×1.79	1.40	11.90	502	239	212	1.09	0.85	0.26
50	301815	black	19×1.79	1.40	11.90	502	239	212	1.09	0.85	0.26
50	301816	g/y	19×1.79	1.40	11.90	502	239	212	1.09	0.85	0.26
70	301817	red	19×2.15	1.40	13.60	699	304	273	0.84	0.64	0.31
70	301818	black	19×2.15	1.40	13.60	699	304	273	0.84	0.64	0.31
70	301819	g/y	19×2.15	1.40	13.60	699	304	273	0.84	0.64	0.31
95	301820	red	19×2.52	1.60	15.80	959	381	336	0.68	0.50	0.41
95	301821	black	19×2.52	1.60	15.80	959	381	336	0.68	0.50	0.41
95	∅	g/y	19×2.52	1.60	15.80	959	381	336	0.68	0.50	0.41
120	301822	red	37×2.02	1.60	17.50	1'208	447	395	0.60	0.43	0.46
120	301823	black	37×2.02	1.60	17.50	1'208	447	395	0.60	0.43	0.46
120	∅	g/y	37×2.02	1.60	17.50	1'208	447	395	0.60	0.43	0.46
150	301824	red	37×2.23	1.80	19.50	1'483	517	452	0.54	0.38	0.57
150	301825	black	37×2.23	1.80	19.50	1'483	517	452	0.54	0.38	0.57
150	∅	g/y	37×2.23	1.80	19.50	1'483	517	452	0.54	0.38	0.57
185	301826	red	37×2.49	2.00	21.70	1'845	603	525	0.49	0.33	0.71
185	301827	black	37×2.49	2.00	21.70	1'845	603	525	0.49	0.33	0.71
185	∅	g/y	37×2.49	2.00	21.70	1'845	603	525	0.49	0.33	0.71
240	301828	red	61×2.23	2.20	24.50	2'418	724	627	0.44	0.29	0.88
240	301829	black	61×2.23	2.20	24.50	2'418	724	627	0.44	0.29	0.88
240	∅	g/y	61×2.23	2.20	24.50	2'418	724	627	0.44	0.29	0.88

∅ = On request
g/y = Green/Yellow

1 AC circuit, max. conductor temperature 90 °C
2 Free in air, spaced
3 Open tray, touching

Cross section	Part no.	Core colour	Conductor stranding	Nominal thickness insulation	Nominal diameter core	Approx. weight	Current Rating [1]		AC Voltage Drop		Fire Load
							1 phase [2]	3 phase [3]	1 phase system	3 phase system	
mm²	LSA		n × ∅ mm	mm	∅ mm	kg / km	A	A	mV / Am	mV / Am	kWh / m
300	301830	red	61 × 2.52	2.45	28.30	3'109	856	737	0.41	0.26	1.14
300	301831	black	61 × 2.52	2.45	28.30	3'109	856	737	0.41	0.26	1.14
300	∅	g/y	61 × 2.52	2.45	28.30	3'109	856	737	0.41	0.26	1.14
400	301832	red	61 × 2.85	2.65	31.70	3'948	1'007	862	0.38	0.24	1.38
400	301833	black	61 × 2.85	2.65	31.70	3'948	1'007	862	0.38	0.24	1.38
400	∅	g/y	61 × 2.85	2.65	31.70	3'948	1'007	862	0.38	0.24	1.38
500	301834	red	61 × 3.20	2.85	35.30	4'955	1'179	1'008	0.36	0.22	1.66
500	301835	black	61 × 3.20	2.85	35.30	4'955	1'179	1'008	0.36	0.22	1.66
500	∅	g/y	61 × 3.20	2.85	35.30	4'955	1'179	1'008	0.36	0.22	1.66
630	301836	red	127 × 2.52	3.05	39.70	6'384	1'385	1'184	0.34	0.21	2.01
630	301837	black	127 × 2.52	3.05	39.70	6'384	1'385	1'184	0.34	0.21	2.01
630	∅	g/y	127 × 2.52	3.05	39.70	6'384	1'385	1'184	0.34	0.21	2.01

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