

**HEPR insulated flexible cable with braided shield of red copper wires and plastic sheath of halogen-free flame retardant and without emission of corrosive gases**

**FG70M1**

**CEI 20-13 - CEI 20-22/3**  
**EN 50266-2-4 - EN 50267-2-1**  
**EN 61034-2**  
**CEI 20-37/4**  
**CEI UNEL 35382**  
**Low voltage directive 2006/95/CE**  
**RoHS 2011/65/CE directive**



**Manufacturing characteristics**

Conductor stranded bare copper, ethylene-propylene rubber insulation, high-quality module G7, braid of copper wires, sheathed in thermoplastic special quality M1

**Marking**

Marking on the external insulation with special ink:  
 IRCE CAVI IEMMEQU CEI 20-22 III CAT C FG70M1 0,6/1 kV  
 <nr. conductors x section><year><metric marking>

**Application – intended use**

Flexible cables suitable for power transmission and power control and signals in industry and construction. Suitable for use in environments with risk of fire and with a lot of people such as metropolitan schools, offices, hotels, etc.. Suitable for fixed installation inside and outside can be installed in open air, on bridges, in pipes or ducts. Can be directly buried. The screen offers excellent protection against electromagnetic interference.

**Warning**

The current carrying capacities of single wires are calculated for three not spaced cables. The capacities of four and five core cables are calculated for three active conductors. The capacities for underground installed cables has been calculated with embedment depth of 0.8 m.



**Nominal voltage:**  
 $U_0/U = 600/1000V$



**Minimum bending radius:**  
 4 x ext. diameter



**Operating temperature:**  
 90° C



**Traction force during laying:**  
 50 N/mm<sup>2</sup> of copper section max  
 for fixed layings



**Short circuit temperature:**  
 250° C



**Laying temperature:**  
 minimum 0° C

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Number of conductors nom. cross section area n° x mm <sup>2</sup>	Approx. conductor diameter mm	Average insulation thickness mm	Maximum external cable diameter mm	Cable nominal weight kg / km	Max conductor resistance at 20° C Ohm / km	Current carrying (A) at			
						30° C air	30° C pipe	20° C undergr.	20° C undergr. pipe
1 x 10	3,9	0,70	9,4	141	1,91	77	66	84	65
1 x 16	5,0	0,70	10,4	198	1,21	100	89	106	85
1 x 25	6,4	0,90	12,2	291	0,780	135	117	136	110
1 x 35	7,7	0,90	13,6	388	0,554	170	147	165	137
1 x 50	9,2	1,00	15,4	532	0,386	209	176	192	164
1 x 70	11,0	1,10	17,3	735	0,272	268	222	233	201
1 x 95	12,5	1,10	19,4	965	0,206	328	269	278	247
1 x 120	14,2	1,20	21,4	1200	0,161	385	312	317	283
1 x 150	15,8	1,40	23,8	1490	0,129	446	355	353	323
1 x 185	17,5	1,60	26,0	1825	0,106	511	417	400	368
1 x 240	20,1	1,70	29,2	2330	0,0801	610	490	459	430
1 x 300	22,8	1,80	32,0	2945	0,0641	703	---	518	485

Number of conductors nom. cross section area n° x mm2	Approx. conductor diameter mm	Average insulation thickness mm	Maximum external cable diameter mm	Cable nominal weight kg / km	Max conductor resistance at 20° C Ohm / km	Current carrying (A) at			
						30° C		20° C	
						air	pipe	undergr.	20° C undergr. pipe
2 x 1,5	1,5	0,70	12,0	150	13,3	26	22	35	24
2 x 2,5	2,0	0,70	13,0	185	7,98	36	30	46	31
2 x 4,0	2,5	0,70	14,2	235	4,95	50	41	57	41
2 x 6,0	3,0	0,70	15,4	295	3,30	64	52	74	52
2 x 10	3,9	0,70	17,3	415	1,91	86	69	96	71
2 x 16	5,0	0,70	19,4	570	1,21	115	90	122	92
2 x 25	6,4	0,90	23,0	845	0,780	150	120	161	124
2 x 35	7,7	0,90	25,7	1110	0,554	186	147	193	150
2 x 50	9,2	1,00	29,3	1515	0,386	225	175	224	180
3 x 1,5	1,5	0,70	12,5	166	13,3	23	20	29	20
3 x 2,5	2,0	0,70	13,6	210	7,98	32	25	36	26
3 x 4,0	2,5	0,70	14,9	272	4,95	43	35	48	34
3 x 6,0	3,0	0,70	16,2	345	3,30	55	45	60	44
3 x 10	3,9	0,70	18,2	500	1,91	77	61	78	60
3 x 16	5,0	0,70	20,6	705	1,21	100	80	105	78
3 x 25	6,4	0,90	24,5	1050	0,780	128	106	135	104
3 x 35	7,7	0,90	27,3	1390	0,554	159	130	160	126
3 x 50	9,2	1,00	31,2	1920	0,386	193	155	186	150
3 x 70	11,0	1,10	35,6	2680	0,272	245	194	230	190
3 x 95	12,5	1,10	40,0	3450	0,206	300	235	275	232
3 x 120	14,2	1,20	44,4	4330	0,161	345	267	311	265
3 x 150	15,8	1,40	49,5	5400	0,129	400	299	350	300
4 x 1,5	1,5	0,70	13,4	190	13,3	24	20	29	20
4 x 2,5	2,0	0,70	14,6	245	7,98	32	26	37	26
4 x 4,0	2,5	0,70	16,0	322	4,95	42	35	48	34
4 x 6,0	3,0	0,70	17,5	414	3,30	54	45	60	44
4 x 10	3,9	0,70	19,8	610	1,91	75	60	79	60
4 x 16	5,0	0,70	22,4	865	1,21	100	80	105	78
4 x 25	6,4	0,90	26,8	1290	0,780	128	106	135	104
3x35+1x25	7,7	0,90	29,2	1615	0,554	159	130	160	126
3x50+1x25	9,2	1,00	32,4	2090	0,386	193	155	186	150
3x70+1x35	11,0	1,10	37,0	2900	0,272	245	194	230	190
3x95+1x50	12,5	1,10	42,0	3840	0,206	300	235	275	232
3x120+1x70	14,2	1,20	46,9	4910	0,161	345	267	311	265
3x150+1x95	15,8	1,40	52,5	6150	0,129	400	299	350	300
5 x 1,5	1,5	0,70	14,4	225	13,3	24	20	29	20
5 x 2,5	2,0	0,70	15,6	290	7,98	32	26	37	26
5 x 4,0	2,5	0,70	17,3	385	4,95	42	35	48	34
5 x 6,0	3,0	0,70	18,9	500	3,30	54	45	60	43
5 x 10	3,9	0,70	21,5	740	1,91	75	60	79	60
5 x 16	5,0	0,70	24,4	1060	1,21	100	80	105	78
5 x 25	6,4	0,90	29,3	1590	0,780	128	106	134	104
5 x 35	7,7	0,90	32,8	2130	0,554	159	131	169	132
5 x 50	9,2	1,00	38,2	2985	0,386	193	162	207	164
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7 x 1,5	1,5	0,70	15,4	280	13,3	13	11	18	
7 x 2,5	2,0	0,70	16,8	365	7,98	18	16	24	
10 x 1,5	1,5	0,70	18,7	375	13,4	13	12	19	
10 x 2,5	2,0	0,70	20,6	495	8,06	18	16	24	
12 x 1,5	1,5	0,70	19,3	420	13,4	11	10	15	
12 x 2,5	2,0	0,70	21,3	560	8,06	14	12	20	
16 x 1,5	1,5	0,70	21,1	520	13,4	11	10	15	
16 x 2,5	2,0	0,70	23,3	700	8,06	14	12	20	
19 x 1,5	1,5	0,70	22,1	580	13,4	9	8	13	
19 x 2,5	2,0	0,70	24,5	795	8,06	12	11	16	
24 x 1,5	1,5	0,70	25,4	715	13,5	9	8	13	
24 x 2,5	2,0	0,70	28,3	980	8,10	12	11	16	