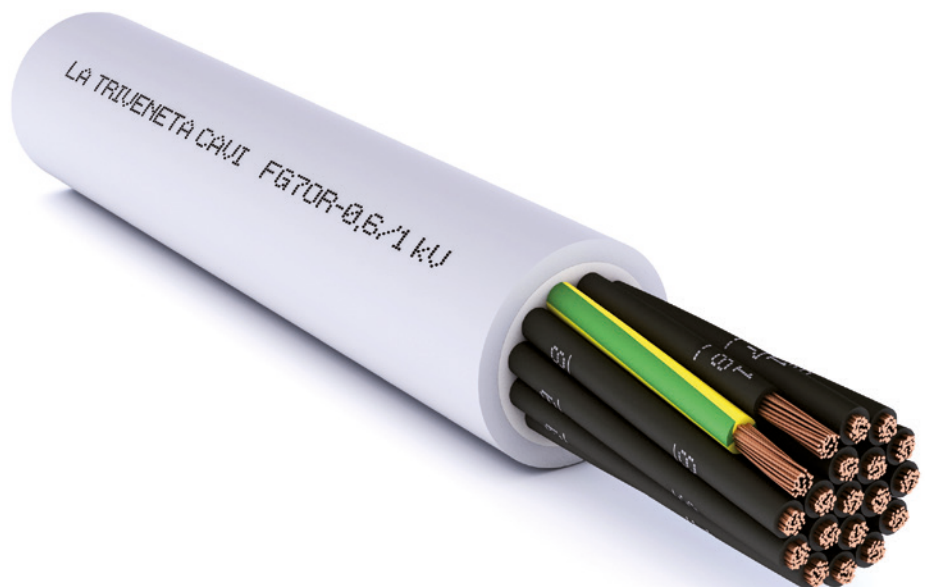
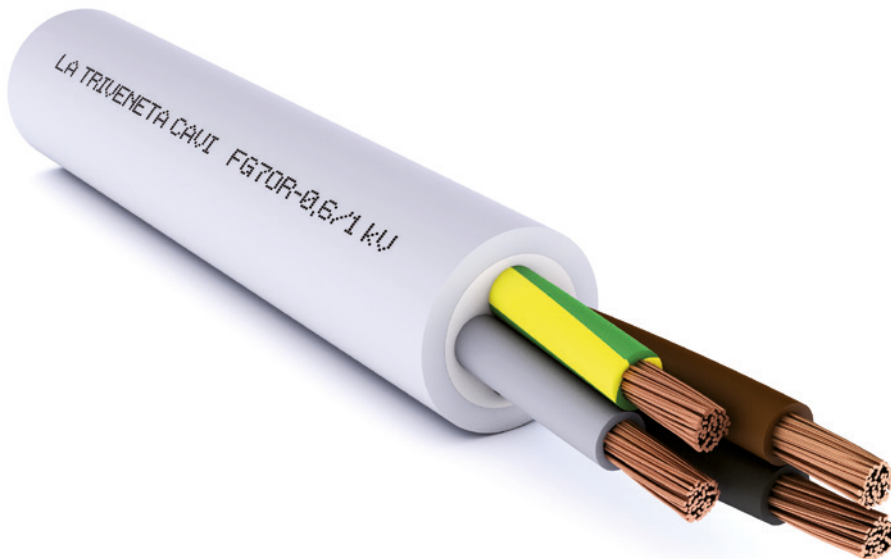


FG7R-0,6/1 kV

FG70R-0,6/1 kV

Structure and electrical, physical, mechanical requirements:	CEI 20-13
	IEC 60502-1
	CEI UNEL 35375 (energy cables)
	CEI UNEL 35377 (control cables)
Fire propagation:	CEI 20-22 II
Flame propagation:	EN 60332-1-2
Corrosive gases or halogens:	EN 50267-2-1
Low Voltage Directive:	2014/35/EU
RoHS Directive:	2011/65/EU



Description

- Conductor: class 5, flexible, plain copper wire
- Insulation: rubber compound, G7 quality
- Filler: thermoplastic, penetrating between the cores (only in multi-core cables)
- Sheath: PVC, Rz quality
- Colour: grey

Functional characteristics

- Rated voltage U_0/U : 0,6/1 kV
- Max. operating temperature: 90°C
- Min. operating temperature: -15°C (without mechanical shocks)
- Max. short circuit temperature: 250°C

Special features

Good resistance to grease and mineral oils.
Good flexibility and behaviour at low temperatures.

Colours of the cores

- SINGLE-CORE ●
- TWO-CORE ● ●
- THREE-CORE ● ● ● or ● ● ●
- FOUR-CORE ● ● ● ● or ● ● ● ●
- FIVE-CORE ● ● ● ● ● or ● ● ● ● ●

The cores in multiple cables for signal and control are black, numbered, with or without GREEN/YELLOW

Marking

Made in Italy [company] FG7(O)R 0,6/1 kV [form.] IEMMEQU CEI 20-22 II Pb free [year] [traceability] [metric]

Installation conditions

- Minimum installation temperature: 0°C
- Recommended minimum bending radius: 4 times the cable diameter
- Recommended maximum tensile stress: 50 N/mm² of the cross-section of the copper

Use and installation method

Reference Guidance CEI 20-67:

Suitable for the supply and transport of commands and/or signals in industry, construction sites, in housing. For use outdoor and indoor. For installation in brickwork, metal structures, gangways, pipes, ducts or similar closed systems.

Allowed for underground laying also unprotected.

N.B. For applications not covered by Regulation EU 305/2011.

Single-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A					
							in air a 30°C	in pipe in air at 30°C	buried at 20°C		buried pipe at 20°C	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km			K = 1	K = 1,5	K = 1	K = 1,5
1 x 1,5	1,5	0,7	1,4	6,7	13,3	43	24	20	26	24	23	21
1 x 2,5	2,0	0,7	1,4	7,2	7,98	54	33	28	34	31	29	27
1 x 4	2,5	0,7	1,4	7,8	4,95	68	45	37	43	40	38	35
1 x 6	3,0	0,7	1,4	8,4	3,30	91	58	48	55	51	48	44
1 x 10	4,0	0,7	1,4	9,4	1,91	140	80	66	73	68	64	59
1 x 16	5,0	0,7	1,4	10,4	1,21	190	107	88	96	89	83	77
1 x 25	6,2	0,9	1,4	12,2	0,780	280	141	117	124	115	108	100
1 x 35	7,4	0,9	1,4	13,6	0,554	370	176	144	150	139	131	121
1 x 50	8,9	1,0	1,4	15,4	0,386	510	216	175	186	173	162	150
1 x 70	10,5	1,1	1,4	17,3	0,272	700	279	222	229	212	199	184
1 x 95	12,2	1,1	1,5	19,4	0,206	905	342	269	270	250	234	217
1 x 120	13,8	1,2	1,5	21,4	0,161	1140	400	312	312	289	271	251
1 x 150	15,4	1,4	1,6	23,8	0,129	1420	464	355	356	330	310	287
1 x 185	16,9	1,6	1,6	26,0	0,106	1725	533	417	401	371	349	323
1 x 240	19,5	1,7	1,7	29,2	0,0801	2360	634	490	471	436	409	379
1 x 300	23,0	1,8	1,8	32,0	0,0641	2820	736	-	533	493	463	429
1 x 400	26,5	2,0	1,9	36,5	0,0486	3700	868	-	621	575	540	500
1 x 500 (*)	28,5	2,2	2,1	37,1	0,0384	4605	998	-	705	650	610	560
1 x 630 (*)	33,0	2,4	2,3	42,2	0,0287	6125	1151	-	823	762	716	663

(*) = This formation is without IMQ certificate
 Permissible current rating values are according to:
 - three-phase circuit
 - laying depth of 0,8 m for buried cables

N.B. K=1: resistivity of the ground equal to 1,0 K·m/W
 K=1,5: resistivity of the ground equal to 1,5 K·m/W

Two-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A					
							in air at 30°C	in pipe in air at 30°C	buried at 20°C		buried pipe at 20°C	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km			K = 1	K = 1,5	K = 1	K = 1,5
2 x 1,5	1,5	0,7	1,8	12,0	13,3	120	26	22	28	26	25	23
2 x 2,5	2,0	0,7	1,8	13,0	7,98	150	36	30	37	35	32	30
2 x 4	2,5	0,7	1,8	14,2	4,95	195	49	40	48	45	41	39
2 x 6	3,0	0,7	1,8	15,4	3,30	250	63	51	60	56	52	49
2 x 10	4,0	0,7	1,8	17,3	1,91	365	86	69	80	76	70	66
2 x 16	5,0	0,7	1,8	19,4	1,21	510	115	91	105	99	91	86
2 x 25	6,2	0,9	1,8	23,0	0,780	760	149	119	135	128	118	111
2 x 35	7,4	0,9	1,8	25,7	0,554	1010	185	140	166	156	144	136
2 x 50	8,9	1,0	1,8	29,3	0,386	1390	225	175	205	193	178	168

Permissible current rating values are according to:
 - two-phase circuit for two-core cables
 - laying depth of 0,8 m for buried cables

N.B. K=1: resistivity of the ground equal to 1,0 K·m/W
 K=1,5: resistivity of the ground equal to 1,5 K·m/W

Three-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A					
							in air at 30°C	in pipe in air at 30°C	buried at 20°C		buried pipe at 20°C	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km			K = 1	K = 1,5	K = 1	K = 1,5
3 x 1,5	1,5	0,7	1,8	12,5	13,3	135	23	19	23	22	20	19
3 x 2,5	2,0	0,7	1,8	13,6	7,98	170	32	26	30	29	27	25
3 x 4	2,5	0,7	1,8	14,9	4,95	230	42	35	39	37	34	32
3 x 6	3,0	0,7	1,8	16,2	3,30	300	54	44	50	47	43	41
3 x 10	4,0	0,7	1,8	18,2	1,91	445	75	60	67	63	58	55
3 x 16	5,0	0,7	1,8	20,6	1,21	640	100	80	88	83	76	72
3 x 25	6,2	0,9	1,8	24,5	0,780	950	127	105	113	107	99	93
3 x 35	7,4	0,9	1,8	27,3	0,554	1280	158	128	139	131	121	114
3 x 50	8,9	1,0	1,8	31,2	0,386	1780	192	154	172	162	149	141
3 x 70	10,5	1,1	1,9	35,6	0,272	2474	246	194	212	200	184	174
3 x 95	12,2	1,1	2,0	40,0	0,206	3160	298	233	251	237	218	206
3 x 120	13,8	1,2	2,1	44,4	0,161	4020	346	268	290	274	252	238
3 x 150	15,4	1,4	2,3	49,5	0,129	5240	399	300	332	313	288	272
3 x 185	16,9	1,6	2,4	55,2	0,106	6365	456	340	373	352	324	306
3 x 240	19,5	1,7	2,6	61,9	0,0801	8270	538	398	439	414	382	360
3 x 300	22,0	1,8	2,8	68,0	0,0641	10210	621	-	-	-	-	-

Permissible current rating values are according to:
 - three-phase circuit for three-core cables
 - laying depth of 0,8 m for buried cables

N.B. K=1: resistivity of the ground equal to 1,0 K·m/W
 K=1,5: resistivity of the ground equal to 1,5 K·m/W

Four-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A					
							in air at 30°C	in pipe in air at 30°C	buried at 20°C		buried pipe at 20°C	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km			K = 1	K = 1,5	K = 1	K = 1,5
4 x 1,5	1,5	0,7	1,8	13,4	13,3	155	23	19	23	22	20	19
4 x 2,5	2,0	0,7	1,8	14,6	7,98	205	32	26	30	29	27	25
4 x 4	2,5	0,7	1,8	16,0	4,95	275	42	35	39	37	34	32
4 x 6	3,0	0,7	1,8	17,5	3,30	365	54	44	50	47	43	41
4 x 10	4,0	0,7	1,8	19,8	1,91	550	75	60	67	63	58	55
4 x 16	5,0	0,7	1,8	22,4	1,21	790	100	80	88	83	76	72
4 x 25	6,2	0,9	1,8	26,8	0,780	1200	127	105	113	107	99	93
3x35+25	7,4/6,2	0,9/0,9	1,8	29,2	0,554/0,780	1520	158	128	139	131	121	114
3x50+25	8,9/6,2	1,0/0,9	1,8	32,4	0,386/0,780	2015	192	154	172	162	149	141
3x70+35	10,5/7,4	1,1/0,9	1,9	37,0	0,272/0,554	2800	246	194	212	200	184	174
3x95+50	12,2/8,9	1,1/1,0	2,1	42,0	0,206/0,386	3635	298	233	251	237	218	206
3x120+70	13,8/10,5	1,2/1,1	2,2	46,9	0,161/0,272	4695	346	268	290	274	252	238
3x150+95	15,4/12,2	1,4/1,1	2,4	52,5	0,129/0,206	6060	399	300	332	313	288	272
3x185+95	16,9/12,2	1,6/1,1	2,5	57,3	0,106/0,206	7150	456	340	373	352	324	306
3x240+150	19,5/15,4	1,7/1,4	2,7	65,5	0,0801/0,129	9310	538	398	439	414	382	360
3x300+150	22,0/15,4	1,8/1,4	2,9	70,8	0,0641/0,129	11420	621	455	-	-	-	-

Permissible current rating values are according to:
 - three-phase circuit
 - laying depth of 0,8 m for buried cables

N.B. K=1: resistivity of the ground equal to 1,0 K·m/W
 K=1,5: resistivity of the ground equal to 1,5 K·m/W

Five-core

Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A					
							in air at 30°C	in pipe in air at 30°C	buried at 20°C		buried pipe at 20°C	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km			K = 1	K = 1,5	K = 1	K = 1,5
5G1,5	1,5	0,7	1,8	14,4	13,3	180	23	19	23	22	20	19
5G2,5	2,0	0,7	1,8	15,6	7,98	235	32	26	30	29	27	25
5G4	2,5	0,7	1,8	17,3	4,95	320	42	35	39	37	34	32
5G6	3,0	0,7	1,8	18,9	3,30	430	54	44	50	47	43	41
5G10	4,0	0,7	1,8	21,5	1,91	650	75	60	67	63	58	55
5G16	5,0	0,7	1,8	24,4	1,21	965	100	80	88	86	76	72
5G25	6,2	0,9	1,8	29,3	0,780	1460	127	105	113	107	99	93
5G35	7,4	0,9	1,8	32,8	0,554	1980	158	128	139	131	121	114
5G50	8,9	1,0	2,0	38,2	0,386	2930	192	154	172	162	149	141

Permissible current rating values are according to:
 - three-phase circuit
 - laying depth of 0,8 m for buried cables

N.B. K=1: resistivity of the ground equal to 1,0 K·m/W
 K=1,5: resistivity of the ground equal to 1,5 K·m/W

Multi-core / signalling and control

Formation (*)	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Max. external Ø	Max. electrical resistance at 20°C	Approx. cable weight	Current rating A			
							in air at 30°C	in pipe in air at 30°C	buried pipe at 20°C	
n° x mm ²	mm	mm	mm	mm	Ω/km	kg/km			K = 1	K = 1,5
7G1,5	1,5	0,7	1,8	15,4	13,3	220	13	11,5	18,5	16
10G1,5	1,5	0,7	1,8	18,7	13,4	300	13	11,5	18,5	16
12G1,5	1,5	0,7	1,8	19,3	13,4	330	11	9,5	14,5	12,5
16G1,5	1,5	0,7	1,8	21,1	13,4	420	11	9,5	14,5	12,5
19G1,5	1,5	0,7	1,8	22,1	13,4	470	9	8	13	11,5
24G1,5	1,5	0,7	1,8	25,4	13,5	575	9	8	13	11,5
7G2,5	2,0	0,7	1,8	16,8	7,98	305	17,5	15,5	24	21
10G2,5	2,0	0,7	1,8	20,6	8,06	415	17,5	15,5	24	21
12G2,5	2,0	0,7	1,8	21,3	8,06	470	13,5	12	20	17,5
16G2,5	2,0	0,7	1,8	23,3	8,06	605	13,5	12	20	17,5
19G2,5	2,0	0,7	1,8	24,5	8,06	680	12	10,5	16	14
24G2,5	2,0	0,7	1,8	28,3	8,10	835	12	10,5	16	14

(*) also available without the green/yellow

N.B. Permissible current rating values are according to:

- all conductors are charged (except for the green/yellow).
- laying depth of 0,8 m for buried cables

N.B. K=1: resistivity of the ground equal to 1,0 K·m/W

K=1,5: resistivity of the ground equal to 1,5 K·m/W