

FG7M1 - FG7OM1 0,6/1 kV

**NON PROPAGANTI LA FIAMMA - NON PROPAGANTI L'INCENDIO - BASSISSIMA EMISSIONE DI FUMI, GAS TOS-
SICI E CORROSIVI - ZERO ALOGENI**
**FLAME RETARDANT - FIRE RETARDANT - VERY LOW EMISSION OF SMOKE, TOXIC AND CORROSIVE GASES - HA-
LOGEN FREE**



NON PROPAGANTE
LA FIAMMA
FLAME RETARDANT

NON PROPAGANTE
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FIRE RETARDANT
CEI EN 20-22 III

BASSISSIMA
EMISSIONE FUMI,
GAS TOS-
SICI E
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VERY LOW EMISSION
OF SMOKE, TOXIC
AND CORROSIVE
GASES

ZERO ALOGENI
HALOGEN-FREE

RIFERIMENTO NORMATIVO/STANDARD REFERENCE

Costruzione e requisiti/Construction and specifications	CEI 20-13 CEI 20-38 CEI UNEL 35382
Propagazione fiamma/Flame propagation	CEI EN 60332-1-2
Propagazione incendio/Fire propagation	CEI EN 60332-3-24 CEI EN 20-22 III
Emissione gas corrosivi e alogenidrici/Corrosive gases emission or halogens	CEI EN 50267-2-1
Emissione di fumi (trasmissione)/Smoke density (transmit- tance	CEI EN 61034-2
Indice di tossicità (norma nazionale)/Toxicity index (natio- nal standard	CEI 20-37/4-0
Direttiva Bassa Tensione/Low Voltage Directive	2006/95/CE
Direttiva RoHS/RoHS Directive	2011/65/CE



DESCRIZIONE:

Cavo per energia, isolato con gomma etilpropilenica ad alto modulo di qualità G7, sotto guaina termoplastica speciale di qualità M1, esente da alogeni, non propagante l'incendio e a basso sviluppo di fumi.

CARATTERISTICHE FUNZIONALI:

- Tensione nominale U_0/U : 0,6/1 kV
- Temperatura massima di esercizio: 90°C
- Temperatura minima di esercizio: -15°C (in assenza di sollecitazioni meccaniche)
- Temperatura minima di posa: 0°C
- Temperatura massima di corto circuito: 250°C
- Sforzo massimo di trazione (consigliato): 50 N/mm² di sezione del rame.
- Raggio minimo di curvatura: 4 volte il diametro del cavo.

CONDIZIONI DI IMPIEGO:

Adatto per il trasporto di energia e segnalamento nei luoghi con pericolo d'incendio e con elevata presenza di persone come scuole, uffici, teatri, metropolitane, ospedali, luoghi di culto, centri commerciali e luoghi di pubblico spettacolo e intrattenimento.

Per posa fissa all'interno in ambienti anche bagnati e all'esterno. Può essere installato su murature e strutture metalliche, su passerelle, tubazioni, canalette e sistemi simili.

Ammissa la posa interrata anche non protetta. (CEI 20-67).

DESCRIPTION:

Flexible power cable, G7 high quality HEPR insulated, with special thermoplastic outer sheath M1 quality, halogen free, not propagating fire with low smoke emission.

FUNCTIONAL CHARACTERISTICS

- Maximum voltage U_m : 0,6/1 kV
- Maximum operating temperature: 90°C
- Minimum operating temperature: -15°C (without mechanical stress)
- Minimum installation temperature: 0°C
- Maximum short circuit temperature: 250°C
- Maximum tensile stress (recommended): 50 N/mm² of the cross-section of the copper
- Minimum bending radius: 4 x cable diameter.

USE AND INSTALLATION

Suitable for transport of power and transmission of signals and controls in places at risk of fire and containing large number of people like schools, offices, theatres, subways, hospitals, place of worship, malls and places of entertainment.

For static use indoor even in wet environments and outdoor.

Can be laid on brickwork, metal structures, gangways, pipes, ducts or similar closed systems.

Allowed for underground laying also unprotected. (CEI 20-67).

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COSTRUZIONE DEL CAVO / CABLE CONSTRUCTION



CONDUTTORE

Materiale:
Rame rosso, formazione flessibile, classe 5

CONDUCTOR

Material: Copper flexible wire, class 5



ISOLAMENTO

Materiale: Gomma, qualità G7

INSULATION

Material: Rubber compound, G7 quality



CORDATURA TOTALE

Tipo: i conduttori isolati sono cordati insieme

TOTAL CABLING

Type: The cores are stranded together in concentric lay



RIEMPITIVO

Materiale: termoplastico, penetrante tra le anime (solo nei cavi multipolari)

FILLER

Material: Thermoplastic, penetrating between the cores (only in multi-core cables)



GUAINA

Materiale: Termoplastico LSOH, qualità M1
Colore: Verde o grigio

SHEATH

Material: LSOH thermoplastic, M1 quality
Colour: Green ore grey

Unipolari/Single core

Formazione Size	Ø indicativo conduttore Approx. conduct. Ø	Spessore medio isolante Average insulation thickness	Spessore medio guaina Average sheath thickness	Ø esterno massimo Max outer Ø	Peso indicativo cavo Indicative cable weight	Resistenza elettrica max a Max electrical resistance at 20° C	Portata di corrente Current rating A					
							in aria a in air at	in tubo in aria a in pipe in air at	interrato a Underground at 20° C	in tubo interrato a In underground pipe at 20° C		
							30° C	30° C	K=1	K=1,5	K=1	K=1,5
1 x 10	4,0	0,7	1,4	9,4	150,0	1,91	80,0	66,0	73,0	68,0	64,0	59,0
1 x 16	5,0	0,7	1,4	10,4	20,5	1,21	107,0	88,0	96,0	89,0	83,0	77,0
1 x 25	6,2	0,9	1,4	12,2	295,0	0,798	141,0	117,0	124,0	115,0	108,0	100,0
1 x 35	7,4	0,9	1,4	13,6	390,0	0,554	176,0	144,0	150,0	139,0	131,0	121,0
1 x 50	8,9	1,0	1,4	15,4	550,0	0,386	216,0	175,0	186,0	173,0	162,0	150,0
1 x 70	10,5	1,1	1,4	17,3	740,0	0,272	279,0	222,0	229,0	212,0	199,0	184,0
1 x 95	12,2	1,1	1,5	19,4	940,0	0,206	342,0	269,0	270,0	250,0	234,0	217,0
1 x 120	13,8	1,2	1,5	21,4	1210,0	0,161	400,0	312,0	312,0	289,0	271,0	251,0
1 x 150	15,4	1,4	1,6	23,8	1490,0	0,129	464,0	355,0	356,0	330,0	310,0	287,0
1 x 185	16,9	1,6	1,6	26,0	1850,0	0,106	533,0	417,0	401,0	371,0	349,0	323,0
1 x 240	19,5	1,7	1,7	29,2	2350,0	0,0801	634,0	490,0	471,0	436,0	409,0	379,0
1 x 300	22,0	1,8	1,8	32,0	2950,0	0,0641	736,0	-	533,0	493,0	463,0	429,0

N.B. I valori di portata di corrente sono riferiti a:

- n°3 conduttori attivi
- profondità di posa 0,8 m per i cavi interrati

Permissible current rating values are according to:

- three-phase circuit
- laying depth of 0,8 m for buried cables

N.B. K=1: resistività termica del terreno 1,0 K.m/W

K=1,5: resistività termica del terreno 1,5 K.m/W

N.B. K=1: thermal resistivity 1,0 K.m/W

K=1,5: thermal resistivity 1,5 K.m/W

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Bipolari/2 cores

Formazione Size	Ø indicativo conduttore Approx. conduct. Ø	Spessore medio isolante Average insulation thickness	Spessore medio guaina Average sheath thickness	Ø esterno massimo Max outer Ø	Peso indicativo cavo Indicative cable weight	Resistenza elettrica max a Max electrical resistance at 20° C	Portata di corrente Current rating					
							A		A			
							in aria a in air at	in tubo in aria a in pipe in air at	interrato a Underground at 20° C	in tubo interrato a In underground pipe at 20° C		
							30° C	30° C	K=1	K=1,5	K=1	K=1,5
2 x 1,5	1,5	0,7	1,8	12,0	150,0	13,30	26,0	22,0	28,0	26,0	25,0	23,0
2 x 2,5	2,0	0,7	1,8	13,0	190,0	7,98	36,0	30,0	37,0	35,0	32,0	30,0
2 x 4	2,5	0,7	1,8	14,2	240,0	4,95	49,0	40,0	48,0	45,0	41,0	39,0
2 x 6	3,0	0,7	1,8	15,4	310,0	3,30	63,0	51,0	60,0	56,0	52,0	49,0
2 x 10	4,0	0,7	1,8	17,3	430,0	1,91	86,0	69,0	80,0	76,0	70,0	66,0
2 x 16	5,0	0,7	1,8	19,4	580,0	1,21	115,0	91,0	105,0	99,0	91,0	86,0
2 x 25	6,2	0,9	1,8	23,0	820,0	0,798	149,0	119,0	135,0	128,0	118,0	111,0
2 x 35	7,4	0,9	1,8	25,7	1.100,0	0,554	185,0	140,0	166,0	156,0	144,0	136,0
2 x 50	8,9	1,0	1,8	29,3	1.550,0	0,386	225,0	175,0	205,0	193,0	178,0	168,0
2 x 70	10,5	1,1	1,8	33,1	2.050,0	0,272	289,0	221,0	252,0	238,0	219,0	207,0
2 x 95	12,2	1,1	2,0	37,4	2.700,0	0,206	352,0	265,0	299,0	282,0	260,0	245,0
2 x 120	13,8	1,2	2,1	41,5	3.350,0	0,161	410,0	305,0	346,0	327,0	301,0	284,0
2 x 150	15,4	1,4	2,2	46,1	4.100,0	0,129	473,0	334,0	395,0	373,0	343,0	324,0

N.B. I valori di portata di corrente sono riferiti a:

- n°2 conduttori attivi
- profondità di posa 0,8 m per i cavi interrati

Permissible current rating values are according to:
 - two-phase circuit

- laying depth of 0,8 m for buried cables

N.B. K=1: resistività termica del terreno 1,0 K.m/W

K=1,5: resistività termica del terreno 1,5 K.m/W

N.B. K=1: thermal resistivity 1,0 K.m/W

K=1,5: thermal resistivity 1,5 K.m/W

Tripolari/3 cores

3 x 1,5	1,5	0,7	1,8	12,5	170,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
3 x 2,5	2,0	0,7	1,8	13,6	220,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
3 x 4	2,5	0,7	1,8	14,9	280,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
3 x 6	3,0	0,7	1,8	16,2	360,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
3 x 10	4,0	0,7	1,8	18,2	520,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
3 x 16	5,0	0,7	1,8	20,6	730,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
3 x 25	6,2	0,9	1,8	24,5	1.050,0	0,798	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35	7,4	0,9	1,8	27,3	1.400,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50	8,9	1,0	1,8	31,2	1.950,0	0,386	192,0	154,0	172,0	162,0	149,0	141,0
3 x 70	10,5	1,1	1,9	35,6	2.700,0	0,272	246,0	194,0	212,0	200,0	184,0	174,0
3 x 95	12,2	1,1	2,0	40,0	3.500,0	0,206	298,0	233,0	251,0	237,0	218,0	206,0
3 x 120	13,8	1,2	2,1	44,4	4.400,0	0,161	346,0	268,0	290,0	274,0	252,0	238,0
3 x 150	15,4	1,4	2,3	49,5	5.400,0	0,129	399,0	300,0	332,0	313,0	288,0	272,0
3 x 185	16,9	1,6	2,4	55,2	6.700,0	0,106	456,0	340,0	373,0	352,0	324,0	306,0
3 x 240	19,5	1,7	2,6	61,9	8.700,0	0,0801	538,0	398,0	439,0	414,0	382,0	360,0
3 x 300	22,0	1,8	2,8	68,0	10.700,0	0,0641	621,0	455,0	-	-	-	-

N.B. I valori di portata di corrente sono riferiti a:

- n°3 conduttori attivi
- Profondità di posa 0,8 m per i cavi interrati

N.B. Current rating values are referred to:

- n° 3 loaded conductors

- Installation depth for underground cables 0,8 m

N.B. K=1: resistività termica del terreno 1,0 K.m/W

K=1,5: resistività termica del terreno 1,5 K.m/W

N.B. K=1: thermal resistivity 1,0 K.m/W

K=1,5: thermal resistivity 1,5 K.m/W

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Quadripolari/4 cores

Formazione	Ø indicativo conduttore	Spessore medio isolante	Spessore medio guaina	Ø esterno massimo	Peso indicativo cavo	Resistenza elettrica max a	Portata di corrente					
	Size	Approx. conduct. Ø	Average insulation thickness	Average sheath thickness	Max outer Ø		Indicative cable weight	Current rating				
							in aria a		interrato a		in tubo interrato a	
							in air at		Underground at		In underground pipe at	
							30° C		20° C		20° C	
									K=1		K=1,5	
n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	30° C	30° C	K=1	K=1,5	K=1	K=1,5
4 x 1,5	1,5	0,7	1,8	13,4	200,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
4 x 2,5	2,0	0,7	1,8	14,6	260,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
4 x 4	2,5	0,7	1,8	16,0	330,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
4 x 6	3,0	0,7	1,8	17,5	440,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
4 x 10	4,0	0,7	1,8	19,8	640,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
4 x 16	5,0	0,7	1,8	22,4	900,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
4 x 25	6,2	0,9	1,8	26,8	1.300,0	0,780	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35 + 25	7,4/6,2	0,9/0,9	1,8	29,2	1.600,0	0,554/0,780	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50 + 25	8,9/6,2	1,0/0,9	1,8	32,4	2.200,0	0,386/0,780	192,0	154,0	172,0	162,0	149,0	141,0
3 x 70 + 35	10,5/7,4	1,1/1,0	1,9	37,0	3.000,0	0,272/0,554	246,0	194,0	212,0	200,0	184,0	174,0
3 x 95 + 50	12,2/8,9	1,1/1,0	2,1	42,0	3.900,0	0,206/0,386	298,0	233,0	251,0	237,0	218,0	206,0
3 x 120 + 70	13,8/10,5	1,2/1,1	2,2	46,9	4.700,0	0,161/0,272	346,0	268,0	290,0	274,0	252,0	238,0
3 x 150 + 95	15,4/12,2	1,4/1,1	2,4	52,5	6.300,0	0,129/0,206	399,0	300,0	332,0	313,0	288,0	272,0
3 x 185 + 95	16,9/12,2	1,6/1,1	2,5	57,3	7.650,0	0,106/0,206	456,0	340,0	373,0	352,0	324,0	306,0
3 x 240 + 150	19,5/15,4	1,7/1,4	2,7	65,5	10.000,0	0,0801/0,129	538,0	398,0	439,0	414,0	382,0	360,0
3 x 300 + 150	22,0/15,4	1,8/1,4	2,9	70,8	12.150,0	0,0641/0,129	621,0	455,0	-	-	-	-

Pentapolari/5 cores

5G1,5	1,5	0,7	1,8	14,4	230,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
5G2,5	2,0	0,7	1,8	15,6	310,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
5G4	2,5	0,7	1,8	17,3	395,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
5G6	3,0	0,7	1,8	18,9	535,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
5G10	4,0	0,7	1,8	21,5	760,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
5G16	5,0	0,7	1,8	24,4	1.100,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
5G25	6,2	0,9	1,8	29,3	1.650,0	0,780	127,0	105,0	113,0	107,0	99,0	93,0
5G35	7,4	0,9	1,8	32,8	2.160,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
5G50	8,9	1,0	2,0	38,2	3.000,0	0,386	192,0	154,0	172,0	162,0	149,0	141,0

N.B. I valori di portata di corrente sono riferiti a: n°3 conduttori attivi - Profondità di posa 0,8 m per i cavi interrati

N.B. Current rating values are referred to: n° 3 loaded conductors - Installation depth for underground cables 0,8 m

N.B. K=1: resistività termica del terreno 1,0 K.m/W - K=1,5: resistività termica del terreno 1,5 K.m/W

N.B. K=1: thermal resistivity 1,0 K.m/W - K=1,5: thermal resistivity 1,5 K.m/W

Multipli, Segnalamento e comando/Multi-cores, Signal and control

5G1,5	1,5	0,7	1,8	14,4	230,0	13,30	16,0	14,0	26,0	23,0	-	-
7G1,5	1,5	0,7	1,8	15,4	275,0	13,30	13,0	11,5	18,5	16,0	-	-
10G1,5	1,5	0,7	1,8	18,7	365,0	13,40	13,0	11,5	18,5	16,0	-	-
12G1,5	1,5	0,7	1,8	19,3	410,0	13,40	11,0	9,5	14,5	12,5	-	-
16G1,5	1,5	0,7	1,8	21,1	510,0	13,40	11,0	9,5	14,5	12,5	-	-
19G1,5	1,5	0,7	1,8	22,1	580,0	13,40	9,0	8,0	13,0	11,5	-	-
24G1,5	1,5	0,7	1,8	25,4	700,0	13,50	9,0	8,0	13,0	11,5	-	-
7G2,5	2,0	0,7	1,8	16,8	310,0	7,98	17,5	15,5	24,0	21,0	-	-
10G2,5	2,0	0,7	1,8	20,6	395,0	8,06	17,5	15,5	24,0	21,0	-	-
12G2,5	2,0	0,7	1,8	21,3	445,0	8,06	13,5	12,0	20,0	17,5	-	-
16G2,5	2,0	0,7	1,8	23,3	545,0	8,06	13,5	12,0	20,0	17,5	-	-
19G2,5	2,0	0,7	1,8	24,5	615,0	8,06	12,0	10,5	16,0	14,0	-	-
24G2,5	2,0	0,7	1,8	28,3	750,0	8,10	12,0	10,5	16,0	14,0	-	-

*Disponibile anche senza conduttore giallo/verde - N.B. I valori di portata di corrente sono riferiti a: tutti i conduttori attivi (eccetto il conduttore giallo/verde) - Profondità di posa 0,8 m per i cavi interrati

*Available without yellow/green conductor - N.B. Current rating values are referred to: All loaded conductors - Installation depth for underground cables 0,8 m

N.B. K=1: resistività termica del terreno 1,0 K.m/W - K=1,5: resistività termica del terreno 1,5 K.m/W

N.B. K=1: thermal resistivity 1,0 K.m/W - K=1,5: thermal resistivity 1,5 K.m/W

