FG16M16 - FG16OM16 0,6/1 kV

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

NON PROPAGANTE LA FIAMMA
FLAME RETARDANT

NON PROPAGANTE L'INCENDIO
FIRE RETARDANT
CEI EN 20-22 III

BASSISSIMA EMISSIONE FUMI, GAS TOSSICI E CORROSIVI
VERY LOW EMISSION OF SMOKE, TOXIC AND CORROSIVE GASES

ZERO ALOGENI
HALOGEN-FREE

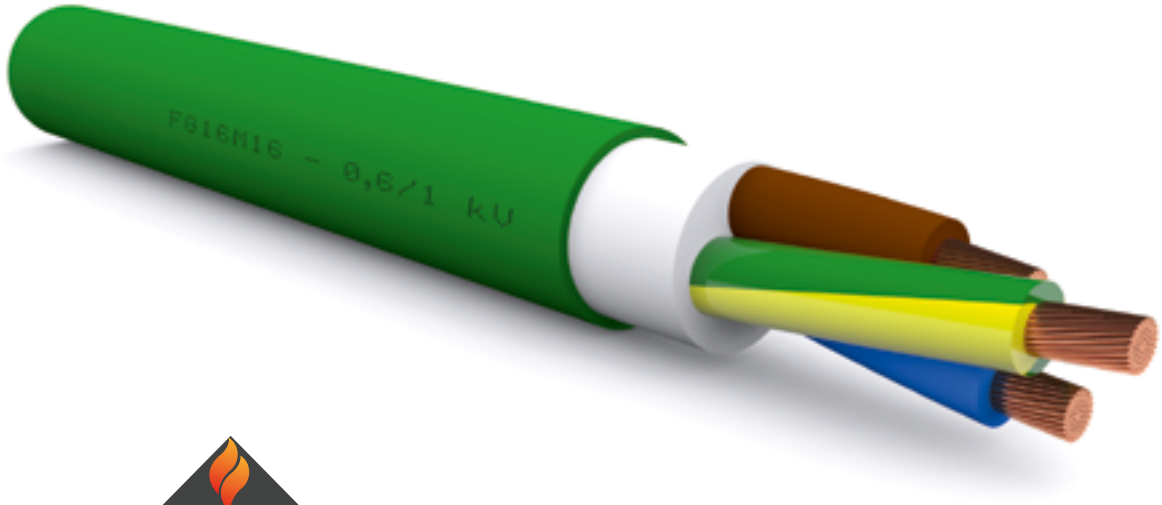
CONFORME CPR

RoHS 2002/95/EC

EAC

RIFERIMENTO NORMATIVO/*STANDARD REFERENCE*

Costruzione e requisiti elettrici fisici e meccanici/*Structure and electrical, physical, mechanical requirements*	CEI 20-13, CEI 20-38 p.q.a. CEI UNEL 35324 (energia) CEI UNEL 35328 (Segnalamento)
Direttiva Bassa Tensione/*Low Voltage Directive*	2014/35/UE
Direttiva RoHS/*RoHS Directive*	2011/65/UE



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CONFORME CPR

REAZIONE AL FUOCO/*REACTION TO FIRE*

REGOLAMENTO/*REGULATION* **305/2011/UE**	
Norma/*Standard*	EN 50575:2014+A1:2016
Classe/*Low Voltage Directive*	C_{ca}-s1b, d1, a1
Classificazione/*Classification* (CEI UNEL 35016)	EN 13501-6
Emissione di calore e fumi durante lo sviluppo della fiamma/*Heat and smoke emission and flame development*	EN 50399
Propagazione della fiamma verticale/*Flame propagation*	EN 60332-1-2
Gas corrosivi e alogenidrici/*Corrosive gases or halogens*	EN 60754-2
Densità dei fumi/*Smoke density*	EN 61034-2

Cavo commercializzato da produttori con classificazione CPR

Cables & Equipments

FG16M16 - FG16OM16 0,6/1 kV

DESCRIZIONE:
Cavo con isolamento in gomma di qualità G16, sotto guaina termoplastica LS0H, qualità M16 a ridotta emissione di gas corrosivi. Buona resistenza agli oli e ai grassi industriali.
Buon comportamento alle basse temperature

DESCRIPTION:
Cable insulated with rubber G16 quality, with sheath LS0H thermoplastic M1 quality, with reduced corrosive gas emission. Good resistance to grease and mineral oils. Good flexibility and behaviour at low temperatures.

CARATTERISTICHE FUNZIONALI:
- Tensione nominale Uo/U: 600/1000 V c.a.
- 1500 V c.c.
- Tensione Massima Um: 1200 V c.a.
- 1800 V c.a.
- Tensione di prova industriale: 4000 V
- 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.

FUNCTIONAL CHARACTERISTICS
- *Rated voltage Um: 600/1000 V a.c.*
- *1500 V c.c.*
- *Max. rated voltage Um: 1200 V a.c.*
- *1800 V c.c. also earthwards*
- *Rated voltage test: 4000 V*
- *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.*

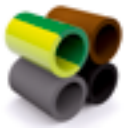
CONDIZIONI DI IMPIEGO:
Riferimento Guida CEI 20-67:
Il cavo è adatto per l'alimentazione di energia nei luoghi con pericolo d'incendio e con elevata presenza di persone come scuole , uffici, cinema, teatri, mostre, biblioteche, ospedali, musei, alberghi. Per posa fissa all'interno, all'esterno; per posa interrata diretta e indiretta. Adatto all'installazione su murature e strutture metalliche, su passarelle, tubazioni, canalette e sistemi similari.
Riferimento Regolamento Prodotti da Costruzione 305/2011 EU e Norma EN 50575:
Date le proprietà di limitare lo sviluppo del fuoco e fumi nocivi, il cavo è adatto per l'alimentazione di energia elettrica nelle costruzioni ed altre opere di ingegneria civile.

USE AND INSTALLATION
Reference Guidance CEI 20-67:
Cable suitable for energy supply in public places of fire hazard such as schools, offices, theatres, exhibitions, libraries, hospitals, museums and hotels. For fixed wiring indoors and outdoors; for direct and indirect underground wiring. Suitable for installation on walls, metal structures, cable trays, pipes, wiring holders and similar devices.
Reference Construction Products Regulation 305/2011 EU and Standard EN 50575:
Given its properties of limiting the development of fire and heat emission, the cable is suitable for the supply of electricity in buildings and other civil engineering works.

COSTRUZIONE DEL CAVO / *CABLE CONSTRUCTION*

CONDUTTORE
Materiale:
Rame rosso, formazione flessibile, classe 5

CONDUCTOR
Material: *Copper flexible wire, class 5*



ISOLAMENTO
Materiale: Gomma, qualità G16

INSULATION
Material: *Rubber compound, G16 quality*

CORDATURA TOTALE
Tipo: i conduttori isolati sono cordati insieme

TOTAL CABLING
Type: *The cores are stranded together in concentric lay*

RIEMPITIVO
Materiale: termoplastico LS0H *(Low Smoke Zero Halogen)*, penetrante tra le anime (solo nei cavi multipolari)

FILLER
Material: *Thermoplastic LS0H, penetrating between the cores*
(only in multi-core cables)

GUAINA
Materiale: Termoplastico LS0H, qualità M16
Colore: Verde o grigio

SHEATH
Material: *LS0H thermoplastic, M16 quality*
Colour: *Green ore grey*

FG16M16 - FG16OM16 0,6/1 kV

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	
n° x mm²	mm	mm	mm	mm	kg/km	Ω/km	*30° C*	30°C	K=1	K=1,5	K=1	K=1,5
1 x 10	4,0	0,7	1,4	10,9	175	1,91	80,0	66,0	73,0	68,0	64,0	59,0
1 x 16	5,0	0,7	1,4	11,4	245	1,21	107,0	88,0	96,0	89,0	83,0	77,0
1 x 25	6,2	0,9	1,4	13,2	340	0,798	141,0	117,0	124,0	115,0	108,0	100,0
1 x 35	7,4	0,9	1,4	14,6	440	0,554	176,0	144,0	150,0	139,0	131,0	121,0
1 x 50	8,9	1,0	1,4	16,4	590	0,386	216,0	175,0	186,0	173,0	162,0	150,0
1 x 70	10,5	1,1	1,4	18,3	795	0,272	279,0	222,0	229,0	212,0	199,0	184,0
1 x 95	12,2	1,1	1,5	20,4	995	0,206	342,0	269,0	270,0	250,0	234,0	217,0
1 x 120	13,8	1,2	1,5	22,4	1.340	0,161	400,0	312,0	312,0	289,0	271,0	251,0
1 x 150	15,4	1,4	1,6	24,8	1.635	0,129	464,0	355,0	356,0	330,0	310,0	287,0
1 x 185	16,9	1,6	1,6	27,0	1.955	0,106	533,0	417,0	401,0	371,0	349,0	323,0
1 x 240	19,5	1,7	1,7	30,2	2.495	0,0801	634,0	490,0	471,0	436,0	409,0	379,0
1 x 300	22,0	1,8	1,8	33,0	3.040	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

FG16M16 - FG16OM16 0,6/1 kV

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					
							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	
n° x mm²	mm	mm	mm	mm	kg/km	Ω/km	*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	140	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	175	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	220	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	180	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	390	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	610	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	880	0,798	149,0	119,0	135,0	128,0	118,0	111,0
2 x 35	8,9	1,0	1,8	27,7	1180	0,554	185,0	140,0	166,0	156,0	144,0	136,0
2 x 50	10,5	1,1	1,8	29,3	1590	0,386	225,0	175,0	205,0	193,0	178,0	168,0
2 x 70	12,2	1,1	1,8	33,1	2140	0,272	289,0	221,0	252,0	238,0	219,0	207,0

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	160	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	200	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	260	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	330	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	480	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	745	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	1080	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	1465	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	1990	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	2720	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	3430	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	4360	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	5420	0,129	399,0	300,0	332,0	313,0	288,0	372,0
3 x 185	16,9	1,6	2,4	55,2	6570	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	8495	0,0801	538,0	398,0	439,0	414,0	382,0	360,0

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 refered 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

FG16M16 - FG16OM16 0,6/1 kV

Quadripolari/4 cores

Formazione *Size*	Ø indicativo conduttore *Approx. conduct. Ø*	Spessore medio isolante *Average insulation thickness*	Spessore medio guaina *Average shea-th 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	
n° x mm²	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	185	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	240	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	280	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	405	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	600	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	910	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	1300	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	1730	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	2230	0,386/0,780	192,0	154,0	172,0	162,0	149,0	141,0
3 x 70 + 35	10,5/7,4	1,1/0,9	1,9	37,0	3045	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	3930	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	5060	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	6320	0,129/,0206	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	7430	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	9950	0,0801/0,129	538,0	398,0	439,0	414,0	382,0	360,0

Pentapolari/5 cores

5G1,5	1,5	0,7	1,8	14,4	225	13,30	23,0	19,0	23,0	22,0	20,0	19,0
5G2,5	2,0	0,7	1,8	15,6	290	7,98	32,0	26,0	30,0	29,0	27,0	25,0
5G4	2,5	0,7	1,8	17,3	385	4,95	42,0	35,0	39,0	37,0	34,0	32,0
5G6	3,0	0,7	1,8	18,9	500	3,30	54,0	44,0	50,0	47,0	43,0	41,0
5G10	4,0	0,7	1,8	21,5	750	1,91	75,0	60,0	67,0	63,0	58,0	55,0
5G16	5,0	0,7	1,8	24,4	1100	1,21	100,0	80,0	88,0	83,0	76,0	72,0
5G25	6,2	0,9	1,8	29,3	1630	0,780	127,0	105,0	113,0	107,0	99,0	93,0
5G35	7,4	0,9	1,8	32,8	2205	0,554	158,0	128,0	139,0	131,0	121,0	114,0
5G50	8,9	1,0	2,0	38,2	3055	0,386	192,0	154,0	172,0	162,0	149,0	141,0

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

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