

**CAVI BASSA TENSIONE - ENERGIA
LOW VOLTAGE - POWER**

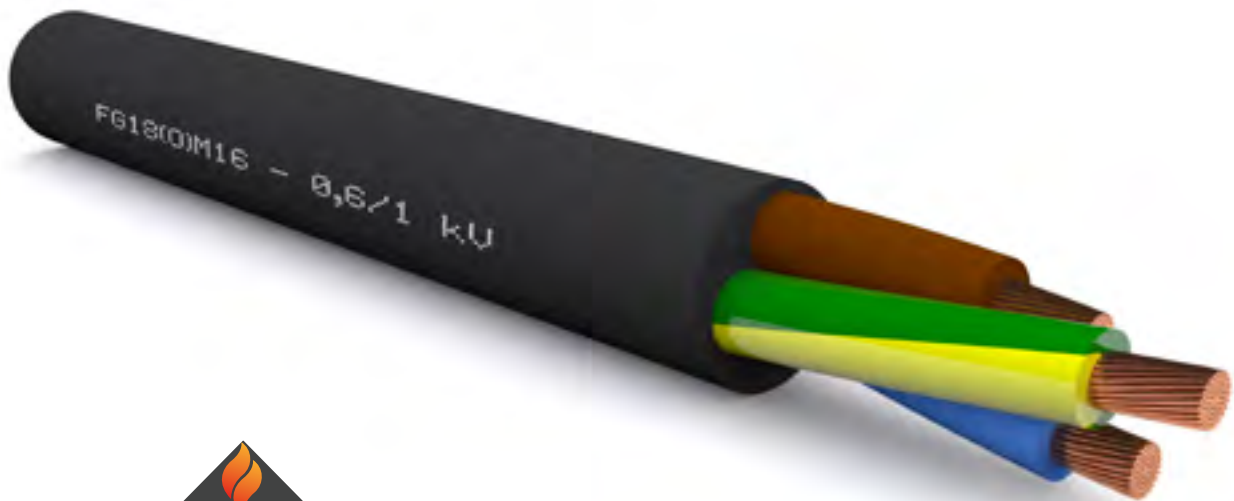
FG180M16 0,6/1 kV

**CAVI NON PROPAGANTI LA FIAMMA - ZERO ALOGENI
FLAME RETARDANT CABLES - HALOGEN-FREE**



RIFERIMENTO NORMATIVO/STANDARD REFERENCE

Costruzione e requisiti / Construction and specifications	CEI UNEL 35312 CEI 20-38 IEC 60502-1 EN 50575
Direttiva Bassa Tensione / Low Voltage Directive	2014/35/UE
Direttiva RoHS/RoHS Directive	2011/65/UE



REAZIONE AL FUOCO/REACTION TO FIRE

REGOLAMENTO/REGULATION 305/2011/UE

Norma/Standard	EN 50575:2014+A1:2016
Classe/Low Voltage Directive	B2 _{ca} - s1a, 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 (trasmittanza) / Smoke density	EN 61034-2
CE	2018

Cavo commercializzato da produttori con classificazione CPR

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CARATTERISTICHE FUNZIONALI:

- **Tensione nominale U₀/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
- **Raggio minimo di curvatura:** 6 volte il diametro esterno massimo

CARATTERISTICHE PARTICOLARI:

Cavi per trasporto di energia. Buona resistenza agli oli e ai grassi industriali. Adatto alle basse temperature.

CONDIZIONI DI IMPIEGO:

Riferimento Guida CEI 20-67

Adatti per installazioni a fascio in ambienti a maggior rischio in caso d'incendio per l'elevata densità di affollamento o per l'elevato tempo di sfollamento in caso di incendio o per l'elevato danno ad animali e cose come ad esempio aerostazioni, stazioni ferroviarie, stazioni marittime, metropolitane, gallerie stradali e ferroviarie. Per ambienti interni o esterni anche bagnati, per posa fissa in aria libera, in tubo o canaletta, su muratura e strutture metalliche.

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.

FUNCTIONAL CHARACTERISTICS

- **Rated voltage U₀/U:** 0,6/1 kV
- **Max operating temperature:** 90°C
- **Minimum operating temperature:** -15°C (without mechanical shocks)
- **Minimum installation temperature:** 0°C
- **Maximum short circuit temperature:** 250° C
- **Recommended maximum tensile stress:** 50 N/mm²
- **Minimum bending radius:** 6 x maximum external diameter of the cross-section of the copper

SPECIAL FEATURES

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

USE AND INSTALLATION

Reference Guidance CEI 20-67:

Suitable for bundle installations in environments at higher risk in case of fire due to high overcrowding or long evacuation time in case of fire or major damages to animals and things such as airports, railway stations, marine stations, subways, road and railway tunnels. Suitable for internal or external environments, even wet; for fixed outdoor laying, in pipe or duct, on walls and metallic structures.

Reference Construction Products Regulation 305/2011 EU and Standard EN 50575:

Given its properties of limiting the development of fire, heat emission and noxious fumes, 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: Flexible, plain Copper wire, class 5



ISOLANTE

Materiale: Gomma HEPR, qualità G18
Colore anime: CEI UNEL 00722 – 00725 (HD 308 S2 – EN50334)

INSULATION

Material: HEPR Rubber compound, G18 quality
Colour: CEI UNEL 00722 – 00725 (HD 308 S2 – EN50334)



GUAINA ESTERNA

Materiale: Materiale termoplastico LSOH, qualità M16
Colore: Nero (basato su RAL 9005)

OUTER SHEATH

Material: LSOH thermoplastic, M16 quality
Colour: Black (focused on RAL 9005)

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Bipolari/2 cores



Formazione	Ø indicativo conduttore	Spessore medio isolante	Spessore medio guaina	Ø esterno massimo	Peso indicativo cavo	Resistenza elettrica max a	Portata di corrente					
							Current rating					
Size	Approx. conduct. Ø	Average insulation thickness	Average sheath thickness	Max outer Ø	Indicative cable weight	Max electrical resistance at 20° C	A					
n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	in aria a	in tubo in aria a	interrato a		in tubo interrato a	
							in air at	in pipe in air at	Underground at 20° C		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	1,0	1,8	13,4	230,0	13,30	26,0	22,0	28,0	26,0	25,0	23,0
2 x 2,5	2,0	1,0	1,8	14,4	270,0	7,98	36,0	30,0	37,0	35,0	32,0	30,0
2 x 4	2,5	1,0	1,8	15,6	320,0	4,95	49,0	40,0	48,0	45,0	41,0	39,0
2 x 6	3,0	1,0	1,8	16,8	400,0	3,30	63,0	51,0	60,0	56,0	52,0	49,0
2 x 10	4,0	1,0	1,8	18,7	530,0	1,91	86,0	69,0	80,0	76,0	70,0	66,0

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



Tripolari/3 cores



n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	in aria a	in tubo in aria a	interrato a	in tubo interrato a	interrato a	in tubo interrato a
							in air at	in pipe in air at	Underground at 20° C	Underground at 20° C	Underground at 20° C	Underground at 20° C
							30° C	30° C	K=1	K=1,5	K=1	K=1,5
3 x 1,5	1,5	1,0	1,8	14,1	260,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
3 x 2,5	2,0	1,0	1,8	15,1	305,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
3 x 4	2,5	1,0	1,8	16,4	385,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
3 x 6	3,0	1,0	1,8	17,7	450,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
3 x 10	4,0	1,0	1,8	19,8	635,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
3 x 16*	5,0	1,0	1,8	-	865,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
3 x 25*	6,2	1,0	1,8	-	1.235,0	0,798	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35*	7,4	1,2	1,8	-	1.630,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50*	8,9	1,2	1,8	-	2.225,0	0,386	192,0	154,0	172,0	162,0	149,0	141,0

*Formazione non certificata IMQ

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

*Not IMQ certified

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



Quadripolari/4 cores



n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	in aria a	in tubo in aria a	interrato a	in tubo interrato a	interrato a	in tubo interrato a
							in air at	in pipe in air at	Underground at 20° C	Underground at 20° C	Underground at 20° C	Underground at 20° C
							30° C	30° C	K=1	K=1,5	K=1	K=1,5
4 x 1,5	1,5	1,0	1,8	15,2	330,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
4 x 2,5	2,0	1,0	1,8	16,3	400,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
4 x 4	2,5	1,0	1,8	17,8	480,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
4 x 6	3,0	1,0	1,8	19,2	580,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
4 x 10	4,0	1,0	1,8	21,5	765,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
4 x 16*	5,0	1,0	1,8	-	1.050,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
4 x 25*	6,2	1,0	1,8	-	1.515,0	0,780	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35 + 25*	7,4/6,2	1,2	1,8	-	1.905,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50 + 25*	8,9/6,2	1,2	1,9	-	2.490,0	0,386	192,0	154,0	172,0	162,0	149,0	141,0

*Formazione non certificata IMQ

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

*Not IMQ certified

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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Formazione Size	Ø indicativo conduttore	Spessore medio isolante	Spessore medio guaina	Ø esterno massimo	Peso indicativo cavo	Resistenza elettrica max a	Portata di corrente					
	Approx. conduct. Ø	Average insulation thickness	Average sheath thickness	Max outer Ø	Indicative cable weight	Max electrical resistance at 20° C	Current rating A					
n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	in aria a in air at 30° C	in tubo in aria a in pipe in air at 30°C	interrato a Underground at 20° C		in tubo interrato a In underground pipe at 20°C	
									K=1	K=1,5	K=1	K=1,5
5G1,5	1,5	1,0	1,8	16,3	350,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
5G2,5	2,0	1,0	1,8	17,6	425,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
5G4	2,5	1,0	1,8	19,2	525,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
5G6	3,0	1,0	1,8	20,8	670,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
5G10	4,0	1,0	1,8	23,4	935,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
5G16*	5,0	1,0	1,8	-	1.275,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
5G25*	6,2	1,0	1,9	-	1.895,0	0,780	127,0	105,0	113,0	107,0	99,0	93,0
5G35*	7,4	1,2	1,9	-	2.515,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
5G50*	8,9	1,2	2,0	-	3.470,0	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