

CAVI BASSA TENSIONE - ENERGIA, SEGNALAMENTO E COMANDO
LOW VOLTAGE CABLES - POWER, SIGNALLING AND CONTROL

FTG18M16 - FTG18OM16 0,6/1 kV

RESISTENTI AL FUOCO, BASSISSIMA EMISSIONE DI FUMI, GAS TOSSICI E CORROSIVI, ZERO ALOGENI
FIRE RESISTANT, 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 II



RESISTENTE AGLI OLII
OIL RESISTANT



RESISTENTE ALLE
ALTE TEMPERATURE
HIGH TEMPERATURE
RESISTANT



ZERO ALOGENI
HALOGEN-FREE

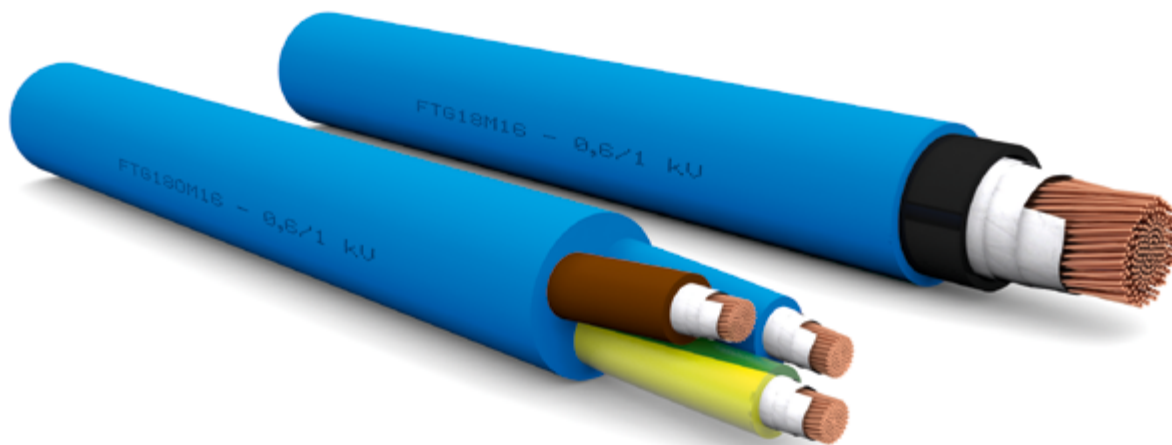


CONFORME
CPR



RIFERIMENTO NORMATIVO/STANDARD REFERENCE

Costruzione e requisiti elettrici fisici e meccanici/ Structure and electrical, physical, mechanical requirements	CEI 20-45 CEI 20-38
Resistenza al fuoco/Fire resistance	EN 50200 EN 50362
Direttiva Bassa Tensione/Low Voltage Directive	2014/35/UE
Direttiva RoHS/RoHS Directive	2011/65/UE



Le immagini sono puramente illustrative e coperte da copyright ©



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
Non propagazione della fiamma verticale/ Not Flame propagation	EN 60332-1-2
Emissione di calore e fumi durante lo sviluppo della fiamma/Heat and smoke emission during the flame development	EN 50399
Gas corrosivi e alogenidrici/Corrosive gases or halogens	EN 60754-2
Densità dei fumi/Smoke density	EN 61034-2
CE	2017

Cavo commercializzato da produttori con classificazione CPR

FTG18M16 - FTG18OM16 0,6/1 kV

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:** 14 volte il diametro esterno massimo

CARATTERISTICHE PARTICOLARI:

Buona resistenza agli oli e grassi industriali. Buon comportamento alle basse temperature. Assicura il funzionamento in presenza di fuoco e shock meccanici per almeno 120 minuti alla temperatura di 830°C.

CONDIZIONI DI IMPIEGO:

Adatto al trasporto di energia e alla trasmissione di segnali e comandi per impianti elettrici quando è richiesta la massima sicurezza nei confronti dell'incendio, quali luci di emergenza e di allarme, rilevazione automatica dell'incendio, dispositivi di spegnimento incendio, apertura porte automatiche, sistemi di aerazione e di condizionamento, sistemi telefonici di emergenza. Per posa fissa all'interno in ambienti anche bagnati e all'esterno. Può essere installato su murature e su strutture metalliche, su passerelle, tubazioni, canalette e sistemi simili. Ammessa la posa interrata anche non protetta.

Riferimento Regolamento Prodotti da Costruzione 305/2011 EU e Norma EN 50575:

Date le proprietà di limitare lo sviluppo del fuoco e l'emissione di calore, 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:** 14 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. Ensures the functioning in case of fire and mechanical shocks, for at least 120 minutes at a temperature of 830°C.

USE AND INSTALLATION

Suitable for the transport of power and transmission of signals and controls in electrical installations where is required the maximum security in case of fire, such as emergency and alarm lights, automatic fire detection, automatic fire extinguishing devices, automatic door opening, ventilation, air conditioning system and emergency telephone system. 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. 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 cl. 5

CONDUCTOR

Material: class 5, flexible, plain copper wire

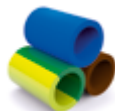


NASTRATURA

Materiale: Nastro di vetro/mica avvolto ad elica

WRAPPING

Material: glass/mica tape, wrapped in spiral



ISOLAMENTO

Materiale: gomma, qualità G18

INSULATION

Material: : rubber compound, G18 quality



CORDATURA TOTALE

Tipo: Le coppie sono cordate insieme

TOTAL STRANDING

Type: The pairs are stranded together in concentric lay



RIEMPITIVO

Materiale: termoplastico LSOH, penetrante tra le anime, formante guainetta

FILLER

Material: : LSOH thermoplastic, penetrating between the cores with function of inner sheath



GUAINA ESTERNA

Materiale: Termoplastico LSOH qualità M16
Colore: Blu

OUTER SHEATH

Material: LSOH thermoplastic, M16 quality
Colour: Grey

FTG18M16 - FTG18OM16 0,6/1 kV

FTG18M16

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 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		
n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	K=1	K=1,5	K=1	K=1,5		
1 x 10	3,9	1,0	1,8	9,9	195,0	1,91	80,0	66,0	73,0	68,0	64,0	59,0
1 x 16	5,0	1,0	1,8	11,0	260,0	1,21	107,0	88,0	96,0	89,0	83,0	77,0
1 x 25	6,1	1,2	1,8	12,5	365,0	0,798	141,0	117,0	124,0	115,0	108,0	100,0
1 x 35	7,3	1,2	1,8	14,1	480,0	0,554	176,0	144,0	150,0	139,0	131,0	121,0
1 x 50	8,8	1,4	1,8	16,0	645,0	0,386	216,0	175,0	186,0	173,0	162,0	150,0
1 x 70	10,5	1,4	1,8	17,7	850,0	0,272	279,0	222,0	229,0	212,0	199,0	184,0
1 x 95	11,9	1,6	1,8	19,5	1.080,0	0,206	342,0	269,0	270,0	250,0	234,0	217,0
1 x 120	13,9	1,6	1,8	21,4	1.360,0	0,161	400,0	312,0	312,0	289,0	271,0	251,0
1 x 150	15,4	1,8	1,8	23,4	1.640,0	0,129	464,0	355,0	356,0	330,0	310,0	287,0
1 x 185	16,9	2,0	2,0	25,5	1.985,0	0,106	533,0	417,0	401,0	371,0	349,0	323,0
1 x 240	19,4	2,2	2,0	28,6	2.530,0	0,0801	634,0	490,0	471,0	436,0	409,0	379,0

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

FTG18M16 - FTG18OM16 0,6/1 kV

FTG18OM16 - 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					
Size	Approx. conduct. Ø	Average insulation thickness	Average sheath thickness	Max outer Ø	Indicative cable weight	Max electrical resistance at 20° C	Current rating					
							in aria a		interrato a		in tubo interrato a	
							in air at	in tubo in aria a	Underground at	in tubo interrato a	in air at	In underground pipe at
							30° C	in pipe in air at	20° C	in air at	30° C	20° C
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
2 x 1,5	1,5	1,0	2,0	12,0	215,0	13,30	26,0	22,0	28,0	26,0	25,0	23,0
2 x 2,5	1,9	1,0	2,0	12,8	260,0	7,98	36,0	30,0	37,0	35,0	32,0	30,0
2 x 4	2,4	1,0	2,0	13,8	315,0	4,95	49,0	40,0	48,0	45,0	41,0	39,0
2 x 6	3,0	1,0	2,0	15,0	390,0	3,30	63,0	51,0	60,0	56,0	52,0	49,0
2 x 10	3,9	1,0	2,0	16,8	525,0	1,91	86,0	69,0	80,0	76,0	70,0	66,0
2 x 16	5,0	1,0	2,0	19,0	710,0	1,21	115,0	91,0	105,0	99,0	91,0	86,0
2 x 25	6,1	1,2	2,0	22,0	1.000,0	0,798	149,0	119,0	135,0	128,0	118,0	111,0
2 x 35	7,3	1,2	2,0	25,1	1.325,0	0,554	185,0	140,0	166,0	156,0	144,0	136,0
2 x 50	8,8	1,4	2,0	28,9	1.800,0	0,386	225,0	175,0	205,0	193,0	178,0	168,0

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

FTG18OM16 - Tripolari/3 cores

3 x 1,5	1,5	1,0	2,0	12,5	245,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
3 x 2,5	1,9	1,0	2,0	13,6	295,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
3 x 4	2,4	1,0	2,0	14,9	365,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
3 x 6	3,0	1,0	2,0	16,2	455,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
3 x 10	3,9	1,0	2,0	18,2	625,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
3 x 16	5,0	1,0	2,0	20,6	865,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
3 x 25	6,1	1,2	2,0	24,5	1.230,0	0,798	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35	7,3	1,2	2,0	27,3	1.635,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50	8,8	1,4	2,1	31,2	2.255,0	0,386	192,0	154,0	172,0	162,0	149,0	141,0
3 x 70	10,5	1,4	2,2	35,6	3.005,0	0,272	246,0	194,0	212,0	200,0	184,0	174,0
3 x 95	11,9	1,6	2,4	40,0	3.865,0	0,206	298,0	233,0	251,0	237,0	218,0	206,0
3 x 120	13,8	1,6	2,5	44,4	4.905,0	0,161	346,0	268,0	290,0	274,0	252,0	238,0

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

FTG18M16 - FTG18OM16 0,6/1 kV

FTG18OM16 - Quadripolari/4 cores

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 shea- th 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
4 x 1,5	1,5	1,0	2,0	13,6	200,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
4 x 2,5	1,9	1,0	2,0	14,6	260,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
4 x 4	2,4	1,0	2,0	15,8	330,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
4 x 6	3,0	1,0	2,0	17,3	440,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
4 x 10	3,9	1,0	2,0	19,4	640,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
4 x 16	5,0	1,0	2,0	22,1	900,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
4 x 25	6,1	1,2	2,0	25,7	1.300,0	0,780	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35 + 25	7,3/6,1	1,2/1,2	2,0	28,5	1.600,0	0,554/0,780	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50 + 25	8,8/6,1	1,2/1,2	2,10	32,1	2.200,0	0,386/0,780	192,0	154,0	172,0	162,0	149,0	141,0
3 x 70 + 35	10,5/7,3	1,4/1,2	2,20	36,3	3.000,0	0,272/0,554	246,0	194,0	212,0	200,0	184,0	174,0
3 x 95 + 50	11,9/8,8	1,6/1,2	2,40	41,1	3.900,0	0,206/0,386	298,0	233,0	251,0	237,0	218,0	206,0

*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

FTG18OM16 - Pentapolari/5 cores

5 X 1,5	1,5	1,0	2,0	14,8	335,0	13,30	23,0	19,0	23,0	22,0	20,0	19,0
5 X 2,5	1,9	1,0	2,0	15,9	415,0	7,98	32,0	26,0	30,0	29,0	27,0	25,0
5 X 4	2,4	1,0	2,0	17,2	520,0	4,95	42,0	35,0	39,0	37,0	34,0	32,0
5 X 6	3,0	1,0	2,0	18,8	660,0	3,30	54,0	44,0	50,0	47,0	43,0	41,0
5 X 10	3,9	1,0	2,0	21,3	925,0	1,91	75,0	60,0	67,0	63,0	58,0	55,0
5 X 16	5,0	1,0	2,0	24,2	1.295,0	1,21	100,0	80,0	88,0	83,0	76,0	72,0
5 X 25	6,1	1,2	2,10	28,3	1.870,0	0,780	127,0	105,0	113,0	107,0	99,0	93,0
5 X 35	7,3	1,2	2,1	32,7	2.510,0	0,554	158,0	128,0	139,0	131,0	121,0	114,0
5 X 50	8,8	1,4	2,3	38,2	3.495,0	0,386	192,0	154,0	172,0	162,0	149,0	141,0
5 X 70	10,5	1,4	2,6	43,4	4.685,0	0,272	246	194	212	200	184	174
5 X 95	11,9	1,6	2,7	48,4	5.980,0	0,206	298	233	251	237	218	206
5 X 120	13,9	1,6	2,9	54,1	7.600,0	0,161	346	268	290	274	252	238

*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