

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

FG16H2R16 - FG16OH2R16 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

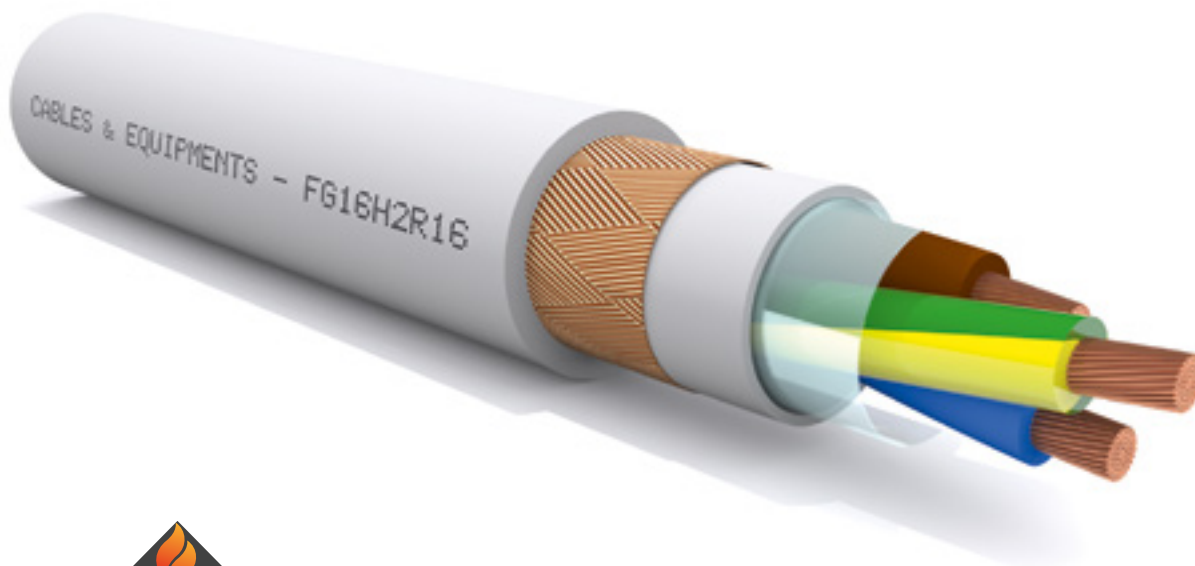


NON PROPAGANTE
L'INCENDIO
FIRE RETARDANT
CEI EN 20-22 II



RIFERIMENTO NORMATIVO/STANDARD REFERENCE

Costruzione e requisiti elettrici fisici e meccanici/ <i>Structure and electrical, physical, mechanical requirements</i>	CEI 20-13 IEC 60502-1 CEI UNEL 35318 (energia) CEI UNEL 35322 (Segnalamento)
Direttiva Bassa Tensione/ <i>Low Voltage Directive</i>	2014/35/UE
Direttiva RoHS/ <i>RoHS Directive</i>	2011/65/UE



REAZIONE AL FUOCO/REACTION TO FIRE

REGOLAMENTO/REGULATION 305/2011/UE

Norma/ <i>Standard</i>	EN 50575:2014+A1:2016
Classe/ <i>Low Voltage Directive</i>	C _{ca} -s3, d1, a3
Classificazione/ <i>Classification</i> (CEI UNEL 35016)	EN 13501-6
Non propagazione della fiamma verticale/ <i>Not Flame propagation</i>	EN 50399
Gas corrosivi e alogenidrici/ <i>Corrosive gases or halogens</i>	EN 60332-1-2
Densità dei fumi/ <i>Smoke density</i>	EN 60754-2
Organismo notificato/ <i>Notified body</i>	L.A.P.I. - 0987
CE	2017

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FG16H2R16 - FG16OH2R16 0,6/1 kV

DESCRIZIONE:

Cavi schermati a treccia di rame rosso per energia e segnalamento, con isolamento in gomma di qualità G16, sotto guaina di PVC qualità R16 a ridotta emissione di gas corrosivi. Buona resistenza agli oli e ai grassi industriali. Buon comportamento alle basse temperature.

CARATTERISTICHE FUNZIONALI:

- Tensione nominale U_0/U : 600/1000 V c.a.
- 1500 V c.c.
- Tensione Massima U_m : 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: 10 volte il diametro del cavo.

CONDIZIONI DI IMPIEGO:

Riferimento Guida CEI 20-67 per quanto applicabile:

Il cavo è adatto per l'alimentazione di energia nell'industria, nei cantieri, nell'edilizia residenziale. 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 l'emissione di calore, il cavo è adatto per l'alimentazione di energia elettrica nelle costruzioni ed altre opere di ingegneria civile.

DESCRIPTION:

Copper wire braid screened flexible power and control cables insulated with rubber G16 quality, with PVC R16 sheath, with reduced corrosive gas emission. Good resistance to grease and mineral oils. Good flexibility and behaviour at low temperatures.

FUNCTIONAL CHARACTERISTICS

- Rated voltage U_m : 600/1000 V a.c.
- 1500 V c.c.
- Max. rated voltage U_m : 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: 10 x cable diameter.

USE AND INSTALLATION

Reference Guidance CEI 20-67 as far as applicable:

Cable suitable for energy supply in industry, building sites and construction industry. 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



NASTRATURA

Materiale: Nastro di poliestere (se necessario)

WRAPPING

Material: Polyester tape (if necessary)



GUAINA RIEMPITIVA

Materiale: Riempitivo non igroscopico
Colore: Grigio o naturale

FILLER SHEATH

Material: Not hygroscopic filler
Colour: Grey or natural



SCHERMATURA ELETTROMAGNETICA

Tipo: Treccia
Materiale: Rame rosso
Copertura: ≥ 70%

ELECTROMAGNETIC SCREEN

Type: Wire braid
Material: Annealed bare copper
Coverage: ≥ 70%



GUAINA

Materiale: PVC, qualità R16
Colore: Grigio

SHEATH

Material: PVC, R16 quality
Colour: Grey

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Unipolari/Single core

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	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 1,5	1,5	0,7	1,8	9,6	79	13,3	24,0	20,0	26,0	24,0	23,0	21,0
1 x 2,5	2,0	0,7	1,8	10,1	94	7,98	33,0	28,0	34,0	31,0	29,0	27,0
1 x 4	2,5	0,7	1,8	10,7	112	4,95	45,0	37,0	43,0	40,0	38,0	35,0
1 x 6	3,0	0,7	1,8	11,3	139	3,30	58,0	48,0	55,0	51,0	48,0	44,0
1 x 10	4,0	0,7	1,8	15,5	188	1,91	80,0	66,0	73,0	68,0	64,0	59,0
1 x 16	5,0	0,7	1,8	13,0	227	1,21	107,0	88,0	96,0	89,0	83,0	77,0
1 x 25	6,2	0,9	1,8	14,8	331	0,798	141,0	117,0	124,0	115,0	108,0	100,0
1 x 35	7,4	0,9	1,8	16,2	425	0,554	176,0	144,0	150,0	139,0	131,0	121,0
1 x 50	8,9	1,0	1,8	18,0	579	0,386	216,0	175,0	186,0	173,0	162,0	150,0
1 x 70	10,5	1,1	1,8	20,1	784	0,272	279,0	222,0	229,0	212,0	199,0	184,0
1 x 95	12,2	1,1	1,8	22,0	989	0,206	342,0	269,0	270,0	250,0	234,0	217,0
1 x 120	13,8	1,2	1,8	24,2	1250	0,161	400,0	312,0	312,0	289,0	271,0	251,0
1 x 150	15,4	1,4	1,8	26,4	1540	0,129	464,0	355,0	356,0	330,0	310,0	287,0
1 x 185	16,9	1,6	1,8	28,6	1890	0,106	533,0	417,0	401,0	371,0	349,0	323,0
1 x 240	19,5	1,7	1,8	31,6	2410	0,0801	634,0	490,0	471,0	436,0	409,0	379,0
1 x 300	23,0	1,8	1,9	34,4	3030	0,0641	736,0	-	533,0	493,0	463,0	429,0
1 x 400	26,5	2,0	2,0	38,9	4020	0,0486	868,0	-	621,0	575,0	540,0	500,0

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	Spessore medio isolante	Spessore medio guaina	Ø esterno massimo	Peso indicativo cavo	Resistenza elettrica max a Max electrical resistance at 20° C	Portata di corrente Current rating A					
	Approx. conduct. Ø	Average insulation thickness	Average sheath thickness	Max outer Ø	Indicative cable weight		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 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	0,7	1,8	12,7	190	13,30	26,0	22,0	28,0	26,0	25,0	23,0
2 x 2,5	2,0	0,7	1,8	13,7	240	7,98	36,0	30,0	37,0	35,0	32,0	30,0
2 x 4	2,5	0,7	1,8	14,9	290	4,95	49,0	40,0	48,0	45,0	41,0	39,0
2 x 6	3,0	0,7	1,8	16,1	360	3,30	63,0	51,0	60,0	56,0	52,0	49,0
2 x 10	4,0	0,7	1,8	18,2	500	1,91	86,0	69,0	80,0	76,0	70,0	66,0
2 x 16	5,0	0,7	1,8	20,4	680	1,21	115,0	91,0	105,0	99,0	91,0	86,0
2 x 25	6,2	0,9	1,8	24,0	940	0,798	149,0	119,0	135,0	128,0	118,0	111,0
2 x 35	7,4	0,9	1,8	26,6	1230	0,554	185,0	140,0	166,0	156,0	144,0	136,0
2 x 50	8,9	1,0	1,8	30,5	1700	0,386	225,0	175,0	205,0	193,0	178,0	168,0
2 x 70	10,5	1,1	1,9	34,3	2300	0,272	289,0	221,0	252,0	238,0	219,0	207,0
2 x 95	12,2	1,1	2,0	38,6	3000	0,206	352,0	265,0	299,0	282,0	260,0	245,0
2 x 120	13,8	1,2	2,1	43,0	3700	0,161	410,0	305,0	346,0	327,0	301,0	284,0
2 x 150	15,4	1,4	2,2	47,5	4500	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°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

3 x 1,5	1,5	0,7	1,8	13,3	210	13,30	23,0	19,0	23,0	22,0	20,0	19,0
3 x 2,5	2,0	0,7	1,8	14,3	270	7,98	32,0	26,0	30,0	29,0	27,0	25,0
3 x 4	2,5	0,7	1,8	15,6	330	4,95	42,0	35,0	39,0	37,0	34,0	32,0
3 x 6	3,0	0,7	1,8	16,9	420	3,30	54,0	44,0	50,0	47,0	43,0	41,0
3 x 10	4,0	0,7	1,8	19,2	600	1,91	75,0	60,0	67,0	63,0	58,0	55,0
3 x 16	5,0	0,7	1,8	21,5	820	1,21	100,0	80,0	88,0	83,0	76,0	72,0
3 x 25	6,2	0,9	1,8	25,4	1150	0,798	127,0	105,0	113,0	107,0	99,0	93,0
3 x 35	7,4	0,9	1,8	28,3	1520	0,554	158,0	128,0	139,0	131,0	121,0	114,0
3 x 50	8,9	1,0	1,8	32,4	2100	0,386	192,0	154,0	172,0	162,0	149,0	141,0
3 x 70	10,5	1,1	1,9	36,8	2900	0,272	246,0	194,0	212,0	200,0	184,0	174,0
3 x 95	12,2	1,1	2,0	41,2	3650	0,206	298,0	233,0	251,0	237,0	218,0	206,0
3 x 120	13,8	1,2	2,1	45,8	4700	0,161	346,0	268,0	290,0	274,0	252,0	238,0
3 x 150	15,4	1,4	2,3	50,9	5800	0,129	399,0	300,0	332,0	313,0	288,0	272,0
3 x 185	16,9	1,6	2,4	56,6	7000	0,106	456,0	340,0	373,0	352,0	324,0	306,0
3 x 240	19,5	1,7	2,6	63,3	9000	0,0801	538,0	398,0	439,0	414,0	382,0	360,0
3 x 300	22,0	1,8	2,8	69,5	11000	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

CAVI BASSA TENSIONE - ENERGIA, SEGNALAMENTO E COMANDO

LOW VOLTAGE CABLES - POWER, SIGNALLING AND CONTROL

FG16H2R16 - FG16OH2R16 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		interrato a Underground at 20° C		in tubo interrato a In underground pipe at 20° C	
							in aria a in air at	in tubo in aria a in pipe in air at	K=1	K=1,5	K=1	K=1,5
n° x mm ²	mm	mm	mm	mm	kg/km	Ω/km	30° C	30° C				
4 x 1,5	1,5	0,7	1,8	14,1	250	13,3	23,0	19,0	23,0	22,0	20,0	19,0
4 x 2,5	2,0	0,7	1,8	15,3	330	7,98	32,0	26,0	30,0	29,0	27,0	25,0
4 x 4	2,5	0,7	1,8	16,7	400	4,95	42,0	35,0	39,0	37,0	34,0	32,0
4 x 6	3,0	0,7	1,8	18,4	500	3,30	54,0	44,0	50,0	47,0	43,0	41,0
4 x 10	4,0	0,7	1,8	20,8	720	1,91	75,0	60,0	67,0	63,0	58,0	55,0
4 x 16	5,0	0,7	1,8	23,4	1000	1,21	100,0	80,0	88,0	83,0	76,0	72,0
4 x 25	6,2	0,9	1,8	27,7	1420	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	30,4	1780	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	33,6	2400	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	38,2	3300	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	43,4	4200	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	48,3	5200	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	53,9	6700	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	58,8	8000	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	66,9	10200	0,080/0,129	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	72,2	12500	0,064/0,129	621,0	455,0	-	-	-	-

Pentapolari/5 cores

5G1,5	1,5	0,7	1,8	15,1	280	13,30	23,0	19,0	23,0	22,0	20,0	19,0
5G2,5	2,0	0,7	1,8	16,4	380	7,98	32,0	26,0	30,0	29,0	27,0	25,0
5G4	2,5	0,7	1,8	18,2	480	4,95	42,0	35,0	39,0	37,0	34,0	32,0
5G6	3,0	0,7	1,8	19,8	610	3,30	54,0	44,0	50,0	47,0	43,0	41,0
5G10	4,0	0,7	1,8	22,4	900	1,91	75,0	60,0	67,0	63,0	58,0	55,0
5G16	5,0	0,7	1,8	25,4	1240	1,21	100,0	80,0	88,0	83,0	76,0	72,0
5G25	6,2	0,9	1,8	30,5	1820	0,780	127,0	105,0	113,0	107,0	99,0	93,0
5G35	7,4	0,9	1,8	34,0	2300	0,554	158,0	128,0	139,0	131,0	121,0	114,0
5G50	8,9	1,0	2,0	39,4	3300	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

7G1,5	1,5	0,7	1,8	15,4	260,0	13,30	13,0	11,5	-	-	18,5	16,0
10G1,5	1,5	0,7	1,8	18,7	340,0	13,40	13,0	11,5	-	-	18,5	16,0
12G1,5	1,5	0,7	1,8	19,3	380,0	13,40	11,0	9,5	-	-	14,5	12,5
16G1,5	1,5	0,7	1,8	21,1	480,0	13,40	11,0	9,5	-	-	14,5	12,5
19G1,5	1,5	0,7	1,8	22,1	535,0	13,40	9,0	8,0	-	-	13,0	11,5
24G1,5	1,5	0,7	1,8	25,4	640,0	13,50	9,0	8,0	-	-	13,0	11,5
7G2,5	2,0	0,7	1,8	16,8	381,0	7,98	17,5	15,5	-	-	24,0	21,0
10G2,5	2,0	0,7	1,8	20,6	462,0	8,06	17,5	15,5	-	-	24,0	21,0
12G2,5	2,0	0,7	1,8	21,3	530,0	8,06	13,5	12,0	-	-	20,0	17,5
16G2,5	2,0	0,7	1,8	23,3	670,0	8,06	13,5	12,0	-	-	20,0	17,5
19G2,5	2,0	0,7	1,8	24,5	755,0	8,06	12,0	10,5	-	-	16,0	14,0
24G2,5	2,0	0,7	1,8	28,3	915,0	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