

Sensitherm

Production of special cables and thermocouple sensors

Specialist in
custom design
cables and sensors
since 1999



ISO 9001
BUREAU VERITAS
Certification



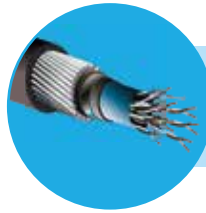
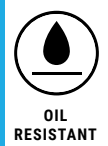
APPROVED BY
L.S.FIRE
ACCORDING TO EN 50575:2014+A1:2016

We protect
industrial plants
with special cables
CCA - S1B, D1, A1
risk level

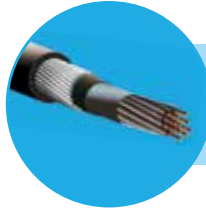
QUALITY SYSTEM CERTIFIED ISO 9001 BY BUREAU VERITAS

SPECIAL CABLES LS FIRE APPROVED AND CABLE FACTORY ACCORDING TO THE EU REGULATION 305/2011
CPR EN 50575:2014 +A1:2016

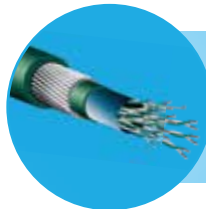
Summary



INSTRUMENTATION CABLE - 1
SHIELDED AND ARMURED



CONTROL CABLES - 2
SHIELDED AND ARMURED



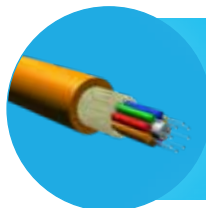
THERMOCOUPLE CABLES - 3
EXTENSION AND COMPENSATING
SHIELDED AND ARMURED



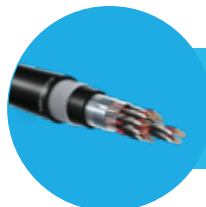
POWER CABLES - 4
LOW VOLTAGE
SHIELDED AND ARMURED



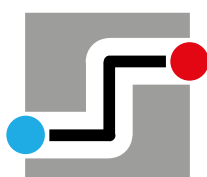
HYBRID CABLES - 5
COPPER AND FIBER OPTIC



EXTREME APPLICATIONS - 6
MUD RESISTANT CABLES
GAS TIGHT CABLES
ARTIC CABLES TRCU - EAC



THE CONSTRUCTION - 7
PRODUCTS REGULATION "CPR"



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Special cables on demand since 1999 - CPR UE 305/2011 COMPLIANCE

Extreme applications

MUD

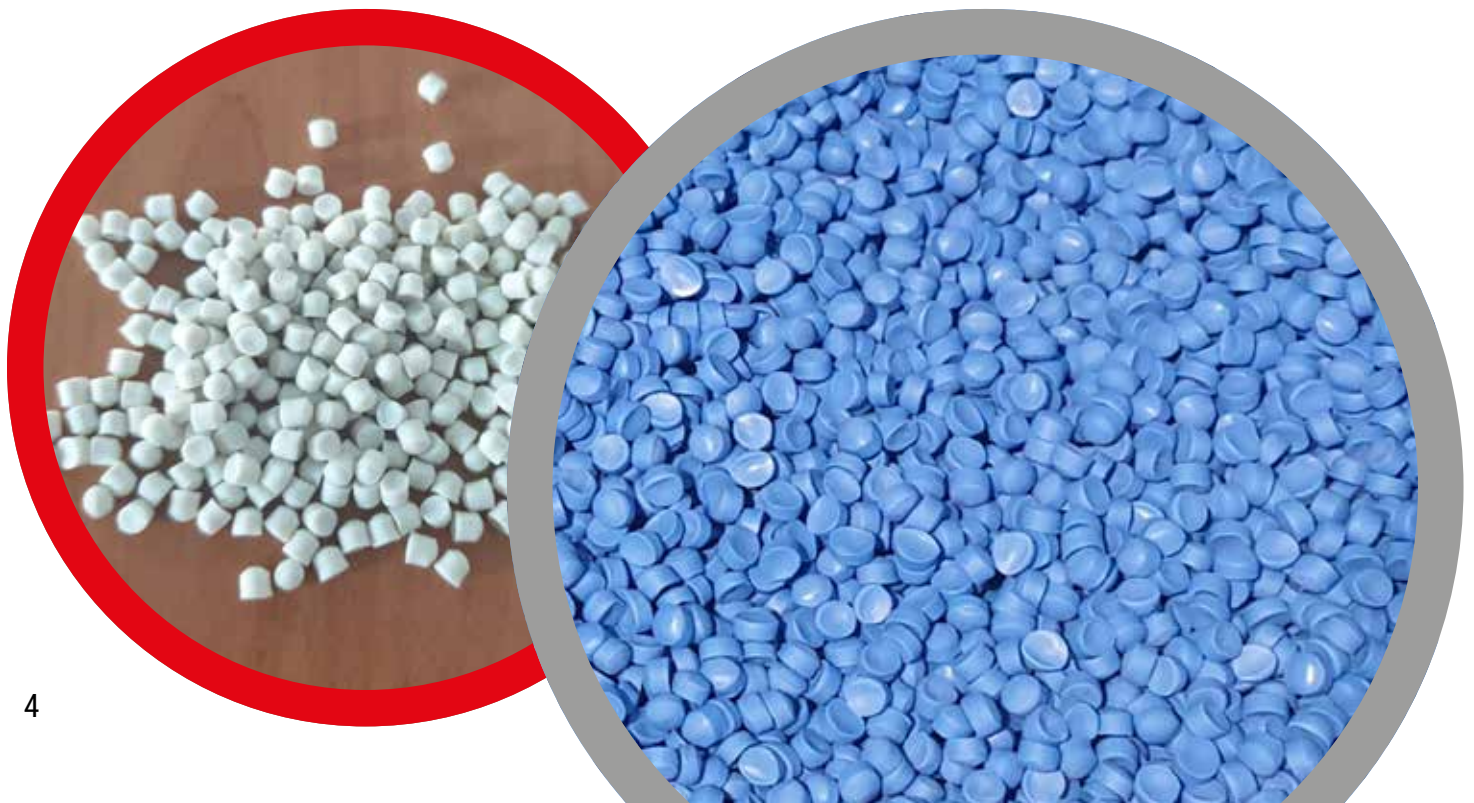
Compound type SHF2 acc. to IEC 60092-360

**Thermoset, crosslinked by Dry Silane procedure
to be resistant to organic fluids**

Conforming to NEK 606:2016 requisitions

- ✓ Resistance to oils as per IRM 902 e 903 along 7 days at 100°C
- ✓ Resistance (mud water based) to calcium bromide along 56 days at 70°C
- ✓ Resistance to water absorption as per IEC 60811 along 7 days at 70°C

Cables fit for offshore applications on platforms, (floating prod. storage and offloading unit), drilling pumps...and where organic fluids are present in petrochemical environments



GAS TIGHT

**Gelly filled cable according to IEC 60079-14 annexe E
To prevent gas and vapour migration all along the cable
inbetween cores interstices
Fit for use in explosion proof and hazardous areas ATEX**

✓ In-house testing equipment to release immediate test report

Cables suitable for use in gas plants with high risk of gas dispersion,when buffered cable glands are not provided



Extremes climates

Desert

UV and weathering resistant cables according to ISO 4892 and with armouring for direct burial

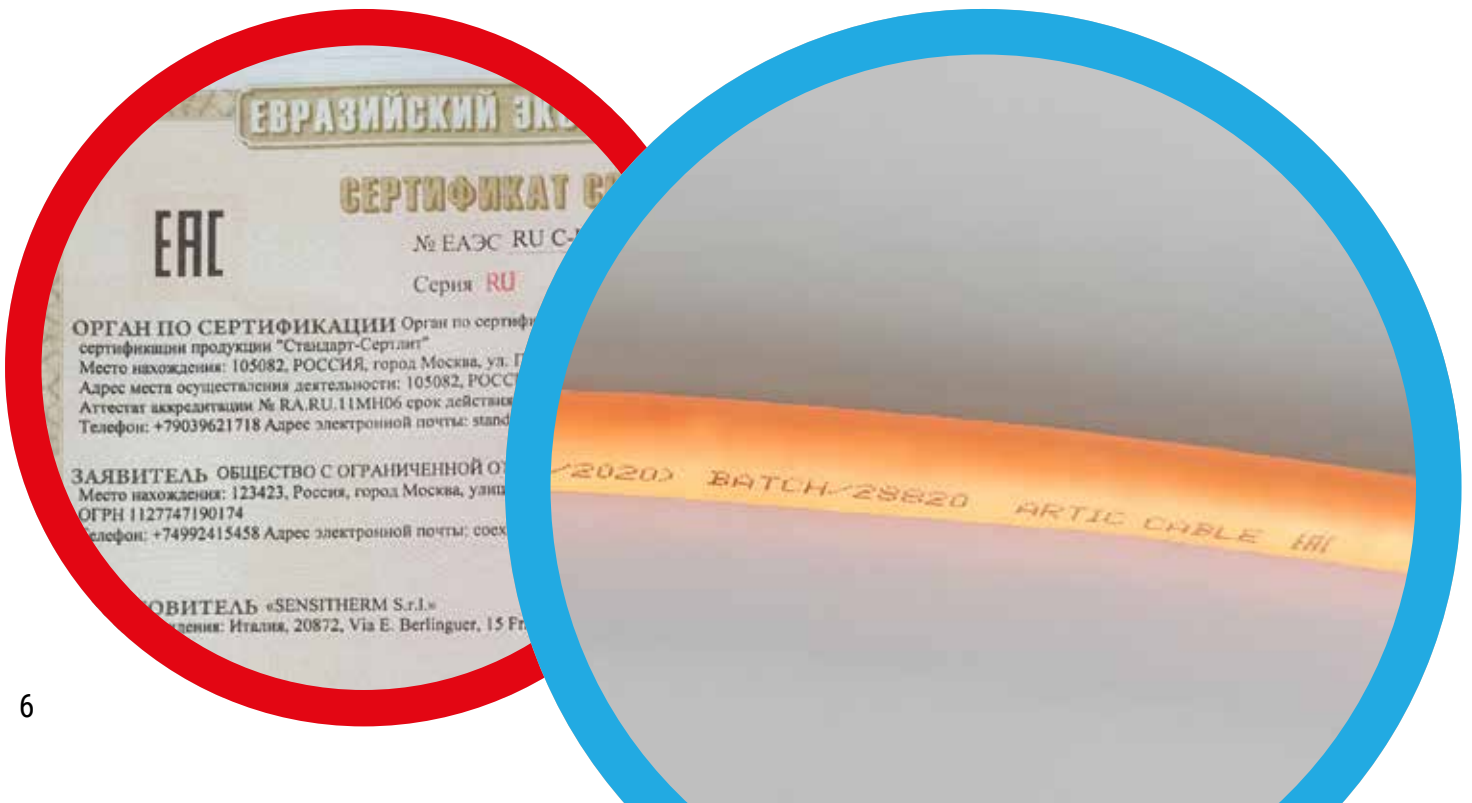
Arctic

Cables resistant to arctic temperatures up to -52°C as per IEC 60811

Cold bending test -35°C

With laying minimum temperature -15°C

Cables are EAC TRCU certified and have technical passport 004/2011 for Russia



Fire behaviours

Flame retardancy test:

acc.to IEC 60332-1 | CEI 20-35 | EN50265-2-1

acc.to IEC 60332-3-24 | CEI 20-22/3 | EN50266-2-4

acc.to IEC 60332-3-22 | CEI 20-22/2 | EN50265-2-2

Low smoke and halogen free:

acc.to IEC 60754-2 | CEI 20-37/2 | EN50267-2-2

Low smoke density emission:

acc.to IEC 61034 | EN50268

Fire resistant test:

according to IEC 60331-11

according to IEC 60331-21

according to IEC 60331-23

according to CEI EN 50200 (PH30-PH60-PH90-PH120)

according to BS6387

Class Cca s1b-d1-a1:

according to CPR EU 305/2011 | EN 50575:2014 A1

Class B2ca s1b-d1a1:

according to CPR EU 305/2011 | EN 50575:2014 A1



Il Comitato Elettrotecnico Italiano ha emesso, in data 1° settembre 2016, la Norma CEI UNEL 35016 che fissa, sulla base delle prescrizioni normative installative CENELEC e CEI, le quattro classi di reazione al fuoco per i cavi elettrici in relazione al Regolamento Prodotti da Costruzione (UE 305/2011), che consentono di rispettare le prescrizioni installative nell'attuale versione della Norma CEI 64-8. Norma CEI UNEL si applica a tutti i cavi elettrici, siano essi per il trasporto di energia o di trasmissione dati con conduttori metallici o dielettrici, per installazioni permanenti negli edifici e opere di ingegneria civile con lo scopo di supportare progettisti ed utilizzatori nella scelta del cavo adatto per ogni tipo di installazione.

CPR tabella di correlazione

LUOGHI DI IMPIEGO	LIVELLO DI RISCHIO	DESIGNAZIONE CPR	CLASSE DI PRESTAZIONE
<p>Aerostazioni, stazioni ferroviarie, stazioni marittime, metropolitane in tutto o in parte sotterranee. Gallerie stradali di lunghezza superiore a 500 m, ferroviarie superiori a 1000 m.</p>	ALTO	FG180M16 0,6/1Kv	B2ca-s1a, d1, a1
<p>Strutture sanitarie, locali di spettacolo e di intrattenimento in genere, palestre e centri sportivi. Alberghi, pensioni, motel, villaggi, residenze turistico-alberghiere. Scuole di ogni ordine, grado e tipo. Locali adibiti ad esposizione e/o vendita all'ingrosso o al dettaglio. Aziende ed uffici con oltre 300 persone presenti; biblioteche ed archivi, musei, gallerie, esposizioni e mostre. Edifici destinati ad uso civile, con altezza antincendio superiore a 24 m.</p>	MEDIO	FG160M16 0,6/1Kv	Cca-s1b, d1, a1
<p>Edifici destinati ad uso civile, con altezza antincendio inferiore a 24 m, sale d'attesa, bar, ristoranti, studi medici.</p>	BASSO (posa a fascio)	FG160R16 0,6/1Kv	Cca-s3, d1, a3
<p>Altre attività: installazioni non previste negli edifici di cui sopra e dove non esiste rischio di incendio e pericolo per persone e/o cose.</p>	BASSO (posa singola)	FR2OR 4501750V	Eca

ESEMPIO DI CLASSIFICAZIONE

Cca

PROPAGAZIONE INCENDIO

- Lunghezza di propagazione della fiamma: $FS \leq 2,0$ m
- Quantità totale di calore rilasciato: $THR_{1200s} \leq 30$ MJ
- Valore del picco di calore rilasciato: Picco HRR ≤ 60 KW
- Tasso di incremento dell'incendio: $FIGRA \leq 300$ Ws^{-1}
- Altezza di bruciatura: $H \leq 425$ mm

s1b

FUMI

- Quantità totale di fumo emesso: $TSP_{1200s} \leq 50$ m^2
- Valore del picco del fumo emesso: picco SPR $\leq 0,25$ m^2/s
- Trasmittanza: ≥ 60 % < 80 %

d1

GOCCE

- Assenza di gocce/particelle ardenti persistenti: oltre i 10 s entro 1200 s

a1

ACIDITÀ

- Conduttività: $< 2,5$ $\mu S/mm$ e $pH > 4,3$



I requisiti considerati rilevanti per i cavi

A) SICUREZZA IN CASO DI INCENDIO (Requisito n. 2 – Allegato 1 del Regolamento CPR)

Le opere di costruzione devono essere concepite e realizzate in modo che, in caso di incendio:

1. La generazione e la propagazione del fuoco e del fumo al loro interno siano limitate
2. La propagazione del fuoco a opere di costruzione vicine sia limitata
3. Gli occupanti possano abbandonare le opere di costruzione o essere soccorsi in altro modo
4. Si tenga conto della sicurezza delle squadre di soccorso

B) IGIENE, SALUTE E AMBIENTE (Requisito n. 3 – Allegato 1 del Regolamento CPR)

Le opere di costruzione devono essere concepite e realizzate in modo da non rappresentare, durante il loro intero ciclo di vita, una minaccia per l'igiene o la salute e la sicurezza.

La conformità dei cavi al requisito di igiene, salute e ambiente si ritiene implicitamente assolto dal rispetto della Direttiva RoHS (2011/65/UE e successivi adeguamenti) e del Regolamento REACH (1907/2006/CE).

Il Regolamento Prodotti da Costruzione per i Cavi

? I CAVI ELETTRICI RICADONO NEL REGOLAMENTO CPR?

Tutti i cavi elettrici per energia, controllo e telecomunicazioni di qualsiasi tensione e tipo di conduttore sono richiamati dalla tabella 1 dell'allegato IV del Regolamento CPR che definisce i vari livelli di prestazione con l'obiettivo di limitare la generazione la propagazione dell'incendio e le emissioni di fumo, riconoscendo l'importanza del loro comportamento ed il loro ruolo in caso di incendio.

? COSA COMPORTA PER I CAVI RICADERE NELLO SCOPO DELLA CPR?

Con l'emissione di un cavo sul mercato occorrerà che il produttore rediga la Dichiarazione di Prestazione (DoP: Declaration of performance) di quel cavo come da allegato III del Regolamento CPR e che sia in possesso dei requisiti necessari per poter porre la marcatura CE assumendosi la responsabilità della conformità del prodotto a quanto dichiarato. La DoP dovrà accompagnare ogni cavo immesso sul mercato fino all'utilizzatore finale, il quale dovrà esibirla alle autorità competenti qualora esse lo richiedano (art. 7 del Regolamento CPR) potrà essere fornita informata cartacea o su supporto elettronico.

? COSA SI INTENDE PER INGEGNERIA CIVILE?

Si definiscono opere di ingegneria civile i lavori di costruzione, manutenzione, riparazione, demolizione, conservazione, risanamento, ristrutturazione o equipaggiamento, la trasformazione, il rinnovamento o lo smantellamento di opere fisse, permanenti o temporanee, in muratura, in cemento armato, in metallo, in legno o in altri materiali, comprese le parti strutturali delle linee elettriche e le parti strutturali degli impianti elettrici, le opere stradali, ferroviarie, idrauliche, marittime, idroelettriche e, solo per la parte che comporta lavori edili o di ingegneria civile, le opere di bonifica, di sistemazione forestale e di sterro. Sono, inoltre, lavori di costruzione edile o di ingegneria civile gli scavi ed il montaggio e lo smontaggio di elementi prefabbricati utilizzati per la realizzazione di lavori edili o di ingegneria civile. (Testo unico sulla salute e sicurezza sul lavoro art. 89, comma 1, lettera a).

? QUALI CAVI SONO INCLUSI SOTTO LA CPR? – Fonte Europacable –

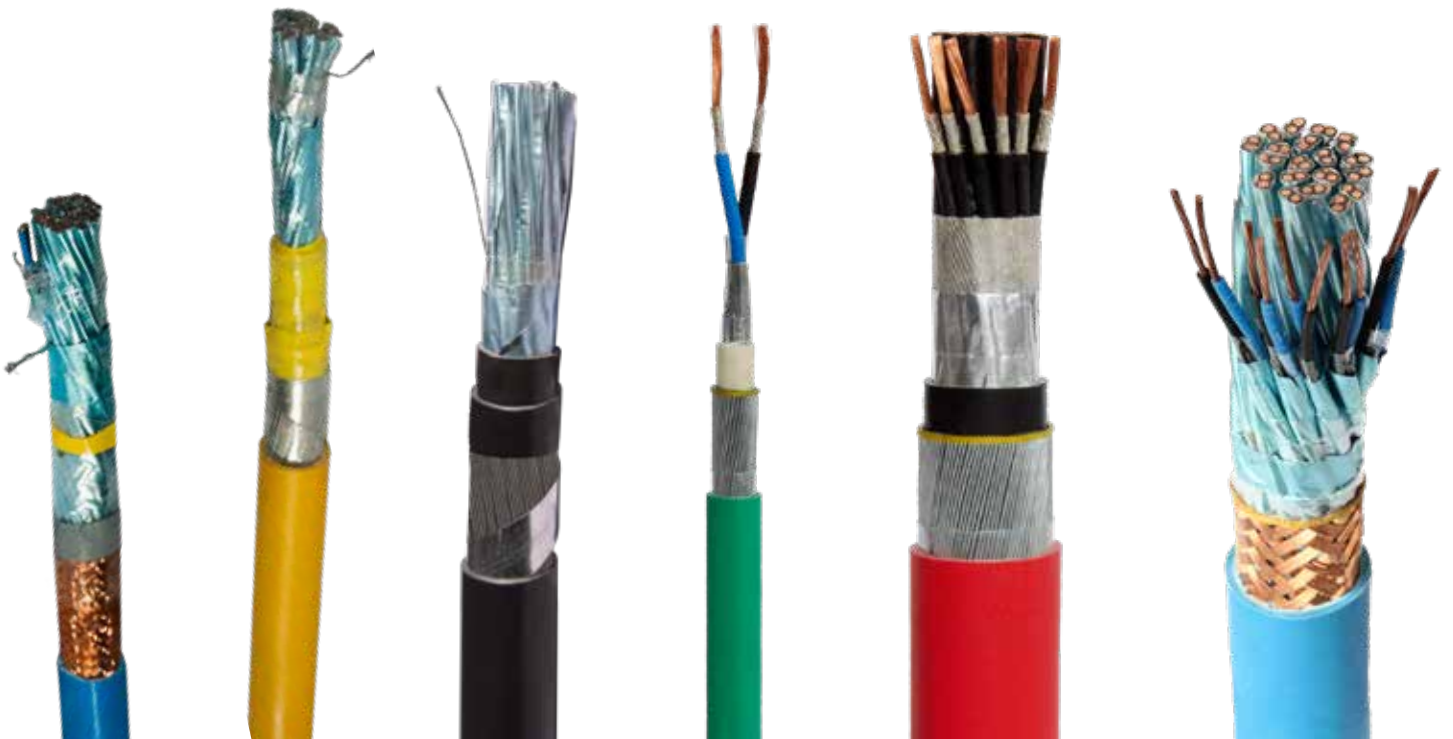
- Cavi per installazioni permanenti nelle costruzioni che rientrano nell'ambito di due tipologie di prodotti:
- Cavi destinati ad essere utilizzati per la fornitura di energia elettrica e delle comunicazioni in edifici e altre opere di ingegneria civile soggetti a requisiti prestazionali di reazione al fuoco;
 - E in futuro cavi soggetti a requisiti prestazionali di resistenza al fuoco destinati ad essere utilizzati per la fornitura di energia elettrica, delle comunicazioni e rilevazione/allarme incendio in edifici e altre opere di ingegneria civile dove è essenziale assicurare la continuità nella fornitura di energia e/o segnale per la sicurezza dell'installazione.





 **Sensitherm** 

Special cables on demand since 1999 - CPR UE 305/2011 COMPLIANCE



CPR approved special cables

INSTRUMENTATION CABLE - 101 CPR EU 305/2011 12

CU, G16 INSULATION, INDIVIDUAL (IF REQUIRED) AND OVERALL SCREEN, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 – HALOGEN FREE

INSTRUMENTATION CABLE - 102 CPR EU 305/2011 15

CU, G16 INSULATION, INDIVIDUAL (IF REQUIRED) AND OVERALL SCREEN, M16 INNER SHEATH, STEEL WIRE ARMOUR,
M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

MULTICORE POWER CABLE - 103 CPR EU 305/2011 19

CU, G16 INSULATION, M16 INNER SHEATH, STEEL WIRE ARMOUR, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

INSTRUMENTATION CABLE - 104 CPR EU 305/2011 22

CU, G16 INSULATION, INDIVIDUAL ALUMINIUM SCREEN AND COPPER WIRE BRAID OVERALL SCREEN, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

CONTROL AND POWER CABLE - 105 CPR EU 305/2011 24

CU, G16 INSULATION, OVERALL SCREEN, M16 INNER SHEATH, STEEL WIRE ARMOUR, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

CONTROL AND POWER CABLE - 106 CPR EU 305/2011 26

CU, G16 INSULATION, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

CONTROL AND POWER CABLE - 107 CPR EU 305/2011 29

CU, G16 INSULATION, R16 INNER SHEATH, STEEL WIRE ARMOUR, R16 OUTER SHEATH
IEC 60332.1 IEC 60332.3

THERMOCOUPLE EXTENSION CABLE - 109 CPR EU 305/2011 32

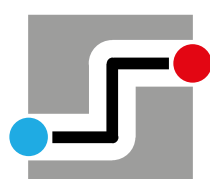
ALLOY, G16 INSULATION, INDIVIDUAL (IF REQUIRED) AND OVERALL SCREEN, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 – HALOGEN FREE

FIRE RESISTANT CABLE - 110 CPR EU 305/2011 34

F Conductor, FR-HEPR G18 INSULATION, M16 OUTER SHEATH. EN50200 PH 120,
IEC 60502-1, IEC 60332.3 – HALOGEN FREE

POWER AND CONTROL CABLE - 111 CPR EU 305/2011 36

F Conductor, FR-HEPR G18 INSULATION, M16 OUTER SHEATH.
IEC 60502-1, IEC 60332.3 – HALOGEN FREE – CPR B2ca s1a d1 a1



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Special cables on demand since 1999 - CPR UE 305/2011 COMPLIANCE

Instrumentation Cable – 101

FG16XHOHM16

CPR EU 305/2011
Cca s1b-d1-a1

CU, G16 INSULATION, INDIVIDUAL (IF REQUIRED) AND OVERALL SCREEN, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 – HALOGEN FREE

Technical Specifications n° 101/18 of 12/01/2018 Rev. 0

Type: F-Cu/G16/IS/OS/M16 0,6/1KV - F-Cu/G16/OS/M16 0,6/1KV FG16XHOHM16 0,6/1 KV - FG16XOHM16 0,6/1KV
Conductor: Flexible tinned and/or plain copper conductor according to IEC60228 cl.5
Insulation: EPR G16 type extruded compound
 Temperature range -15 +90° C
 Temperature laying -5 +70° C

SIZE	THICKNESS
0,75 mm ²	0,70 ± 0,02 mm
1,0 mm ²	0,70 ± 0,02 mm
1,5 mm ²	0,70 ± 0,02 mm
2,5 mm ²	0,70 ± 0,02 mm

Laying up: Twisted to pair, Blue - Black numbered (or to be agreed)

Pair screen: (if necessary) Applied over the single pair/triad will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 mm size 0,5sqmm, over the screen will be placed a further Mylar tape.

Overall screen: Applied over total assembly will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.

Outer sheath: M16 LSZH extruded compound
Colour: Blue/Black (or to be agreed)

Marking: On the outer sheath "Sensitherm – FG16XHOHM16 0,6/1 KV Siz. IEC 60332.3 WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001 m"

Performance:

- Test voltage core to core 3,5 KV
- Flame retardant according to IEC 60332-3-24, CEI 20-22/3
- Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2
- Low smoke density emiss. IEC 61034 1/2
- Hydrocarbon and UV resistant
- Cable for intrinsically safe application
- Inductance </= 0,90 mH/Km
- Capacitance /= 0,200 µF/Km
- This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded
- EN50575 tested for approval

ITEM			THICKNESS OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM
FG16OHM16	0,6/1KV	1x2x0,75 mm ²	1,8	8,8	110	70
FG16XHOHM16	0,6/1KV	2x2x0,75 mm ²	1,8	12,9	200	100
FG16XHOHM16	0,6/1KV	3x2x0,75 mm ²	1,8	13,6	250	110
FG16XHOHM16	0,6/1KV	4x2x0,75 mm ²	1,8	14,7	300	120
FG16XHOHM16	0,6/1KV	5x2x0,75 mm ²	1,8	16,1	360	130
FG16XHOHM16	0,6/1KV	6x2x0,75 mm ²	1,8	17,4	400	130
FG16XHOHM16	0,6/1KV	7x2x0,75 mm ²	1,8	17,6	450	140
FG16XHOHM16	0,6/1KV	12x2x0,75 mm ²	2,0	23	700	180
FG16XHOHM16	0,6/1KV	16x2x0,75 mm ²	2,0	25,6	910	200
FG16XHOHM16	0,6/1KV	24x2x0,75 mm ²	2,0	30	1250	240
FG16OHM16	0,6/1KV	1x2x1 mm ²	1,8	9	120	70
FG16XHOHM16	0,6/1KV	2x2x1 mm ²	1,8	13,5	220	110
FG16XHOHM16	0,6/1KV	3x2x1 mm ²	1,8	14	270	110
FG16XHOHM16	0,6/1KV	4x2x1 mm ²	1,8	15,5	330	120
FG16XHOHM16	0,6/1KV	5x2x1 mm ²	1,8	16,8	400	130
FG16XHOHM16	0,6/1KV	6x2x1 mm ²	1,8	18,4	250	140
FG16XHOHM16	0,6/1KV	7x2x1 mm ²	1,8	18,6	500	140
FG16XHOHM16	0,6/1KV	12x2x1 mm ²	2,0	24	800	190
FG16XHOHM16	0,6/1KV	16x2x1 mm ²	2,0	27	1030	210
FG16XHOHM16	0,6/1KV	24x2x1 mm ²	2,0	32,5	1420	250
FG16OHM16	0,6/1KV	1x2x1,5 mm ²	1,8	9,5	130	80
FG16XHOHM16	0,6/1KV	2x2x1,5 mm ²	1,8	14,4	250	120
FG16XHOHM16	0,6/1KV	3x2x1,5 mm ²	1,8	15	320	130
FG16XHOHM16	0,6/1KV	4x2x1,5 mm ²	1,8	16,5	390	130
FG16XHOHM16	0,6/1KV	5x2x1,5 mm ²	1,8	18	470	140
FG16XHOHM16	0,6/1KV	6x2x1,5 mm ²	1,8	19,6	530	160
FG16XHOHM16	0,6/1KV	7x2x1,5 mm ²	1,8	19,8	600	160
FG16XHOHM16	0,6/1KV	12x2x1,5 mm ²	2,0	26	950	210
FG16XHOHM16	0,6/1KV	16x2x1,5 mm ²	2,0	29	1240	230
FG16XHOHM16	0,6/1KV	24x2x1,5 mm ²	2,0	35	1720	280
FG16XHM16	0,6/1KV	1x2x2,5 mm ²	1,8	10,6	170	80
FG16XHOHM16	0,6/1KV	2x2x2,5 mm ²	1,8	16	320	130
FG16XHOHM16	0,6/1KV	3x2x2,5 mm ²	1,8	16,8	400	140
FG16XHOHM16	0,6/1KV	6x2x2,5 mm ²	2,0	23	720	180
FG16XHOHM16	0,6/1KV	7x2x2,5 mm ²	2,0	22,4	810	180
FG16XHOHM16	0,6/1KV	12x2x2,5 mm ²	2,0	29	1260	230
FG16XHOHM16	0,6/1KV	16x2x2,5 mm ²	2,0	32,6	1650	260
FG16XHOHM16	0,6/1KV	24x2x2,5 mm ²	2,0	40	2300	320
FG16OHM16	0,6/1KV	1x3x0,75 mm ²	1,8	9	130	70
FG16XHOHM16	0,6/1KV	2x3x0,75 mm ²	1,8	15	250	120
FG16XHOHM16	0,6/1KV	3x3x0,75 mm ²	1,8	15,8	310	130

FG16XHOHM16	0,6/1KV	4x3x0,75 mm ²	1,8	17,3	380	140
FG16XHOHM16	0,6/1KV	5x3x0,75 mm ²	1,8	18,9	460	150
FG16XHOHM16	0,6/1KV	6x3x0,75 mm ²	1,8	21	520	170
FG16XHOHM16	0,6/1KV	7x3x0,75 mm ²	1,8	20,6	590	170
FG16XHOHM16	0,6/1KV	12x3x0,75 mm ²	2,0	27	930	210
FG16XHOHM16	0,6/1KV	16x3x0,75 mm ²	2,0	30,2	1210	240
FG16XHOHM16	0,6/1KV	24x3x0,75 mm ²	2,0	36	1660	290
FG16OHM16	0,6/1KV	1x3x1 mm ²	1,8	9,6	140	80
FG16XHOHM16	0,6/1KV	2x3x1 mm ²	1,8	15,8	280	130
FG16XHOHM16	0,6/1KV	3x3x1 mm ²	1,8	16,7	350	140
FG16XHOHM16	0,6/1KV	4x3x1 mm ²	1,8	18,2	430	150
FG16XHOHM16	0,6/1KV	5x3x1 mm ²	1,8	20	520	160
FG16XHOHM16	0,6/1KV	5x3x1 mm ²	1,8	20	520	160
FG16XHOHM16	0,6/1KV	6x3x1 mm ²	1,8	21,8	590	170
FG16XHOHM16	0,6/1KV	7x3x1 mm ²	1,8	22	670	180
FG16XHOHM16	0,6/1KV	12x3x1 mm ²	2,0	29	1030	230
FG16XHOHM16	0,6/1KV	16x3x1 mm ²	2,0	32,4	1380	260
FG16XHOHM16	0,6/1KV	24x3x1 mm ²	2,0	38	1860	300
FG16OHM16	0,6/1KV	1x3x1,5 mm ²	1,8	10	160	80
FG16XHOHM16	0,6/1KV	2x3x1,5 mm ²	1,8	16,8	330	140
FG16XHOHM16	0,6/1KV	3x3x1,5 mm ²	1,8	17,8	420	150
FG16XHOHM16	0,6/1KV	4x3x1,5 mm ²	1,8	19,5	510	160
FG16XHOHM16	0,6/1KV	5x3x1,5 mm ²	1,8	21,4	630	170
FG16XHOHM16	0,6/1KV	6x3x1,5 mm ²	2,0	24	740	190
FG16XHOHM16	0,6/1KV	7x3x1,5 mm ²	2,0	23,8	840	180
FG16XHOHM16	0,6/1KV	12x3x1,5 mm ²	2,0	31	1290	250
FG16XHOHM16	0,6/1KV	16x3x1,5 mm ²	2,0	34,8	1690	270
FG16XHOHM16	0,6/1KV	24x3x1,5 mm ²	2,0	43	2360	340
FG16OHM16	0,6/1KV	1x3x2,5 mm ²	1,8	11	210	90
FG16XHOHM16	0,6/1KV	2x3x2,5 mm ²	1,8	19	420	150
FG16XHOHM16	0,6/1KV	3x3x2,5 mm ²	1,8	20	540	160
FG16XHOHM16	0,6/1KV	4x3x2,5 mm ²	1,8	22	670	180
FG16XHOHM16	0,6/1KV	6x3x2,5 mm ²	2,0	27	980	210
FG16XHOHM16	0,6/1KV	12x3x2,5 mm ²	2,0	35	1750	280

Weight and diameter: Are theoretical + / - 10%

Overall screen: Applied over total assembly will be wrapped with polyester tape and shielded with Aluminium / Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.

Intended use: Instrumentation cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Instrumentation Cable - 102

CPR EU 305/2011

FG16XHOHM16FM6 – FG16XHOHM16AM16

Cca s1b-d1-a1

CU, G16 INSULATION, INDIVIDUAL (IF REQUIRED) AND OVERALL SCREEN, M16 INNER SHEATH, STEEL WIRE ARMOUR, M16 OUTER SHEATH

IEC 60332.1 IEC 60332.3 - HALOGEN FREE

Technical Specifications n° 102/18 of 12/01/2018 Rev. 0

Type: F-Cu/G16/IS/OS/M16/SWA/M16 0,6/1KV - F-Cu/G16/OS/M16/SWA/M16 0,6/1KV
FG16XHOHM16FM16 0,6/1 KV - FG16XOHM16FM16 0,6/1KV

Conductor: Flexible tinned and/or plain copper conductor according to IEC 60228 cl.5

Insulation: EPR G16 type extruded compound

Temperature range -15 +90° C

Temperature laying -5 +70° C

SIZE	THICKNESS
0,75 mm ²	0,70 ± 0,02 mm
1,0 mm ²	0,70 ± 0,02 mm
1,5 mm ²	0,70 ± 0,02 mm
2,5 mm ²	0,70 ± 0,02 mm

Laying up: Twisted to pair, Blue - Black numbered (or to be agreed)

**Pair screen:
(if necessary)** Applied over the single pair/triad will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 mm size 0,5sqmm, over the screen will be placed a further Mylar tape.

Overall screen: Applied over total assembly will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.

Inner sheath: M16 LSZH extruded compound

Armour: Galvanized steel round wires plus wrapping polyester tape (SWA) or Galvanized steel wires braid (SWB)

Outer sheath: M16 LSZH extruded compound
Colour: Blue/Black (or to be agreed)

Marking: On the outer sheath "Sensitherm – FG16XHOHM16FM16 0,6/1 KV Siz. IEC 60332.3
WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001 m"

Performance:

- Test voltage core to core 3,5 KV
- Flame retardant according to IEC 60332-3-24, CEI 20-22/3
- Low smoke and Halogen free as per IEC 60754-2, CE I20-37/2
- Low smoke density emiss. IEC 61034 1/2
- Hydrocarbon and UV resistant
- Rodent resistant
- Fit for direct burial

- Cable for intrinsically safe application
- Inductance $\leq 0,90$ mH/Km
- Capacitance $\leq 0,200$ μ F/Km
- This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded
- EN50575 tested for approval

ITEM	THICK. INNER SHEATH MM	Ø OVER INNER SHEATH MM	THICK. OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM		
FG16OHM16FM16	0,6/1KV	1x2x0,75 mm ²	1,0	7	1,8	11,8	230	160
FG16XHOHM16FM16	0,6/1KV	2x2x0,75 mm ²	1,0	11,4	1,8	16,4	380	220
FG16XHOHM16FM16	0,6/1KV	3x2x0,75 mm ²	1,0	12	1,8	16,8	450	230
FG16XHOHM16FM16	0,6/1KV	4x2x0,75 mm ²	1,0	13,2	1,8	18	520	250
FG16XHOHM16FM16	0,6/1KV	5x2x0,75 mm ²	1,0	14,5	1,8	20	610	280
FG16XHOHM16FM16	0,6/1KV	6x2x0,75 mm ²	1,0	16	1,8	20,8	680	290
FG16XHOHM16FM16	0,6/1KV	7x2x0,75 mm ²	1,0	16,2	1,8	21,4	730	310
FG16XHOHM16FM16	0,6/1KV	12x2x0,75 mm ²	1,0	21,4	2,0	26	1080	360
FG16XHOHM16FM16	0,6/1KV	16x2x0,75 mm ²	1,0	23,6	2,0	29,6	1380	420
FG16XHOHM16FM16	0,6/1KV	24x2x0,75 mm ²	1,0	30	2,0	34	1840	470
FG16OHM16FM16	0,6/1KV	1x2x1 mm ²	1,0	7,6	1,8	12,4	250	170
FG16XHOHM16FM16	0,6/1KV	2x2x1 mm ²	1,0	12	1,8	16,8	410	230
FG16XHOHM16FM16	0,6/1KV	3x2x1 mm ²	1,0	12,7	1,8	17,5	490	250
FG16XHOHM16FM16	0,6/1KV	4x2x1 mm ²	1,0	14	1,8	19	570	270
FG16XHOHM16FM16	0,6/1KV	5x2x1 mm ²	1,0	15,4	1,8	20,8	670	300
FG16XHOHM16FM16	0,6/1KV	6x2x1 mm ²	1,0	17	1,8	22	750	310
FG16XHOHM16FM16	0,6/1KV	7x2x1 mm ²	1,0	16,8	1,8	22,4	810	320
FG16XHOHM16FM16	0,6/1KV	12x2x1 mm ²	1,0	23	2,0	28	1210	390
FG16XHOHM16FM16	0,6/1KV	16x2x1 mm ²	1,0	25	2,0	31	1540	430
FG16XHOHM16FM16	0,6/1KV	24x2x1 mm ²	1,0	31,4	2,0	36	2070	500
FG16OHM16FM16	0,6/1KV	1x2x1,5 mm ²	1,0	8	1,8	12,8	280	180
FG16XHOHM16FM16	0,6/1KV	2x2x1,5 mm ²	1,0	12,8	1,8	17,8	460	250
FG16XHOHM16FM16	0,6/1KV	3x2x1,5 mm ²	1,0	13,8	1,8	18,5	550	260
FG16XHOHM16FM16	0,6/1KV	4x2x1,5 mm ²	1,0	15	1,8	20	650	280
FG16XHOHM16FM16	0,6/1KV	5x2x1,5 mm ²	1,0	16,6	1,8	22	770	310
FG16XHOHM16FM16	0,6/1KV	6x2x1,5 mm ²	1,0	18	1,8	23	860	330
FG16XHOHM16FM16	0,6/1KV	7x2x1,5 mm ²	1,0	18,4	1,8	23,7	940	340
FG16XHOHM16FM16	0,6/1KV	12x2x1,5 mm ²	1,0	24,6	2,0	29,8	1440	420
FG16XHOHM16FM16	0,6/1KV	16x2x1,5 mm ²	1,0	27	2,0	33	1820	460

FG16XHOHM16FM16	0,6/1KV 24x2x1,5 mm ²	1,0	34	2,0	37,6	2470	530
FG16XH16FM16	0,6/1KV 1x2x2,5 mm ²	1,0	9	1,8	16	326	220
FG16XHOHM16FM16	0,6/1KV 2x2x2,5 mm ²	1,0	14,4	1,8	19,4	560	280
FG16XHOHM16FM16	0,6/1KV 3x2x2,5 mm ²	1,0	15,6	1,8	20,8	670	300
FG16XHOHM16FM16	0,6/1KV 4x2x2,5 mm ²	1,0	17	1,8	22	810	310
FG16XHOHM16FM16	0,6/1KV 5x2x2,5 mm ²	1,0	18,6	1,8	24,6	990	350
FG16XHOHM16FM16	0,6/1KV 6x2x2,5 mm ²	1,0	21	1,8	25,4	1090	360
FG16XHOHM16FM16	0,6/1KV 7x2x2,5 mm ²	1,0	21,5	2,0	26,4	1230	380
FG16XHOHM16FM16	0,6/1KV 12x2x2,5 mm ²	1,0	27,3	2,0	32,4	1830	460
FG16XHOHM16FM16	0,6/1KV 16x2x2,5 mm ²	1,0	31	2,0	36,5	2360	520
FG16XHOHM16FM16	0,6/1KV 24x2x2,5 mm ²	1,0	38	2,0	43	3260	600
FG16OHM16FM16	0,6/1KV 1x3x0,75 mm ²	1,0	7,6	1,8	12,4	260	170
FG16XHOHM16FM16	0,6/1KV 2x3x0,75 mm ²	1,0	13,5	1,8	18,5	470	270
FG16XHOHM16FM16	0,6/1KV 3x3x0,75 mm ²	1,0	14,5	1,8	19,2	550	280
FG16XHOHM16FM16	0,6/1KV 4x3x0,75 mm ²	1,0	15,8	1,8	20,8	650	290
FG16XHOHM16FM16	0,6/1KV 5x3x0,75 mm ²	1,0	17,3	1,8	22,8	770	320
FG16XHOHM16FM16	0,6/1KV 6x3x0,75 mm ²	1,0	19,2	1,8	24	860	340
FG16XHOHM16FM16	0,6/1KV 7x3x0,75 mm ²	1,0	19,5	2,0	24,6	940	350
FG16XHOHM16FM16	0,6/1KV 12x3x0,75 mm ²	1,0	25,8	2,0	30,7	1400	440
FG16XHOHM16FM16	0,6/1KV 16x3x0,75 mm ²	1,0	28,5	2,0	34,4	1800	490
FG16XHOHM16FM16	0,6/1KV 24x3x0,75 mm ²	1,0	35,6	2,0	36	2420	500
FG16OHM16FM16	0,6/1KV 1x3x1 mm ²	1,0	8	1,8	13,2	290	180
FG16XHOHM16FM16	0,6/1KV 2x3x1 mm ²	1,0	14,3	1,8	19,6	520	280
FG16XHOHM16FM16	0,6/1KV 3x3x1 mm ²	1,0	15,2	1,8	20,6	620	300
FG16XHOHM16FM16	0,6/1KV 4x3x1 mm ²	1,0	16,6	1,8	22,2	730	310
FG16XHOHM16FM16	0,6/1KV 5x3x1 mm ²	1,0	18,4	1,8	24	850	340
FG16XHOHM16FM16	0,6/1KV 6x3x1 mm ²	1,0	20	2,0	25,8	970	370
FG16XHOHM16FM16	0,6/1KV 7x3x1 mm ²	1,0	20,2	2,0	26	1080	370
FG16XHOHM16FM16	0,6/1KV 12x3x1 mm ²	1,0	27	2,0	33	1640	460
FG16XHOHM16FM16	0,6/1KV 16x3x1 mm ²	1,0	30	2,0	36	2030	500
FG16XHOHM16FM16	0,6/1KV 24x3x1 mm ²	1,0	37	2,0	43	2840	600
FG16OHM16FM16	0,6/1KV 1x3x1,5 mm ²	1,0	8,5	1,8	13,3	320	180
FG16XHOHM16FM16	0,6/1KV 2x3x1,5 mm ²	1,0	15,4	1,8	20,6	580	300
FG16XHOHM16FM16	0,6/1KV 3x3x1,5 mm ²	1,0	16,6	1,8	21,4	700	310
FG16XHOHM16FM16	0,6/1KV 4x3x1,5 mm ²	1,0	18	1,8	23	840	320
FG16XHOHM16FM16	0,6/1KV 5x3x1,5 mm ²	1,0	19,8	1,8	25,4	990	360

FG16XHOHM16FM16	0,6/1KV 6x3x1,5 mm ²	1,0	22	1,8	27	1130	380
FG16XHOHM16FM16	0,6/1KV 7x3x1,5 mm ²	1,0	22,2	2,0	27,8	1280	390
FG16XHOHM16FM16	0,6/1KV 12x3x1,5 mm ²	1,0	30	2,0	34	1890	480
FG16XHOHM16FM16	0,6/1KV 16x3x1,5 mm ²	1,0	33	2,0	37	2490	520
FG16XHOHM16FM16	0,6/1KV 24x3x1,5 mm ²	1,0	41	2,0	45	3350	630
FG16OHM16FM16	0,6/1KV 1x3x2,5 mm ²	1,0	9,5	1,8	14,4	380	210
FG16XHOHM16FM16	0,6/1KV 2x3x2,5 mm ²	1,0	17,6	1,8	22,4	710	320
FG16XHOHM16FM16	0,6/1KV 3x3x2,5 mm ²	1,0	18,6	1,8	23,6	880	340
FG16XHOHM16FM16	0,6/1KV 4x3x2,5 mm ²	1,0	20,4	1,8	25,6	1060	360
FG16XHOHM16FM16	0,6/1KV 5x3x2,5 mm ²	1,0	22,5	1,8	28	1260	390
FG16XHOHM16FM16	0,6/1KV 6x3x2,5 mm ²	1,2	25	2,0	30	1450	420
FG16XHOHM16FM16	0,6/1KV 12x3x2,5 mm ²	1,2	33,5	2,0	38	2490	530

Weight and diameter: Are theoretical + / - 10%

Intended use: Instrumentation cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Multicore Power Cable - 103

FG160M16FM16 – FG160M16AM16

CPR EU 305/2011
Cca s1b-d1-a1

CU, G16 INSULATION, M16 INNER SHEATH, STEEL WIRE ARMOUR, M16 OUTER SHEATH.
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

Technical Specifications n° 103/18 of 12/01/2018 Rev. 0

Type: F-Cu/G16/M16/SWA/M16 0,6/1KV FG160M16FM16 0,6/1 KV
Conductor: Flexible tinned and/or plain copper conductor according to IEC 60228 cl.5
Insulation: EPR G16 type extruded compound
 Temperature range -15 +90° C
 Temperature laying -5 +70° C

SIZE	THICKNESS
1,50 mm ²	0,70 ± 0,02 mm
2,5 mm ²	0,70 ± 0,02 mm
4 mm ²	0,7 ± 0,02 mm
6 mm ²	0,70 ± 0,02 mm
10 mm ²	0,70 ± 0,02 mm
16 mm ²	0,70 ± 0,02 mm
25 mm ²	0,90 ± 0,02 mm
35 mm ²	0,90 ± 0,02 mm
50 mm ²	1,00 ± 0,02 mm
70 mm ²	1,10 ± 0,02 mm
95 mm ²	1,10 ± 0,02 mm
120 mm ²	1,20 ± 0,02 mm

Laying up: Twisted to core, UNEL (or to be agreed)
Inner sheath: M16 LSZH extruded compound
Armour: Galvanized steel round wires plus wrapping polyester tape (SWA) or Galvanized steel wires braid (SWB)
Outer sheath: M16 LSZH extruded compound
 Colour: Grey/Black (or to be agreed)
Marking: On the outer sheath "Sensitherm – FG160M16FM16 0,6/1 KV Siz. IEC 60332.3
 WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001 m"

- Performance:**
- Test voltage core to core 3,5KV
 - Flame retardant according to IEC60 332-3-22, CEI 20-22/2
 - Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2
 - Low smoke density emiss. IEC 61034 1/2
 - Hydrocarbon and UV resistant
 - Rodent resistant
 - Fit for direct burial
 - Cable for intrinsically safe application
 - Inductance $\leq 0,90\text{mH/Km}$
 - Capacitance $\leq 0,200\mu\text{F/Km}$
 - This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded
 - EN50575 tested for approval

ITEM	THICK. INNER SHEATH MM	Ø OVER INNER SHEATH MM	THICK. OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM
FG160M16FM16 0,6/1KV 2x1,5 mm ²	1,0	7,9	1,8	13,4	260
FG160M16FM16 0,6/1KV 3x1,5 mm ²	1,0	8,4	1,8	13,8	300
FG160M16FM16 0,6/1KV 4x1,5 mm ²	1,0	9	1,8	14,6	340
FG160M16FM16 0,6/1KV 5x1,5 mm ²	1,0	10	1,8	15,5	390
FG160M16FM16 0,6/1KV 6x1,5 mm ²	1,0	10,6	1,8	16,4	440
FG160M16FM16 0,6/1KV 7x1,5 mm ²	1,0	10,8	1,8	16,5	460
FG160M16FM16 0,6/1KV 10x1,5 mm ²	1,0	13,6	1,8	19,2	620
FG160M16FM16 0,6/1KV 12x1,5 mm ²	1,0	14,2	1,8	20	670
FG160M16FM16 0,6/1KV 16x1,5 mm ²	1,0	15,8	1,8	21,5	830
FG160M16FM16 0,6/1KV 20x1,5 mm ²	1,0	17,6	2,0	23,5	1020
FG160M16FM16 0,6/1KV 24x1,5 mm ²	1,0	20	2,0	25,5	1110
FG160M16FM16 0,6/1KV 48x1,5 mm ²	1,0	26	2,0	32	2000
FG160M16FM16 0,6/1KV 2x2,5 mm ²	1,0	9	1,8	14,4	310
FG160M16FM16 0,6/1KV 3x2,5 mm ²	1,0	9,4	1,8	14,8	360
FG160M16FM16 0,6/1KV 4x2,5 mm ²	1,0	10,2	1,8	15,7	420
FG160M16FM16 0,6/1KV 5x2,5 mm ²	1,0	11,2	1,8	16,8	480
FG160M16FM16 0,6/1KV 6x2,5 mm ²	1,0	12,4	1,8	17,8	560
FG160M16FM16 0,6/1KV 7x2,5 mm ²	1,0	12,2	1,8	18,2	610
FG160M16FM16 0,6/1KV 10x2,5 mm ²	1,0	15,8	1,8	21,6	830
FG160M16FM16 0,6/1KV 12x2,5 mm ²	1,0	16	1,8	21,8	870
FG160M16FM16 0,6/1KV 16x2,5 mm ²	1,0	18,2	2,0	23,8	1140
FG160M16FM16 0,6/1KV 20x2,5 mm ²	1,0	20,6	2,0	26	1350
FG160M16FM16 0,6/1KV 24x2,5 mm ²	1,2	23	2,0	28,8	1500
FG160M16FM16 0,6/1KV 48x2,5 mm ²	1,2	29	2,0	34	2740

FG160M16FM16	0,6/1KV	2x4 mm ²	1,0	9,8	1,8	15,4	370
FG160M16FM16	0,6/1KV	3x4 mm ²	1,2	10,3	1,8	16	440
FG160M16FM16	0,6/1KV	4x4 mm ²	1,0	11,5	1,8	17	520
FG160M16FM16	0,6/1KV	5x4 mm ²	1,0	12,5	1,8	18	610
FG160M16FM16	0,6/1KV	7x4 mm ²	1,0	13,7	1,8	19,7	790
FG160M16FM16	0,6/1KV	2x6 mm ²	1,0	11,2	1,8	17	450
FG160M16FM16	0,6/1KV	3x6 mm ²	1,0	11,8	1,8	17,5	550
FG160M16FM16	0,6/1KV	4x6 mm ²	1,0	13	1,8	18,6	670
FG160M16FM16	0,6/1KV	5x 6 mm ²	1,2	14,6	2,0	20,6	780
FG160M16FM16	0,6/1KV	2x10 mm ²	1,0	14,8	1,8	20,8	660
FG160M16FM16	0,6/1KV	3x10 mm ²	1,0	15,8	1,8	21,4	830
FG160M16FM16	0,6/1KV	4x10 mm ²	1,2	18	1,8	23,5	1050
FG160M16FM16	0,6/1KV	5x10 mm ²	1,2	20	2,0	25,6	1240
FG160M16FM16	0,6/1KV	2x16 mm ²	1,0	18	1,8	23,4	900
FG160M16FM16	0,6/1KV	3x16mm ²	1,2	19	2,0	25	1190
FG160M16FM16	0,6/1KV	4x16 mm ²	1,2	21	2,0	26,8	1470
FG160M16FM16	0,6/1KV	5x16 mm ²	1,2	23	2,0	29	1760
FG160M16FM16	0,6/1KV	3x25 mm ²	1,2	22	2,0	28	1600
FG160M16FM16	0,6/1KV	4x25 mm ²	1,2	24,5	2,0	30	2000
FG160M16FM16	0,6/1KV	5x25 mm ²	1,2	27	2,0	33	2400
FG160M16FM16	0,6/1KV	3x35 mm ²	1,2	25	2,0	30	2040
FG160M16FM16	0,6/1KV	3½x35 mm ²	1,2	27	2,0	33	2580
FG160M16FM16	0,6/1Kv	5x35 mm ²	1,2	34	2,0	40	3100
FG160M16FM16	0,6/1KV	3x50 mm ²	1,2	29	2,0	34	2700
FG160M16FM16	0,6/1KV	3½x50 mm ²	1,2	31	2,0	37	3420
FG160M16FM16	0,6/1KV	3x70 mm ²	1,2	33	2,0	38	3530
FG160M16FM16	0,6/1KV	3½x70 mm ²	1,4	36	2,0	42	4500
FG160M16FM16	0,6/1Kv	3x95 mm ²	1,4	36	2,0	42	4540
FG160M16FM16	0,6/1KV	3½x95 mm ²	1,4	41	2,0	46	5800
FG160M16FM16	0,6/1KV	3x120 mm ²	1,4	42	2,0	47	5500
FG160M16FM16	0,6/1KV	3½x120 mm ²	1,4	44	2,0	50	7080
FG160M16FM16	0,6/1KV	5 G 50 mm ²	1,2	35	2,0	40	3990

Weight and diameter: Are theoretical +/- 10%

Intended use: Multicore power cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Instrumentation Cable - 104

FG16XHOH2M16

CPR EU 305/2011
Cca s1b-d1-a1

CU, G16 INSULATION, INDIVIDUAL ALUMINIUM SCREEN AND COPPER WIRE BRAID OVERALL SCREEN, M16 OUTER SHEATH
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

Technical Specifications n° 104/18 of 12/01/2018 Rev. 0

Type: F-Cu/G16/IS/CWB/M16 0,6/1KV FG16XHOH2M16 0,6/1 KV
Conductor: Flexible tinned and/or plain copper conductor according to IEC 60228 cl.5
Insulation: EPR G16 type extruded compound
 Temperature range -15 +90° C
 Temperature laying -5 +70° C

SIZE	THICKNESS
1,0 mm ²	0,7 ± 0,02 mm

Laying up: Twisted to pair, Blue - Black numbered (or to be agreed)

Pair screen: (if required) Applied over the single pair/triad will be wrapped with polyester tape and shielded with Aluminium / Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 mm size 0,5sqmm, over the screen will be placed a further Mylar tape.

Overall screen: Applied over total assembly will be wrapped with polyester tape and shielded with copper wire braid 60% coverage.

Outer sheath: M16 LSZH extruded compound
Colour: Green/Black (or to be agreed)

Marking: On the outer sheath "Sensitherm – FG16XHOH2M16 0,6/1 KV Siz. IEC 60332.3 WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001 m"

Performance:

- Test voltage core to core 3,5KV
- Flame retardant according to IEC 60332-3-24, CEI 20-22/3
- Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2
- Low smoke density emiss. IEC 61034 1/2
- Hydrocarbon and UV resistant
- Cable for intrinsically safe application
- Inductance $\leq 0,90\text{mH/Km}$
- Capacitance $\leq 0,200\mu\text{F/Km}$
- This cable is suitable to be used in ATEX area following the EN 60079-14 prescription annexe E excluded
- EN50575 tested for approval

ITEM			THICKNESS OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM
FG16XHH2M16	0,6/1KV	1x2x1 mm ²	1,8	10	160	120
FG16XHOH2M16	0,6/1KV	2x2x1 mm ²	1,8	14	270	160
FG16XHOH2M16	0,6/1KV	5x2x1 mm ²	1,8	18	510	210
FG16XHOH2M16	0,6/1KV	6x2x1 mm ²	1,8	19	590	220
FG16XHOH2M16	0,6/1KV	7x2x1 mm ²	1,8	20	650	240
FG16XHOH2M16	0,6/1KV	12x2x1 mm ²	1,8	25	1000	300
FG16OHH2M16	0,6/1KV	1x3x1 mm ²	1,8	10,4	190	120
FG16XHOH2M16	0,6/1KV	2x3x1 mm ²	1,8	16,5	350	190
FG16XHOH2M16	0,6/1KV	5x3x1 mm ²	1,8	21	670	250
FG16XHOH2M16	0,6/1KV	6x3x1 mm ²	1,8	23	770	270
FG16XHOH2M16	0,6/1KV	7x3x1 mm ²	1,8	23,4	850	270
FG16XHOH2M16	0,6/1KV	12x3x1 mm ²	2,0	30	1350	360

Weight and diameter: Are theoretical + / - 10%

Intended use: Instrumentation cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Control and Power Cable - 105

FG16OHM16FM16 – FG16OHM16AM16

CPR EU 305/2011
Cca s1b-d1-a1

CU, G16 INSULATION, OVERALL SCREEN, M16 INNER SHEATH, STEEL WIRE ARMOUR, M16 OUTER SHEATH.
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

Technical Specifications n° 105/18 of 12/01/2018 Rev. 0

Type: F-Cu/G16/OS/M16/SWA/M16 0,6/1Kv
FG16OHM16FM16 0,6/1 KV

Conductor: Flexible tinned and/or plain copper conductor according to IEC60228 cl.5 or cl.5

Insulation: EPR G16 type extruded compound
Temperature range -15 +90° C
Temperature laying -5 +70° C

SIZE	THICKNESS
1,5 mm ²	0,70 ± 0,02 mm
2,5 mm ²	0,70 ± 0,02 mm
4 mm ²	0,70 ± 0,02 mm
6 mm ²	0,70 ± 0,02 mm

Laying up: Twisted to pair, Blue - Black numbered (or to be agreed)

Overall screen: Applied over total assembly will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.

Inner sheath: M16 LSZH extruded compound

Armour: Galvanized steel round wires plus wrapping polyester tape (SWA) or Galvanized steel wires braid (SWB)

Outer sheath: M16 LSZH extruded compound
Colour: Grey/Black (or to be agreed)

Marking: On the outer sheath "Sensitherm – FG16OHM16FM16 0,6/1 KV Siz. IEC 60332.3
WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001mt"

Performance:

- Test voltage core to core 3,5KV
- Flame retardant according to IEC60332-3-22, CEI20-22/2
- Low smoke and Halogen free as per IEC60754-2, CEI20-37/2
- Low smoke density emiss. IEC61034 1/2
- Hydrocarbon and UV resistant
- Rodent resistant
- Fit for direct burial
- Cable for intrinsically safe application
- Inductance < / = 0,90mH/Km
- Capacitance / = 0,200microF/Km
- This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded
- EN50575 tested for approval

ITEM	THICK. INNER SHEATH MM	Ø OVER INNER SHEATH MM	THICK. OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM		
FG160HM16FM16	0,6/1Kv	4x1,5 mm ²	1,0	9,3	1,8	14,9	368	205
FG160HM16FM16	0,6/1Kv	5x1,5 mm ²	1,0	10,1	1,8	15,8	410	220
FG160HM16FM16	0,6/1Kv	6x1,5 mm ²	1,0	10,8	1,8	16,7	440	230
FG160HM16FM16	0,6/1Kv	7x1,5 mm ²	1,0	11,2	1,8	16,6	480	230
FG160HM16FM16	0,6/1Kv	10x1,5 mm ²	1,0	13,6	1,8	19,2	620	260
FG160HM16FM16	0,6/1Kv	12x1,5 mm ²	1,0	14,6	1,8	20,4	730	280
FG160HM16FM16	0,6/1Kv	16x1,5 mm ²	1,0	15,8	1,8	21,8	870	300
FG160HM16FM16	0,6/1Kv	20x1,5 mm ²	1,0	17,6	2,0	23,6	1020	330
FG160HM16FM16	0,6/1Kv	24x1,5 mm ²	1,0	20	2,0	26	1180	360
FG160HM16FM16	0,6/1Kv	48x1,5 mm ²	1,0	26,5	2,0	32,2	1950	440
FG160HM16FM16	0,6/1Kv	4x2,5 mm ²	1,0	10,3	1,8	15,8	440	220
FG160HM16FM16	0,6/1Kv	5x2,5 mm ²	1,0	11,4	1,8	17	510	230
FG160HM16FM16	0,6/1Kv	6x2,5 mm ²	1,0	12,2	1,8	17,6	560	240
FG160HM16FM16	0,6/1Kv	7x2,5 mm ²	1,0	12,4	1,8	18	610	210
FG160HM16FM16	0,6/1Kv	10x2,5 mm ²	1,0	15,6	1,8	21,6	830	290
FG160HM16FM16	0,6/1Kv	12x2,5 mm ²	1,0	16,5	2,0	22,3	940	300
FG160HM16FM16	0,6/1Kv	16x2,5 mm ²	1,0	18	2,0	24	1140	330
FG160HM16FM16	0,6/1Kv	24x2,5 mm ²	1,0	22,8	2,0	28,6	1580	390
FG160HM16FM16	0,6/1Kv	48x2,5 mm ²	1,2	30	2,0	35,8	2730	500
FG160HM16FM16	0,6/1Kv	2x4 mm ²	1,0	10	1,8	15,6	390	210
FG160HM16FM16	0,6/1Kv	3x4 mm ²	1,0	10,5	1,8	16	470	220
FG160HM16FM16	0,6/1Kv	4x4 mm ²	1,0	11,6	1,8	17,2	550	230
FG160HM16FM16	0,6/1Kv	5x4 mm ²	1,0	12,8	1,8	18,3	630	250
FG160HM16FM16	0,6/1Kv	7x4 mm ²	1,0	14	2,0	20	810	280
FG160HM16FM16	0,6/1Kv	2x6 mm ²	1,0	11,4	1,8	17	480	230
FG160HM16FM16	0,6/1Kv	3x6 mm ²	1,0	12	1,8	17,7	580	230

Weight and diameter: Are theoretical + / - 10%

Intended use: Control and power cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Control and Power Cable - 106

FG160M16

CPR EU 305/2011
Cca s1b-d1-a1

CU, G16 INSULATION, M16 OUTER SHEATH.
IEC 60332.1 IEC 60332.3 - HALOGEN FREE

Technical Specifications n° 106/18 of 18/09/2018 Rev. 0

Type: F-Cu/G16/M16 0,6/1KV
FG160M16 0,6/1 KV

Conductor: Flexible tinned and/or plain copper conductor according to IEC 60228 cl.5

Insulation: EPR G16 type extruded compound
Temperature range -15 +90° C
Temperature laying -5 +70° C

SIZE	THICKNESS
1,50 mm ²	0,70 ± 0,02 mm
2,5 mm ²	0,70 ± 0,02 mm
4 mm ²	0,7 ± 0,02 mm
6 mm ²	0,70 ± 0,02 mm
10 mm ²	0,70 ± 0,02 mm
16 mm ²	0,70 ± 0,02 mm
25 mm ²	0,90 ± 0,02 mm
35 mm ²	0,90 ± 0,02 mm
50 mm ²	1,00 ± 0,02 mm
70 mm ²	1,10 ± 0,02 mm
95 mm ²	1,10 ± 0,02 mm
120 mm ²	1,20 ± 0,02 mm

Laying up: Twisted to core, UNEL (or to be agreed)

Inner sheath: Extruded compound (if required)

Outer sheath: M16 LSZH extruded compound
Colour: Grey/Black (or to be agreed)

Marking: On the outer sheath "Sensitherm – FG160M16 0,6/1 KV Siz. IEC 60332.3
WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001 m CE"

Performance:

- Test voltage core to core 3,5 KV
- Flame retardant according to IEC60 332-3-22, CEI 20-22/2
- Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2
- Low smoke density emiss. IEC 61034 1/2
- Hydrocarbon and UV resistant
- Cable for intrinsically safe application
- Inductance $\leq 0,90$ mH/Km
- Capacitance $\leq 0,200$ μ F/Km

ITEM			THICKNESS OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM
FG160M16	0,6/1KV	2x1,5 mm ²	1,8	9,5	260	80
FG160M16	0,6/1KV	3x1,5 mm ²	1,8	9,9	300	80
FG160M16	0,6/1KV	4x1,5 mm ²	1,8	10,7	340	85
FG160M16	0,6/1KV	5x1,5 mm ²	1,8	11,5	390	90
FG160M16	0,6/1KV	6x1,5 mm ²	1,8	12,2	440	100
FG160M16	0,6/1KV	7x1,5 mm ²	1,8	12,4	460	100
FG160M16	0,6/1KV	10x1,5 mm ²	1,8	15,2	380	120
FG160M16	0,6/1KV	12x1, 5 mm ²	1,8	15,8	420	120
FG160M16	0,6/1KV	16x1, 5 mm ²	1,8	17,8	550	145
FG160M16	0,6/1KV	20x1, 5 mm ²	2,0	19,6	650	160
FG160M16	0,6/1KV	24x1,5 mm ²	2,0	21,7	780	175
FG160M16	0,6/1KV	48x1,5 mm ²	2,0	28	1380	220
FG160M16	0,6/1KV	2x2, 5 mm ²	1,8	10,4	160	85
FG160M16	0,6/1KV	3x2,5 mm ²	1,8	10,9	200	85
FG160M16	0,6/1KV	4x2,5 mm ²	1,8	11,8	240	100
FG160M16	0,6/1KV	5x2,5 mm ²	1,8	13	300	100
FG160M16	0,6/1KV	6x2,5 mm ²	1,8	13,8	340	110
FG160M16	0,6/1KV	7x2,5 mm ²	1,8	14	380	120
FG160M16	0,6/1KV	10x2,5 mm ²	1,8	17,6	520	145
FG160M16	0,6/1KV	12x2,5 mm ²	1,8	18	590	145
FG160M16	0,6/1KV	16x2,5 mm ²	2,0	20	750	160
FG160M16	0,6/1KV	20x2, 5 mm ²	2,0	22	910	175
FG160M16	0,6/1KV	24x2,5 mm ²	2,0	24,5	1080	200
FG160M16	0,6/1KV	48x2,5 mm ²	2,0	32	1980	260
FG160M16	0,6/1KV	2x 4 mm ²	1,8	11,4	200	90
FG160M16	0,6/1KV	3x4 mm ²	1,8	11,9	260	90
FG160M16	0,6/1KV	4x4 mm ²	1,8	13	320	100

FG160M16	0,6/1KV	5x4 mm ²	1,8	14,5	400	115
FG160M16	0,6/1KV	7x4 mm ²	1,8	15,7	510	130
FG160M16	0,6/1KV	2x6 mm ²	1,8	13	270	100
FG160M16	0,6/1KV	3x6 mm ²	1,8	13,8	350	110
FG160M16	0,6/1KV	4x6 mm ²	1,8	15	440	120
FG160M16	0,6/1KV	5x 6 mm ²	2,0	16,4	520	130
FG160M16	0,6/1KV	2x10 mm ²	1,8	16,8	420	135
FG160M16	0,6/1KV	3x10 mm ²	1,8	18	550	140
FG160M16	0,6/1KV	4x10 mm ²	1,8	19,4	700	155
FG160M16	0,6/1KV	5x10 mm ²	2,0	21,5	840	170
FG160M16	0,6/1KV	2x16 mm ²	1,8	19	580	150
FG160M16	0,6/1KV	3x16 mm ²	2,0	20,5	780	160
FG160M16	0,6/1KV	4x16 mm ²	2,0	22,5	990	180
FG160M16	0,6/1KV	5x16 mm ²	2,0	24,6	1200	200
FG160M16	0,6/1KV	3x25 mm ²	2,0	24	1100	200
FG160M16	0,6/1KV	4x25 mm ²	2,0	26,5	1400	210
FG160M16	0,6/1KV	5x25 mm ²	2,0	29	1700	230
FG160M16	0,6/1KV	3x35 mm ²	2,0	26,6	1480	210
FG160M16	0,6/1KV	3½x35 mm ²	2,0	29	1650	230
FG160M16	0,6/1Kv	5x35 mm ²	2,0	32,4	2200	260
FG160M16	0,6/1KV	3x50 mm ²	2,0	30,6	1990	240
FG160M16	0,6/1KV	3½x50 mm ²	2,0	32	2200	260
FG160M16	0,6/1KV	3x70 mm ²	2,0	35	2650	280
FG160M16	0,6/1KV	3½x70 mm ²	2,0	38	3000	300
FG160M16	0,6/1Kv	3x95 mm ²	2,0	39	3400	310
FG160M16	0,6/1KV	3½x95 mm ²	2,0	43	4000	340
FG160M16	0,6/1KV	3x120 mm ²	2,0	43	4300	340
FG160M16	0,6/1KV	3½x120 mm ²	2,0	46,5	4700	370

Weight and diameter: Are theoretical + / - 10%

Intended use: Control and power cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Control and Power Cable - 107

FG16OR16FR16 – FG16OR16AR16

CPR EU 305/2011
Cca s3b-d1-a3

CU, G16 INSULATION, R16 INNER SHEATH, STEEL WIRE ARMOUR, R16 OUTER SHEATH.
IEC 60332.1 IEC 60332.3

Technical Specifications n° 107/18 of 06/05/2019 Rev. 0

Type: F-Cu/G16/R16/SWA/R16 0,6/1KV
FG16OR16FR16 0,6/1 KV

Conductor: Flexible tinned and/or plain copper conductor according to IEC 60228 cl.5

Insulation: EPR G16 type extruded compound
Temperature range -15 +90° C
Temperature laying -5 +70° C

SIZE	THICKNESS
1,50 mm ²	0,70 ± 0,02 mm
2,5 mm ²	0,70 ± 0,02 mm
4 mm ²	0,7 ± 0,02 mm
6 mm ²	0,70 ± 0,02 mm
10 mm ²	0,70 ± 0,02 mm
16 mm ²	0,70 ± 0,02 mm
25 mm ²	0,90 ± 0,02 mm
35 mm ²	0,90 ± 0,02 mm
50 mm ²	1,00 ± 0,02 mm
70 mm ²	1,10 ± 0,02 mm
95 mm ²	1,10 ± 0,02 mm
120 mm ²	1,20 ± 0,02 mm

Laying up: Twisted to core, UNEL (or to be agreed)

Inner sheath: R16 PVC extruded compound

Armour: Galvanized steel round wires plus wrapping polyester tape (SWA) or Galvanized steel wires braid (SWB)

Outer sheath: R16 PVC extruded compound
Colour: Grey/Black (or to be agreed)

Marking: On the outer sheath "Sensitherm – FG16OR16FR16 0,6/1 KV Siz. IEC 60332.3
WWW/YY (Batch/Num.) Cca s3b-d1-a3 001 m"

Performance:

- Test voltage core to core 3,5KV
- Flame retardant according to IEC60 332-3-22, CEI 20-22/2
- Low smoke and fume as per IEC 60754-2, CEI 20-37/2
- HCL emission </= 18%

- Hydrocarbon and UV resistant
- Rodent resistant
- Fit for direct burial
- Cable for intrinsically safe application
- Inductance $\leq 0,90$ mH/Km
- Capacitance $\leq 0,200$ μ F/Km
- This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded
- EN50575 tested for approval

ITEM			THICK. INNER SHEATH MM	Ø OVER INNER SHEATH MM	THICK. OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM
FG16OR16FR16	0,6/1KV	2x1,5 mm ²	1,0	7,9	1,8	13,4	260
FG16OR16FR16	0,6/1KV	3x1,5 mm ²	1,0	8,4	1,8	13,8	300
FG16OR16FR16	0,6/1KV	4x1,5 mm ²	1,0	9	1,8	14,6	340
FG16OR16FR16	0,6/1KV	5x1,5 mm ²	1,0	10	1,8	15,5	390
FG16OR16FR16	0,6/1KV	6x1,5 mm ²	1,0	10,6	1,8	16,4	440
FG16OR16FR16	0,6/1KV	7x1,5 mm ²	1,0	10,8	1,8	16,5	460
FG16OR16FR16	0,6/1KV	10x1,5 mm ²	1,0	13,6	1,8	19,2	620
FG16OR16FR16	0,6/1KV	12x1,5mm ²	1,0	14,2	1,8	20	670
FG16OR16FR16	0,6/1KV	16x1,5mm ²	1,0	15,8	1,8	21,5	830
FG16OR16FR16	0,6/1KV	20x1,5mm ²	1,0	17,6	2,0	23,5	1020
FG16OR16FR16	0,6/1KV	24x1,5 mm ²	1,0	20	2,0	25,5	1110
FG16OR16FR16	0,6/1KV	48x1,5 mm ²	1,0	26	2,0	32	2000
FG16OR16FR16	0,6/1KV	2x2,5 mm ²	1,0	9	1,8	14,4	310
FG16OR16FR16	0,6/1KV	3x2,5 mm ²	1,0	9,4	1,8	14,8	360
FG16OR16FR16	0,6/1KV	4x2,5 mm ²	1,0	10,2	1,8	15,7	420
FG16OR16FR16	0,6/1KV	5x2,5 mm ²	1,0	11,2	1,8	16,8	480
FG16OR16FR16	0,6/1KV	6x2,5 mm ²	1,0	12,4	1,8	17,8	560
FG16OR16FR16	0,6/1KV	7x2,5 mm ²	1,0	12,2	1,8	18,2	610
FG16OR16FR16	0,6/1KV	10x2,5 mm ²	1,0	15,8	1,8	21,6	830
FG16OR16FR16	0,6/1KV	12x2,5 mm ²	1,0	16	1,8	21,8	870
FG16OR16FR16	0,6/1KV	16x2,5 mm ²	1,0	18,2	2,0	23,8	1140
FG16OR16FR16	0,6/1KV	20x2,5 mm ²	1,0	20,6	2,0	26	1350
FG16OR16FR16	0,6/1KV	24x2,5 mm ²	1,2	23	2,0	28,8	1500
FG16OR16FR16	0,6/1KV	48x2,5 mm ²	1,2	29	2,0	34	2740
FG16OR16FR16	0,6/1KV	2x4 mm ²	1,0	9,8	1,8	15,4	370
FG16OR16FR16	0,6/1KV	3x4 mm ²	1,2	10,3	1,8	16	440
FG16OR16FR16	0,6/1KV	4x4 mm ²	1,0	11,5	1,8	17	520

FG16OR16FR16	0,6/1KV	5x4 mm ²	1,0	12,5	1,8	18	610
FG16OR16FR16	0,6/1KV	7x4 mm ²	1,0	13,7	1,8	19,7	790
FG16OR16FR16	0,6/1KV	2x6 mm ²	1,0	11,2	1,8	17	450
FG16OR16FR16	0,6/1KV	3x6 mm ²	1,0	11,8	1,8	17,5	550
FG16OR16FR16	0,6/1KV	4x6 mm ²	1,0	13	1,8	18,6	670
FG16OR16FR16	0,6/1KV	5x6 mm ²	1,2	14,6	2,0	20,6	780
FG16OR16FR16	0,6/1KV	2x10 mm ²	1,0	14,8	1,8	20,8	660
FG16OR16FR16	0,6/1KV	3x10 mm ²	1,0	15,8	1,8	21,4	830
FG16OR16FR16	0,6/1KV	4x10 mm ²	1,2	18	1,8	23,5	1050
FG16OR16FR16	0,6/1KV	5x10 mm ²	1,2	20	2,0	25,6	1240
FG16OR16FR16	0,6/1KV	2x16 mm ²	1,0	18	1,8	23,4	900
FG16OR16FR16	0,6/1KV	3x16 mm ²	1,2	19	2,0	25	1190
FG16OR16FR16	0,6/1KV	4x16 mm ²	1,2	21	2,0	26,8	1470
FG16OR16FR16	0,6/1KV	5x16 mm ²	1,2	23	2,0	29	1760
FG16OR16FR16	0,6/1KV	3x25 mm ²	1,2	22	2,0	28	1600
FG16OR16FR16	0,6/1KV	4x25 mm ²	1,2	24,5	2,0	30	2000
FG16OR16FR16	0,6/1KV	5x25 mm ²	1,2	27	2,0	33	2400
FG16OR16FR16	0,6/1KV	3x35 mm ²	1,2	25	2,0	30	2040
FG16OR16FR16	0,6/1KV	3½x35 mm ²	1,2	27	2,0	33	2580
FG16OR16FR16	0,6/1Kv	5x35 mm ²	1,2	34	2,0	40	3100
FG16OR16FR16	0,6/1KV	3x50 mm ²	1,2	29	2,0	34	2700
FG16OR16FR16	0,6/1KV	3½x50 mm ²	1,2	31	2,0	37	3420
FG16OR16FR16	0,6/1KV	3x70 mm ²	1,2	33	2,0	38	3530
FG16OR16FR16	0,6/1KV	3½x70 mm ²	1,4	36	2,0	42	4500
FG16OR16FR16	0,6/1Kv	3x95 mm ²	1,4	36	2,0	39,9	4540
FG16OR16FR16	0,6/1KV	3½x95 mm ²	1,4	41	2,0	46	5800
FG16OR16FR16	0,6/1KV	3x120 mm ²	1,4	42	2,0	47	5500
FG16OR16FR16	0,6/1KV	3½x120 mm ²	1,4	44	2,0	50	7080
FG16OR16FR16	0,6/1KV	5 G 50 mm ²	1,2	35	2,0	40	3500

Weight and diameter: Are theoretical + / - 10%

Intended use: Control and power cable in buildings and other civil engineering works with the objective of limiting the generation and spread of fire and smoke.

Thermocouple extension Cable – 109 CPR EU 305/2011

Kx (Jx) FG16XHOHM16

Cca s1b-d1-a1

**Alloy, G16 INSULATION, INDIVIDUAL (IF REQUIRED) AND OVERALL SCREEN, M16 OUTER SHEATH.
IEC 60332.1 IEC 60332.3 – HALOGEN FREE**

Technical Specifications n° 109/20 of 30/09/2020 Rev. 0

Type:	F-Kx(Jx)/G16/IS/OS/M16 0,6/1KV - F-Kx(Jx)/G16/OS/M16 0,6/1KV Kx(Jx)FG16XHOHM16 0,6/1 KV – Kx(Jx)FG16XOHM16 0,6/1KV
Conductor:	Flexible Alloy conductor according to IEC60584 or ANSI MC96.1 or DIN43710 Thermocouple extension type Jx: JPX + Fe JNX - CuNi Thermocouple extension type Kx: KPX (T1) + NiCr KNX (T2) - Ni
Insulation:	EPR G16 type extruded compound Temperature range -40 +90° C Temperature laying -5 +70° C

SIZE	THICKNESS
0,75 mm ²	0,70 ± 0,02 mm
1,0 mm ²	0,70 ± 0,02 mm
1,5 mm ²	0,70 ± 0,02 mm

Laying up:	Twisted to pair numbered (or to be agreed)
Pair screen: (if necessary)	Applied over the single pair/triad will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 mm size 0,5sqmm, over the screen will be placed a further Mylar tape.
Overall screen:	Applied over total assembly will be wrapped with polyester tape and shielded with Aluminium/Mylar tape 100% coverage and 25% overlap with metal side in contact with a tinned copper drain wire 7x0,30 size 0,5sqmm.
Outer sheath:	M16 LSZH extruded compound
Marking:	On the outer sheath "Sensitherm – TC FG16XHOHM16 0,6/1 KV Siz. IEC 60332.3 WWW/YY (Batch/Num.) Cca s1b-d1-a1 0001 m"
Performance:	<ul style="list-style-type: none"> - Test voltage core to core 3,5 KV - Flame retardant according to IEC 60332-3-24, CEI 20-22/3 - Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2 - Low smoke density emiss. IEC 61034 1/2 - Hydrocarbon and UV resistant - This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded - EN50575 tested for approval

ITEM	THICKNESS OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM
TC FG16OHM16 0,6/1KV 1x2x0,75 mm ²	1,8	8,8	110	70
TC FG16XHOHM16 0,6/1KV 2x2x0,75 mm ²	1,8	12,9	200	100
TC FG16XHOHM16 0,6/1KV 3x2x0,75 mm ²	1,8	13,6	250	110
TC FG16XHOHM16 0,6/1KV 4x2x0,75 mm ²	1,8	14,7	300	120
TC FG16XHOHM16 0,6/1KV 5x2x0,75 mm ²	1,8	16,1	360	130
TC FG16XHOHM16 0,6/1KV 6x2x0,75 mm ²	1,8	17,4	400	130
TC FG16XHOHM16 0,6/1KV 7x2x0,75 mm ²	1,8	17,6	450	140
TC FG16XHOHM16 0,6/1KV 12x2x0,75 mm ²	2,0	23	700	180
TC FG16XHOHM16 0,6/1KV 16x2x0,75 mm ²	2,0	25,6	910	200
TC FG16XHOHM16 0,6/1KV 24x2x0,75 mm ²	2,0	30	1250	240
TC FG16OHM16 0,6/1KV 1x2x1 mm ²	1,8	9	120	70
TC FG16XHOHM16 0,6/1KV 2x2x1 mm ²	1,8	13,5	220	110
TC FG16XHOHM16 0,6/1KV 3x2x1 mm ²	1,8	14	270	110
TC FG16XHOHM16 0,6/1KV 4x2x1 mm ²	1,8	15,5	330	120
TC FG16XHOHM16 0,6/1KV 5x2x1 mm ²	1,8	16,8	400	130
TC FG16XHOHM16 0,6/1KV 6x2x1 mm ²	1,8	18,4	250	140
TC FG16XHOHM16 0,6/1KV 7x2x1 mm ²	1,8	18,6	500	140
TC FG16XHOHM16 0,6/1KV 12x2x1 mm ²	2,0	24	800	190
TC FG16XHOHM16 0,6/1KV 16x2x1 mm ²	2,0	27	1030	210
TC FG16XHOHM16 0,6/1KV 24x2x1 mm ²	2,0	32,5	1420	250
TC FG16OHM16 0,6/1KV 1x2x1,5 mm ²	1,8	9,5	130	80
TC FG16XHOHM16 0,6/1KV 2x2x1,5 mm ²	1,8	14,4	250	120
TC FG16XHOHM16 0,6/1KV 3x2x1,5 mm ²	1,8	15	320	130
TC FG16XHOHM16 0,6/1KV 4x2x1,5 mm ²	1,8	16,5	390	130
TC FG16XHOHM16 0,6/1KV 5x2x1,5 mm ²	1,8	18	470	140
TC FG16XHOHM16 0,6/1KV 6x2x1,5 mm ²	1,8	19,6	530	160
TC FG16XHOHM16 0,6/1KV 7x2x1,5 mm ²	1,8	19,8	600	160
TC FG16XHOHM16 0,6/1KV 12x2x1,5 mm ²	2,0	26	950	210
TC FG16XHOHM16 0,6/1KV 16x2x1,5 mm ²	2,0	29	1240	230
TC FG16XHOHM16 0,6/1KV 24x2x1,5 mm ²	2,0	35	1720	280

Weight and diameter are theoretical +/- 10%

Fire resistant Cable - 110

FTG180M16

CPR EU 305/2011
B2ca s1a-d1-a1

**F Conductor, FR-HEPR G18 INSULATION, M16 OUTER SHEATH.
EN50200 PH 120, IEC 60502-1, IEC 60332.3 – HALOGEN FREE**

Technical Specifications n° 110/20 of 30/09/2020 Rev. 0

Type: F-Cu/MGT/G18/M16 0,6/1KV
FTG180M16 0,6/1KV

Conductor: Flexible plain or tinned copper conductor according to IEC60228 cl.5

Insulation: Mica glass tape plus FR-HEPR G18 type extruded compound
Temperature range -40 +90° C
Temperature laying -5 +70° C

SIZE	THICKNESS
1,5 mm ²	1,0 ± 0,02 mm
2,5 mm ²	1,0 ± 0,02 mm
4,0 mm ²	1,0 ± 0,02 mm
6,0 mm ²	1,0 ± 0,02 mm
10 mm ²	1,0 ± 0,02 mm
16 mm ²	1,0 ± 0,02 mm

Laying up: Twisted to cores, UNEL 00722 color (or to be agreed)

Outer sheath: M16 LSZH extruded compound

Marking: On the outer sheath "Sensitherm – FTG180M16 0,6/1 KV Siz. IEC 60332.3 EN50200 PH120 WWW/YY (Batch/Num.) B2ca s1a-d1-a1 0001 m"

Performance:

- Test voltage core to core 3,5 KV
- Flame retardant according to IEC 60332-3-24, CEI 20-22/3
- Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2
- Low smoke density emission IEC 61034 ½
- Fire resistant EN50200 PH120
- Hydrocarbon and UV resistant
- This cable is suitable to be used in ATEX area following the EN60079-14 prescription annexe E excluded
- EN50575 tested for approval, **B2ca s1a, d1, a1**

ITEM		THICKNESS OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM
FTG180M16 0,6/1KV	2x1,5 mm ²	1,8	10,4	160	150
FTG180M16 0,6/1KV	2x2,5 mm ²	1,8	12	180	162
FTG180M16 0,6/1KV	2x4 mm ²	1,8	13,0	240	182
FTG180M16 0,6/1KV	2x6 mm ²	1,8	14	300	202
FTG180M16 0,6/1KV	2x10 mm ²	2,0	16,2	420	238
FTG180M16 0,6/1KV	2x16 mm ²	2,0	17,5	580	280
FTG180M16 0,6/1KV	3x1,5 mm ²	1,8	11,6	200	162
FTG180M16 0,6/1KV	3x2,5 mm ²	1,8	13	240	176
FTG180M16 0,6/1KV	3x4 mm ²	1,8	13,6	310	190
FTG180M16 0,6/1KV	3x6 mm ²	1,8	15,2	390	213
FTG180M16 0,6/1KV	3x10 mm ²	2,0	17,7	550	248
FTG180M16 0,6/1KV	3x16 mm ²	2,0	20,2	780	294
FTG180M16 0,6/1KV	4x1,5 mm ²	1,8	12,5	230	175
FTG180M16 0,6/1KV	4x2,5 mm ²	1,8	13,6	300	190
FTG180M16 0,6/1KV	4x4 mm ²	1,8	14,8	380	207
FTG180M16 0,6/1KV	4x6 mm ²	1,8	16,5	490	231
FTG180M16 0,6/1KV	4x10 mm ²	2,0	19,5	700	273
FTG180M16 0,6/1KV	4x16 mm ²	2,0	23	990	322
FTG180M16 0,6/1KV	5x1,5 mm ²	1,8	13,5	280	189
FTG180M16 0,6/1KV	5x2,5 mm ²	1,8	14,8	350	208
FTG180M16 0,6/1KV	5x4 mm ²	1,8	16,2	450	227
FTG180M16 0,6/1KV	5x6 mm ²	2,0	18,2	580	255
FTG180M16 0,6/1KV	5x10 mm ²	2,0	21,4	840	300
FTG180M16 0,6/1KV	5x16 mm ²	2,0	25	1200	350
FTG180M16 0,6/1KV	7x1,5 mm ²	1,8	14,6	340	204
FTG180M16 0,6/1KV	10x1,5 mm ²	1,8	18,2	470	255
FTG180M16 0,6/1KV	12x1,5 mm ²	1,8	18,8	530	263
FTG180M16 0,6/1KV	14x1,5 mm ²	2,0	19,8	600	277
FTG180M16 0,6/1KV	19x1,5 mm ²	2,0	21,8	760	305
FTG180M16 0,6/1KV	24x1,5 mm ²	2,0	25,4	950	356
FTG180M16 0,6/1KV	27x1,5 mm ²	2,0	26	1040	364
FTG180M16 0,6/1KV	7x2,5 mm ²	1,8	16	440	224
FTG180M16 0,6/1KV	10x2,5 mm ²	1,8	20	610	280
FTG180M16 0,6/1KV	12x2,5 mm ²	2,0	21	700	294
FTG180M16 0,6/1KV	14x2,5 mm ²	2,0	21,8	790	305
FTG180M16 0,6/1KV	19x2,5 mm ²	2,0	24	1020	336
FTG180M16 0,6/1KV	24x2,5 mm ²	2,0	28	1260	392

Weight and diameter are theoretical +/- 10%

Power and Control Cable - 111

FG180M16

CPR EU 305/2011

B2ca s1a-d1-a1

F Conductor, FR-HEPR G18 INSULATION, M16 OUTER SHEATH.
IEC 60502-1, IEC 60332.3 – HALOGEN FREE – CPR B2ca s1a d0 a1

Technical Specifications n° 111/20 of 20/11/2020 Rev. 0

Type:	F-Cu/G18/M16 0,6/1KV FG180M16 0,6/1KV
Conductor:	Flexible plain or tinned copper conductor according to IEC60228 cl.5
Insulation:	FR-HEPR G18 type extruded compound Temperature range -40 +90° C Temperature laying -5 +70° C

SIZE	THICKNESS
1,5 mm ²	1,0 ± 0,02 mm
2,5 mm ²	1,0 ± 0,02 mm
4,0 mm ²	1,0 ± 0,02 mm
6,0 mm ²	1,0 ± 0,02 mm
10 mm ²	1,0 ± 0,02 mm
16 mm ²	1,0 ± 0,02 mm

Laying up:	Twisted to cores, UNEL 00722 color (or to be agreed)
Outer sheath:	M16 LSZH extruded compound
Marking:	On the outer sheath "Sensitherm – FG180M16 0,6/1 KV Siz. IEC 60332.3 WWW/YY (Batch/Num.) B2ca s1a-d0-a1 0001 m"
Performance:	<ul style="list-style-type: none"> - Test voltage core to core 3,5 KV - Flame retardant according to IEC 60332-3-24, CEI 20-22/3 - Low smoke and Halogen free as per IEC 60754-2, CEI 20-37/2 - Low smoke density emission IEC 61034 ½ - Hydrocarbon and UV resistant - This cable is suitable to be used in ATEX area following the EN60079-14 prescription and outdoor applications - EN50575 tested for approval, B2ca s1a, d0, a1

ITEM	THICKNESS OUTER SHEATH MM	OVERAL DIAMETER MM	WEIGHT KG/KM	BENDING RADIUS MM
FG180M16 0,6/1KV 2x1,5 mm ²	1,8	10,7	155,8	150
FG180M16 0,6/1KV 2x2,5 mm ²	1,8	12	173,6	162
FG180M16 0,6/1KV 2x4 mm ²	1,8	13,0	233	182

FG180M16 0,6/1KV	2x6 mm ²	1,8	14	291,6	202
FG180M16 0,6/1KV	2x10 mm ²	2,0	16,8	410,6	238
FG180M16 0,6/1KV	2x16 mm ²	2,0	18	568	280
FG180M16 0,6/1KV	3x1,5 mm ²	1,8	11,6	193,7	162
FG180M16 0,6/1KV	3x2,5 mm ²	1,8	13	230,4	176
FG180M16 0,6/1KV	3x4 mm ²	1,8	13,6	299,5	190
FG180M16 0,6/1KV	3x6 mm ²	1,8	15,2	377,4	213
FG180M16 0,6/1KV	3x10 mm ²	2,0	17,7	535,9	248
FG180M16 0,6/1KV	3x16 mm ²	2,0	21	762	294
FG180M16 0,6/1KV	4x1,5 mm ²	1,8	12,5	221,6	175
FG180M16 0,6/1KV	4x2,5 mm ²	1,8	13,6	300	190
FG180M16 0,6/1KV	4x4 mm ²	1,8	14,8	380	207
FG180M16 0,6/1KV	4x6 mm ²	1,8	16,5	490	231
FG180M16 0,6/1KV	4x10 mm ²	2,0	19,5	700	273
FG180M16 0,6/1KV	4x16 mm ²	2,0	23	990	322
FG180M16 0,6/1KV	5x1,5 mm ²	1,8	13,5	280	189
FG180M16 0,6/1KV	5x2,5 mm ²	1,8	14,8	350	208
FG180M16 0,6/1KV	5x4 mm ²	1,8	16,2	450	227
FG180M16 0,6/1KV	5x6 mm ²	2,0	18,2	580	255
FG180M16 0,6/1KV	5x10 mm ²	2,0	21,4	840	300
FG180M16 0,6/1KV	5x16 mm ²	2,0	25	1200	350
FG180M16 0,6/1KV	7x1,5 mm ²	1,8	14,6	340	204
FG180M16 0,6/1KV	10x1,5 mm ²	1,8	18,2	470	255
FG180M16 0,6/1KV	12x1,5 mm ²	1,8	18,8	530	263
FG180M16 0,6/1KV	14x1,5 mm ²	2,0	19,8	600	277
FG180M16 0,6/1KV	19x1,5 mm ²	2,0	21,8	760	305
FG180M16 0,6/1KV	24x1,5 mm ²	2,0	25,5	950	356
FG180M16 0,6/1KV	27x1,5 mm ²	2,0	26	1040	364
FG180M16 0,6/1KV	7x2,5 mm ²	1,8	16	440	224
FG180M16 0,6/1KV	10x2,5 mm ²	1,8	20	610	280
FG180M16 0,6/1KV	12x2,5 mm ²	2,0	21	700	294
FG180M16 0,6/1KV	14x2,5 mm ²	2,0	21,8	745,2	305
FG180M16 0,6/1KV	19x2,5 mm ²	2,0	24	959,2	336
FG180M16 0,6/1KV	24x2,5 mm ²	2,0	26,5	1183,2	392

Weight and diameter are theoretical +/- 10%

Shields and armourings

Aluminium/mylar tape for individual pair shield
 Aluminium/mylar tape for overall bundle shield
 Copper tape
 Copper braid shield

A - GALVANISED ROUND STEEL WIRE BRAID

F - GALVANISED ROUND STEEL WIRES

N - GALVANISED STEEL TAPE



1

SWACS

Steel Wires +
Counterspiral Steel
Tape Armour



2

SWA

Single Layer of
Galv. Steel
Wire Armour



3

STA

Steel
Tape Armour



4

SWB

Steel Wire
Braid

L'azienda



Sensitherm Srl sviluppa e produce una vasta gamma di cavi elettrici speciali e sensori di temperatura, adatti per l'utilizzo nell'industria, negli impianti chimici, petrolchimici e centrali elettriche. I nostri cavi speciali vengono prodotti esattamente nel quantitativo e nel genere richiesto dai nostri clienti in modo da soddisfare i severi requisiti di personalizzazione. In particolare cavi adatti ad essere utilizzati in aree ATEX di tipo EEX-D, EEX-IA secondo EN60079-4 ed applicazioni dove è richiesto il certificato CPR.

LA QUALITÀ DEL SERVIZIO

Il nostro obiettivo è fornire un servizio di alto livello ai nostri clienti con una pronta risposta alle richieste, tempi di consegna brevi e un servizio di consegna affidabile, sia per le piccole che per le grandi quantità d'ordine di cavi standard o personalizzati.

PRODOTTI DI QUALITÀ

Lo scopo principale di Sensitherm è produrre cavi che rispondono agli standard nazionali ed internazionali mantenendo un alto livello qualitativo. Per garantire questo, l'Azienda, già certificata secondo i requisiti ISO9001, ha implementato inserendo il sistema FPC (piano di fabbricazione e controllo) che consiste in procedure di ispezione periodiche, prove e/o valutazioni da parte di Ente esterno notificato, in modo da garantire che i prodotti immessi sul mercato siano conformi alle prestazioni dichiarate, il tutto secondo il sistema 1+ del regolamento europeo EU305/2011 (CPR) EN 50575:2014+A1:2016.

ATTREZZATURE DI PRODUZIONE

Sensitherm, sempre nell'ottica di garantire la qualità dei propri prodotti, possiede macchinari di produzione in grado di svolgere internamente tutti i tipi di lavorazioni necessarie per la realizzazione dei cavi richiesti. Inoltre dispone di un laboratorio interno attrezzato con strumenti all'avanguardia che consentono di effettuare ogni tipo di test elettrico e meccanico.

Il nostro personale tecnico competente ed esperto è in grado di eseguire prove a cui possono presenziare anche supervisor esterni.

IL MONDO

Sensitherm è strutturata per servire i propri prodotti in tutto il mondo attraverso agenti e distributori autorizzati.

L'imballaggio standard che viene utilizzato è in bobine Anie di tipo fumigato e il confezionamento del prodotto finito può essere realizzato con dogatura e reggiatura, reso quindi idoneo a qualsiasi tipo di spedizione sia essa via aerea, via nave o in container.



SENSITHERM Srl

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