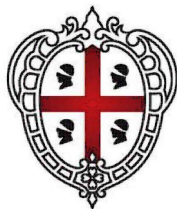


Regione  
Sardegna



Provincia di  
Sassari



Comune di  
Alghero



# IMPIANTO FOTOVOLTAICO "SAN-MARCO" DI 16MW SITO NEL COMUNE DI ALGHERO (SS) E RELATIVE OPERE DI CONNESSIONE

PROGETTISTI INCARICATI:

Ing. Luca Monsorno

Scala

-

Titolo elaborato:

Datasheet

Formato

A4

Ing. Alberto Voltolina

CODICE ELABORATO

PROGETTO	CLASSE	TIPO	PROG.
SPFVSA04	PAUR2	R	02

ALTRI TECNICI COINVOLTI

Dott.ssa Archeol. Ilaria  
Frontori Arch. Maurizio Cossar  
Dott. Geol. Alberto Velicogna

Rev.	Data	Descrizione	Redige	Verifica	Approva
00	12/23	Prima emissione	SR	AV	AV
01					
02					
03					
04					
05					
06					

GESTORE RETE ELETTRICA



SOCIETA' PROPONENTE:

# OPR SUN 30

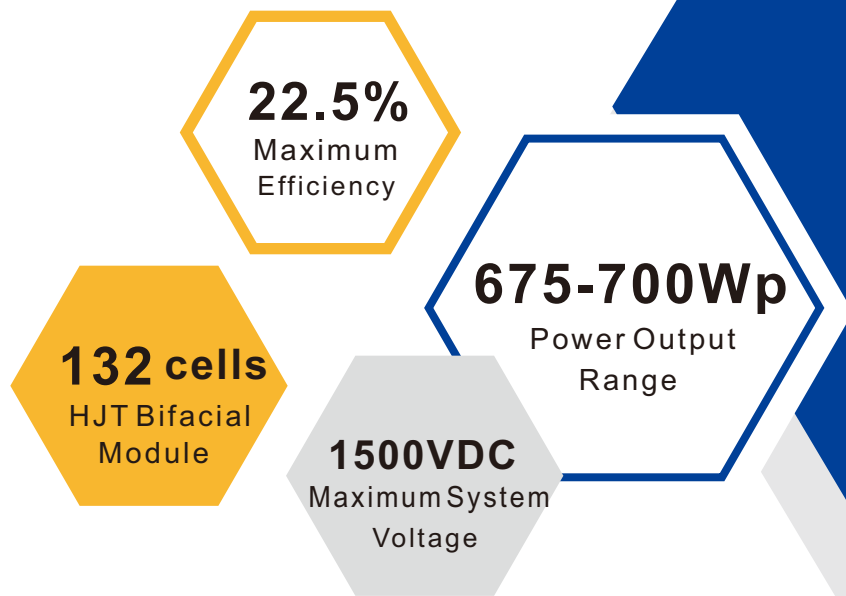
OPR SUN 30 SRL

Via Ceresio, 7 - 20154 Milano

PEC: oprsun30@legalmail.it

P.iva 13086440966

## 210 THIN WAFERS HJT BIFACIAL MODULE



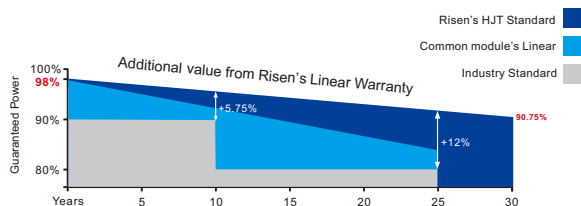
**ULTRA-LOW CARBON**

RSM132-8-675-700BHDG

### KEY SALIENT FEATURES:

- Global, Tier 1 bankable brand, with independently certified state-of-the-art automated manufacturing
- N-type solar cell without LID caused by B-O
- No PID
- Better Temperature Coefficient
- Bifacial technology enables additional energy harvesting from rear side
- Positive power tolerance of 0~+3%
- Dual stage 100% EL Inspection warranting defect-free product
- Module Imp binning radically reduces string mismatch losses
- Excellent wind load 2400Pa & snow load 5400Pa under certain installation method
- Comprehensive product and system certification
  - ♦ IEC61215:2016; IEC61730-1/-2:2016;
  - ♦ ISO 9001:2015 Quality Management System
  - ♦ ISO 14001:2015 Environmental Management System
  - ♦ ISO 45001:2018 Occupational Health and Safety Management System

### LINEAR PERFORMANCE WARRANTY



★ Please check the valid version of Limited Product Warranty which is officially released by Risen Energy Co., Ltd

- 12 Year** Product Warranty
- 30 Year** Linear Power Warranty
- 0.25%** Annual Degradation over 30 years



**RISEN ENERGY CO., LTD.**

Add: Tashan Industry Zone, Meilin, Ninghai 315609

Tel: 400-8291-000

Fax: +86-574-59953599

E-mail: marketing@risenenergy.com

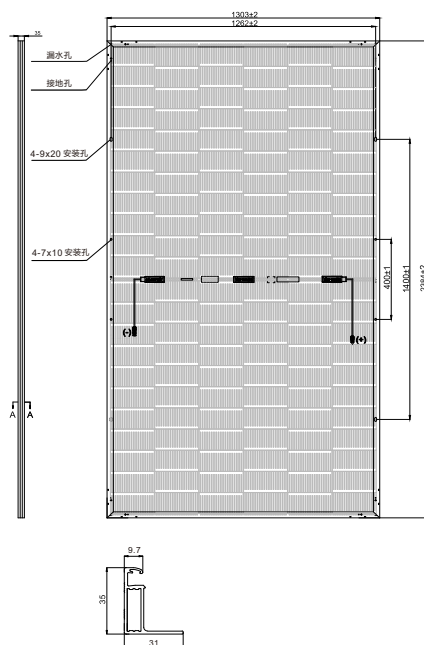
Website: www.risenenergy.com



\* As there are different certification requirements in different markets, please contact your local Risen Energy sales representative for the specific certificates applicable to the products in the region in which the products are to be used.

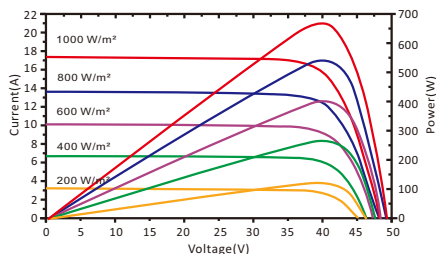
## Dimensions of PV Module

Unit: mm



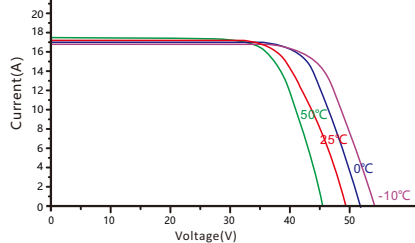
### RSM132-8-690BHDG

#### I-V characteristics at different irradiances



#### I-V characteristics at different temperatures

(AM1.5, 1000W/m²)



## ELECTRICAL DATA (STC)

Model Number	RSM132-8-675BHDG	RSM132-8-680BHDG	RSM132-8-685BHDG	RSM132-8-690BHDG	RSM132-8-695BHDG	RSM132-8-700BHDG
Rated Power in Watts-Pmax(Wp)	675	680	685	690	695	700
Open Circuit Voltage-Voc(V)	49.38	49.47	49.56	49.65	49.74	49.83
Short Circuit Current-Isc(A)	17.40	17.48	17.56	17.66	17.74	17.82
Maximum Power Voltage-Vmpp(V)	41.41	41.48	41.56	41.63	41.71	41.78
Maximum Power Current-Impp(A)	16.32	16.41	16.50	16.60	16.68	16.77
Module Efficiency (%) ★	21.7	21.9	22.1	22.2	22.4	22.5

STC: Irradiance 1000 W/m², Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3.  
Bifacial factor:(%) 85±5 ★ Module Efficiency (%): Round-off to the nearest number

## Electrical characteristics with 10% rear side power gain

Total Equivalent power -Pmax (Wp)	743	748	754	759	765	770
Open Circuit Voltage-Voc(V)	49.38	49.47	49.56	49.65	49.74	49.83
Short Circuit Current-Isc(A)	19.14	19.23	19.32	19.43	19.51	19.60
Maximum Power Voltage-Vmpp(V)	41.41	41.48	41.56	41.63	41.71	41.78
Maximum Power Current-Impp(A)	17.95	18.05	18.15	18.26	18.35	18.44

Rear side power gain: The additional gain from the rear side compared to the power of the front side at the standard test condition. It depends on mounting (structure, height, tilt angle etc.) and albedo of the ground.

## ELECTRICAL DATA (NMOT)

Model Number	RSM132-8-675BHDG	RSM132-8-680BHDG	RSM132-8-685BHDG	RSM132-8-690BHDG	RSM132-8-695BHDG	RSM132-8-700BHDG
Maximum Power-Pmax (Wp)	515.6	519.3	523.0	527.2	530.9	534.5
Open Circuit Voltage-Voc (V)	46.27	46.35	46.44	46.52	46.61	46.69
Short Circuit Current-Isc (A)	14.27	14.34	14.40	14.48	14.55	14.61
Maximum Power Voltage-Vmpp (V)	38.71	38.78	38.85	38.93	39.00	39.07
Maximum Power Current-Impp (A)	13.32	13.39	13.46	13.54	13.61	13.68

NMOT: Irradiance at 800 W/m², Ambient Temperature 20°C, Wind Speed 1 m/s.

## MECHANICAL DATA

Solar cells	HJT cell
Cell configuration	132 cells (6×11+6×11)
Module dimensions	2384×1303×35mm
Weight	38.5kg
Superstrate	High Transmission, Low Iron, Tempered ARC Glass
Substrate	Tempered Glass
Frame	Anodized Aluminium Alloy type 6005-2T6, Silver Color
J-Box	Potted, IP68, 1500VDC, TÜV&UL Certified
Cables	4.0mm² (12AWG), Positive(+)350mm, Negative(-)230mm (Connector Included )
Connector	Risen Twinsel PV-SY02, IP68

## TEMPERATURE & MAXIMUM RATINGS

Nominal Module Operating Temperature (NMOT)	43°C±2°C
Temperature Coefficient of Voc	-0.22%/°C
Temperature Coefficient of Isc	0.047%/°C
Temperature Coefficient of Pmax	-0.24%/°C
Operational Temperature	-40°C~+85°C
Maximum System Voltage	1500VDC
Max Series Fuse Rating	35A
Limiting Reverse Current	35A

## PACKAGING CONFIGURATION

	40ft(HQ)
Number of modules per container	558
Number of modules per pallet	31
Number of pallets per container	18
Packaging box dimensions (LxWxH) in mm	1320×1120×2515
Box gross weight[kg]	1245

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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No special undertaking or warranty for the suitability of special purpose or being installed in extraordinary surroundings is granted unless as otherwise specifically committed by manufacturer in contract document.

THE POWER OF RISING VALUE

### Our Partners:

# SG350HX

Multi-MPPT String Inverter for 1500 Vdc System

Preliminary



## HIGH YIELD

- Up to 16 MPPTs with max. efficiency 99%
- 20A per string, compatible with 500Wp+ module
- Data exchange with tracker system, improving yield



## Low Cost

- Q at night function, save investment
- Power line communication (PLC)
- Smart IV Curve diagnosis\*, active O&M



## Grid Support

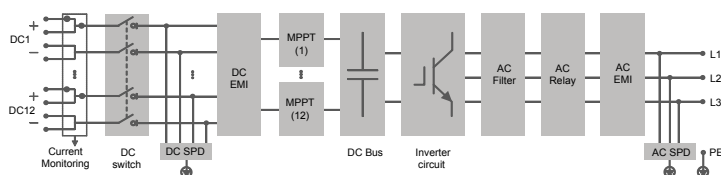
- $SCR \geq 1.16$  stable operation in extremely weak grid
- Reactive power response time <30ms
- Compliant with global grid code



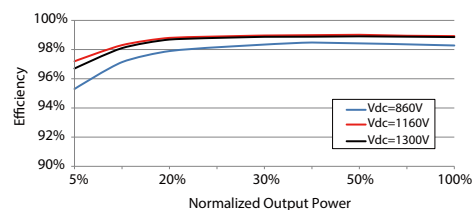
## PROVEN SAFETY

- 2 strings per MPPT, no fear of string reverse connection
- Integrated DC switch, automatically cut off the fault
- 24h real-time AC and DC insulation monitoring

## CIRCUIT DIAGRAM



## EFFICIENCY CURVE

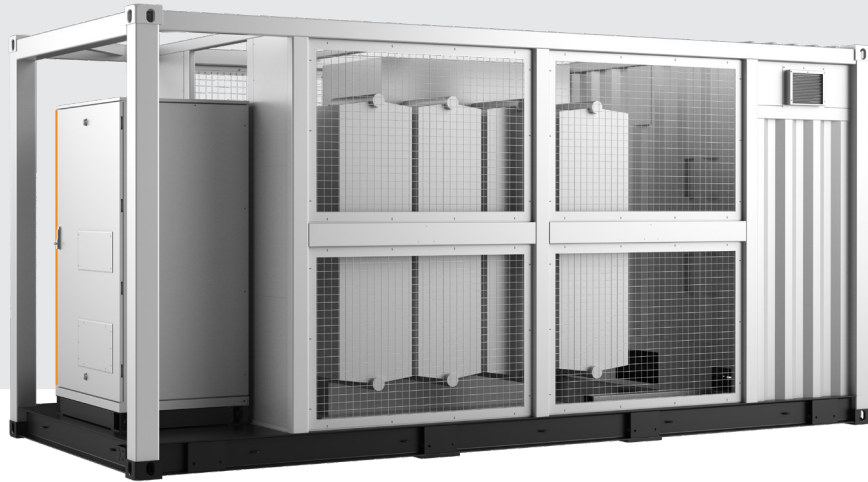


Type designation	SG350HX
<b>Input (DC)</b>	
Max. PV input voltage	1500 V
Min. PV input voltage / Startup input voltage	500 V / 550 V
Nominal PV input voltage	1080 V
MPP voltage range	500 V – 1500 V
MPP voltage range for nominal power	860 V – 1300 V
No. of independent MPP inputs	12 (Optional: 14 / 16)
Max. number of input connector per MPPT	2
Max. PV input current	12 * 40 A (Optional: 14 * 30 A / 16 * 30 A)
Max. DC short-circuit current per MPPT	60 A
<b>Output (AC)</b>	
AC output power	352 kVA @ 30 °C / 320 kVA @40 °C / 295 kVA @50 °C
Max. AC output current	254 A
Nominal AC voltage	3 / PE, 800 V
AC voltage range	640 – 920 V
Nominal grid frequency / Grid frequency range	50 Hz / 45 – 55 Hz, 60 Hz / 55 – 65 Hz
THD	< 3 % (at nominal power)
DC current injection	< 0.5 % In
Power factor at nominal power / Adjustable power factor	> 0.99 / 0.8 leading – 0.8 lagging
Feed-in phases / Connection phases	3 / 3
<b>Efficiency</b>	
Max. efficiency / European efficiency / CEC	99.01 % / 98.8 % / 98.5 %
<b>Protection</b>	
DC reverse connection protection	Yes
AC short circuit protection	Yes
Leakage current protection	Yes
Grid monitoring	Yes
Ground fault monitoring	Yes
DC switch/ AC switch	Yes / No
PV String current monitoring	Yes
Q at night function	Yes
Anti-PID and PID recovery function	Optional
Overvoltage protection	DC Type II / AC Type II
<b>General Data</b>	
Dimensions (W*H*D)	1136*870*361 mm (44.7" * 34.3" * 14.2")
Weight	≤110 kg (≤242.5 lbs)
Isolation method	Transformerless
Ingress protection rating	IP66 (NEMA 4X)
Night power consumption	< 6 W
Operating ambient temperature range	-30 to 60 °C (-22 to 140 °F)
Allowable relative humidity range (non-condensing)	0 – 100 %
Cooling method	Smart forced air cooling
Max. operating altitude	4000 m (> 3000 m derating) / 13123 ft (> 9843 ft derating)
Display	LED, Bluetooth+APP
Communication	RS485 / PLC
DC connection type	MC4-Evo2 (Max. 6 mm <sup>2</sup> , optional 10mm <sup>2</sup> / Max. 10AWG, optional 8AWG )
AC connection type	Support OT/DT terminal (Max. 400 mm <sup>2</sup> / 789 Kcmil)
Compliance	IEC 62109, IEC 61727, IEC 62116, IEC 60068, IEC 61683, VDE-AR-N 4110:2018, VDE-AR-N 4120:2018, EN 50549-1/2, UNE 206007-1:2013, P.O.12.3, UTE C15-712-1:2013, UL1741, UL1741SA, IEEE1547, IEEE1547.1, CSA C22.2 107.1-01-2001, California Rule 21, UL1699B
Grid support	Q at night function, LVRT, HVRT, active & reactive power control and power ramp rate control, Q-U control, P-f control

\*: Only compatible with Sungrow logger and iSolarCloud

# MVS3200/4480-LV

MV Turnkey Solution for 1500 Vdc String Inverter SG350HX



## SAVED INVESTMENT

- Up to 4.48 MW block design
- Easy transportation due to standard container design
- All pre-assembled for easy set-up and commissioning



## SAFETY

- MV and LV isolated, independent control room
- All key components front accessible, no need walk-in operation



## EASY O&M

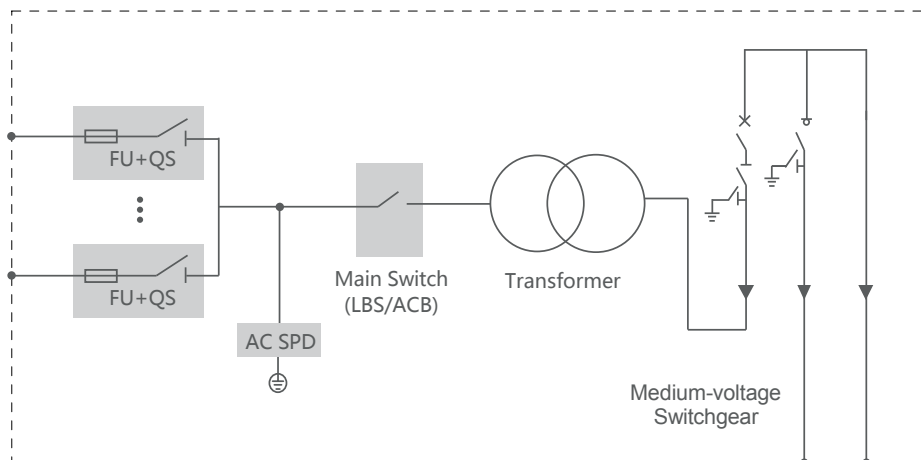
- Online analysis for fast trouble shooting
- Modular design, main device easy replacement



## RELIABLE

- All components type-tested
- Compliance with standards: IEC 60076, IEC 62271, IEC 61439

## CIRCUIT DIAGRAM



Type designation	MVS3200-LV	MVS4480-LV
<b>Transformer</b>		
Transformer type	Oil immersed	
Rated power	3200 kVA @ 40 °C	4480 kVA @ 40 °C
Max. power	3520 kVA @ 30 °C	4928 kVA @ 30 °C
Vector group	Dy11	
LV / MV voltage	0.8 kV / 20 – 35 kV	
Maximum input current at nominal voltage	2540 A	3557 A
Frequency	50 Hz / 60 Hz	
Tapping on HV	0, ±2×2.5%	
Efficiency	≥99%	
Cooling type	ONAN (Oil Natural Air Natural)	
Impedance	7% (±10%)	8% (±10%)
Oil type	Mineral oil (PCB free)	
Winding material	Al / Al	
Insulation class	A	
<b>MV Switchgear</b>		
Insulation type	SF6	
Rate voltage	24 – 36 kV	
Rate current	630 A	
Internal arcing fault	IAC AFL 20kA/1s	
Qty. of feeder	3 feeders	
<b>LV Panel</b>		
Main switch specification	4000 A / 800 Vac / 3P, 1 pcs	
Disconnecter specification	260 A / 800 Vac / 3P, 10 pcs	260 A / 800 Vac / 3P, 14 pcs
Fuse specification	400A / 800 Vac / 1P, 30 pcs	400 A / 800 Vac / 1P, 42 pcs
<b>Protection</b>		
AC input protection	FUSE+Disconnecter	
Transformer protection	Oil-temperature, oil-level, oil-pressure	
Relay protection	50/51,50N/51N	
LV overvoltage protection	AC Type II (optional: AC Type I + II)	
<b>General Data</b>		
Dimensions(W*H*D)	6058*2896*2438 mm	
Approximate weight	15 T	17 T
Operating ambient temperature range	-20 to 60 °C (optional: -30 to 60 °C)	
Auxiliary power supply	5 kVA / 400 V (optional: max. 40 kVA)	
Degree of protection	IP54	
Allowable relative humidity range (non-condensing)	0 – 95 %	
Operating altitude	1000 m (standard) / > 1000 m (optional)	
Communication	Standard: RS485, Ethernet; Optional: optical fiber	
Compliance	IEC 60076, IEC 62271-200, IEC 62271-202, IEC 61439-1, EN50588-1	



CPR (UE) n°305/11  
Cca - s3, d1, a3

Regolamento Prodotti da Costruzione/Construction Products Regulation  
Classe conforme norme EN 50575:2014 + A1:2016 e EN 13501-6:2014  
Class according to standards EN 50575:2014 + A1:2016 and EN 13501-6:2014

DoP n°1043/17

CEI 20-13  
CEI EN 60332-1-2  
2014/35/UE  
2011/65/CE

Costruzione e requisiti/Construction and specifications  
Propagazione fiamma/Flame propagation  
Direttiva Bassa Tensione/Low Voltage Directive  
Direttiva RoHS/RoHS Directive



## DESCRIZIONE

Cavo unipolare per energia con conduttore in alluminio, isolato in gomma etilenpropilenica ad alto modulo di qualità G16, sotto guaina di PVC, con particolari caratteristiche di reazione al fuoco e rispondente al Regolamento Prodotti da Costruzione (CPR).

### Conduttore

Corda di alluminio rigida, classe 2

### Isolante

Mescola di gomma etilpropilenica ad alto modulo di qualità G16

### Guaina esterna

Mescola di PVC di qualità R16

### Colore anime

Normativa HD 308

### Colore guaina

Grigio

### Marcatura a inchiostro

BALDASSARI CAVI REPERO® ARG16R16 0,6/1 kV (sez)  
Cca-s3,d1,a3 IEMMEQU EFP (anno) (m) (tracciabilità)

## CARATTERISTICHE TECNICHE

Tensione nominale  $U_0/U$ : 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 fino alla sezione 240 mm², oltre 220°C

Sforzo massimo di trazione: 50 N/mm²

Raggio minimo di curvatura: 6 volte il diametro esterno massimo

### Condizioni di impiego

Per trasporto energia nell'edilizia industriale e/o residenziale. Adatto per impiego all'interno in locali anche bagnati o all'esterno; posa fissa su murature e strutture metalliche. Ammessa anche la posa interrata.

## DESCRIPTION

Single-core power cable with aluminum conductor, HEPR insulated (G16 quality), PVC sheathed, with special fire reaction characteristics according to Construction Products Regulation (CPR).

### Conductor

Aluminium stranded wire, class 2

### Insulation

Rubber HEPR compound G16 quality

### Outer sheath

PVC compound, R16 quality

### Cores colour

HD 308 Standard

### Sheath colour

Grey

### Inkjet marking

BALDASSARI CAVI REPERO® ARG16R16 0,6/1 kV (section)  
Cca-s3,d1,a3 IEMMEQU EFP (year) (m) (traceability)

## TECHNICAL CHARACTERISTICS

Nominal voltage  $U_0/U$ : 0,6/1 kV

Maximum operating temperature: 90°C

Minimum operating temperature: -15°C  
(without mechanical stress)

Minimum installation temperature: 0°C

Maximum short circuit temperature:  
250°C up to 240 mm² section, over 220°C

Maximum tensile stress: 50 N/mm²

Minimum bending radius: 6 x maximum external diameter

### Use and installation

Power cable for industrial and/or residential uses. Suitable to be used indoor and outdoor, even in wet environments; it can be fixed on walls and/or metal structures. Suitable also for laying underground.





Formazione	Ø indicativo conduttore	Spessore medio isolante	Spessore medio guaina	Ø indicativo produzione	Peso indicativo cavo	Resistenza elettrica max a 20°C	Portata di corrente Current rating			
Formation	Approx. conductor Ø	Average insulation thickness	Average sheath thickness	Approx. production Ø	Approx. cable weight	Max. electrical resistance at 20°C	In aria libera Free in air 30°C	In tubo in aria In pipe in air 30°C	Interrato Underground 20°C	In tubo interrato Underground in pipe 20°C
n° x mm²	mm	mm	mm	mm	kg/km	ohm/km	A	A	A	A
1 x 16	4,9	0,7	1,4	9,1	109	1,91	70	64	98	75
1 x 25	6,1	0,9	1,4	10,7	151	1,20	102	88	119	95
1 x 35	7,1	0,9	1,4	11,7	185	0,868	136	110	141	115
1 x 50	8,2	1,0	1,4	13,0	230	0,641	164	131	167	134
1 x 70	9,9	1,1	1,4	14,9	315	0,443	218	175	204	173
1 x 95	11,4	1,1	1,5	16,6	405	0,320	261	209	245	196
1 x 120	13,1	1,2	1,5	18,5	510	0,253	310	250	277	238
1 x 150	14,4	1,4	1,6	20,4	620	0,206	350	280	313	250
1 x 185	16,2	1,6	1,6	22,6	750	0,164	415	334	350	300
1 x 240	18,4	1,7	1,7	25,2	955	0,125	490	392	413	331
1 x 300	20,7	1,8	1,8	27,9	1150	0,100	567	-	454	400
1 x 400	23,6	2,0	1,9	31,4	1520	0,0778	665	-	512	450
1 x 500	26,5	2,2	2,0	34,9	1850	0,0605	765	-	578	505
1 x 630	30,2	2,4	2,2	39,8	2415	0,0469	880	-	646	580

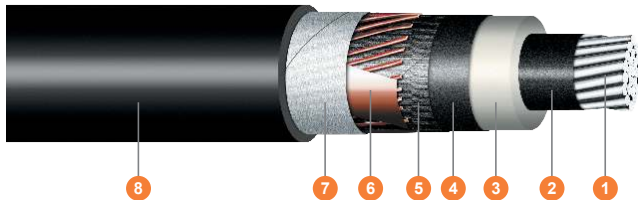
N.B. Il coefficiente di resistività termica del terreno preso a riferimento per il calcolo della portata dei cavi interrati è di 1° C.m/W, profondità di posa 0,8 m.  
Calcolo della portata di corrente eseguito considerando quattro cavi a contatto con temperatura dei conduttori di 90°C.

N.B. The thermal resistivity coefficient used as a reference for the calculation of the underground cables current rating is 1° C.m/W, 0,8 m installation depth.  
Calculation of current rating performed considering four cables in contact with conductor temperature of 90°C.



# Mittelspannungskabel mit VPE-Isolierung

Medium voltage cables with XLPE Insulation



**Standard:** in Anlehnung an DIN VDE 0276-620  
following DIN VDE 0276-620

## Aufbau:

Design:

- |   |   |   |                                     |
|---|---|---|-------------------------------------|
| 1 Aluminiumleiter<br>Aluminium conductor            | 3 VPE-Isolierung<br>XLPE insulation                 | 5 Bandierung<br>Tape  | 7 Quellvlies<br>Water-blocking tape |
| 2 Innere Leitschicht<br>Inner semi-conducting layer | 4 Äußere Leitschicht<br>Outer semi-conducting layer | 6 Kupferdrahtschirm aus<br>Kupferdrähten und<br>Kupferband<br>Copper wire screen and<br>copper tape | 8 PE-Mantel<br>PE outer sheath      |

## Anwendung:

Application:

Die Kabel sind geeignet für die feste Verlegung in Innenräumen, im Freien und in Erde. Sie können direkt in den Boden oder in Kabelkanäle gelegt werden.

The cables are suitable for installation indoors, outdoors and in the ground. Installation to be carried out in the ground or in a cable channel.

## Eigenschaften:

Properties:

Nennspannung Rated voltage	20.8/36 kV	Mindesttemperatur für die Verlegung Minimal temperature for laying	-20°C
Prüfspannung Test voltage	73 kV	Farbe der Isolierung Colour of insulation	ungefärbt uncoloured
Maximale Betriebstemperatur des Leiters Maximal operating conductor temperature	+90°C	Farbe des Mantels Colour of sheath	schwarz black
Maximale Betriebstemperatur beim Kurzschluss Maximal short-circuit temperature	+250°C	Flammwidrigkeit Flame retardant	nein no
Betriebstemperatur Operating temperature range	-35°C - +90°C	Verpackung Packaging	Holz- oder Metalltrommeln wooden or metal drums
Mindesttemperatur für die Lagerung Minimal storage temperature	-35°C	CE-Konformität CE-Conformity	ja yes

## Technische Daten:

Technical details:

Aderzahl und Nennquerschnitt	Leiterform	Durchmesser des Leiters (ca.)	Nennwanddicke der Isolierung	Durchmesser über Isolation (ca.)	Nennwanddicke des Mantels	Außendurch- messer (ca.)	Biegeradius (min.)	Gewicht (ca.)
Number of cores and cross-section	Shape of conductor	Conductor diameter (approx.)	Nominal insulation thickness	Diameter over insulation (approx.)	Nominal sheath thickness	Outer diameter (approx.)	Bending radius (min.)	Weight (approx.)
mm <sup>2</sup>		mm	mm	mm	mm	mm	mm	kg/km
1x50/16	RM	8.3	8.8	27.1	2.5	35	525	1074
1x70/16	RM	9.8	8.8	28.6	2.5	37	555	1181
1x95/16	RM	11.3	8.8	30.1	2.5	38	570	1307
1x120/16	RM	12.8	8.8	31.6	2.5	40	600	1430
1x150/25	RM	14.2	8.8	33.0	2.5	41	615	1634
1x185/25	RM	15.8	8.8	34.6	2.5	43	645	1802
1x240/25	RM	18.1	8.8	36.9	2.5	45	675	2038
1x300/25	RM	20.2	8.8	39.0	2.6	48	720	2294
1x400/35	RM	23.3	8.8	42.1	2.6	51	765	2808
1x500/35	RM	26.5	8.8	45.3	2.7	54	810	3235
1x630/35	RM	29.9	8.8	48.7	2.8	58	870	3763
1x800/35	RM	34.2	8.8	53.0	2.9	62	930	4439

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## Elektrische Eigenschaften:

Electrical properties:

Aderzahl und Nennquerschnitt  <i>Number of cores and cross-section</i>	Gleichstrom- widerstand bei 20°C <i>DC resistance at 20°C</i>	Kapazität (ca.) <i>Capacitance (approx.)</i>	Induktivität, Dreieck (ca.) <i>Inductance, trefoil (approx.)</i>	Induktivität in Erde, flach (ca.) <sup>1</sup> <i>Inductance in ground, flat (approx.) <sup>1</sup></i>
mm <sup>2</sup>	Ω/km	µF/km	mH/km	mH/km
1x50/16	0.6410	0.13	0.48	0.73
1x70/16	0.4430	0.14	0.45	0.70
1x95/16	0.3200	0.15	0.44	0.67
1x120/16	0.2530	0.16	0.42	0.65
1x150/25	0.2060	0.17	0.40	0.62
1x185/25	0.1640	0.19	0.39	0.60
1x240/25	0.1250	0.20	0.37	0.58
1x300/25	0.1000	0.22	0.36	0.56
1x400/35	0.0778	0.25	0.35	0.53
1x500/35	0.0605	0.27	0.33	0.51
1x630/35	0.0469	0.30	0.31	0.49
1x800/35	0.0367	0.33	0.30	0.47

Anmerkung: <sup>1</sup>) Lichter Abstand zwischen den Kabeln: 7 cm  
 Remarks: <sup>1</sup>) clearance between cables: 7 cm

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Aderzahl und Nennquerschnitt <i>Number of cores and cross-section</i>	Zulässiger Kurzschluss- strom, Leiter <i>Conductor short- circuit current</i>	Zulässiger Kurzschluss- strom, Schirm <i>Screen short- circuit current</i>	Erwärmungszeit- konstante, Dreieck* <i>Heating time constant, trefoil*</i>	Erwärmungszeit- konstante, flach* <i>Heating time constant, flat*</i>	Belastbarkeit an Luft, Dreieck* <i>Current ratings in air, trefoil*</i>	Belastbarkeit an Luft, flach* <i>Current ratings in air, flat*</i>	Belastbarkeit in Erde, Dreieck* <i>Current ratings in ground, trefoil*</i>	Belastbarkeit in Erde, flach* <i>Current ratings in ground, flat*</i>
mm <sup>2</sup>	kA	kA	s	s	A	A	A	A
1x50/16	4.7	3.2	264	204	194	221	179	193
1x70/16	6.6	3.2	336	260	241	274	219	235
1x95/16	9.0	3.2	425	330	291	330	261	282
1x120/16	11.3	3.2	511	400	335	378	298	320
1x150/25	14.2	5.0	632	509	376	419	331	350
1x185/25	17.5	5.0	737	599	430	477	373	393
1x240/25	22.7	5.0	901	748	504	553	432	449
1x300/25	28.4	5.0	1086	913	574	626	485	500
1x400/35	37.8	7.0	1464	1305	659	698	547	542
1x500/35	47.3	7.0	1740	1608	756	786	617	592
1x630/35	59.6	7.0	2105	2000	866	889	690	653
1x800/35	75.6	7.0	2631	2588	984	992	770	723

## Anmerkungen: \*)

Die Strombelastbarkeitswerte basieren auf folgenden Bedingungen:

- Legung berührend im Dreieck oder flach mit 70 mm lichtem Abstand
- ein System mit Legetiefe 0,7 m
- beidseitige Erdung der Schirme
- Bodentemperatur 20°C
- spezifischer Bodenwärmewiderstand:
  - 1,0 K·m/W für feuchten Boden
  - 2,5 K·m/W für trockenen Boden
- keine zusätzlichen beeinflussenden Wärmequellen
- Lufttemperatur 30°C
- keine direkte Sonnenbestrahlung

## Remarks: \*)

The values of current-carrying capacity are based on following conditions:

- touching trefoil or flat formation with 70 mm clearance
- one circuit at 0.7 m laying depth
- solid bonding of cable screens
- ground temperature 20°C
- soil thermal resistivity:
  - 1.0 K·m/W for wet soil
  - 2.5 K·m/W for dry soil
- no additional heat sources
- air temperature 30°C
- no exposure to direct solar radiation

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