POWER SLIP RING

Technical Details

SR Series marine

SPM SPECIAL MACHINE. Via Padana superiore 38 Interno 5 Inzago (milano) ITALY
(sales@spm-slipring.it)
www.spm-slipring.it

THE COMPANY

SPM Special Machine is a young company from Milan (Italy) specialized in slip ring and cable reel.
The strength of the SPM is the twenty-year experience of Teem working in different industrial sectors (mining, marine and industrial, automotive and testing).

Thanks to their creative ability, the teem over the years has revised all the products on the market in terms of technology, quality, reliability and safety, differentiating themselves from competitors with extremely different and effective solutions.

SPM SPECIAL MACHINE is certified

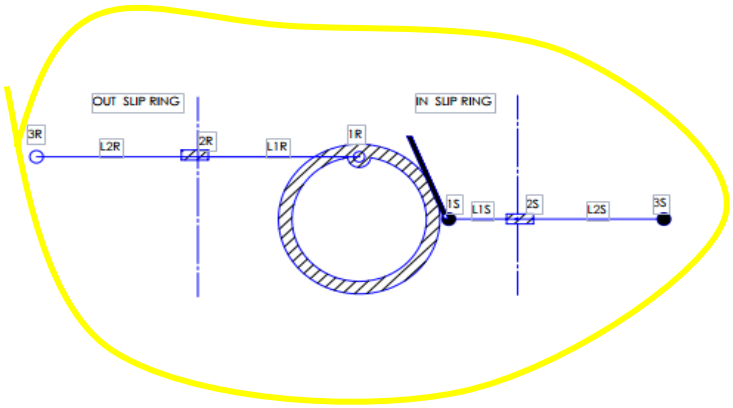
CESI

ISO/IEC 80079-34:2018
Explosive atmospheres -- Part 34: Application of quality systems for ex product manufacture

SLIP RING ASSEMBLY

The slip ring assemblies are designed for an operational voltage of max. 1500 V.
Depending on the size and the application of the spring-driven cable reel both sliprings for the data transmission
(mA-range / data bus systems) and sliprings for power transmission (up to max. 750 A) can be used.
The individually admissible amperages of the slipring assemblies can be gathered from the selection list.
The material of the cover the slip ring is steel Correspond to protection class IP 65

The leaf foil brush system is a particular brush that slides on a surface of a brass or bronze ring.
It has the function of transmitting power electricity, analog and digital signals from a fixed point (brush) to a rotating mobile one (ring) (input = ring / output = brush)



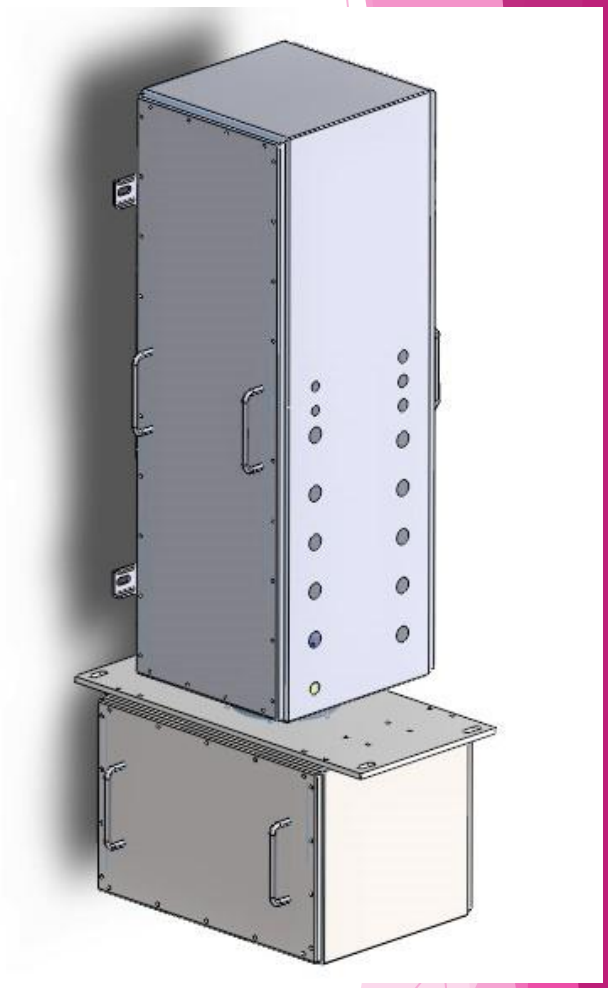
The main advantages of the system are:

1) Compactness and constructive simplicity;
2) Ease of maintenance;
3) Low electrical resistivity values (0.2 <R <6 mohm)
4) Good values of the characteristic impedance of the ring / brush system
5) Low friction value (Good ring / brush smoothness).
7) Low overheating at the contact point.
8) Low overtemperature values of the terminals in case of failure
9) Rapid cooling in case of failure at the contact point

POWER SLIP RING SR412

MARINE AISI 316L IP66

The slip ring series SR slip rings MARINE are designed for
Carrying AC and DC electrical signals from a rotating platform to a stationary structure, or with the same contacts as gold plating surface treatment, are also suitable for carrying analog or digital signals.
The main features of the Slip Ring Series of Power that the sliding contacts are realized in a nylon monofilament technology with different types of surface treatments that give it better electrical and mechanical performance than traditional metal grafite



General Characteristics

- slip ring of modular type;
- Direction of rotation: double (CW / CCW);
- Protection standard IP 66;
- Max operating speed 1-50 rpm (standard monofilament to copper beryllium);

Mechanical characteristics
- Body enclouse : steel AISI 316L
- Closing / opening top cover / base with metric thread
- Stainless steel screws quality
- Bearing: double with permanent lubrication;

mechanical group
stainless steel with zinc nickel treatment 1000 hours of salt spray
- Protection shaft / base: rotary seal

Electrical Characteristics
- Number of electrical ways:> 100 rings
- Ring ; Nichel /bronze power and auxiliar
- Brush (version beryllium copper treated);

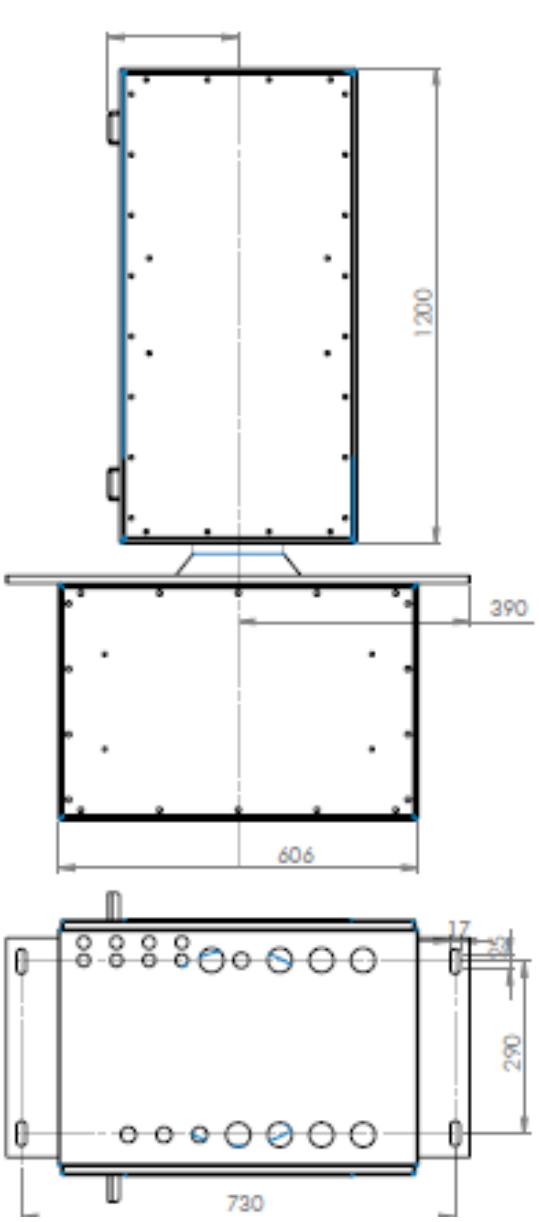
Ring ; gold to gold /bronze digital signal
- Brush (version beryllium copper gold treated);

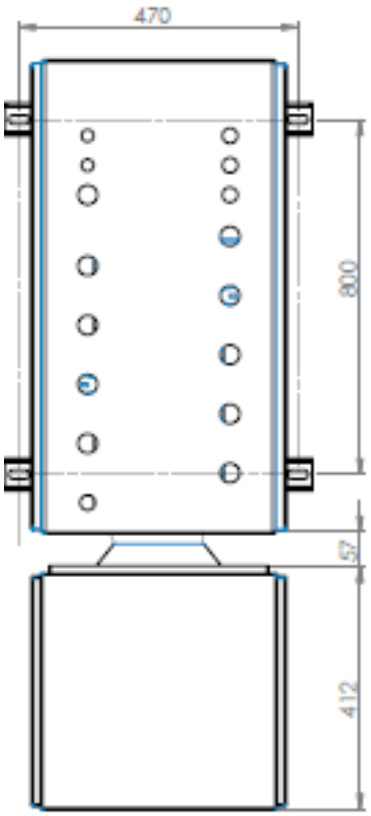
Resistence of contact

Power <1 mohm
-Auxiliary Utilities: < 10 mohm
-Utilities ehternet digital signal < 5 mohm,

- **Rated voltages:**
- **to 480Vac**
- Output cable gland Stainless steel AISI 316 L

technical drawing





Compliance Certifications

- **The device has been built with due regard to the following Directives and harmonized standards.**
- - Machinery Directive 2006/42. (Annex B).
  - Standards EN 60309-1-2 Plugs and sockets for industrial use.
  - Standards EN 60204-1 for electrical systems on board.
  - 60947-1-1 Low-voltage switchgear Part 1: General requirements.)
  .

Machinery Directive 2006/42. (Annex B)

MARINE SAFETY

DNV GL Standard for Certification No. 0377 "Offshore lifting appliances"

DNV·GL

IEC 60529 Applies to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72,5 kV

CESI

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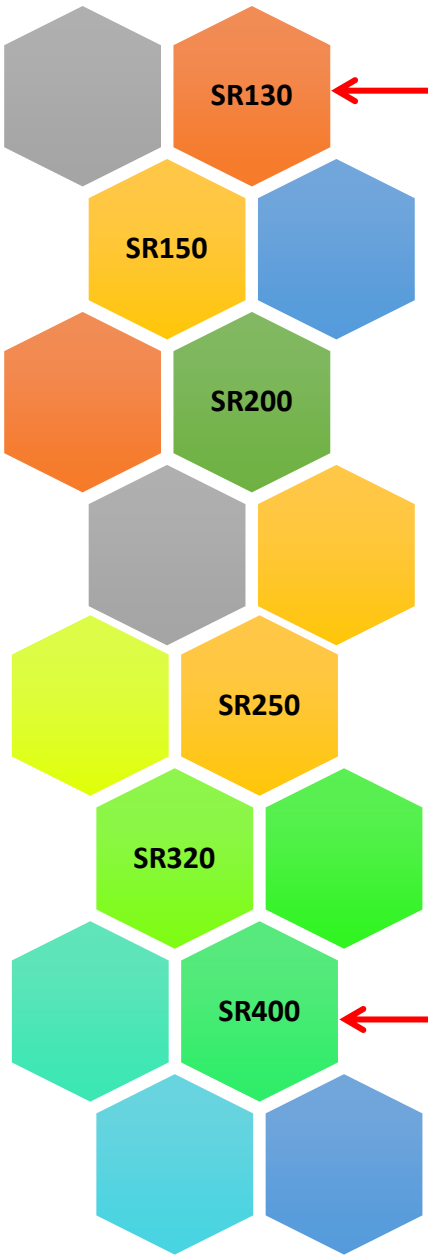
SR400 SERIES



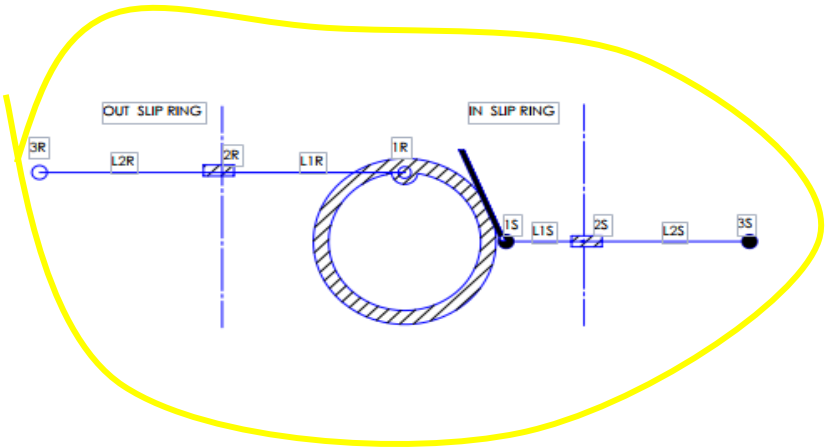
SLIP RING

1.0 SLIP RING ASSEMBLY SR320 SERIES

The slip ring assemblies are designed for an operational voltage of max. 680 V.
Depending on the size and the application of the spring-driven cable reel both sliprings for the data transmission
(mA-range / data bus systems) and sliprings for power transmission (up to max. 350 A) can be used.
The individually admissible amperages of the slipring assemblies can be gathered from the selection list.
The material of the cover the slip ring is steel Correspond to protection class IP 66

2.0 ELECTRICAL CONTACT SLIP RING

The leaf foil brush system is a particular brush that slides on a surface of a brass or bronze ring.
It has the function of transmitting power electricity, analog and digital signals from a fixed point (brush) to a rotating mobile one (ring) (input = ring / output = brush)



The main advantages of the system are:

1) Compactness and constructive simplicity;
2) Ease of maintenance;
3) Low electrical resistivity values (0.2 <R <6 mohm)
4) Good values of the characteristic impedance of the ring / brush system
5) Low friction value (Good ring / brush smoothness).
7) Low overheating at the contact point.
8) Low overtemperature values of the terminals in case of failure
9) Rapid cooling in case of failure at the contact point

SLIP RING SR320 SERIES

MARINE SAFETY

Mechanical Data

Parameter	Value
Enclosure type	MARINE SAFETY
Enclousure material	STAINLESS STEEL AISI 316L
Protetion	IP66
Working Temperature	;-40+60
Operating Humidity	0~85% RH
Rotating shaft on ball bearings	sealed and lubricated for life
Rotating Speed max	1~50 RPM
surface treatment	MECHANICAL ELEMENTS (zinc nickel (1000 hours of salt spray))
Torque	1N.m;- 3Nm/40 ring

Electrical Data

Parameter	Value		
	Power	Auxiliar	Signal
ring slip ring	bronze / nickel plated	bronze / nickel plated	bronze gold
brush slip ring	beryllium copper/nichel plated	beryllium copper/nichel plated	beryllium /copper gold
Rated Voltage	220/2500V	110/220V	<24Vdc
Rated current	In<500A	In<25A	In<2A
Insulation Resistance	1000V	500V	250V
Lead Wires	4-185 mmq	0,75-2,5mmq	<0,5mmq
Electrical Noise	<1mΩ	<8mΩ	<5mΩ
Cable gland	stainless steel, nickel-plated brass Exd M20/M25/M32/M40		
armored / non-armored cable	cable type armored, PUR ,		
Conduit	Hose: 1/2" , 3/4", 1"1 1/2"		
slip ring attachment	Flange C1		

Directive & Standard

Directives	Machinery Directive 2006/42. (Annex B)Value ;
Standard	Standards EN 60309-1-2 Plugs and sockets for industrial use. - Standards EN 60204-1 for electrical systems on board. - 60947-1-1 Low-voltage switchgear Part 1: General requirements.

SR324-C1

SR400 TYPE	L
SR406	600
SR408	800
SR410	1000
SR412	1200

3.0 SPECIAL CONDITIONS

It is possible to create special products with different types of users (see list)

Types of utilities
-number of power ways <350A
-number of auxiliary ways <20A
-number of signals type:
-analog Signal
- digital Can bus.
- digital profibus.
- digital ethernet.
- digital profinet.

For more information call the sales office of
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