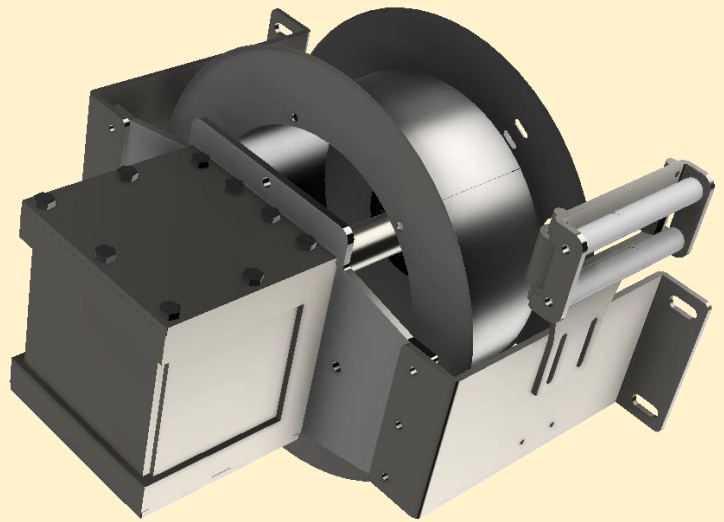


ATEX 

SCREX SERIES

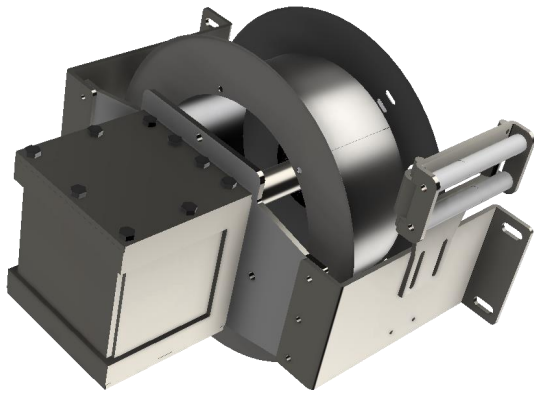


I12G Ex h IIB T5 Gb

1,0 Spring-driven cable reels SCREX- general technical data

The spring cable reels are used for the winding and unwinding of power and control cables, mainly in the lifting sectors, process machines, and water treatment plants.

The operation of the device consists of a steel drum inside which we have spiral springs which are unwound and wound by the towing of the mobile vehicle.



TYPE B



TYPE A

2,0 Slip ring assembly

The slip ring assemblies are designed for an operational voltage of max. 400 / 1000 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. 150 A) can be used.

The individually admissible amperages of the slipring assemblies can be gathered from the selection list.



The material of the spring cable reels is steel. Correspond to protection class IP 66

2.0 Purpose and applicability

The purpose of this document is to define the operating procedures, the resources and the sequence of activities that guarantee the compliance of the REEL SYSTEMS.

Spring cable reel

to the following requirements:

IIG	Surface plant with presence of gas
Ex h	Protection type Ex h ISO IEC 80079-36 non-electrical devices for explosive atmospheres ISO IEC 80079-37: Non-electrical devices for explosive atmospheres ISO EN 60079-0 2017 Explosive atmospheres - Part 0: electrical devices -: general rules
II B	Group IIA: Group IIB:
T4 /T5°C	Temperature class of the wood pulverization system (maximum surface temperature) suitable for the corresponding temperature class of the flammable substance 100/135 C °
Gb	EPL protection level: category 2 zone 1 equipment (gas)
	Marcatura di conformità alla direttiva 2014/34 / UE ed alle relative norme tecniche
	Marking of conformity to directive 2014/34 / EU and related technical standards
Technical file Number	FT-SPMEX01
BODY O.N	N/A
Delivery receipt	CESI C1017262R

3.0 Code Spring Cable Reel


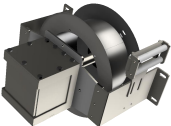
Exemple

S	C	R	E	X	0	1	-	1	J	-	S	R	E	X	1	5	1	-	0	0	0	X	-	A	D		
						2		2	H								2							B	S	G	
						3			B								3										
						4																					
						5																					

TYPE OF SPRING CABLE REEL

TYPE	D (mm)	d (mm)	L (mm)	Type spring
SCREX01	350	260	130	B
SCREX02	400	260	130	B
SCREX03	470	330	100	J/H
SCREX04	470	330	130	J/H
SCREX05	550	330	130	J/H

TYPE OF ATTACK AND ACCESORIES

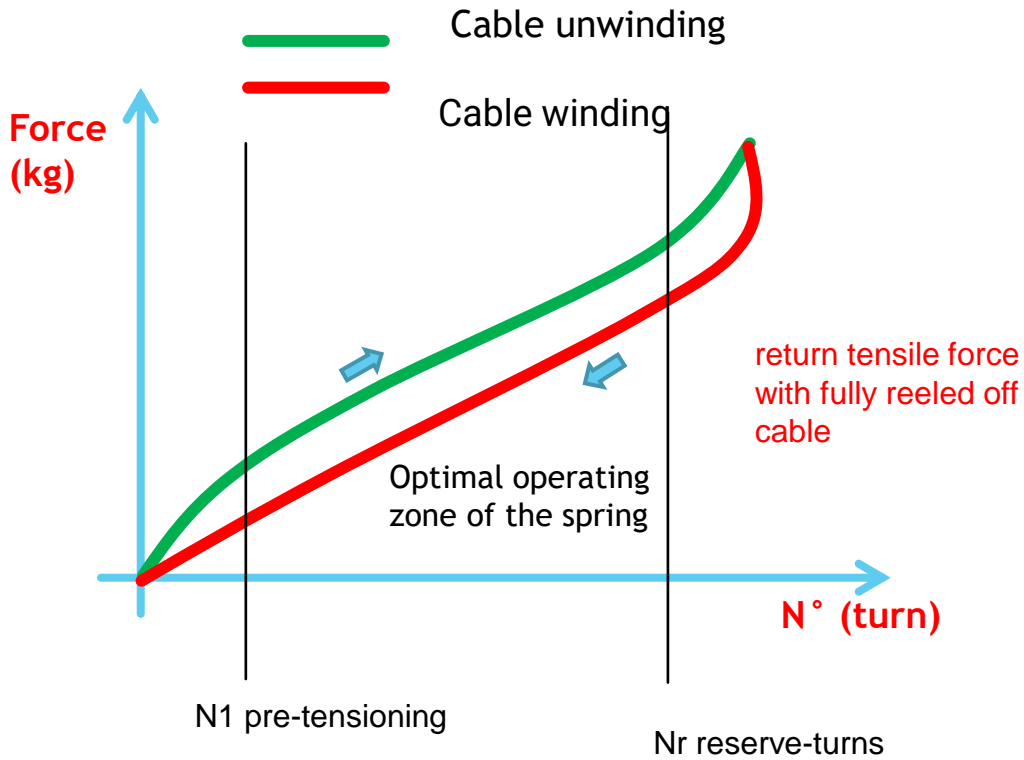
TYPE OF ATTACK		ROTATION SENSE	GUIDE CABLE
	A	D= CCW DIRECTION OF ROTATION ANTI-CLOCKWISE SIDE SLIP RING s	(-) NO GUIDE CABLE
		S=CW ROTATION DIRECTION SLIP RING SIDE CLOCK	G =GUIDE CABLE
	B	D= CCW DIRECTION OF ROTATION ANTI-CLOCKWISE SIDE SLIP RING	(-) NO GUIDE CABLE
		S=CW ROTATION DIRECTION SLIP RING SIDE CLOCK	G =GUIDE CABLE

3.1 Springs

Springs of high-quality texture-roller spring steel with a long lifespan are used. The springs conduct as shown in the diagram.

The spring forces indicated in the selection list are the max. achievable forces F (referred to the corresponding reel body core).

The pre-tensioning-, working- and reserve-turns to be observed during commissioning are indicated on the type plate of the reel.



TYPE OF SPRING

SPRING CODE	CARATERISTIC	SPIRAL GEOMETRIC	N° TURN	FORCE (max)
B	STEEL FOR SPRING	L502-400718514-B 40X0.7 14.000 (30/185)	29	5 kg
H	STEEL FOR SPRING	L503-401126018-H spring 40x1.1x18.000 (44/260)	24	7 kg
J	STEEL FOR SPRING	L503-401326015-J Spring 40x1.35X15.000 (44/260)	18	12 Kg

4.0 QUICK SELECTION TABLE

HORIZONTAL

D(mm)	W (Kg)	10 m	15 m	20 m	25 m
5-6,	0,05-0,08.	SCREX11 -B	SCREX01 -B	SCREX01 -B	SCREX03 -H
7-9.	0,08-0,15	SCREX11 -B	SCREX01 -B	SCREX01 -B	SCREX03 -H
10-12,	0,15-0,2	SCREX01 -B	SCREX01 -B	SCREX02 -2B	SCREX03 -H
13-15	0,2-0,3	SCREX03 -H	SCREX03 -H	SCREX04 -2H	SCREX04 -2H
16-20	0,3-0,6	SCREX03 -H	SCREX04 -2H	SCREX04 -2H	SCREX05 -2H

VERTICAL

D(mm)	W (Kg)	10 m	15 m	20 m	25 m
5-6,	0,05-0,08.	SCREX01 -B	SCREX01 -B	SCREX01 -B	SCREX03 -H
7-9.	0,08-0,15	SCREX01 -B	SCREX01 -B	SCREX01 -B	SCREX03 -H
10-12,	0,15-0,2	SCREX01 -B	SCREX02 -B	SCREX02 -2B	SCREX04 -2H
13-15	0,2-0,3	SCREX03 -H	SCREX03 -H	SCREX03 -J	SCREX04 -2H
16-20	0,3-0,6	SCREX03 -H	SCREX03 -J	SCREX03 -J	SCREX05 -2H

5.0 LAYOUT TYPE A

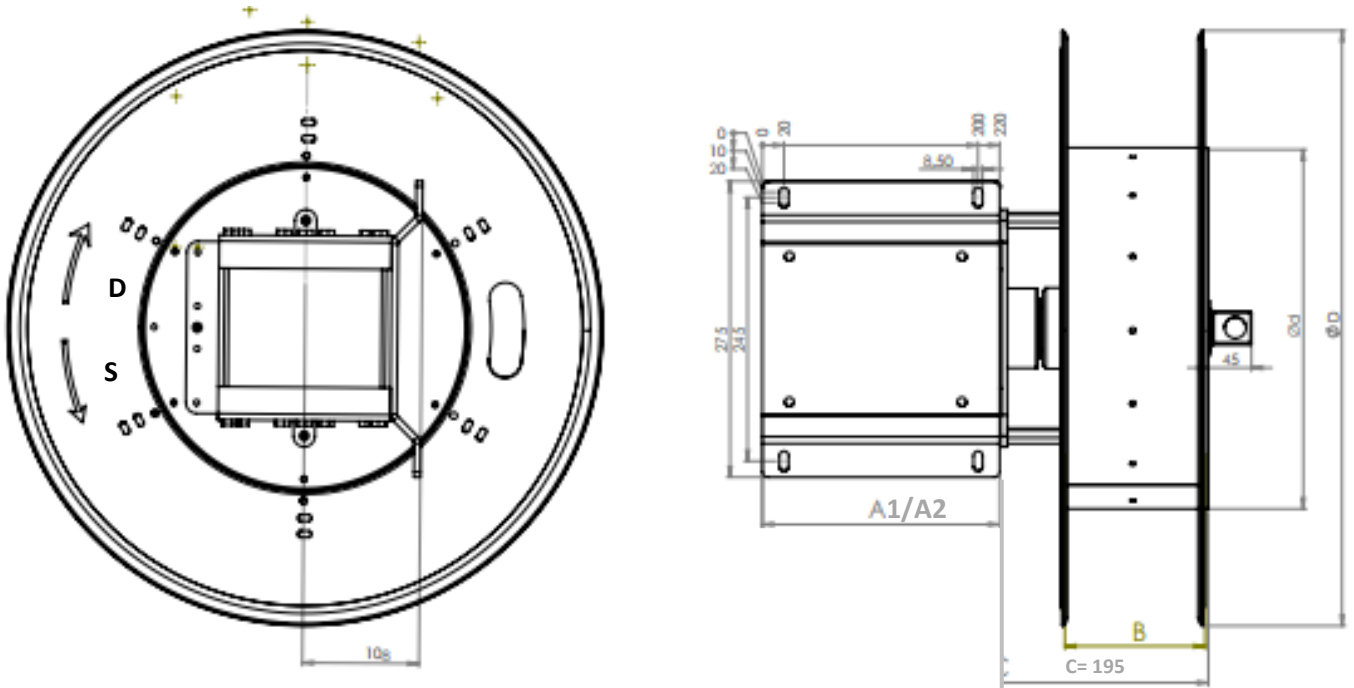


TABLE QUOTE TYPE A

TYPE	D (mm)	d (mm)	B (mm)	C (mm)	A1 SREX151 (mm)	A2 SREX152 (mm)
SCREX11	350	260	100	165	150	220
SCREX01	350	260	130	195	150	220
SCREX02	400	260	130	195	150	220
SCREX03	470	330	100	165	150	220
SCREX04	470	330	130	195	150	220
SCREX05	550	330	130	195	150	220

5.1 LAYOUT TYPE B

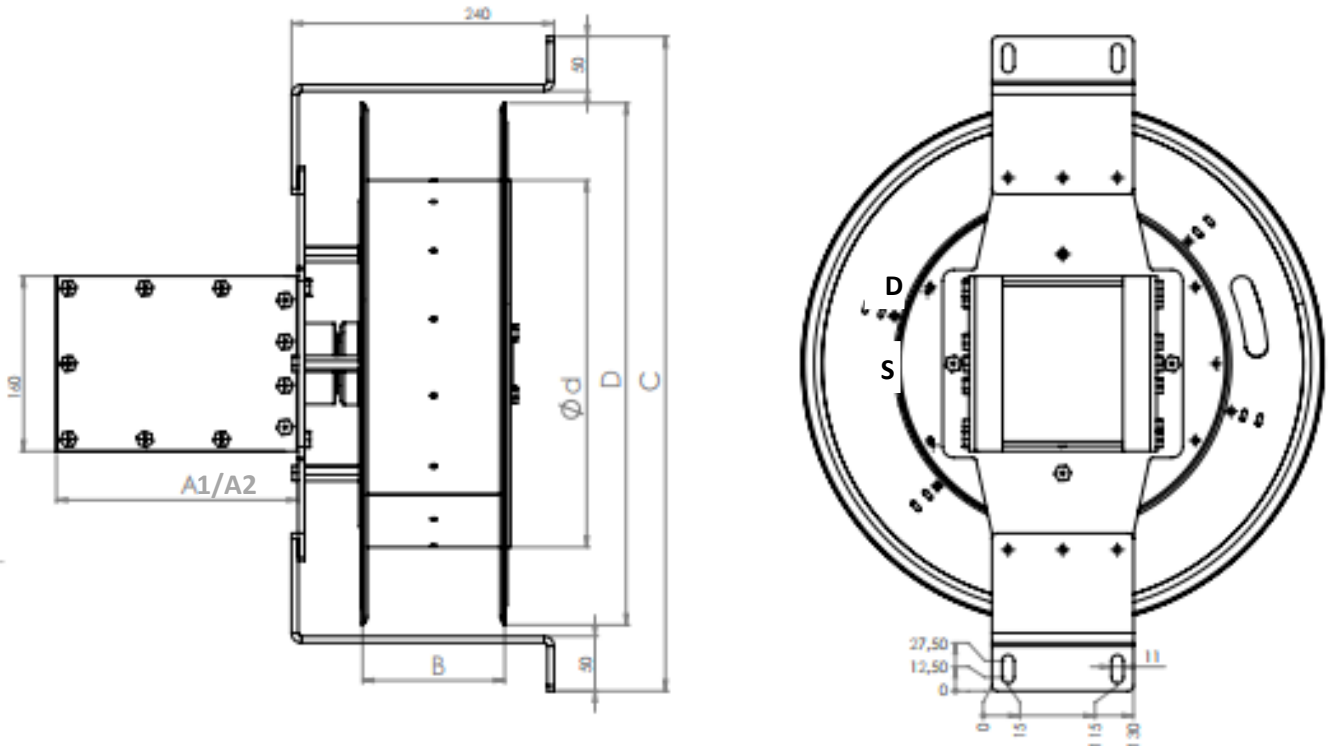
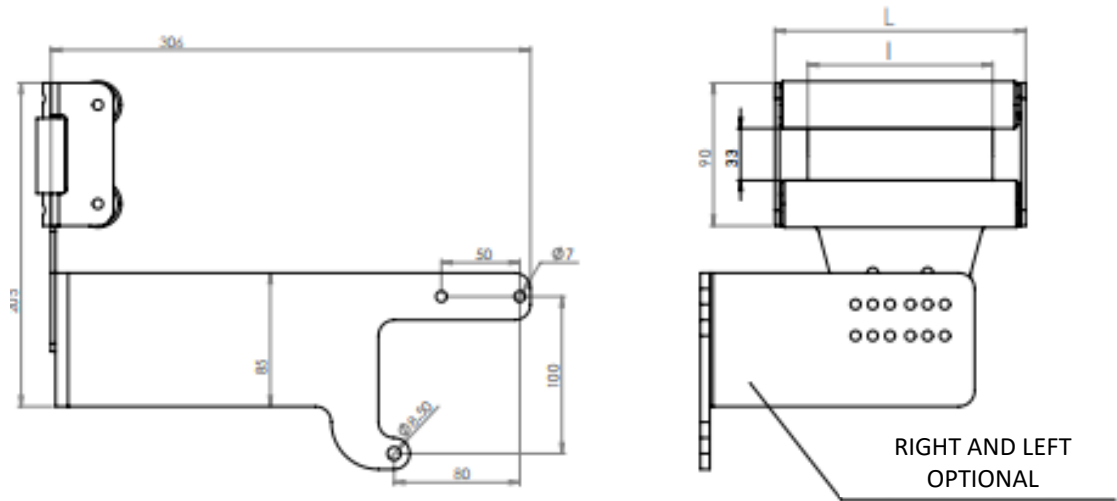


TABLE QUOTE TYPE B

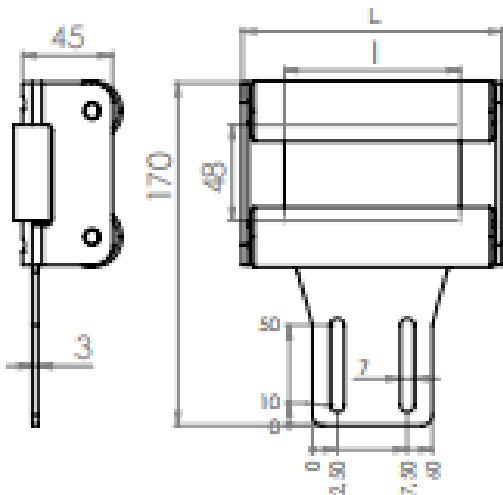
TYPE	D (mm)	d (mm)	B (mm)	C (mm)	A1 SREX151 (mm)	A2 SREX152 (mm)
SCREX01	350	260	130	500	150	220
SCREX02	400	260	130	500	150	220
SCREX03	470	330	100	600	150	220
SCREX04	470	330	130	600	150	220
SCREX05	550	330	130	680	150	220

5.2 CABLE GUIDE TYPE A



TYPE	B (mm)	L (mm)	I (mm)
SCREX01	130	160	120
SCREX02	130	160	120
SCREX03	100	130	90
SCREX04	130	160	120
SCREX05	130	160	120

5.3 CABLE GUIDE TYPE B



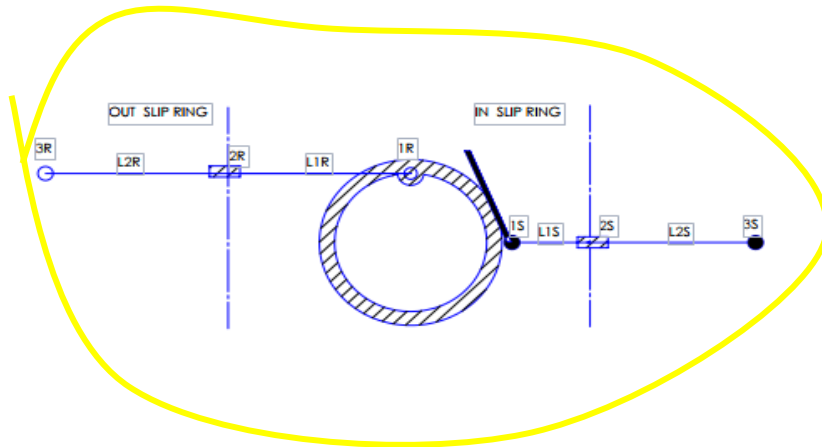
TYPE	B (mm)	L (mm)	I (mm)
SCREX01	130	160	120
SCREX02	130	160	120
SCREX03	100	130	90
SCREX04	130	160	120
SCREX05	130	160	120

6.0 ELECTRICAL CONTACT SLIP RING

The SREX506 power slip ring series are primarily designed for use in hazardous areas in sectors , offshore, oil & gas ect.

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



6,1 SLIP RING SREX150 SERIES

Mechanical Data

Parameter	Value
Enclosure type	EXPLOSION PROOF Ex db
Enclosure material	STEEL
Protection	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	20N.m;- 50Nm/40 ring

Electrical Data

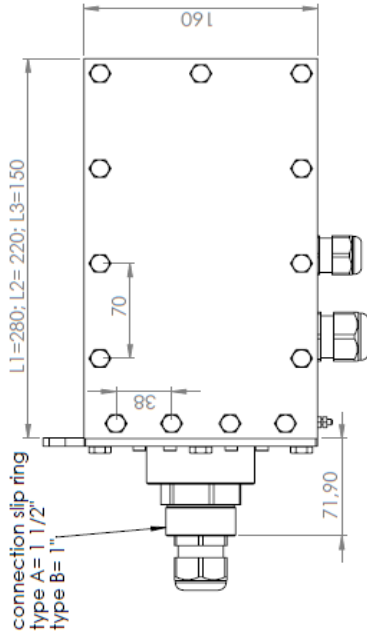
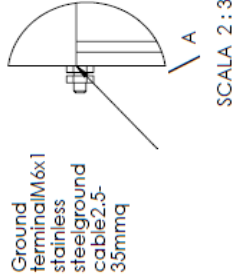
Parameter	Value		
	Power	Auxiliar	Signal
ring slip ring	bronze / nickel plated	bronze / nickel plated	bronze gold
brush slip ring	beryllium copper/nichel plated	beryllium copper/nichel plated	beryllium /copper gold
Rated Voltage	220/2500V	110/220V	<24Vdc
Rated current	In<600A	In<25A	In<2A
Insulation Resistance	1000V	500V	250V
Lead Wires	4-70mmq	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		

Directive & Standard

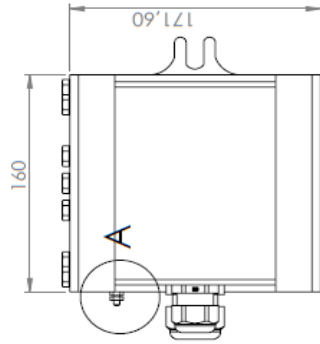
Directives	Directive 2014/34/UE IECEx Scheme
Standard	IEC 60079-1:2016 Explosive atmospheres. Equipment protection by flameproof enclosures "d" IEC 60079-0 2018 Explosive atmospheres - Part 0: Equipment - General requirements

6,2 Slip Ring Layout

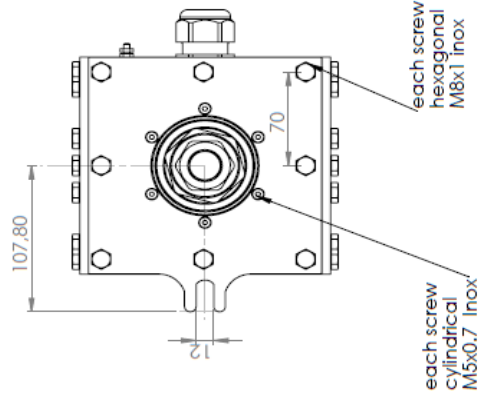
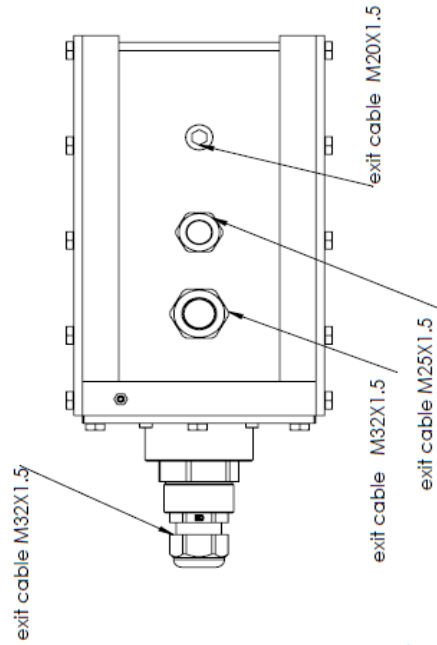
SLIP RING SREX150 Ex db IIB T5 Gb tamb (-40+60)



DESCRIPTION	QUALITY
cover	steel
TRATTAMENTO	painting marine or zinc nickel
each screw hexagonal	M8x1 120 steel inox
each screw cylindrical	M5 X0.7 steel inox



MATERIAL: STEEL
UNI EN 10111:2009



INTEREDIZIONE		NON SCALARE		DISEGNO		REVISIONE	
PROG.	DATA	PROG.	DATA	REV.	DATA	REV.	DATA
	04/11/19		04/11/19				
DESIGN	LIBRA	DESIGN	LIBRA				
VERB.	SANITIZIO						
APPL.							
FABR.							
Out.							
MATERIALE				N. DISEGNO			
				A3			
SCALA 1:10				SCALA 1:10			
2				2			
FOGGIO 1/D/1				FOGGIO 1/D/1			

SERIES	LENGTH L (mm)	exit cable (RING)	exit cable (brush)	Volume
SREX151	150	M32/M25	M25/M20	0.6 l
SREX152	220	M32/M25	M32/M25/M20	1.2 l
SREX153	280	M32/M25	M32/M25/M20	1.8 l



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