

Isolating Spark Gaps ISG and ISG Ex



- Earth termination systems of power installations
- Earth termination systems of telecommunication systems
- Auxiliary earth electrodes of voltage operated earth fault circuit breakers
- Rail earth electrode of AC and DC railways
- Measuring earth electrode for laboratories
- Systems of pipeline cathodic protection
- Service entry masts for low-voltage overhead cables
- Bypassing insulated flanges and insulated couplings of pipelines.

- Ex types for ATEX:
 - III2G Ex mb IIC T6 Gb
 - II2D Ex tb IIIC T80 °C Db
- Classes:
 - N – normal duty
 - H – heavy duty

Isolating Spark Gaps
ISG and ISG EX

Isolating spark gaps

The isolating spark gaps of ISG series are designed to balance differential potentials on conductive non-live parts of technological equipment of buildings that are not galvanically interconnected.

In the event that a difference in potential arises between the conductive parts, the ISGs are able to interconnect the parts for a transient period of time and thus eliminate the dangerous voltage difference. The ISGs may well be used for temporary connection of different grounds which due to functional reasons cannot be galvanically linked to each other, or for bridging insulated flanges on pipes, etc.

The ISG products are designed for use in normal environments, while the ISG EX versions are designed for areas with a risk of explosion and be used e.g. in the gas or chemical industries. Due to their IP67 protection level they can be installed both indoors and outdoors.

The ISGs are manufactured in various sparkover voltage variants. They can be used as protective elements against dangerous contact voltages (product types with switching voltages of 50 V), or for temporary interconnection of various conductive metal parts using higher switching voltages which, however, for safety reasons are not considered to be a problem.



ELEKTROTECHNICKÝ ZKUŠEBNÍ ÚSTAV

ELECTROTECHNICAL TESTING INSTITUTE - CZECH REPUBLIC
ELEKTROTECHNICKÝ PRŮVÁNŠTĚV - TECHNISCHE REPUBLIK
INSTITUT ELEKTROTECHNICKÉHO DESIGNU - REPUBLIQUE TCHÉQUE
TESTCENTRUM ELEKTROTECHNICKÝCH ÚSTAVŮ - REPUBLICA CZECHOSLOVACA

Pod lístkem 129/2, 171 02 Praha 8 - Troja

CERTIFICATE

No.: 120589

Product: Isolating spark gap

Type: ISG-... (H Ex), ISGC-... (H Ex), ISGO-... (H Ex), ISGT-... H Ex

Rating: U_c = 15-70, 250, 380 V AC
U_c = 40, 60, 375, 500 V DC
I_{sc} = 20, 100 A - see Annex

Ordering firm: SALTEK s.r.o.
Dražďanská 85/88, 400 07 Ústí nad Labem - Krásové Březno, Czech Republic

Manufacturer: SALTEK s.r.o.
Dražďanská 85/88, 400 07 Ústí nad Labem - Krásové Březno, Czech Republic

Trade mark:

The test results are stated in the test-report No.: 022180-01/01 of 13.11.2020

Approval of the product was found to be in conformity with:
CSN EN 62561-3 ed. 2:2018 (EN 62561-3:2017, IEC 62561-3:2017)

Other data:

Certificate was issued on the basis of fulfillment of requirements of the "EQU" certificate" certification scheme and on the basis of agreement No. 022180 between the client and the Electrotechnical Testing Institute.

Compliance of the product with mentioned standards and regulations ensures compliance of the product with essential requirements of Government Order No. 118/2016 Sb. (2014/34/EU) as amended and the certificate may be used as a supporting document for the EU Declaration of Conformity under Act No. 90/2016 Coll., on Conformity Assessment of Products When Made Available on the Market, as amended.

The validity of the certificate is limited to: 23.11.2023

23.11.2020

Mr. Miroslav Seifert
Head of Certification Body

ezú
ELEKTROTECHNICKÝ ZKUŠEBNÍ ÚSTAV
Pod lístkem 129/2, 171 02 Praha 8 - Troja

022180-01

FTZÚ Physical-Technical Testing Institute
Ostrava - Radvanice

Supplementary EU - Type Examination Certificate No.3
Equipment or Protective Systems Intended for Use
in Potentially Explosive Atmospheres
(Directive 2014/34/EU)

(3) EU - Type Examination Certificate number:
FTZÚ 14 ATEX 0155X

(4) Product: Isolating Spark Gap, type ISG(-)... H Ex

(5) Manufacturer: SALTEK s.r.o.

(6) Address: Dražďanská 85, 400 07 Ústí nad Labem, Czech Republic

(7) This supplementary certificate extends EC - Type Examination Certificate No. FTZÚ 14 ATEX 0155X to apply to products designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

(8) The Physical-Technical Testing Institute, Notified Body number 1026, in accordance with Articles 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26.02.2014, certifies that this product, as modified by this supplementary certificate, has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

(9) In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20.04.2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20.04.2016.

(10) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013, EN 60079-18:2015, EN 60079-31:2014

(11) The marking of the product shall include the following:

(12) This certificate is valid till: **28.02.2023**

Responsible person:

Dipl. Ing. Lukáš Martinák
Head of Certification Body

Date of issue: 28.02.2018
Page: 1/3

This certificate is granted subject to the general conditions of the FTZÚ, s.p.
This certificate may only be reproduced in its entirety and without any change, schedule included.
Physical-Technical Testing Institute, s.p. Pkárna 1337/7, 716 07 Ostrava - Radvanice, Czech Republic
tel: +420 596 223 111, fax: +420 596 232 072, Email: tbra.cz, www.ftzu.cz

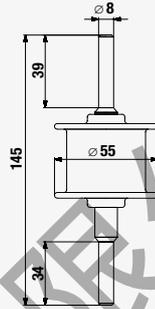
ISG-A100

Isolating Spark Gap
connecting pins

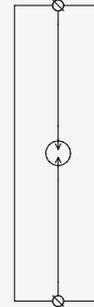
- encapsulated high-performance isolating spark gap
- for indirect connection (earthing) of isolated conductive parts under lightning conditions, where direct connection is not allowed



Dimensions



Basic circuit diagram



Parameter / Type	ISG-A100	
Lightning impulse current	I_{imp}	100 kA
Rated impulse sparkover voltage	U_{rmp}	5 kV
Rated power frequency withstand voltage	U_{WAC}	2,5 kV
Isolation resistance		100 MΩ
Classification		class H - heavy duty
Degree of protection		IP 67
Range of operating temperatures (min/max)		-40 °C / 80 °C
According to standard		EN 62561-3:2012, IEC 62561-3:2012
Ordering number		A03590

奕旭科技有限公司
E-Surge Technology
TEL +886 2 2212 8121

Isolating Spark Gaps
ISG and ISG EX

ISG-...

Isolating Spark Gap

two M8 bolts with nuts

- encapsulated high-performance isolating spark gap
- for indirect connection (earthing) of isolated conductive parts under lightning conditions, where direct connection is not allowed



Dimensions

Basic circuit diagram

Parameter / Type	ISG-50	ISG-100	ISG-500
Lightning impulse current	I_{imp} 50 kA	50 kA	100 kA
Rated impulse sparkover voltage	U_{rimp} 0,9 kV	0,95 kV	1,5 kV
Rated power frequency withstand voltage	U_{WAC} 0,035 kV	0,07 kV	0,35 kV
Rated DC withstand voltage	U_{WDC} 0,05 kV	0,1 kV	0,5 kV
Isolation resistance	100 M Ω	100 M Ω	100 M Ω
Classification	class N - normal duty	class N - normal duty	class H - heavy duty
Degree of protection	IP 67	IP 67	IP 67
Range of operating temperatures (min/max)	-40 °C / 80 °C	-40 °C / 80 °C	-40 °C / 80 °C
According to standard	EN 62561-3:2012, IEC 62561-3:2012	EN 62561-3:2012, IEC 62561-3:2012	EN 62561-3:2012, IEC 62561-3:2012
Ordering number	A04086	A04078	A04127

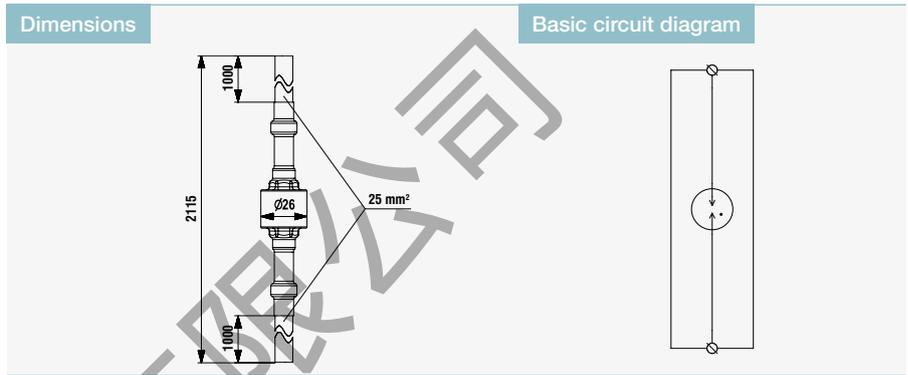
Isolating Spark Gaps
ISG and ISG EX

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ISGC-...

Isolating Spark Gap connecting cables

- encapsulated high-performance isolating spark gap
- for indirect connection (earthing) of isolated conductive parts under lightning conditions, where direct connection is not allowed



Parameter / Type	ISGC-50	ISGC-100	ISGC-500
Lightning impulse current	I_{imp} 50 kA	50 kA	100 kA
Rated impulse sparkover voltage	U_{rimp} 0,9 kV	0,95 kV	1,5 kV
Rated power frequency withstand voltage	U_{WAC} 0,035 kV	0,07 kV	0,35 kV
Rated DC withstand voltage	U_{WDC} 0,05 kV	0,1 kV	0,5 kV
Isolation resistance	100 MΩ	100 MΩ	100 MΩ
Classification	class N - normal duty	class N - normal duty	class H - heavy duty
Degree of protection	IP 67	IP 67	IP 67
Range of operating temperatures (min/max)	-40 °C / 80 °C	-40 °C / 80 °C	-40 °C / 80 °C
According to standard	EN 62561-3:2012, IEC 62561-3:2012	EN 62561-3:2012, IEC 62561-3:2012	EN 62561-3:2012, IEC 62561-3:2012
Ordering number	A05365	A05366	A05368

Isolating Spark Gaps
ISG and ISG EX

ISGO-500

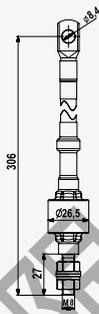
Isolating Spark Gap

connecting cable and M8 bolt with nut

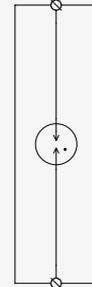
- encapsulated high-performance isolating spark gap
- for indirect connection (earthing) of isolated conductive parts under lightning conditions, where direct connection is not allowed



Dimensions



Basic circuit diagram



Parameter / Type	ISGO-500	
Lightning impulse current	I_{imp}	100 kA
Rated impulse sparkover voltage	U_{rimp}	1,5 kV
Rated power frequency withstand voltage	U_{WAC}	0,35 kV
Rated DC withstand voltage	U_{WDC}	0,5 kV
Isolation resistance		100 MΩ
Classification		class H - heavy duty
Degree of protection		IP 67
Range of operating temperatures (min/max)		-40 °C / 80 °C
According to standard		EN 62561-3:2012, IEC 62561-3:2012
Ordering number		A05518

Isolating Spark Gaps
ISG and ISG EX

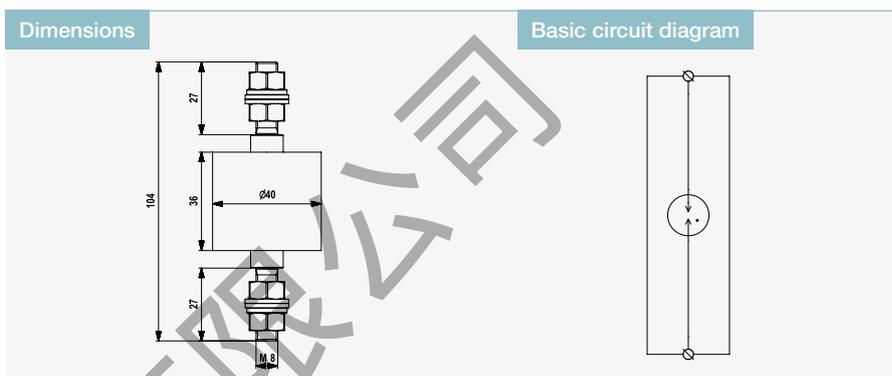
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E-Surge Technology
TEL +886 2 2212 8121

ISG-...H Ex

Isolating spark gaps for explosive environment (Ex)

two M8 bolts with nuts, stainless steel enclosure

- heavy duty encapsulated isolating spark gap for use in Hazardous (Ex) Areas
- for indirect connection (earthing) of isolated conductive parts under lightning conditions
- for safe installation in Ex zone



Parameter / Type	ISG-50H Ex	ISG-100H Ex	ISG-500H Ex
Lightning impulse current	I_{imp} 100 kA	100 kA	100 kA
Rated impulse sparkover voltage	U_{rimp} 0,9 kV	0,95 kV	1,5 kV
Rated power frequency withstand voltage	U_{WAC} 0,035 kV	0,07 kV	0,35 kV
Rated DC withstand voltage	U_{WDC} 0,05 kV	0,1 kV	0,5 kV
Isolation resistance	100 MΩ	100 MΩ	100 MΩ
Classification	class H - heavy duty	class H - heavy duty	class H - heavy duty
Degree of protection	IP 67	IP 67	IP 67
Range of operating temperatures (min/max)	-40 °C / 50 °C	-40 °C / 50 °C	-40 °C / 50 °C
According to standard	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31
Explosion-tested version	II 2G Ex mb IIC T6 Gb, II 2D Ex tb IIIC T80°C Db		
Ordering number	A04131	A04132	A04109

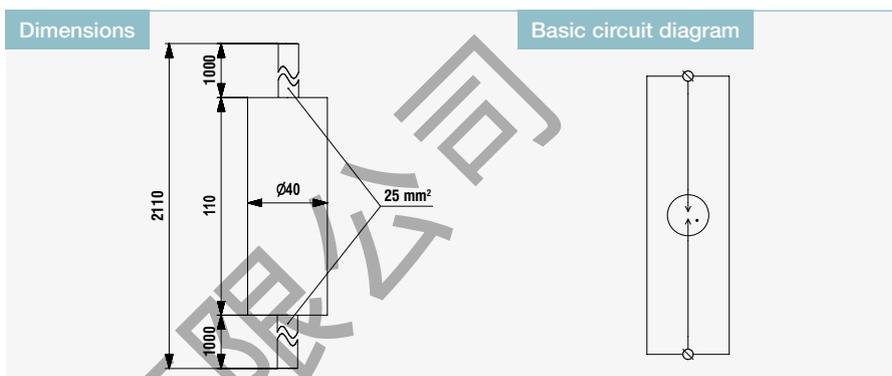
Isolating Spark Gaps
ISG and ISG EX

ISGC-...H Ex

Isolating spark gaps for explosive environment (Ex)

connecting cables, stainless steel enclosure

- heavy duty encapsulated isolating spark gap for use in Hazardous (Ex) Areas
- for indirect connection (earthing) of isolated conductive parts under lightning conditions
- for safe installation in Ex zone



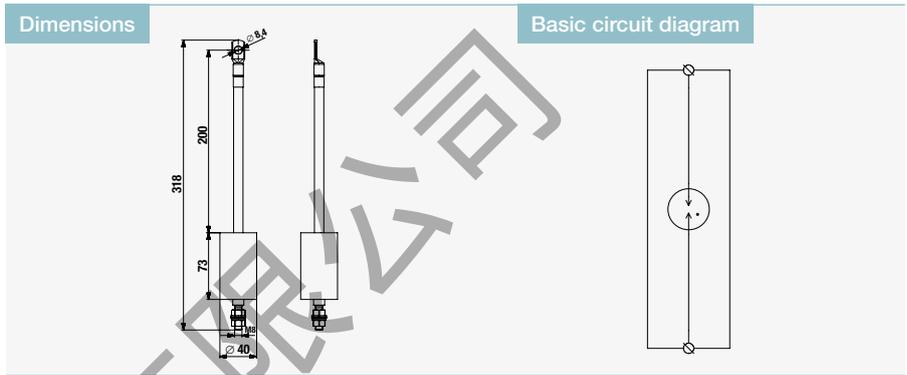
Parameter / Type	ISGC-50H Ex	ISGC-100H Ex	ISGC-500H Ex
Lightning impulse current	I_{imp} 100 kA	100 kA	100 kA
Rated impulse sparkover voltage	U_{rimp} 0,9 kV	0,95 kV	1,5 kV
Rated power frequency withstand voltage	U_{WAC} 0,035 kV	0,07 kV	0,35 kV
Rated DC withstand voltage	U_{WDC} 0,05 kV	0,1 kV	0,5 kV
Isolation resistance	100 MΩ	100 MΩ	100 MΩ
Classification	class H - heavy duty	class H - heavy duty	class H - heavy duty
Degree of protection	IP 67	IP 67	IP 67
Range of operating temperatures (min/max)	-40 °C / 50 °C	-40 °C / 50 °C	-40 °C / 50 °C
According to standard	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31
Explosion-tested version	II 2G Ex mb IIC T6 Gb, II 2D Ex tb IIIC T80°C Db		
Ordering number	A04128	A04129	A04120

Isolating Spark Gaps
ISG and ISG EX

ISGO-...H Ex

Isolating spark gaps for explosive environment (Ex)
 connecting cable and M8 bolt with nut, stainless steel enclosure

- heavy duty encapsulated isolating spark gap for use in Hazardous (Ex) Areas
- for indirect connection (earthing) of isolated conductive parts under lightning conditions
- for safe installation in Ex zone



Parameter / Type	ISGO-50H Ex	ISGO-100H Ex	ISGO-500H Ex
Lightning impulse current	I_{imp} 100 kA	100 kA	100 kA
Rated impulse sparkover voltage	U_{rimp} 0,9 kV	0,95 kV	1,5 kV
Rated power frequency withstand voltage	U_{WAC} 0,035 kV	0,07 kV	0,35 kV
Rated DC withstand voltage	U_{WDC} 0,05 kV	0,1 kV	0,5 kV
Isolation resistance	100 MΩ	100 MΩ	100 MΩ
Classification	class H - heavy duty	class H - heavy duty	class H - heavy duty
Degree of protection	IP 67	IP 67	IP 67
Range of operating temperatures (min/max)	-40 °C / 50 °C	-40 °C / 50 °C	-40 °C / 50 °C
According to standard	EN 62561-3, EN 60079-0, EN 60079-18, EN 60079-31		
Explosion-tested version	II 2G Ex mb IIC T6 Gb, II 2D Ex tb IIIC T80°C Db		
Ordering number	A06142	A06143	A05514

Isolating Spark Gaps
ISG and ISG EX