

HGS 100 Ex

- High power gas discharge tubes marked with Ex are suitable for use in explosion hazardous areas, where ensure the equipotential bonding between inactive parts, which are not conductively interconnected due to the operating conditions.
- Recommended for insulated flanges and insulated screw joints bridging in cathodic protected parts of industrial technology.
- In case of origin of potential difference between those parts, the high power gas discharge tube ignites and interconnects both insulated parts for a transient time.
- High protection degree of the housing allows using indoors, outdoors and also in the underground.
- Suitable construction prevents the formation of sparks and minimizes the release of heat generated during the discharge of the highest lightning impulse current.
- The product can be produced with a cable length of 20 to 50 cm. Unless otherwise specified, the standard length is 20 cm.
- **II 2G Ex mb IIC T6...T4 Gb**
- **Equipment Group II:** Electrical equipment of Group II is intended for use in locations with an explosive gaseous atmosphere other than underground mines with occurrence of methane (surface).
- **Equipment category 2G:** Area use – zone 1, 2 according to EN 60079-10-1 (IEC 60079-10-1:2015).
- **Ex:** Designation of equipment in potentially explosive areas.
- **Type of protection m:** potting with sealing compound mb (for EPL protection level “Mb, Gb, Db”).
- **Gas Explosion Group IIC:** Equipment labeled with IIC is suitable for use where Group IIA or Group IIB equipment is required.

- **Temperature class T6** (maximum surface temperature): 85 ÷ 100 °C (carbon bisulphide, ethylnitrite and other gases with higher ignition temperature).
- **Temperature class T5** (maximum surface temperature): 100 ÷ 135 °C
- **Temperature class T4** (maximum surface temperature): 135 ÷ 200 °C (dibutyl ether, ethyl ether, benzaldehyde and other gases with higher ignition temperature).
- **EPL protection level** (probability that a device will become a gas initiator): Gb – equipment for explosive gas atmospheres that has a „high“ level of protection and it is not a source of ignition in normal operation or at expected failures.
- **II 2D Ex mb IIC T80°C...T110°C Db**
- **Equipment Group II:** equipment for potentially explosive atmospheres other than underground mines with occurrence of gas (methane) and/or combustible dust.
- **Equipment category 2D:** Area use – zone 21, 22 according to EN 60079-10-1 (IEC 60079-10-1:2015).
- **Dust explosion group IIC** (categorized according to the characteristics of the dust explosive atmosphere): IIC conductive dusts.
- **Maximum surface temperature T80°C...T110°C:** the highest temperature that occurs when operating in the most adverse conditions (but within confirmed tolerances) on any part of the electrical equipment surface.
- **Protection level EPL Db:** Db – equipment for dust explosive atmospheres, which has a „high“ level of protection and it is not a source of ignition in normal operation or at expected faults.

Type		HGS 100 Ex
Certified for explosive areas		Yes
EU - Type Examination Certificate		II 2G Ex mb IIC T6...T4 Gb, II 2D Ex mb IIC T80°C...T110°C Db
EU - Type Examination Certificate number		FTZÚ 24 ATEX 0017X
DC ignition voltage		400 ÷ 750 V
AC ignition voltage (50/60 Hz)	U_{aw}	$\geq 550 V_{rms}$
Rated AC withstand voltage of mains frequency	U_{WAC}	285 V
Rated impulse sparkover voltage	$U_{r imp}$	< 1 400 V
Nominal discharge current (8/20)	I_n	100 kA
Impulse discharge current (10/350)	I_{imp}	100 kA
Charge	Q	50 As
Specific energy	W/R	2 500 kJ/Ω

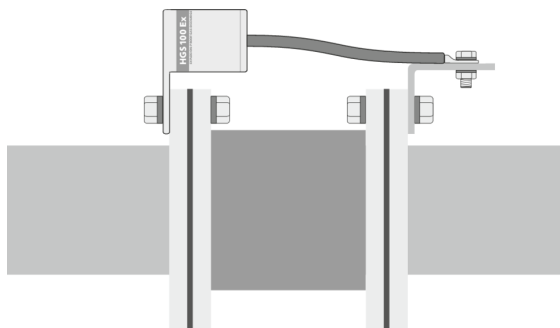
Type		HGS 100 Ex
Voltage protection level at I_{imp}	U_p	< 1 kV
Insulation resistance at 100 V DC	R_i	> 1 GΩ
Capacitance at 1 MHz	C	< 25 pF
Housing material		Stainless steel
Casing		Polyurethane resin
Degree of protection		IP67
Ambient temperature range for Class T4	θ	-40 ÷ 70 °C
Ambient temperature range for Class T5	θ	-40 ÷ 55 °C
Ambient temperature range for Class T6	θ	-40 ÷ 40 °C
Installation		By cable, On the flange
Cable length	l	Based on request 20 ÷ 50 cm
Lifetime		> 100 000 h
Designed according to standards		
Explosive atmospheres – Part 0: Equipment – General requirements		EN IEC 60079-0:2018
Explosive atmospheres – Equipment protection by encapsulation “m”		EN 60079-18:2015
Explosive atmospheres – Equipment dust ignition protection by enclosure “t”		EN 60079-31:2014
Ordering, packaging and additional data		
Mass	m	550 g
Mass (including the packaging)	m	632 g
Packaging dimensions (H x W x D)		87 x 260 x 154 mm
Packaging value	V	3.48 dm ³
ETIM group		EG000021
ETIM class		EC000510
Customs tariff no.		85363010
EAN code		8590681102015
Art. number		10 201



The link in the QR code leads to the online presentation of the HGS 100 Ex. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit www.hakel.com



Application wiring diagram (installation)



Internal diagram

