

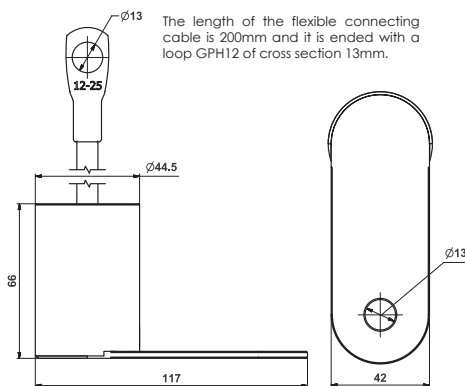
Equipotential bonding of non-electrified building parts of the industry installation



Surge
Protection
Device



Separating high power gas discharge tube

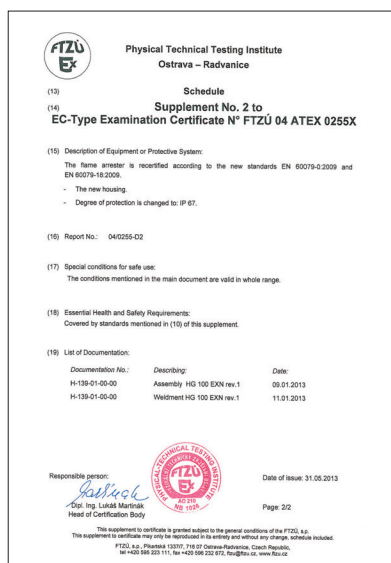


HGS100 Ex

HGS100 Ex - Separating high power gas discharge tube HGS100 Ex for use in explosion hazards areas. It is intended for equipotential bonding of the installation parts of buildings or technological entities which are not interconnected operationally. In case of p.d. (potential difference) origin between those parts, the high power gas discharge tube ignites and interconnects both parts for a transient time (typical value of internal resistance at startup of HGS100 Ex is $0,001 \div 0,002 \Omega$). Recommended installation is inside of the buildings, outdoors, in the damp rooms as well as in the subterraneous areas.

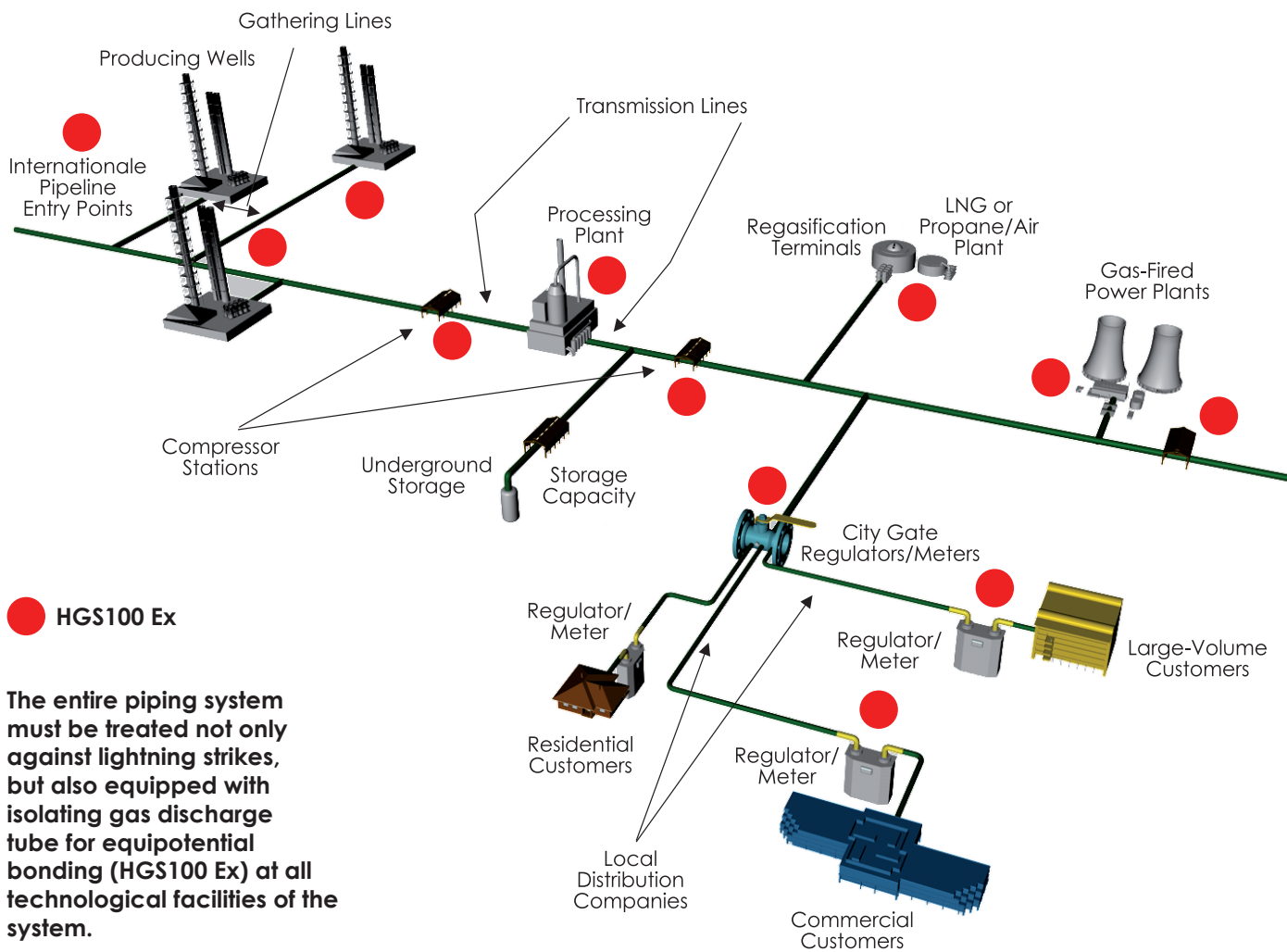
It is an explosion-proof gas discharge tube with flexible connecting cable for equipotential bonding acc. to IEC 61024-1 and also for the use in IT installations acc. to IEC 60364-5-54. It complies with EN 50014 and EN 50028 standards. It is recommended for insulated flanges and insulated screw joints bridging in cathodic protected parts of industrial technology.

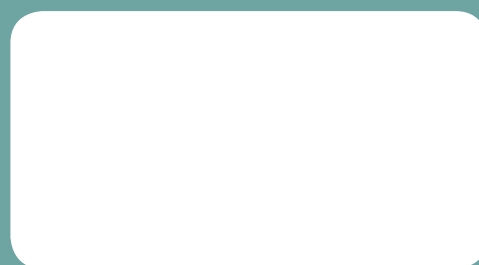
Type	HGS100 Ex	
EC-Type examination certificate	II 2G Ex mb II T6 Gb, II 2D Ex mb IIIC T80°C Db	
Approvals, certification	FTZU 04 ATEX 0255X	
DC-Sparkover voltage	400 ÷ 750 V DC	
Max. discharge current (8/20)	I_{max}	100 kA
Nominal discharge current (8/20)	I_n	75 kA
Max. lightning impulse current (10/350)	I_{imp}	100 kA
- charge	Q	50 As
- specific energy	W/R	2500 kJ/Ω
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	5 pF
Casing	corundum/binary resin with an external steel coat, resistant to climatic effects	
Protection type	IP67	
Operating temperature range	θ	-40°C ... +90 °C
Lifetime	min. 100.000 h	
Weight	m	550 g
Article number	10 201	



The natural gas pipeline infrastructure, including transmission lines, distribution lines, processing plants, compressions stations, gate stations, and underground storage facilities, is susceptible to lightning strikes. This infrastructure encompasses approximately 310,000 miles of natural gas transmission pipeline, 1.9 million miles of natural gas distribution pipelines approximately 3,000 compression stations, and the associated electronic supervisory control and data acquisition (SCADA) systems used to control the infrastructure. This vast size provides a high probability that there will be lightning strikes on or near the natural gas infrastructure on a recurring basis. In addition to the substantial size of the present world pipeline infrastructure, it is estimated that the combined global growth of the pipeline infrastructure under construction or in the planning cycle for 2012 will be 118,000 miles. The two major areas of growth are the Asia Pacific Region, (34,295 miles) and the North America Region (31, 951 miles).

Natural gas pipeline system





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