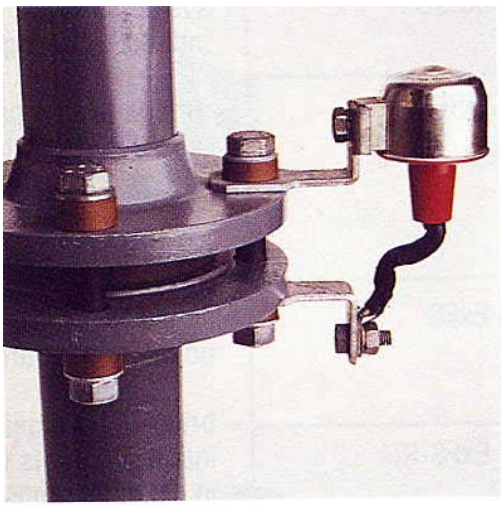
Surge Diverters
Data Sheet

Explosion-proof spark gap sG4 with flexible connecting cable

Buried pipelines carrying hazardous materials are normally provided with cathodic protection as a form of corrosion control. Electrical isolation in the form of isolating flanges/joints at terminal points in the pipeline system, such as at tank farms, pressure reducing stations, etc., are required in order to limit the extent of the applied cathodic protection and prevent the loss of protective current to other buried metallic structures.



In the event of a lightning strike on any above ground pipework or connected structure, or an electrical fault causing a voltage surge on the pipe, a flash-over could occur where isolating flanges/joints are fitted.

In an area classified as "Hazardous" (Division 1or 2) due to the possible presence of an explosive atmosphere, any potential spark hazard caused by such an incident can be avoided by the use of an Explosion-Proof Spark Gap type sG4. The Spark Gap is connected in parallel directly across the insulating flange/joint. The sG4 is fitted with a flexible cable connection enabling it to be fitted over any size flange and three different size connecting lugs to suit flange bolt size (to be specified at time of ordering).

Technical characteristics are a follows:-

1.	Response to alternating voltage (50Hz)	1.0kV
2.	Response to surge voltage (1/50 ~s)	2.2kV
3.	Surge current rating (8/20 ~s)	100kA
4.	Explosion protection	Specification VDE 0171; Item 9
5.	Gases Group	G4

The Spark Gap has been certified (No: 111BE-23 805) by the Technical-Physics Federal Institute of Brunswick and issued with a "Design Certificate" (No: B1/477/261/73) by the Bavarian State Ministry of Public Works.

The sG4 Spark Gap may be used in hazardous areas in insulating flanges having an insulation value to 50HZ alternating voltage of greater than 4.4kV.

1. The Spark Gap contained in a housing of die cast zinc to DIN 1743 with a cap of MAKRALON as protection against accidental bridging.

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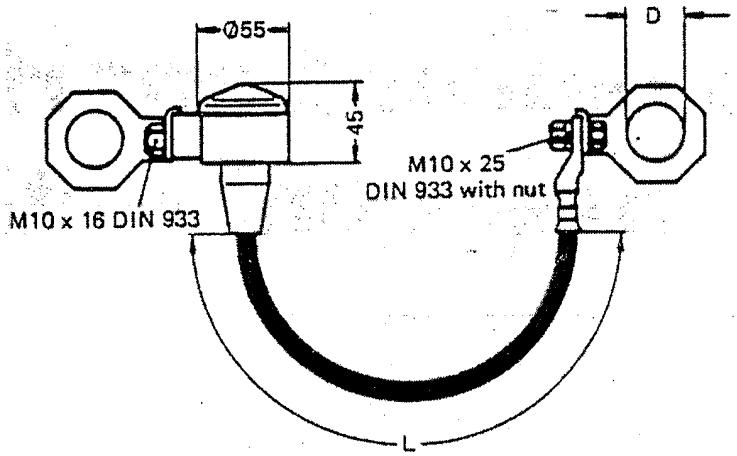
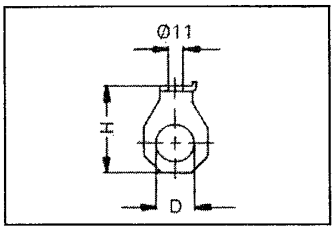
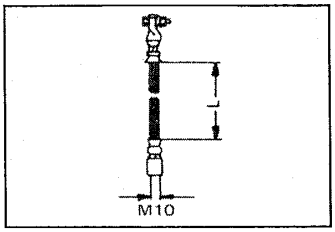
2. One pair of connecting lugs of hot dipped galvanised mild steel available in three sizes to suit the diameter of the flange bolts.
3. An insulated connecting cable, size 25sq .mm available in three lengths to suit the overall dimensions of the flange joint.

In special cases associated with a high incidence of lightning strikes, as may occur in exposed mountainous regions, or high voltage lines running parallel to pipelines, a special design of sG4 Spark Gap is available with electrodes of tungsten copper, which are highly resistant to bum-off.





Size	Suitable for bolts	D (mm)	H (mm)
1	M10 - M24	To be stated in order	75
2	M27 - M39		100
3	M45 - M56		140



Part No.	Cable Length	Suitable for dimension A(mm)	Weight kg
700700 001	100	20 - 130	0.080
	200	120-230	0.130
	300	220 - 320	0.180

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