

Isolating spark gaps 480 and 481



Operation and fields of application

Isolating spark gaps provide galvanic isolation of electrically conducting parts of an installation that must not be connected to each other.

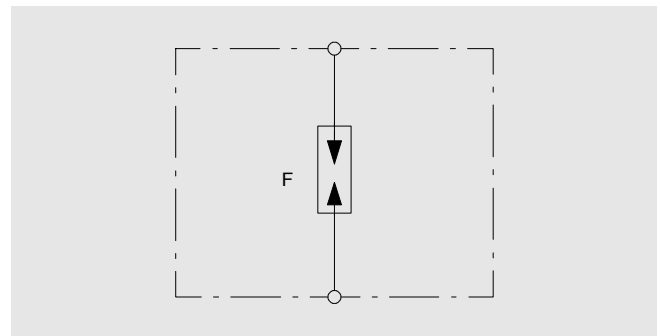
Isolating spark gap 480, for instance, is used to bridge insulating flanges and insulating fittings on pipes. Isolating spark gap 481 may be used, for example, to connect a lightning protection system with the earthing system of heavy-current installations above 1 kV, with the auxiliary earthing points of residual current devices or with the measurement earthing points of laboratories.

Further fields of application are the bridging of proximity points or making connections to pipework and tank installations which have cathodic corrosion protection.

Both isolating spark gaps consist of two electrodes positioned at a defined distance in an insulated housing. In the event of lightning, the spark gap arcs through, and the two electrodes are temporarily electrically connected to each other.

In version 480, electrodes of tungsten-copper ensure an extremely high resistance to erosion, as well as low

wear. This spark gap has (Ex) approval for use in explosion hazard areas.



Block diagram of 480/481

Mounting

Isolating spark gaps 480 and 481 are installed with connecting lugs or connectors between the parts of the installation to be bridged. When installing the spark gaps, keep cable lengths short, since long cables increase the risk of unnecessary stress on the insulation due to inductive voltages.

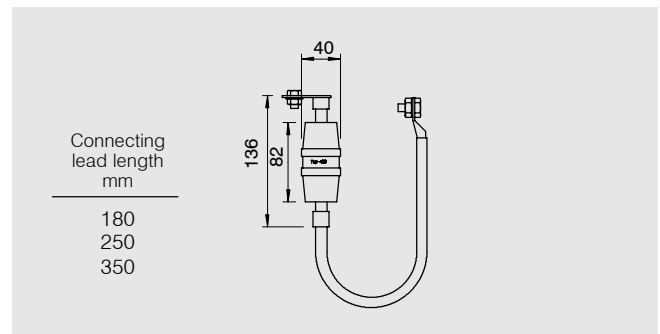
Technical data

Isolating spark gaps		Parex isolating spark gap 480 (Ex)s G 4 to VDE 0171	Isolating spark gap 481
Explosion protection		(Ex)s G 4 to VDE 0171	-
Test certificate		PTB No. III B/E-29 859	-
AC clamping voltage	U_p (50 Hz)	1 kV (higher voltages are possible)	2.5 kV
100% lightning impulse clamping voltage	U_p 100 (1.2/50)	2 kV	5 kV
Nominal discharge current		100 kA	100 kA
Impulse current test (10/350) with the lightning current parameters set out in IEC 61312-1 (02.95)			
Impulse current	I_{imp}	100 kA	50 kA
Charge	Q	50 As	25 As
Spec. energy	W/R	2.5 MJ/ Ω	0.63 MJ/ Ω
Electrodes		Tungsten-copper	Stainless-steel
Housing		Epoxy moulding compound	Epoxy moulding compound
Connecting bolt		-	\varnothing 10 mm; Stainless-steel
Connecting lug		Brass, nickel-plated, with screw, nut and spring washer	-
Connecting lead		25 mm ² Cu, NSLFF highly-flexible, with cable lug, screw, nut and spring washer	-
Screws and nuts		M10 Steel, hot-dip galvanised	-
Connecting lead length	L	180 mm	-
	L	250 mm	
	L	350 mm	

Subject to technical alterations

Ordering data

Type	Description	Order no.
480/180	Connecting lead length 180 mm	5240 03 4
480/250	Connecting lead length 250 mm	5240 07 7
480/350	Connecting lead length 350 mm	5240 06 9



Type	Description	Order no.
481	Connection \varnothing 10 mm; stainless-steel	5240 08 5

