



Description

A lightning arrester (voltage-surge charge eliminator) is required for intrinsically safe circuits, e.g. those which are fed into above- or below-ground tanks for the operation of measurement and control installations (German technical regulations for combustible liquids, TRbF 100). The lightning arrester can be used in installations both with and without "CATHODIC CORROSION PROTECTION". If the object voltage is greater than 2 V, the lightning arrester is to be connected in accordance with drawing 9012.01.03. For object voltages less than 2 V, the connection is to be made in accordance with drawing 9012.01.02. Regulations VDE 0165 and TRbF are to be observed when installing the lightning arrester.

The length of the cable between the lightning arrester and the tank in which the level sensor is installed must not exceed 1 m. The shielding, which carries no current in normal operation, is used as a potential equalization line in the event of a disturbance. This shielding is to be earthed at only one location. The shielding is to be kept potential-free at the signal conditioner.

The potential equalization line between lightning arrester HR-9012 and the tank must have an equivalent conductivity of 4 mm² copper.

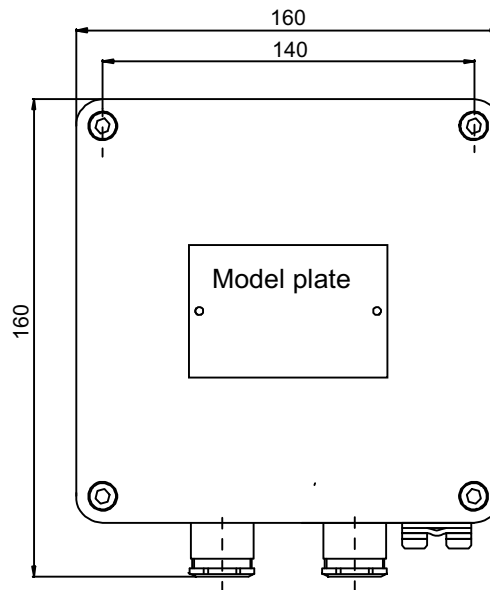
Function

Should the threshold voltage of the voltage-surge charge eliminator be exceeded as the result of a voltage surge, e.g. through atmospheric influences, the voltage-surge charge eliminator short circuits the wires to be protected with the potential equalization line. The energy level is, as a result, kept below the Zone 0 danger range, preventing possible ignition. If the surge voltage falls back below the threshold voltage, the voltage-surge charge eliminator returns to normal operation. A lightning arrester is to be provided for each cable lead of the apparatus to be connected (2 leads per lightning arrester). The function of the lightning arrester is not affected by which terminal strip is used as the input (or output) terminal strip.

Note

In addition to the electrical apparatus and tank, all conductive structural elements must be included in the potential equalization (minimum cross section 10 mm² copper).

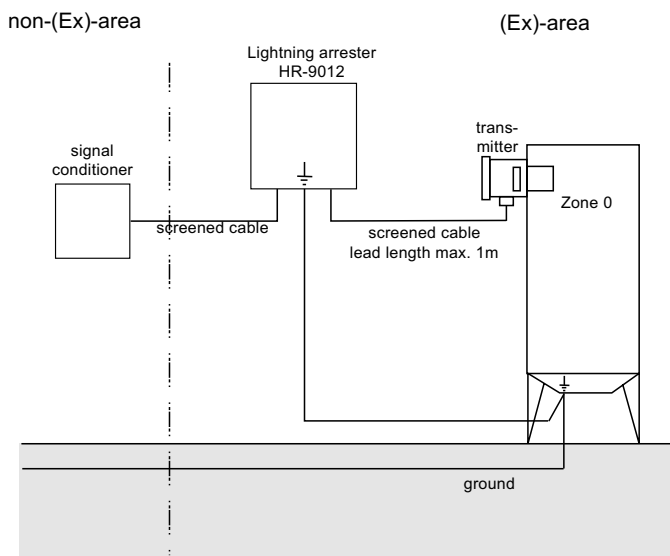
Dimensions



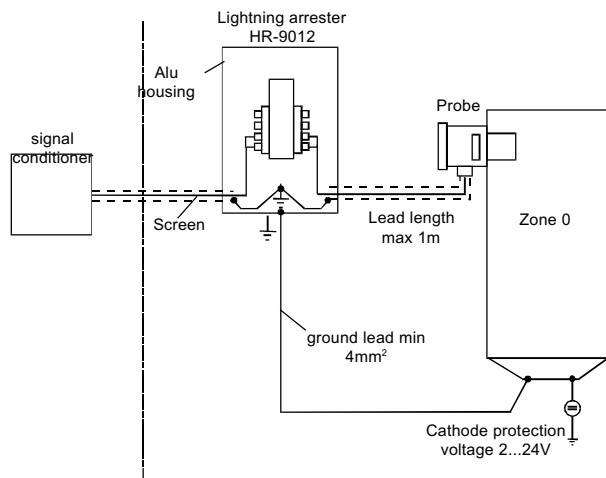
Lightning arrester
HR-9012



Technical data	
Approvals / Certifications	PTB Nr. Ex-88.B.2003
VbF approval	01/PTB/Nr. Ex-88.B.2003
Nominal response voltage	230 V
Mechanics	
Housing	Painted aluminium
Dimensions	B/H/T 160 mm / 160 mm / 90 mm (without cable gland)
Thread	PG 16
Number of leads to be protected	2 leads
Protection class acc. to DIN 40 050	IP 66



Drawing no. 9012.01.02



Attention:
Do not ground the screen of the signal conditioner and the probe head.

Drawing no. 9012.01.03

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