Pressemitteilung Press release Communiqué de presse

Neumarkt, November 2021

PAS EX from DEHN – Safety with non-sparking equipotential bonding

Equipotential bonding is essential, particularly in potentially explosive areas. It eliminates differences in potential, thus preventing dangerous touch voltages and sparking. In order to achieve this, all external, conductive system parts and installations that could cause dangerous potential differences must be connected to the main earthing busbar. Furthermore, in the event of electrical faults or lightning strikes, it is important that no sparking or hot surfaces arise in hazardous areas. Equipotential bonding systems should therefore be designed so that such possible ignition sources cannot come into effect.
The new PAS EX equipotential bonding bars from DEHN meet precisely these requirements. They can be used in the Ex zones 1/21 and 2/22 and also provide a variety of connection options. A wide variety of versions and configuration options mean absolute flexibility. In addition to the chemical and gas industries, they are therefore also especially well suited for use in the pharmaceutical, food and automotive industries, in biogas or sewage plants and in the oil industry. Such facilities are especially susceptible to lightning strikes, and the requirements placed on equipotential bonding and its components are correspondingly high.

In areas with hazardous explosive atmospheres, it is important to design terminals and connections of lightning protection systems so that no ignitable sparks or impermissibly high surface temperatures can arise in the event of lightning current penetration or other electrical faults. The PAS EX series of equipotential bonding bars from DEHN may be used in Ex zones 1/21 and 2/22. For this purpose, they have been assessed as non-sparking to explosion group IIC (hydrogen) at up to 100 kA (10/350 µs) of lightning current and tested to 50 Hz short-circuit current. They meet the test standards CLC/TS 50703-2: 2020-12 and VDE 0185-561-1 (IEC 62561-1). In hazardous areas, high surface temperatures on components can become sources of ignition. This has also been factored into PAS EX. Accordingly, even under high loads, the surface temperature does not exceed a value of 135°C (temperature class T4).
The PAS EX equipotential bonding bars are also flexibly configurable and fitted with a multitude of connection options (cable lug, push-in, flat and round conductor connections), whereby all connections are secured against self-loosening.
The connection for the cable lug already has a thread integrated, meaning that the connection of conductors up to 95 mm^2 can be established quickly and easily using cable lugs. With the push-in connection, both flexible and rigid conductors from 4 to 16 mm^2 can be connected quickly and without tools. A special adapter also offers connection options for flat conductors with a width of 30 or 40 mm and for round conductors with a diameter of 10 mm and establishes the contact with the EBB in a non-sparking manner.
The PAS EX equipotential bonding bars are made from stainless steel (V2A). They come in two versions. 11 connections are possible with the long version and 7 connections with the short one.

DEHN SE + Co KG

Postfach 1640
D-92306 Neumarkt
Tel. + 49 9181 906-0
Fax + 49 9181 906-1100
e-mail: info@dehn.de
www.dehn-international.com

Public Relations

Petra Raab
Tel. + 49 9181 906-1426
Fax + 49 9181 906-551426
eMail: petra.raab@dehn.de

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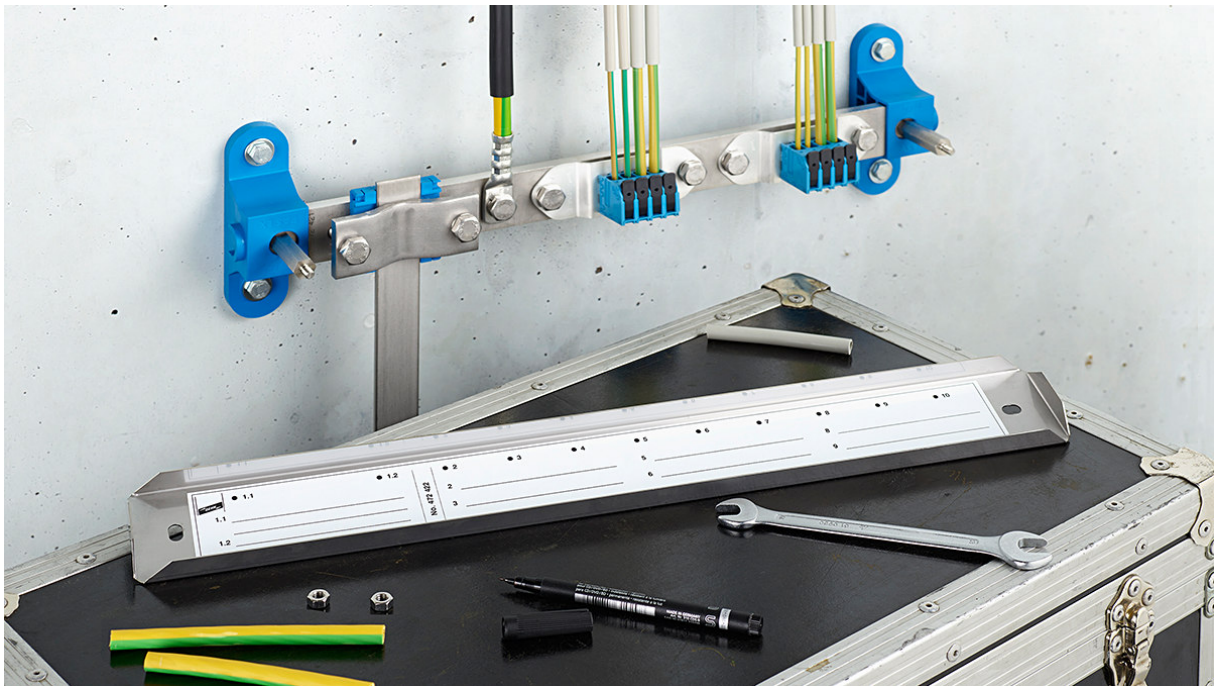

Figure: DEHN PAS EX equipotential bonding bars – Safety through permanently effective equipotential bonding

DEHN is a leading, globally active, family-owned company for electrical engineering with around 2000 employees worldwide and provides innovative products and solutions as well as comprehensive services in the fields of **surge protection, lightning protection and safety equipment.** DEHN focusses on protecting plant and building technology, transport, telecommunications and process industry systems, photovoltaic systems and wind turbines alongside many other applications. The company's continuous growth is based on more than 100 years of tradition and experience as well as the highest quality standards and consistent customer and market orientation.

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Postfach 1640
D-92306 Neumarkt
Tel. + 49 9181 906-0
Fax + 49 9181 906-1100
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Public Relations

Petra Raab
Tel. + 49 9181 906-1426
Fax + 49 9181 906-551426
eMail: petra.raab@dehn.de