



Dear Reader,

When using sheet steel distribution boxes unprotected outdoors and in harsh environments, the most common problem is the formation of rust and rapidly progressing corrosion. As a result, sheet steel distribution boxes lose their full functionality; there is an increased risk of production/operational failures, as well as electric shocks. Therefore, replacement is usually necessary after a short time.

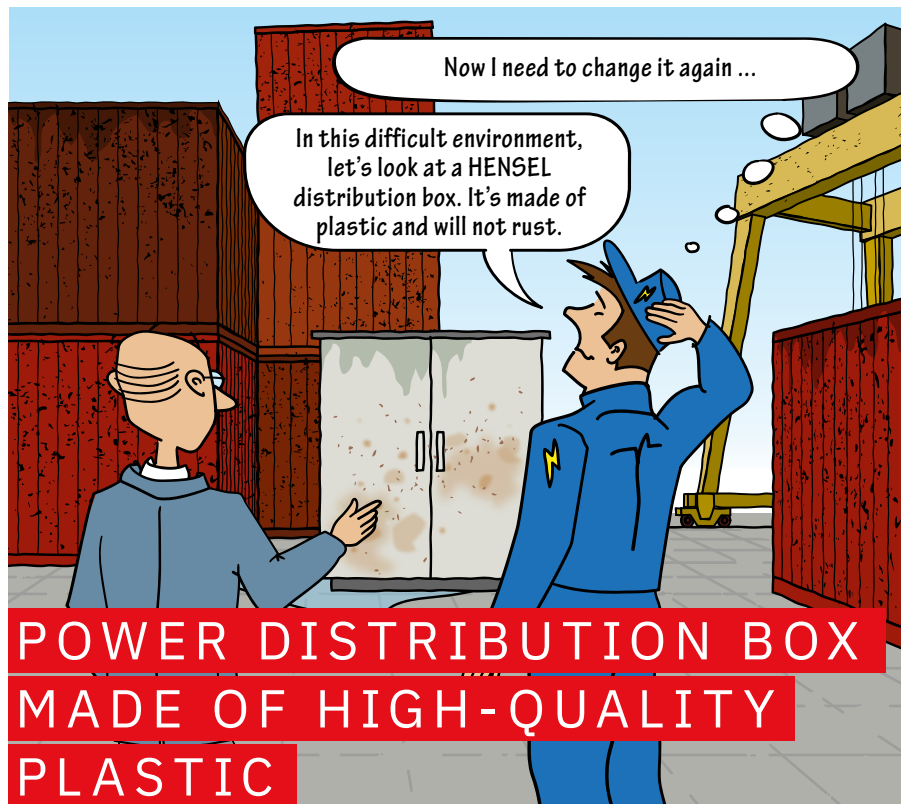
Ensuring safe and long-lasting power distribution is your job as an electrical specialist. With our HENSEL distribution boxes made of the highest quality plastic, we make it easy for you to achieve this task - so that electricity flows safely, even in demanding environments.

HENSEL distribution systems made of highly resilient and corrosion-resistant polycarbonate have proven themselves for many years in electrical equipment within buildings, especially in harsh industrial atmospheres and demanding environmental conditions. They are resistant to weathering, chemicals and mechanical influences and withstand the toughest conditions. They even withstand extreme conditions in unprotected outdoor use, e.g. salt water, without any problems.

See for yourself!

Yours,

Philipp C. Hensel, Managing Director,  
Gustav Hensel GmbH & Co. KG



## THE RIGHT SOLUTION FOR OUTDOOR USE AND IN DEMANDING ENVIRONMENTS.

The reliable distribution of electrical energy is of great importance within industrial, commercial and infrastructure applications. And no wonder: because, if the power supply goes down, it will take systems offline or even cripple operations entirely. In demanding applications such as these, robust and reliable distribution boxes are needed that can withstand environmental influences such as rain, salt water, heat and cold, severe stresses from impacts, shocks or the effects of chemicals without any

problems. Sheet steel distribution boxes quickly reach their limits here due to the material. Moisture, e.g. rain or salt water, leads to rust and corrosion; mechanical loads deform the enclosures irreparably. In such environments, especially outdoors, you need a material that can withstand the increased demands of wind and weather and other external influences and last for a long time.

## OUR SOLUTION

HENSEL distribution systems made of the highest quality plastic (e.g. ENYMOD) are robust, resilient and durable.

# WHICH ENVIRONMENTAL CONDITIONS AND APPLICATIONS ARE PROBLEMATIC FOR SHEET STEEL DISTRIBUTION BOXES?



## Outdoor weather exposure

Especially due to extreme weather influences, e.g. salt water, rain, high UV radiation exposure or large temperature fluctuations, sheet steel enclosures become susceptible to rust and corrosion over time, which can impair their function or make them unsuitable for outdoor use. Problems often occur with sheet steel enclosures in unprotected outdoor installations after 2-3 years at the latest.

**Applications:** ports, ships, desalination plants, floating PV, waterworks, sewage treatment plants, outdoor hotel facilities, PV systems, power plants, pumping stations etc.



## Mechanical loading

Enclosures made of sheet steel do not return to their original shape after mechanical stresses such as impact or collision. This can lead to leaks and malfunctions, as creepage distances and clearances cannot be maintained.

**Applications:** heavy industry such as iron and steel works, mining, open-cast mining, mechanical and plant engineering, foundries etc.



## Chemical influences

Chemicals such as acids, alkalis, petrol or mineral oil can attack the surface or anti-corrosion coating of sheet steel enclosures. This makes sheet steel distribution boxes susceptible to rust and corrosion, which impairs their function.

**Applications:** refineries, chemical plants, petrol stations, landfill sites, pulp and paper industry etc.



## Mobile applications

In mobile applications such as on board ships, the high weight of sheet steel distribution boxes can be an additional disadvantage.

**Applications:** ships etc.



## What is the consequence?

- Production/operational downtime, associated with high costs
- Danger to life and limb
- Frequent repair or replacement, associated with high costs

# HENSEL DISTRIBUTION SYSTEMS MADE OF PLASTIC: MAXIMUM DURABILITY AND SAFETY UNDER EXTREME CONDITIONS

HENSEL

## Corrosion-resistant, highly resilient, dimensionally stable and with certified safety

Protectively insulated HENSEL plastic distribution boxes are made of high-quality, corrosion-resistant and impact-resistant polycarbonate. They withstand even extreme weather and environmental conditions for many years and guarantee reliable and durable power distribution.



### Key benefits at a glance:

- + **Corrosion-resistant** → Does not rust when exposed to environmental influences of e.g. humidity, water, salt water.
- + **Weatherproof, UV-resistant, temperature-resistant** → Decades of undamaged outdoor use, even under extreme conditions and in harsh environments.
- + **High IK impact rating of IK 08 (5 joules)** → High dimensional stability and mechanical load capacity. In the event of an impact or other mechanical stress, the HENSEL distribution boxes made of high-quality polycarbonate cushion and immediately spring back to their original shape.
- + **Long-lasting** → Reliable, low-maintenance and a safe investment.
- + **Insulating material** → Does not conduct electricity and thus offers maximum protection against the risk of electric shock and high protection against short circuits - even in the event of short-term contact with live parts.
- + **Lightweight material** → Low weight compared to sheet steel. Therefore easy (light) to transport and install. Low weight is an advantage in mobile applications such as on board ships.
- + **Modular enclosure system** → Can be flexibly combined and expanded, easy and quick to connect, time-saving assembly. Sectional opening, which is particularly advantageous in dusty environments.
- + **Transparent cover** → Electrical functions which need to be monitored are visible.



### System properties



**Ambient conditions**

#### Ambient temperature

+ for distribution boxes according to DIN EN 61439: 5 °C to 35 °C, max. + 40 °C, humidity: 50% at 40 °C, 100% at 25 °C

+ for empty housing: -25 °C to +70 °C



**Installation**

The enclosures are suitable for protected outdoor mounting.



**Insulation**

Protectively insulated housing (Protection class II)



**Impact strength**

Degree of protection for mechanical stress IK 08 (5 Joules) according to DIN EN 50102



**Foreign body and touch protection**

Dust-tight Degree of protection IP 65



**Water protection**

Jet water protection Degree of protection IP 65



**Fire behaviour**

Glowing wire test 960 °C in accordance with IEC 60695-2-11 self-extinguishing, flame-retardant



**UV resistance**

UV-resistant in accordance with DIN EN 61439-1 para. 10.2.4: The material is tested for UV resistance.



**Chemical resistance**

Resistance to 10% acids and 10% alkalis, petrol and mineral oil



**Toxic behaviour**

Silicone- and halogen-free

### OUR SOLUTION

HENSEL plastic distribution systems made of polycarbonate are a reliable and durable alternative to distribution boxes made of sheet steel - especially in unprotected outdoor areas or in other demanding environments.

# HENSEL DISTRIBUTION SYSTEMS MADE OF PLASTIC: RELIABLE, EVEN IN EXTREME CONDITIONS

Safe and durable in dust, dirt, moisture and harsh industrial atmospheres



## ENYBOARD

KV Small distribution board up to 63 A, weatherproof



## ENYSTAR

Installation distribution system with door up to 250 A



## ENYMOD

Mi power distribution system up to 630 A

## Step 1

Assess the application to check whether plastic is more suitable.

## Step 2

Select the suitable HENSEL distribution system.

## Step 3

Talk to us. Your local HENSEL consultants will give you tailor-made support.

[www.hensel.in](http://www.hensel.in)

## HENSEL

Hensel Electric India Pvt Ltd  
Industrial Electrical Power  
Distribution Systems

35 Kunnam Village,  
Sunguvarchathram Walajabad Road  
Sriperumbudur - 631 604  
Kanchipuram Dist., Tamil Nadu, India  
INDIA

Tel.: +91 44-6712 7700  
Fax: +91 44-6712 7724  
E-mail: [info@hensel-electric.in](mailto:info@hensel-electric.in)  
[www.hensel.in](http://www.hensel.in)

Product information: "Distribution board systems made from thermoplastics"



Product information: "Distribution board systems made from thermoplastics". Scan QR code and download.

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