



Power Reliability



## New benchmark in surge protection

The Safe Protection Plus product family

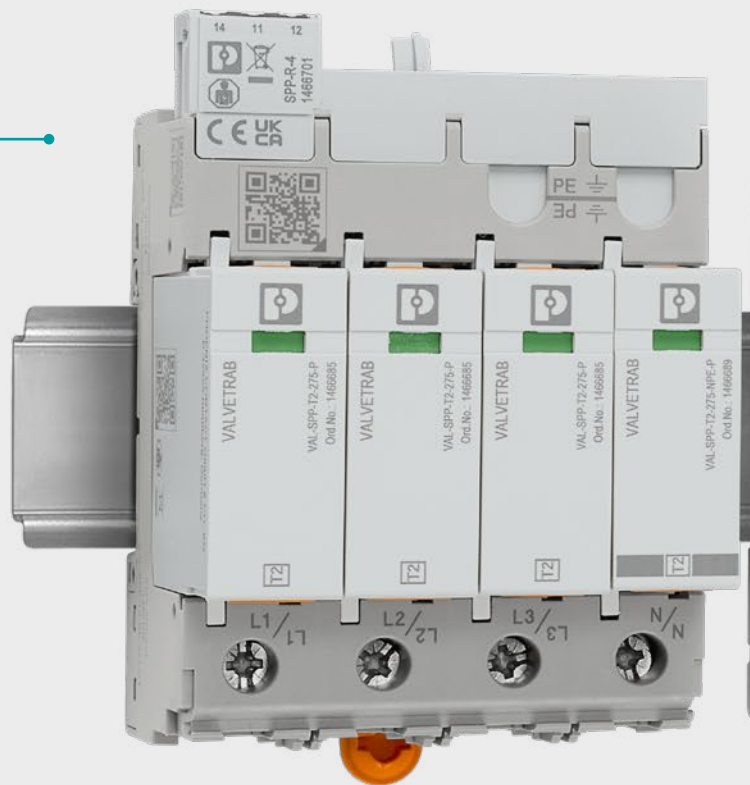
# New benchmark in surge protection

## Easy and safe installation and operation

High demands are placed on the availability of electrical systems. With Safe Protection Plus (SPP), Phoenix Contact is already setting the surge protection standards of the future, today. The VALVETRAB-SPP devices combine forward-thinking installation and safety features that ensure the high availability of your system.

### Easy and safe installation

with forward-thinking handling and safety features



### Can be used in a wide range of applications

due to the optimized design and broad portfolio

## Reliable system protection

with maximum performance and endurance



## Easy planning

due to comprehensive digital data and selectors

## Contents

|   |    |
|---|----|
| Advantages of the Safe Protection Plus product family | 4  |
| Easy and safe installation                            | 4  |
| Reliable system protection                            | 5  |
| Can be used in a wide range of applications           | 6  |
| Quick and simple planning                             | 7  |
| Forward-thinking features                             | 8  |
| Product overview                                      | 10 |



### Power Reliability

Discover solutions for high system availability: Just enter the web code into the search field on our website or scan the QR code.



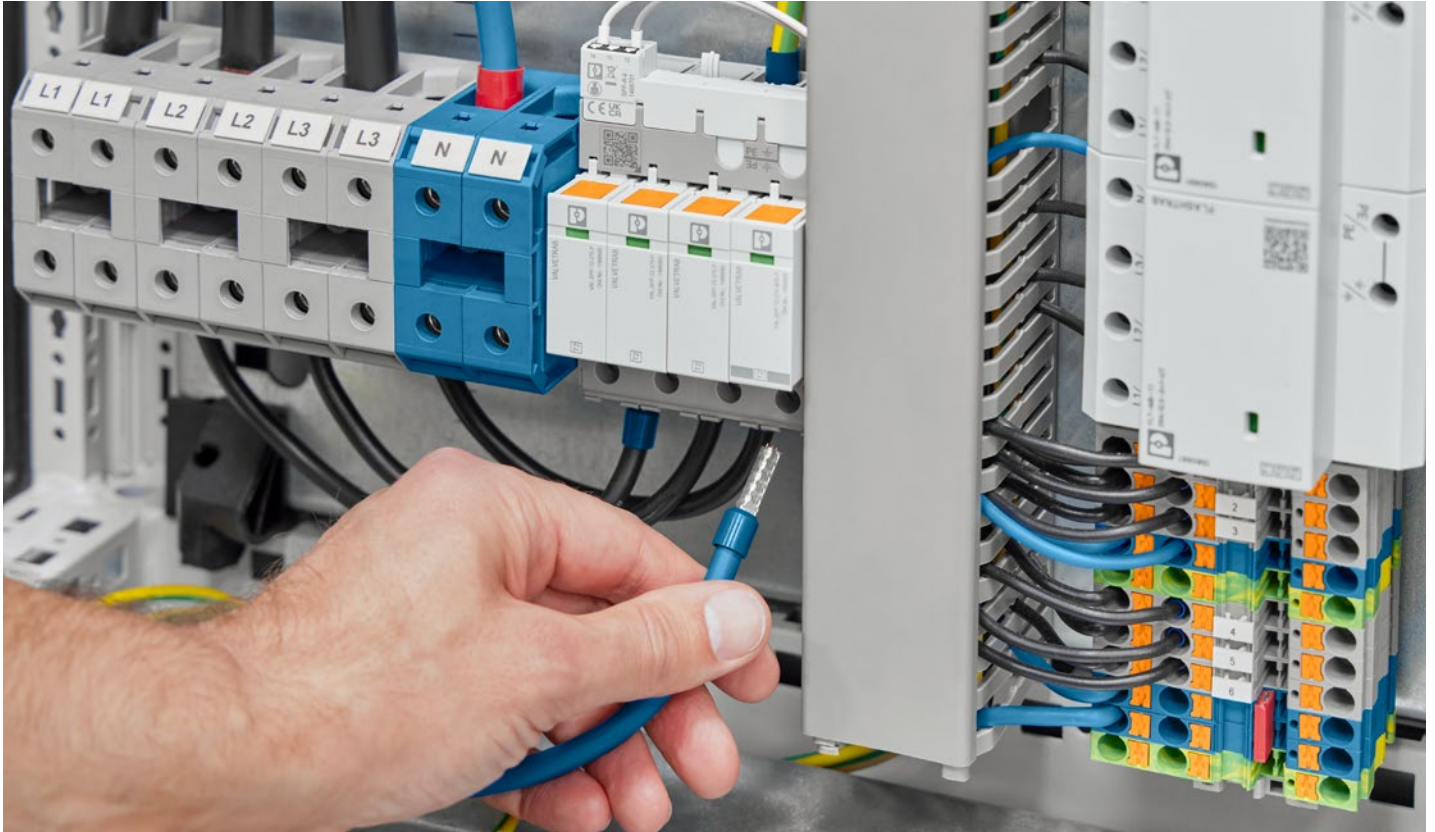
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# Your advantages

## Easy and safe installation

VAL-SPP devices are characterized by their simplicity and safety. They boast innovative features such as miswiring and touch protection, plus a reduced tightening torque of just 3 Nm. The VAL-SPP product

family therefore offers forward-thinking advantages that already meet the standards of the future, today.



### Miswiring and touch protection

All AC versions are equipped with miswiring protection. This prevents the connecting cable from being plugged in incorrectly unintentionally. This also provides touch protection.



### Tightening torque 3 Nm

With the reduced tightening torque, installation is reliable and safe even without a great deal of force.



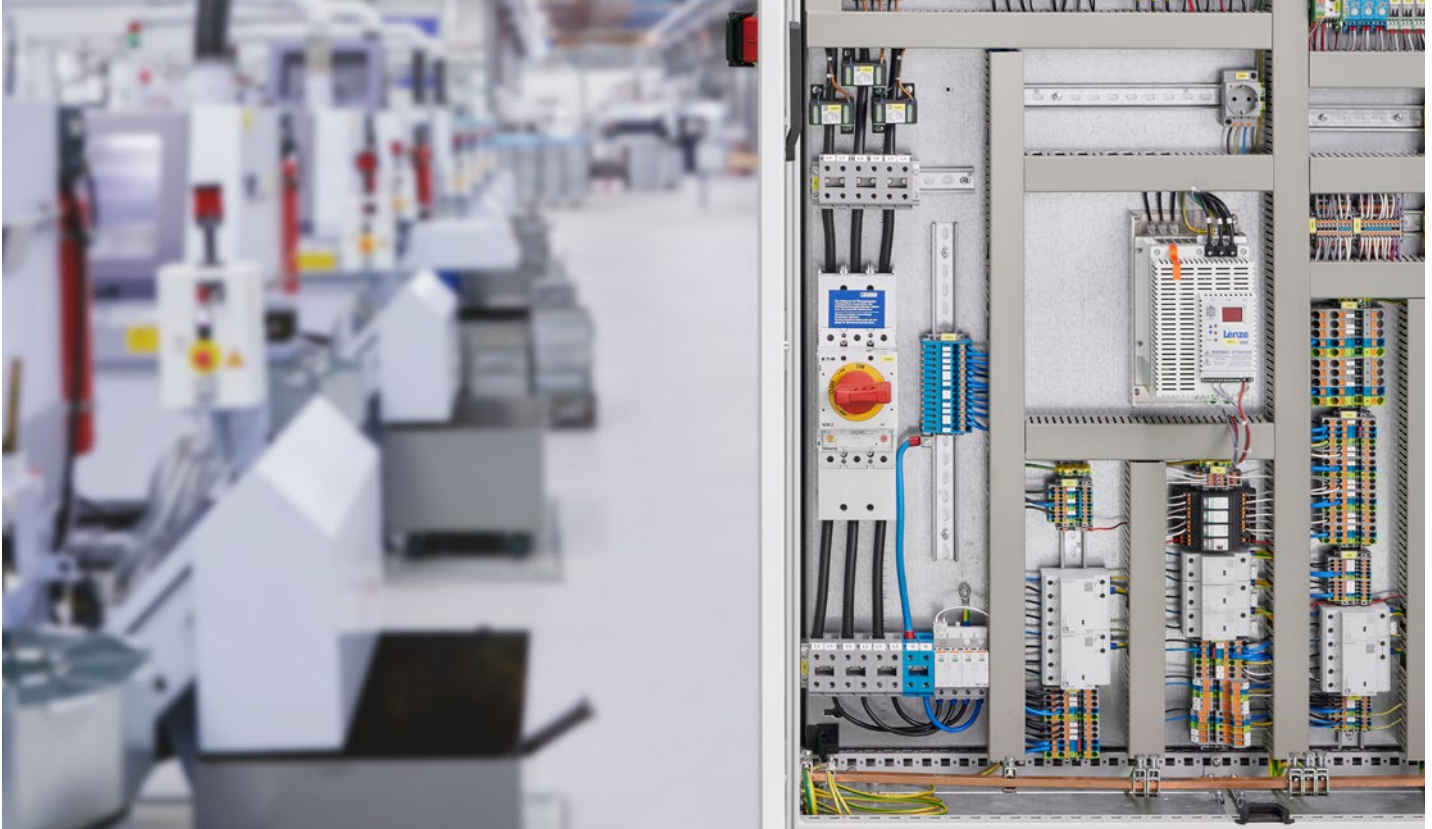
### Pluggable protection modules

The pluggability of the protection modules enables individual protective plugs to be replaced safely and cost-effectively.

## Reliable system protection

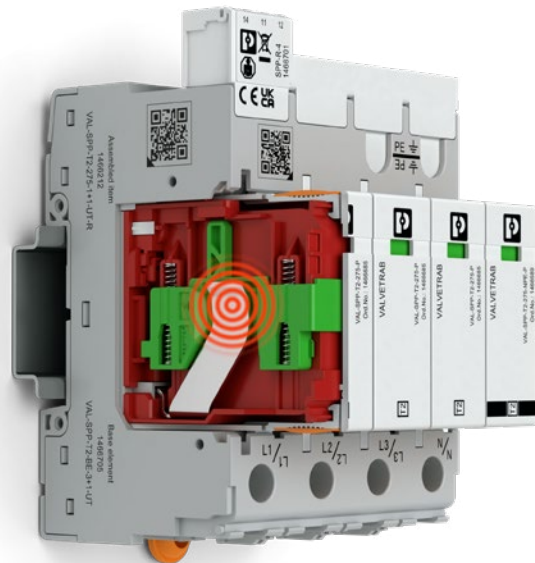
The VAL-SPP product family provides maximum performance and endurance to deliver reliable protection. Reinforced insulation also ensures additional personal and system safety. The direct response

behavior protects the backup fuse and installation. Rapid disconnection guarantees a high level of operational safety.



### New disconnect device and double insulation

In the event of a surge protective device overload, fast and safe disconnection ensures a high level of operational safety. The fast response behavior of the protective devices without current peaks and line follow current protects the backup fuse and the entire downstream installation. The double insulation between the main and auxiliary circuits also provides reliable personal and system protection. At the same time, remote signaling is especially protected.



## Your advantages

### Can be used in a wide range of applications

VAL-SPP covers applications for AC and PV with various different nominal voltages. Versions for grids with strong voltage fluctuations extend the portfolio. The robust design enables installation in

harsh environments and at altitudes up to 5,000 m. The option of use without a backup fuse up to 315 A enables space-saving and cost-effective installation.



#### Photovoltaics

The robust design as well as the high voltage and short-circuit current rating enable installation in solar parks and other applications up to altitudes of 5,000 m.



#### Building installation

No need for an additional backup fuse for systems up to 315 A. This saves time and money and enables significantly shorter connecting cables, in particular in building installation applications.



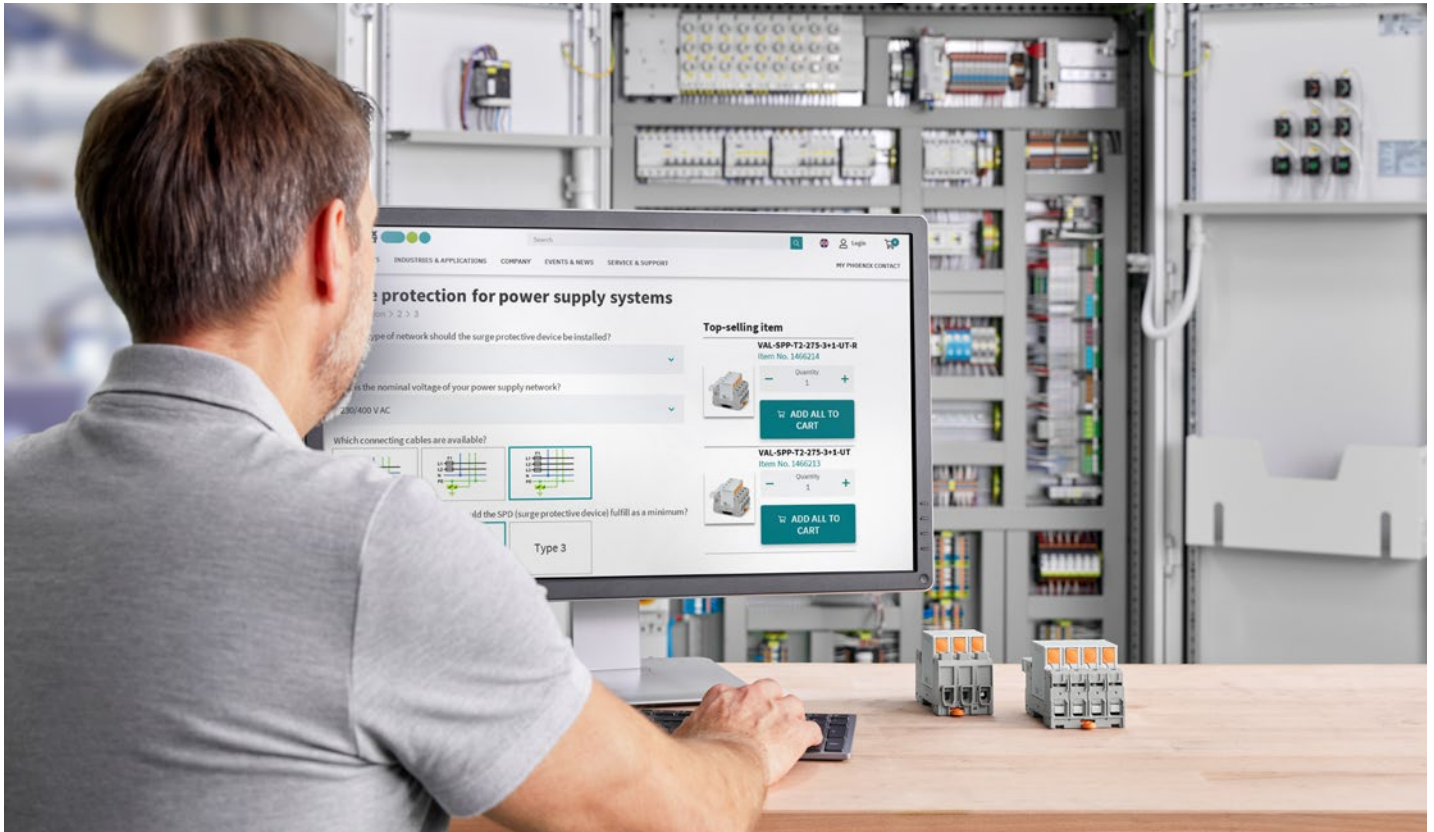
#### Wind power

With product versions with a maximum continuous voltage of up to 800 V and pollution degree 3, the protective devices can also be used in harsh environments with large temperature fluctuations.

## Quick and simple planning

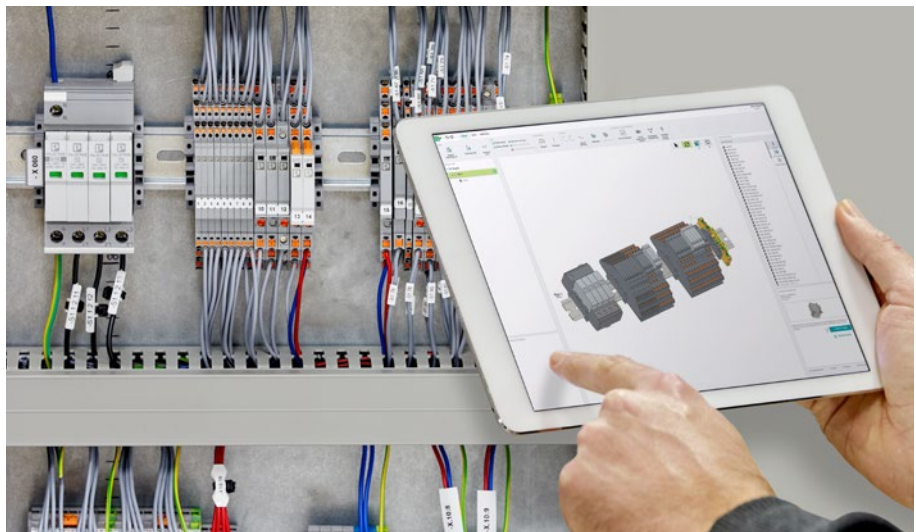
Comprehensive digital data for eCAD systems makes it easier for you to plan your system. Our online selection guide enables you to quickly and easily find the right product for your application.

With the modular accessories, additional functions can also be integrated easily, even at a later time.



## Intuitive selector and clipx ENGINEER

In addition to the intuitive selector for choosing the right products, integration into the clipx ENGINEER engineering software enables comprehensive and efficient project planning of the entire control cabinet. The intelligent interfaces to CAE systems enable time-consuming planning tasks to be streamlined. The online and offline application gives you flexible and mobile access to your planning work.



# Forward-thinking features

## VALVETRAB SPP for AC and PV applications

With new features, the VALVETRAB Safe Protection Plus product family is the forward-thinking surge protection for the standards of the future. With our portfolio of different product versions, you will always find the right selection to meet the requirements of your system.

### Modular remote signaling

For many product versions, the Safe Protection Plus product family offers modular remote signaling that can be quickly and easily plugged into the corresponding base element.

### AC versions

#### New disconnection

Due to high-performance disconnection, surge protection in the event of an overload and fault is even faster and more reliable.

#### Pluggable surge protection

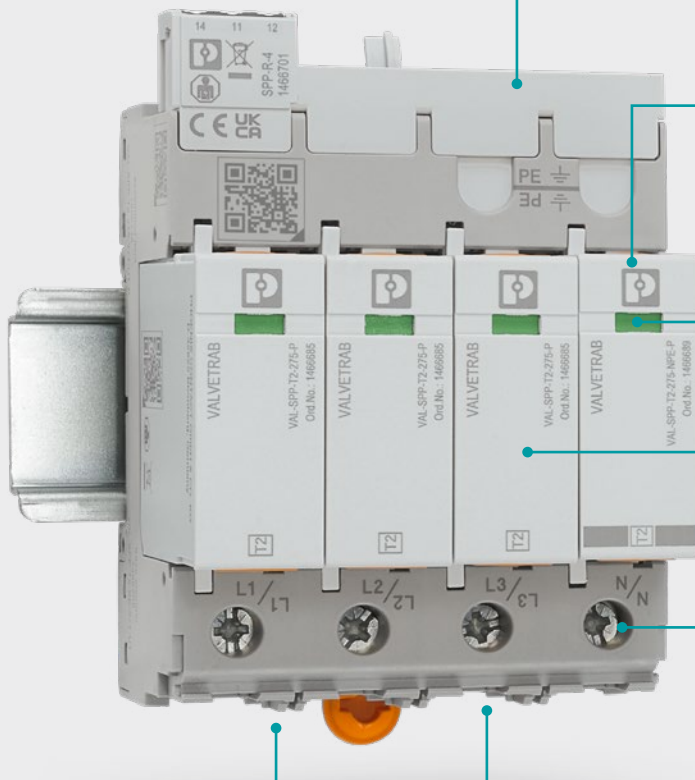
The protection modules can be plugged in separately for each path. Overloaded plugs can thus be replaced quickly and inexpensively.

#### Biconnect connection

The products for AC applications are equipped with Biconnect connections. This means that you can easily bridge the surge protection to other components, such as miniature circuit breakers.

#### Miswiring and touch protection

The products are equipped with miswiring and touch protection. This reliably prevents incorrect insertion. Touch protection ensures greater safety during operation. Current-carrying parts can no longer be touched once the cables have been connected.





## Type 1 and type 2

The protective devices are designed in a 2+V circuit. They are available both as type 1 lightning current arresters for 1,000 V DC or as type 2 surge protection for 600 V DC, 1,000 V DC, or 1,500 V DC.

## PV versions

### Remote signaling

Depending on the requirements, surge protective devices for photovoltaic applications are available with or without floating remote indication contact.

### Mechanical status indicator

Each plug has a mechanical status indicator. This enables the identification of overloaded protective plugs directly on site.

### Reduced tightening torque

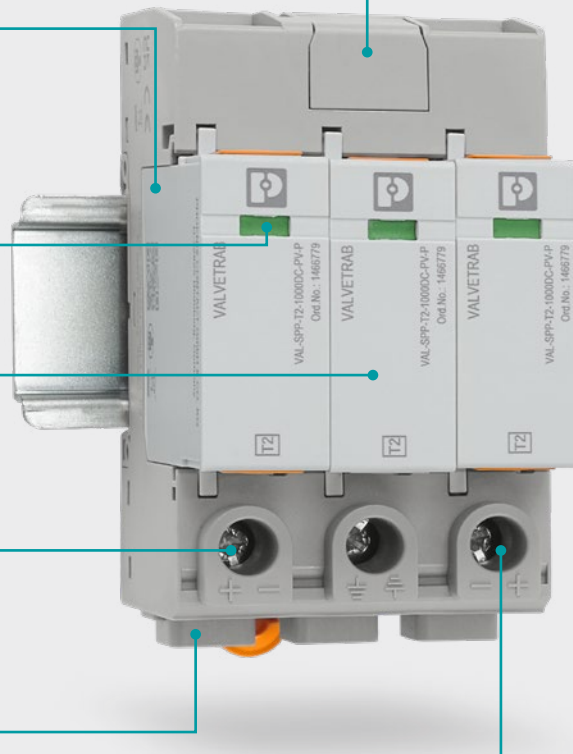
The tightening torque has been reduced. This makes it easier to install the protective devices correctly.

### Extended insertion funnels


The insertion funnels have been extended to achieve better air clearances and creepage distances. They can therefore also be used at altitudes of up to 5,000 m.

### Extended screw shafts


The extended screw shafts optimize the air clearances and creepage distances and therefore offer greater safety even in the case of higher DC voltages.



# Product overview

| VALVETRAB Safe Protection Plus  |       |                             |                       |  |                            |                         |          |
|---|-------|-----------------------------|-----------------------|--|----------------------------|-------------------------|----------|
| AC, 2-position  |       |                             |                       |  |                            |                         |          |
|    | Type  | Supply system configuration | Nominal voltage $U_N$ | Maximum continuous operating voltage $U_C$ | Item designation           | Remote signaling        | Item no. |
|   | II/T2 | TN-S/TT                     | 240 V                 | 275 V                                      | VAL-SPP-T2-275-1+1-UT-R    | ✓                       | 1466212  |
|   |       |                             |                       |  | VAL-SPP-T2-275-1+1-UT      |                         | 1466211  |
|   |       |                             |                       | 335 V                                      | VAL-SPP-T2-335-1+1-UT-R    | ✓                       | 1466597  |
|   |       |                             |                       |  | VAL-SPP-T2-335-1+1-UT      |                         | 1466589  |
|   |       |                             |                       | 385 V                                      | VAL-SPP-T2-385-1+1-UT-R    | ✓                       | 1466608  |
|   |       |                             |                       |  | VAL-SPP-T2-385-1+1-UT      |                         | 1466607  |
| AC, 3-position  |       |                             |                       |  |                            |                         |          |
|   | Type  | Supply system configuration | Nominal voltage $U_N$ | Maximum continuous operating voltage $U_C$ | Item designation           | Remote signaling        | Item no. |
|   | II/T2 | TN-C                        | 240/415 V             | 335 V                                      | VAL-SPP-T2-335-3+0-UT-R    | ✓                       | 1466599  |
|   |       |                             |                       |  | VAL-SPP-T2-335-3+0-UT      |                         | 1466598  |
|   |       |                             | 400/690 V             | 440 V                                      | VAL-SPP-T2-440-3+0-UT-R    | ✓                       | 1466615  |
|   |       | 554/960 V                   | 750 V                 | VAL-SPP-T2-750-3+0-UT-R                    | ✓                          | 1466614                 |          |
|   |       | TN-C IT                     | 240/415 V<br>240 V    | 440 V                                      | VAL-SPP-T2-440-3+0-VF-UT-R | ✓                       | 1466646  |
|   |       |                             |                       |  | VAL-SPP-T2-440IT-3+0-UT-R  | ✓                       | 1466619  |
|   | IT    | 400 V                       | 880 V                 | VAL-SPP-T2-800WE-3+0-VF-UT-R               | ✓                          | 1466642                 |          |
| 800 V   |       |                             |                       |  |                            |                         |          |
| AC, 4-position  |       |                             |                       |  |                            |                         |          |
|  | Type  | Supply system configuration | Nominal voltage $U_N$ | Maximum continuous operating voltage $U_C$ | Item designation           | Remote signaling        | Item no. |
|   | II/T2 | TN-S/TT                     | 240/415 V             | 275 V                                      | VAL-SPP-T2-275-3+1-UT-R    | ✓                       | 1466214  |
|   |       |                             |                       |  | VAL-SPP-T2-275-3+1-UT      |                         | 1466213  |
|   |       |                             |                       |  | VAL-SPP-T2-275/40-3+1-UT-R | ✓                       | 1466216  |
|   |       |                             |                       |  | VAL-SPP-T2-275/40-3+1-UT   |                         | 1466215  |
|   |       |                             |                       | 335 V                                      | VAL-SPP-T2-335-3+1-UT-R    | ✓                       | 1466604  |
|   |       |                             |                       |  | VAL-SPP-T2-335-3+1-UT      |                         | 1466602  |
|   |       |                             |                       | 385 V                                      | VAL-SPP-T2-385-3+1-UT-R    | ✓                       | 1466611  |
|   |       |                             |                       |  | VAL-SPP-T2-385-3+1-UT      |                         | 1466609  |
|   |       |                             |                       | 400/690 V                                  | 440 V                      | VAL-SPP-T2-440-3+1-UT-R | ✓        |

# Product overview

| VALVETRAB Safe Protection Plus   |                      |   |                               |                  |          |
|--|----------------------|---|-------------------------------|------------------|----------|
| DC PV, 3-position  |                      |   |                               |                  |          |
|  | Type                 | Maximum continuous voltage<br>$U_{CPV}$ | Item designation              | Remote signaling | Item no. |
|  | PV I+II/<br>PV T1+T2 | 1200 V DC                               | VAL-SPP-T1-1000DC-PV-2+V-UT-R | ✓                | 1466777  |
|  |                      |   | VAL-SPP-T1-1000DC-PV-2+V-UT   |                  | 1466776  |
|  | PV II/PV T2          | 800 V DC                                | VAL-SPP-T2-600DC-PV-2+V-UT-R  | ✓                | 1466771  |
|  |                      |   | VAL-SPP-T2-600DC-PV-2+V-UT    |                  | 1466770  |
|  |                      | 1200 V DC                               | VAL-SPP-T2-1000DC-PV-2+V-UT-R | ✓                | 1466773  |
|  |                      |   | VAL-SPP-T2-1000DC-PV-2+V-UT   |                  | 1466772  |
|  |                      | 1800 V DC                               | VAL-SPP-T2-1500DC-PV-2+V-UT-R | ✓                | 1466775  |
|  |                      |   | VAL-SPP-T2-1500DC-PV-2+V-UT   |                  | 1466774  |

## What the item designation reveals

The structure of the item designation indicates the respective product version. This enables you to quickly and easily identify products that are in stock.

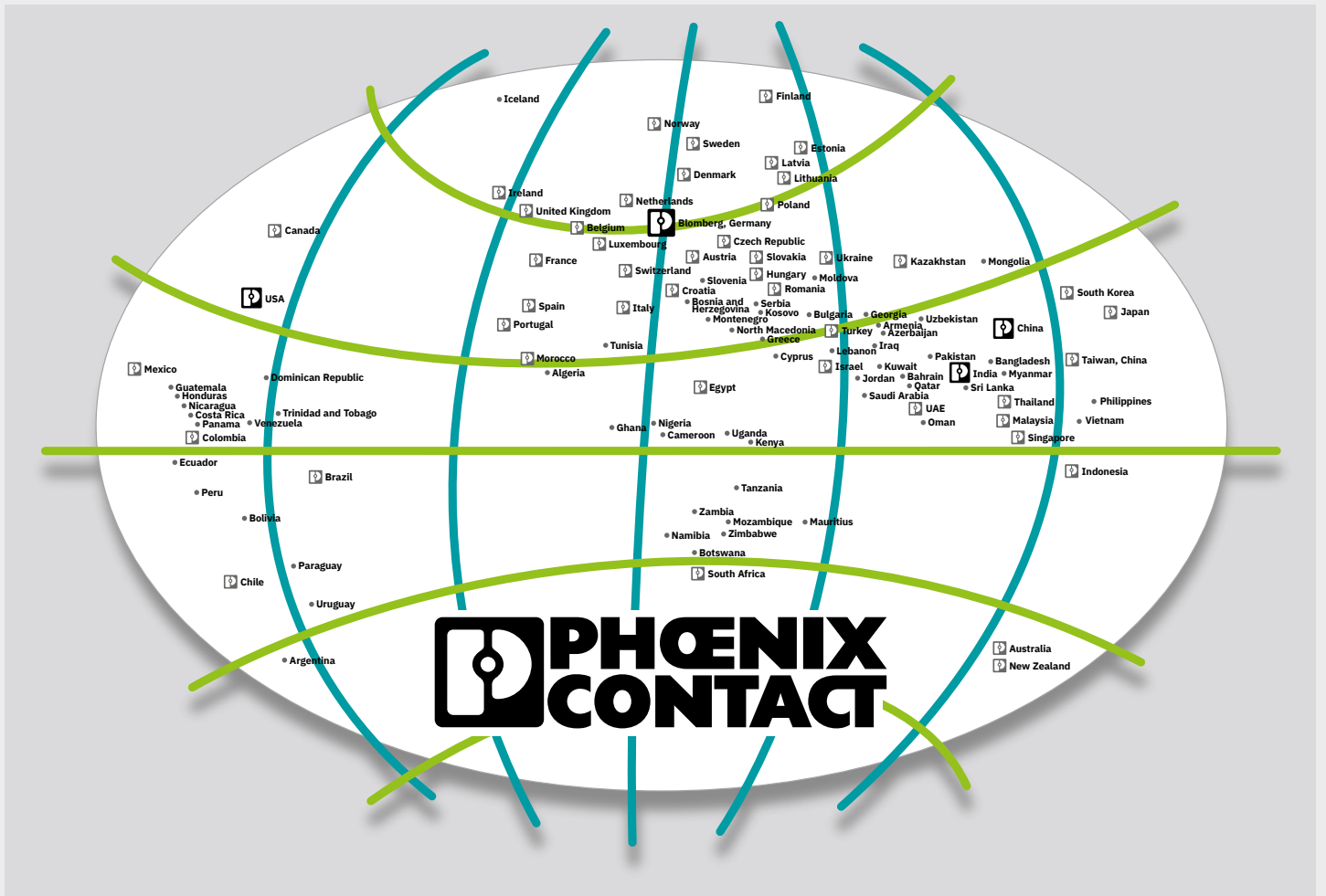
The IEC test classification and the circuit versions are recognizable through the respective combinations of numbers and letters. The wide range of different

continuous and no-load voltages can also be seen from the values shown. The portfolio also includes versions free of leakage current (VF) and versions with an increased discharge capacity.

The new Safe Protection Plus product family is equipped with a screw connection as

standard. Our products are available with and without remote signaling.

| Item designation key       |   |  |
|----------------------------|---|--|
| Example                    | Further options   |  |
| VAL-SPP-T2-335-3+0-UT-R    |   |  |
| Remote signaling           | Without remote signaling  |  |
| Connection                 | Universal terminal (screw)  |  |
| Circuit version            | 1+1, 3+1, 2+V, 3+0-VF   |  |
| Continuous voltage         | 275 V, 385 V, 440 V, 440IT, 750 V, 800WE<br>600 V DC PV, 1000 V DC PV, 1500 V DC PV |  |
| EN/IEC test classification | I/type 1  |  |
| Product family             | VALVETRAB Safe Protection Plus  |  |



## Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing future-oriented products and solutions for the electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network reaching across more than 100 countries with over 21,000 employees, we maintain close relationships with our customers, something we believe is essential for our common success.

Our wide range of innovative products makes it easy for our customers to implement the latest technology in a variety of applications and industries. This especially applies to the target markets of energy, infrastructure, industry, and mobility.

You can find your local partner at  
[phoenixcontact.com](https://phoenixcontact.com)