



DEHN protects
intelligent power grids



Security of supply for today and tomorrow
with lightning and surge protection



Reliable operation in focus – solutions for intelligent power grids

For power supply companies, charging post manufacturers and fleet operators, reliable system operation is the top priority. Compliance with normative regulations is also an important issue. With products and solutions from DEHN, a high level of system availability, and the reliability of supply associated with this, can be delivered with ease – our satisfied customers can vouch for that.

Fundamental to this is lightning and surge protection regarding power grid and supply reliability. Power outages are a major problem for companies and private customers alike. A blackout can lead to high costs, due to the standstill of production systems, for example, and lead to a reduced quality of life – an image problem for grid operators and communities.

Availability is also the top priority for electric mobility. Charging posts need to be protected against outages so that ongoing operations are sustained. Downtimes caused by lightning, surges or electromagnetic interference costs charging post operators money, time and manpower.

This is why you should choose a comprehensive protection concept with DEHN solutions for surge protection, lightning protection and safety equipment – your one-stop shop. For a high level of system availability and the reliability of supply associated with this.



- 1 Large power plant
- 2 Wind turbines
- 3 PV installations
- 4 (High-voltage) transmission grids
- 5 Intelligent transformer substations (distribution grid)
- 6 Substations
- 7 Electric battery storage systems
- 8 Charging infrastructure for electric vehicles
- 9 LED street lights und smart poles
- 10 Intelligent measuring equipment

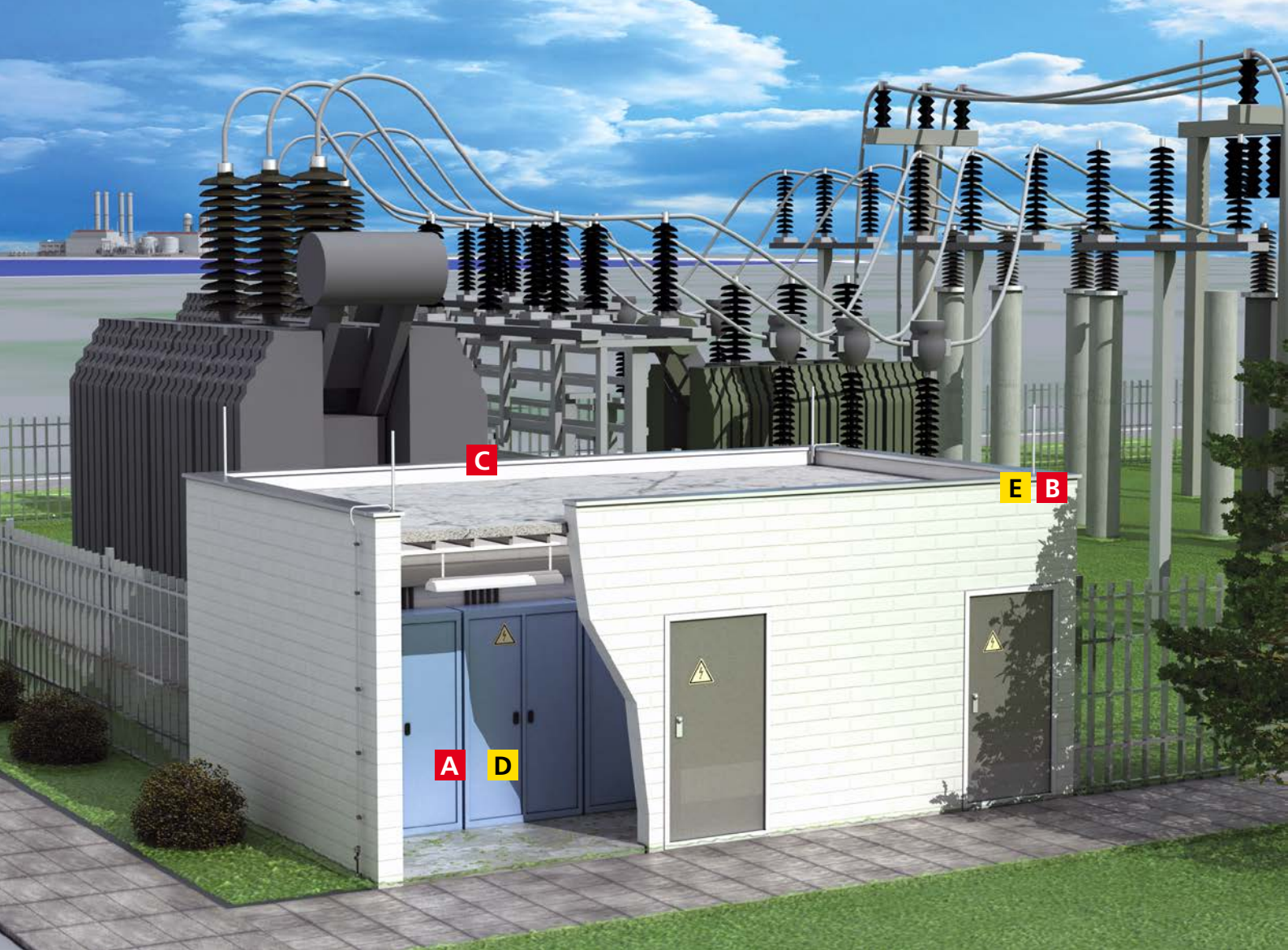


The power grid in transition

In the power grid of the future, power generation is predominantly decentralised. Distribution grids take in the green electricity from photovoltaic and wind turbine generator systems and transport it in all directions. This resulting multi-directional flow of energy places new challenges on distribution grid operators. In order to be able to continue to operate the grids reliably, they must be developed and controlled intelligently.

Development into an intelligent network entails an increasing proportion of sensitive electronic components. The risk of system failures caused by lightning, surges and electromagnetic interference paralysing power supply increases. The central installations and systems of the energy industry can be protected with modern protection concepts. You can learn more about this in this brochure.

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DEHN protects substations

Substations are a central part of the electrical supply system. Technical reliability is the top priority here. The system must be state of the art. The latest normative requirements stipulated by IEC 62305 and IEC 61936-1¹⁾ apply to lightning and surge protection.

A risk assessment of the local threat potential is important when planning a lightning and surge protection concept.

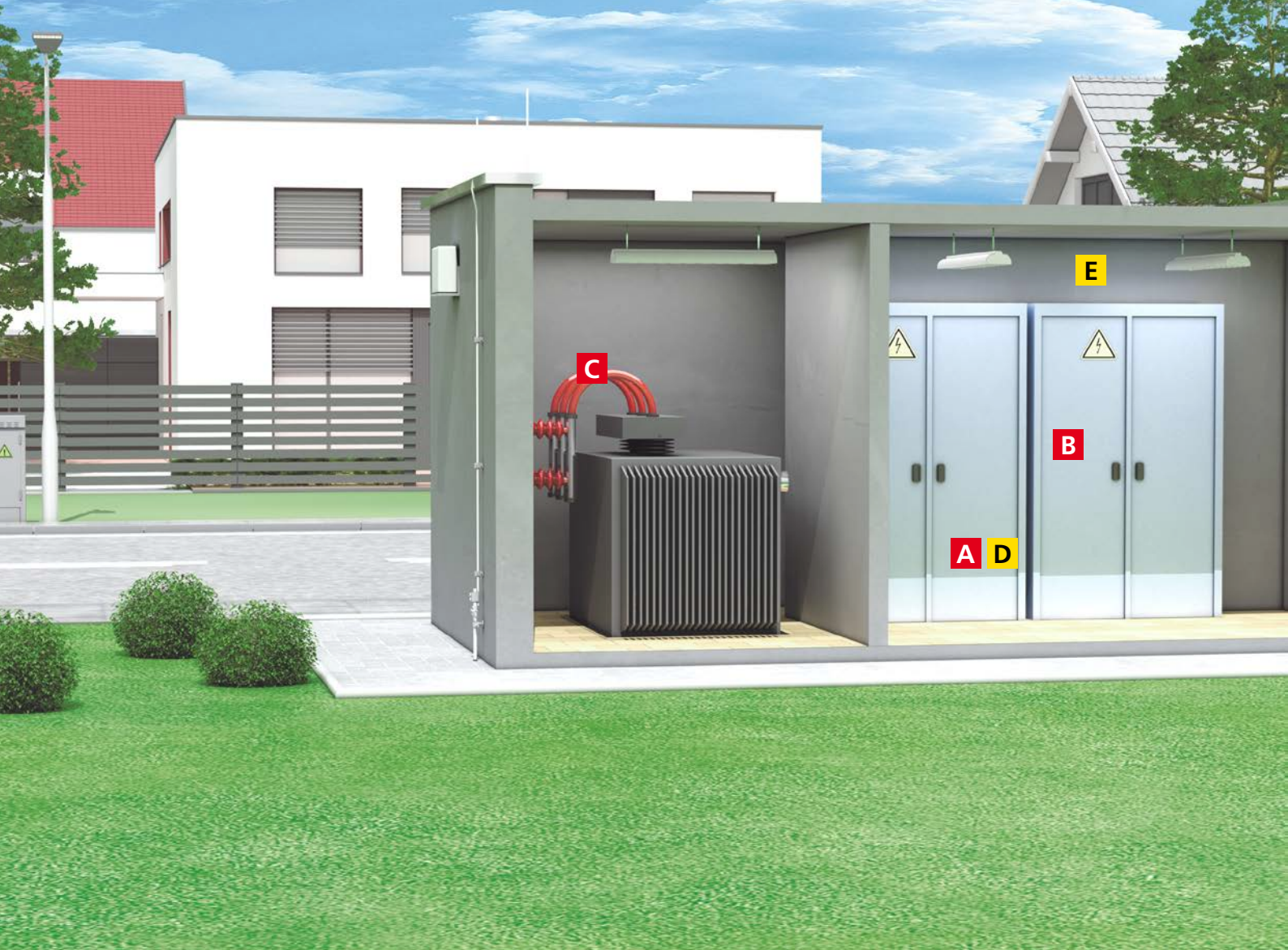
This must be considered, analysed and assessed separately for each case. Make use of the DEHNconcept planning service and have an integrated protection concept created. It consists of lightning protection, surge protection, earthing and equipotential bonding. Another advantage for you: less maintenance and repair work means lower costs. Your operation runs stably and the reliability of supply increases.

You can find information
on the Web:
de.hn/2q7W7



¹⁾ IEC 62305: Protection against lightning
IEC 61936-1: Power installations exceeding 1 kV a.c. – Part 1: Common rule

Application	Type	Part no.	
Power supply systems			
A	 Protection of the LVMDB in the operations building	DEHNventil M2 255 FM Modular combined arrester type 1 + 2 + 3, with RAC spark gap technology und remote signalling contact; 230/400 V AC	954 315 TT 954 405 TNS 954 305 TNC
B	 Protection of external LED lighting	DEHNCord L 2P Universal type 2 surge arrester in IP65 design for retrofitting	900 448
C	 Protection of DC control lines	DEHNGuard SE DC 60 FM Type 2 arrester with remote signalling contact for direct current applications of up to 60 V DC	972 115
Information technology			
D	 Protection of data and communication lines	BLITZDUCTORconnect ML2 BD 24 Modular type 1 combined arrester with push-in connection terminal; for unearthed balanced interfaces	927 244
	 Arrester monitoring	DEHNrecord Alert MODBUS Modbus TCP/RTU communication module for integrating SPDs into a monitoring system DEHNrecord IRCM condition monitoring unit For monitoring the condition of BLITZDUCTORconnect; LED group display and remote signalling contact	910 694 910 710
	 Protection of telecommunication lines	DEHNrapid LSA Type 1 combined arrester on LSA Plus connection technology for protecting 10 pairs Lightning current arrester (type 1) Earthing frame Surge arrester (type 3)	907 401 907 498 907 470
E	 Protection of Ethernet applications Protection of outdoor IP cameras	DEHNpatch Class EA Universal type 2 surge arrester DEHNpatch outdoor Type 2 surge arrester, IP66 version	929 161 929 221
	 Protection of coaxial connection systems	DEHNGate G Type 2 surge arrester, in SMA connection technology	929 039
External lightning protection			
 Isolated external lightning protection for operations buildings	HVI light conductor / DEHNcon-H Isolated lightning protection inside the supporting tube with air-termination tip	819 255	
Earthing and equipotential bonding			
	Operations buildings	Earth rod StSt (V4A) Galvanised steel Earth rod connection clamp StSt (V4A) Galvanised steel	620 902 625 151 620 915 620 015
		Ring earth electrode (30 x 3.5 mm strip steel) StSt (V4A) Galvanised steel	860 335 810 335
		Industrial equipotential bonding bar 12 connections	472 237
		Copper cable Tin-plated, 70 mm ² Tin-plated, 95 mm ² Tin-plated, 120 mm ²	832 202 832 295 832 320
		Connecting clamps Parallel connector Cross clamp Cross clamp Copper Copper StSt (V4A)	306 101 321 047 319 209
		Anti-corrosion tape Width 100 mm, length 10 m; for wrapping around clamp connections in the earth	556 130



DEHN protects intelligent transformer substations

An important link at the juncture between medium and low-voltages are transformer substations. If they have core components such as remote-controlled switch disconnectors and circuit breakers, controllable local distribution transformers, telecontrols and communication and control equipment, we refer to them as intelligent transformer substations.

With DEHN, you will find systems and components for protecting the sensitive electronics of intelligent transformer substations against damage caused by lightning and surges. You will therefore ensure constant availability, avoid financial losses and conserve your human resources. On top of this, earthing and equipotential bonding guarantee the safety of people.
















You can find information
on the Web:
de.hn/2q7W7

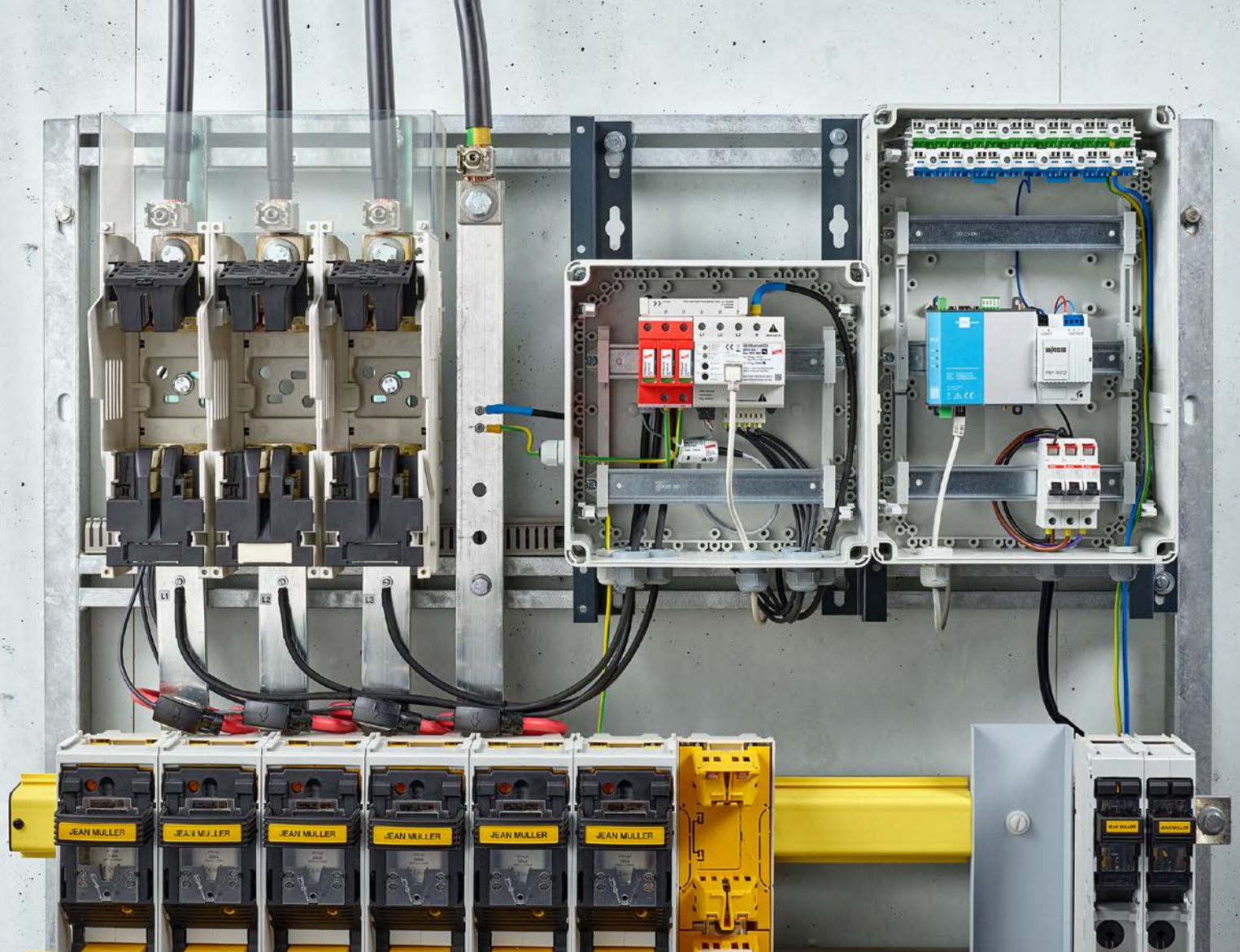


Exposure to lightning or short-circuit currents inside a facility can cause fatal step and touch voltages. A correctly dimensioned earthing system, set up according to the specifications of the standards EN 50522, IEC 60479-1 and IEC 62305, ensures a high degree of operational reliability and the protection of people.

The DEHNconcept team creates earthing simulations for transformer stations. This will allow you to make concrete assertions about whether the defined earthing system offers sufficient safety. You therefore keep step and touch voltages firmly under control to prevent threats to people.

More information:
dehn.de/de/erdungssimulation-trafostationen

Application	Type	Part no.
Power supply systems		
A	 <p>Protection of LV MDB</p>	<p>DEHNvenCI 255 FM: Single-pole, spark-gap-based, type 1 + type 2 combined arrester with remote signalling contact and integrated arrester backup fuse; 230/400 V AC</p> <p>Alternatively: DEHNguard M ACI 275 FM Modular type 2 surge arrester with ACI technology and remote signalling contact; can be used without additional backup fuse</p> <p>Alternatively: VA NH00 Single-pole type 2 arrester with integrated backup fuse in NH-00 design</p> <p>961 205 952 341 TT 952 440 TNS 952 330 TNC 900 262</p>
	 <p>PQ monitoring</p>	<p>DEHNrecord SD: Multifunctional measuring and analysis device for class-A power quality monitoring as per IEC 61000-4-30; load profile and power measurement and power-frequency overvoltages</p> <p>Rogowski coils for a measuring range of up to 2,000 A</p> <p>910 920 910 937</p>
B	 <p>Protection of monitoring technology and telecontrol</p>	<p>DEHncord 3P TT 275 FM Compact type 2 + 3 surge arrester with remote signalling contact and push-in technology; maximum backup fuse 40 A – 230/400 V AC; installation either via DIN rail or screw lugs; as additional protection of the power supply of terminal equipment, such as control system and measurement technology</p> <p>900 439</p>
C	 <p>Protection of the transformer on the medium-voltage side</p>	<p>DEHNmid Metal oxide arrester for medium-voltage systems up to 51 kV</p> <p>Disconnecter Disconnection unit for DEHNmid arresters</p> <p>990 010 994 003</p>
Information technology		
D	 <p>Protection of data and communication lines</p>	<p>BLITZDUCTORconnect ML2 BD 24 Modular type 1 combined arrester with push-in connection terminal; for unearthed balanced interfaces</p> <p>927 244</p>
	 <p>Protection of Ethernet applications</p>	<p>DEHNpatch Class EA Universal surge arrester for the protection of IP-based network applications in structured cabling according to class E_A up to 500 MHz</p> <p>929 161</p>
E	 <p>Protection of coaxial connection systems</p>	<p>DEHNgate G Type 2 surge arrester, in SMA connection technology</p> <p>929 039</p>
Earthing and equipotential bonding		
	 <p>Earthing system control earth electrodes</p>	<p>Strip steel (30 x 3.5 mm) StSt (V4A) Galvanised steel</p> <p>860 325 852 335</p>
		<p>Cross clamps StSt (V4A) Galvanised steel</p> <p>319 209 319 201</p>
		<p>Earth rod StSt (V4A) Galvanised steel</p> <p>620 902 625 151</p>
		<p>Earth rod connection clamp StSt (V4A) Galvanised steel</p> <p>610 020 610 010</p>
		<p>Anti-corrosion tape Width 100 mm, length 10 m; for wrapping around clamp connections in the earth</p> <p>556 130</p>
	 <p>For integration in the station building</p>	<p>Fixed earthing point StSt (V4A)</p> <p>478 011</p>
		<p>Connection clamp For fixed earthing points</p> <p>478 129</p>
		<p>Industrial equipotential bonding bar 12 connections</p> <p>472 237</p>



You can find information
on the Web:
de.hn/bPWLz



Power quality monitoring in a low-voltage system

A high availability of electricity and maximum quality of supply are critical. Power supply companies, power grid operators and municipal utility companies have the duty to ensure the reliable and seamless operation of the power grids and to prevent damage within their own network, but above all also in customer installations. Unfortunately, power supply grids are becoming increasingly susceptible to malfunctions. The reasons for this are varied:

- Decentralised commercial and private infeed
- Fluctuating consumption

- An increased proportion of electronic systems
- Line harmonic distortions due to generating systems

Continuous monitoring of the networks helps to prevent potentially serious consequences such as power outages. DEHNrecord SD, a high-quality measuring and analysis device that provides useful information, monitors intelligent low-voltage systems. Damage and malfunctions are prevented in the long term through permanent monitoring. This provides certainty and also protects against possible liability claims in the event of downtimes.

Advantages for you at a glance



Identify problems promptly



Analyse the causes of defects



Localise and rectify defects quickly

Smart monitoring and reliable operation with the DEHNrecord SD

- Multifunctional: tailored PQ monitoring, measurement of power-frequency over/undervoltages, load profile and power measurement, measurement of impulse currents*, for additional control signals
- Efficient: device configuration, fault localisation and firmware updates from afar
- Standard-compliant: measurement of voltage quality as per EN 61000-4-30, class A and monitoring as per EN 50160







Combined with lightning and surge protection

The installation point of lightning current and surge protection is the right place for the DEHNrecord SD measuring device. Together, these components form the perfect system solution with the protection concepts from DEHN.

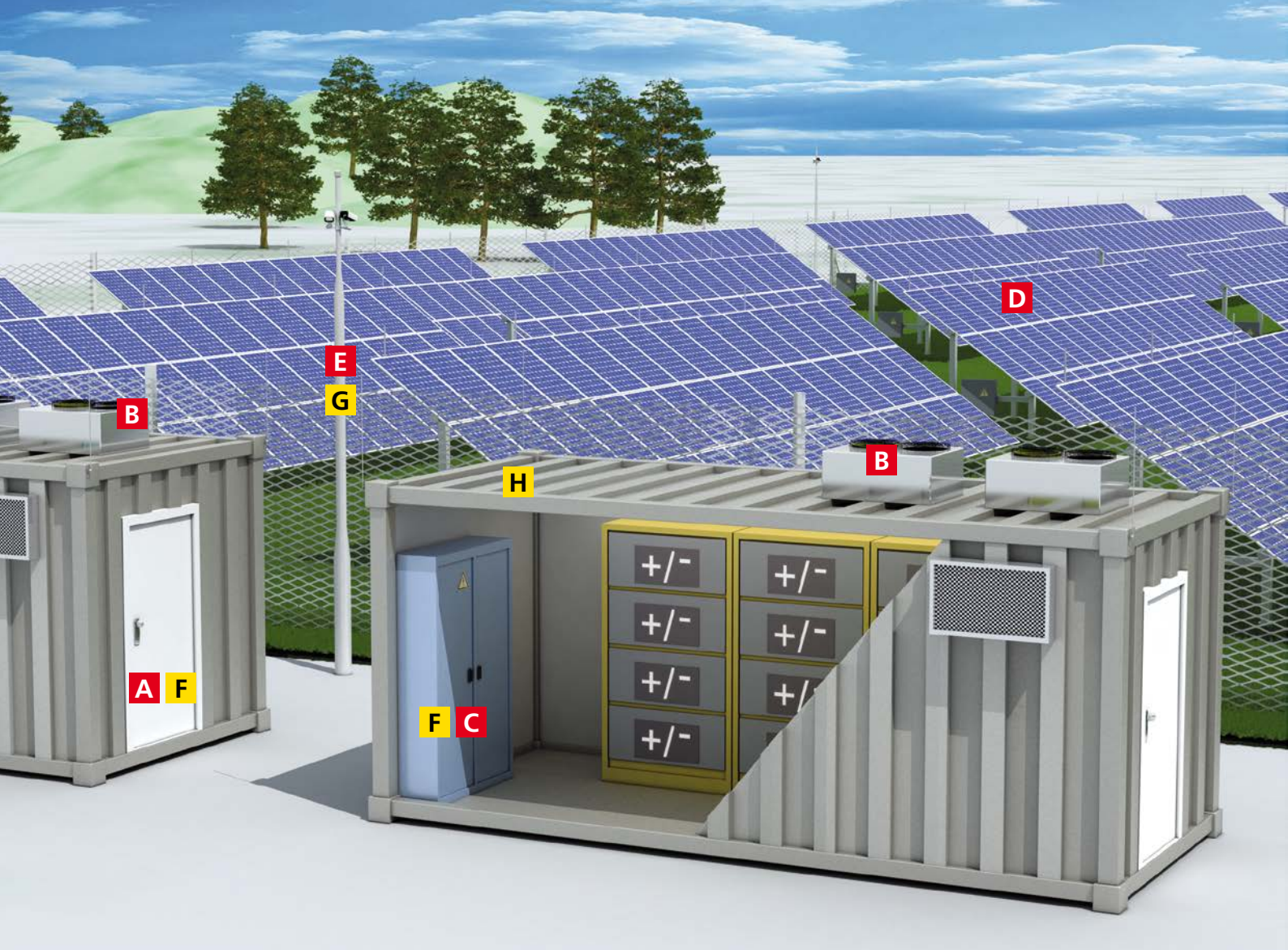
- Direct connection to surge arrester through busbar
- No separate backup fuse necessary for DEHNrecord SD
- No separate wiring necessary
- Direct measurement at the perfect installation point
- Cost savings due to fewer components

- Separate installation or alternatively Customised combination of SPDs
- Supply voltage 230 V AC or 24 V DC, external
- Web-based parameterisation
- Communication via RJ45 Ethernet interface Modbus TCP/IP and/or MQTT protocol
- Push-in terminals for external sensors, such as Rogowski coils



DEHNrecord SD			Part no.
	DEHNrecord SD DRC SD 1 1	230 V AC power supply	910 920
	DEHNrecord SD DRC SD 2 1	24 V DC power supply	910 921
Accessories			Part no.
	Impulse current sensor DRC SD ICS 100	For the recording of lightning-induced impulse currents* up to 100 kA (8/20 μs + 10/350 μs)	910 935
	Split-core transformer DRC SD SCS 100	Measuring range up to 120 A; Cable length: 1,000 mm; for maximum cable diameter of 16 mm	910 936
	Rogowski coil DRC SD RCS 1000	Measuring range up to 2,000 A; Cable length either 1,000 mm or 3,000 mm; for maximum conductor diameter of 95 mm	910 937
	Busbar	MVS 3 6 6: 3-phase / 6-pole for TN-C system MVS 4 8 8: 4-phase / 8-pole for TN-S system	900 595 900 850

* The impulse current measurement function is not currently included in the functionality.
Devices including the impulse current measurement function are expected to be available only from Q2/2022.


















DEHN protects electric battery storage systems

Lightning strokes threaten the sensitive electronics required for charging and discharging processes. The arising overvoltages frequently exceed the dielectric strength of the installed electronic components many times over. Grid-induced voltage spikes can also harm electronic components.

A comprehensive protection concept ensures that the battery storage systems can dependably perform their tasks; such as peak shaving, energy management and maintaining voltage quality. With DEHN lightning and surge protection, the risk of damage can be reduced dramatically. The deployment of human resources for maintenance and servicing is reduced and operating results are improved.

You can find information
on the Web:
de.hn/8o3tZ



Application	Type	Part no.	
Power supply systems			
A	 Protection of the AC infeed to the LV MDB	DEHNventil M2 255 FM Modular combined arrester type 1 + 2 + 3, with RAC spark gap technology und remote signalling contact; 230/400 V AC	954 315 TT 954 405 TNS 954 305 TNC
B	 Protection of air-conditioning systems	DEHNGuard M 275 FM Modular type 2 surge arrester with remote signalling contact; 230/400 V AC	952 315 TT 952 405 TNS 952 305 TNC
C	 Protection of DC supply lines	DEHNGuard ME DC Y 950 FM Type 1 combined arrester + 2 up to 950 V DC with remote signalling contact Alternatively: DEHNGuard SE DC 900 FM Type-2 arrester with remote signalling contact for DC current characteristics up to 900 V with powerful DC switching device (DCD, or DC disconnecter)	972 146 972 145
D	 Protection of photovoltaic power supply systems	DEHNcombo YPV 1500 FM Combined arrester, type 1 + 2 with remote signalling contact; proof of concept for use in battery storage system applications	900 076
E	 Protection of external LED lighting	DEHNCord L 2P Universal type 2 surge arrester in IP65 design for retrofitting	900 448
Information technology			
F	 Protection of data and communication lines	BLITZDUCTORconnect ML2 BD 24 Modular type 1 combined arrester with push-in connection terminal; for unearthed balanced interfaces; meets FISCO requirements	927 244
	 Protection of Ethernet applications	DEHNpatch Class EA Universal surge arrester for the protection of IP-based network applications in structured cabling according to class EA up to 500 MHz	929 161
G	 Protection of outdoor IP cameras	DEHNpatch outdoor Type 2 surge arrester, IP66 version	929 221
H	 Protection of coaxial connection systems	DEHNgate G Type 2 surge arrester, in SMA connection technology	929 039
External lightning protection			
	Isolated external lightning protection for operations buildings	HVI light conductor / DEHNcon-H Isolated lightning protection inside the supporting tube with air-termination tip	819 255
	Bucket or concrete foundations	Telescopic lightning protection mast Height above ground level up to 24,850 mm	103 025
Earthing and equipotential bonding			
	Earthing system	Strip steel (30 x 3.5 m) StSt (V4A) Galvanised steel	860 325 852 335
		Cross clamps StSt (V4A) Galvanised steel	319 209 319 201
		Industrial equipotential bonding bar 12 connections	472 227
		Anti-corrosion tape Width 100 mm, length 10 m; for wrapping around clamp connections in the earth	556 130



DEHN protects charging infrastructure and electric vehicles

Thunderstorms can brew up quite quickly. Here's something only a few owners of electric vehicles and operators of charging infrastructure know: lightning and surge protection must be present in charging posts so that the charging post and the electric vehicle itself are protected against damage while charging during a thunderstorm.

Safeguard your investments and protect yourself against costly damage to charge controllers, to the battery and to the electronics of the charging equipment (controller and communication) – with high-quality, tested DEHN protection solutions. Owners of electric vehicles therefore have a reliable, safe option for charging their vehicles. Due to higher availabil-

ity and the protection of vehicles, charging post operators enjoy an image boost. At the same time, with DEHN lightning and surge protection, you meet the latest normative requirements ¹⁾, e.g. IEC 60364-7-722 and IEC 60364-4-44.









DEHN lightning and surge protection:

- protects charging infrastructure
- protects e-vehicles during the charging process
- increases charging post availability
- meets normative requirements

You can find information
on the Web:
de.hn/2oymr



¹⁾ IEC 60364-7-722: Low-voltage electrical installations – Part 7-722: Requirements for special installations or locations – Supplies for electric vehicles
IEC 60364-4-44: Low-voltage electrical installations – Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbance

Application	Type	Part no.	
Power supply systems			
A	 Protection of LV/MDB	DEHNvenCI 255 FM: Single-pole, spark-gap-based, type 1 + type 2 combined arrester with remote signalling contact and integrated arrester backup fuse; 230/400 V AC Alternatively: DEHNguard M ACI 275 FM Modular type 2 surge arrester with ACI technology and remote signalling contact; can be used without additional backup fuse Alternatively: VA NH00 Single-pole type 2 arrester with integrated backup fuse in NH-00 design.	961 205 952 341 TT 952 440 TNS 952 330 TNC 900 262
	 PQ monitoring	DEHNrecord SD: Multifunctional measuring and analysis device for class-A power quality monitoring as per IEC 61000-4-30; load profile and power measurement and power-frequency overvoltages Rogowski coils for a measuring range of up to 2,000 A	910 920 910 937
B	 Protection of AC-supplied charging posts	DEHNvap EMOB 3P 255 FM Combined arrester, type 1 + 2, with RAC spark gap technology and remote signalling contact; maximum backup fuse 250 A; 230/400 V AC	900 385
	 Protection of AC-supplied charging posts	DEHncord 3P TT 275 FM Compact type 2 + 3 surge arrester with remote signalling contact and push-in technology; maximum backup fuse 40 A – 230/400 V AC; installation either on DIN rail or using screw lugs Alternatively: DEHNguard M 275 FM Modular type 2 surge arrester with remote signalling contact; 230/400 V AC	900 439 952 315 TT 952 405 TNS 952 305 TNC
	 Protection of DC-supplied charging posts	DEHNguard ME DC Y 950 FM Type 1 combined arrester + 2 up to 950 V DC with remote signalling contact	972 146
Information technology			
C	 Protection of data and communication lines	BLITZDUCTORconnect ML2 BD 24 Modular type 1 combined arrester with push-in connection terminal; for unearthed balanced interfaces	927 244
	 Protection of Ethernet applications	DEHNpatch Class EA Universal surge arrester for the protection of IP-based network applications in structured cabling according to class E _A up to 500 MHz	929 161
Earthing and equipotential bonding			
	Protection against step voltages	Mesh mat StSt (V4A)	618 214
		Connecting clamp for mesh mats	540 270
		Earth rod StSt (V4A) Galvanised steel	620 902 625 151
		Earth rod connection clamp StSt (V4A) Galvanised steel	610 020 610 010
		Anti-corrosion tape Width 100 mm, length 10 m; for wrapping around clamp connections in the earth	556 130



DEHN protects LED street lights

Indirect lightning discharge causes overvoltages which exceed the dielectric strength of LED lights many times over. This can lead to partial and complete failure of LED modules and to defective LED drivers. Grid-induced surges can be the reason for the premature ageing of LED modules.



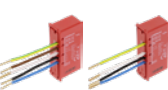
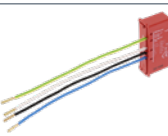









The use of powerful surge protection counteracts this. With DEHN arresters, failure can be avoided – fault-free lighting ensures safety and satisfied residents. In addition, the service life of LED lights can be extended with surge protection – for long-term investment protection.

Good reasons for DEHN lightning and surge protection

- LED lights are sensitive electrical loads with a lower immunity compared to conventional lights.
- A protection concept prevents maintenance work due to damage from surges.
- With DEHN arresters, the longevity and availability of LED technology can be ensured.
- DEHN arresters are quality products from Germany, which reliably protect against overvoltages.

You can find information
on the Web:
de.hn/d1EiD



Application	Type	Part no.	
Power supply systems			
A	 Installation in the lamp head	DEHNcord L 2P (for SK II lights) DEHNcord L 2P (for SK I lights) Compact type 2 arrester; with disconnection function of the load circuit in the event of a fault with the SPD	999 906 900 446
B	 Mast fuse box with integrated surge protection	EK480 mast fuse box With integrated type 2 arrester DEHNcord; for protecting the mast LED lighting	900 443
	 Installation in the mast fuse box	DEHNcord L 3P (with control phase protection) DEHNcord L 2P Compact type 2 arrester; with disconnection function of the load circuit in the event of a fault with the SPD; IP20 design	900 445 900 446
		DEHNcord L 2P (with longer connecting cables) Compact type 2 arrester; with disconnection function of the load circuit in the event of a fault with the SPD; IP20 design	999 937
		DEHNcord L 3P (with control phase protection) DEHNcord L 2P Universal type 2 surge arrester in IP65 design for retrofitting	900 447 900 448
C	 Use in the cable distribution cabinet	DEHNshield FM Combined arrester, type 1 + 2, with RAC spark gap technology and remote signalling contact; for DIN rail up to 160 A; 230/400 V AC	941 315 TT 941 405 TNS 941 305 TNC
		DEHNguard M 275 FM Modular type 2 surge arrester with remote signalling contact; 230/400 V AC	952 315 TT 952 405 TNS 952 305 TNC
		STAK 25 Accessories: Pin-shaped terminal for EMC-oriented feed-through wiring (appropriate for DEHNshield and DEHNguard)	952 589
Information and communication technology			
 Protection of DALI cables	BT 24 Type 2 arrester with KNX bus terminal design	925 001	
Earthing and equipotential bonding			
 Cable distribution cabinet earthing	Earth rod StSt (V4A) Galvanised steel	620 902 625 151	
	Connection clamp, StSt (V4A) Clamping range Rd 8-10 mm; connection 4-50 mm ² solid/stranded	540 121	
	Anti-corrosion tape Width 100 mm, length 10 m; for wrapping around clamp connections in the earth	556 130	
 Earthing and short-circuiting device for street lighting	Kit in a plastic case E27 to E14 thread aluminium adapter; for junction and fuse boxes of street lighting systems	745 105	



Reliable servicing and maintenance work

DEHN Safety Equipment

Safe when it matters most ...






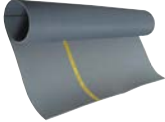

Work on electrical installations is becoming more and more challenging. Complete your tasks with equipment that is safe and reliable.

DEHN offers you tested products and reliable services that protect you from arc fault injuries and ensure the availability of your systems. As an employer, you are thus always on the safe side.

- Insulating operating sticks
- Voltage detectors
- Earthing and short-circuiting devices
- Cover materials and insulated mats
- Arc-fault-tested personal protective equipment

You can find information
on the Web:
de.hn/6xR23



The 5 safety rules		Part no.
1. Disconnect completely		
	Switching stick Nominal voltage (U _N) 1 to 36 kV	763 611
	Fuse tongs Nominal voltage (U _N) 1 to 36 kV	765 042
2. Secure against re-connection		
	Insulating plug Insulating blade Lock-out system	785 640 785 642 785 637
	Warning and information sign set	700 050
3. Verify that the installation is dead		
	High-voltage indicator HSA Nominal voltage (U _N) 110 to 420 kV; for high-voltage overhead lines	767 539
	PHE 4 voltage detector Nominal voltage (U _N) 60 to 132 kV; for switchgear installations and overhead lines	783 280
	Voltage detector kit Nominal voltage (U _N) 20 kV; for switchgear installations and overhead lines; including storage bag	767 724
	Two-pole SPN voltage detector Nominal voltage (U _N): to 1,000 V; with additional phase, rotating field and continuity test	766 665
4. Earthing and short-circuiting		
	Earthing and short-circuiting devices Configure a tailored earthing and short-circuiting device for your system easily and flexibly at www.dehn.de/de/euk	
	Earthing stick	761 016
5. Provide protection against adjacent live parts		
	Insulating protective shutter	763 211
	Insulated mat For standing surface insulation	785 458
Work-assisting products		
	Wireless inspection camera Protected against bridging up to 123 kV	766 390
Personal protective equipment		Part no.
	DEHN ARCfit Arc-fault-tested electrician set for maintenance and repair work on outdoor electrical installations; The set includes DEHNcare ArcFit protective clothing, APG protective gloves, as well as eye and face protection	785 904



From secure generation ...

Protection of wind turbines

Due to their height, wind turbine generator systems are severely exposed to destructive lightning events. Such events can result in lightning-induced system downtimes. High stoppage and servicing costs are an associated risk here.

What DEHN offers:

- An integrated lightning protection system, consisting of external and internal lightning protection, earthing and equipotential bonding.

The advantages for you:

- You significantly reduce lightning-induced system downtimes and the stoppage and servicing costs associated with this.

More information: de.hn/d4MsY

Protection of PV systems

Surges caused by thunderstorms are one of the most common causes of damage to PV systems. In many cases, they lead to the destruction of system parts such as modules, inverters and the monitoring system.

What DEHN offers:

- A professional, comprehensive lightning protection system consisting of external and internal lightning protection

The advantages for you:

- You can therefore increase the availability of your system and secure income over the long term

More information: de.hn/7izgx

Checking and testing protection concepts

Benefit from DEHN's expert knowledge at the DEHN Test Centre and make your protection solution workable. Tested protection concepts promise more operational safety and the increased availability of your systems over the long term. Have your components tested for lightning current carrying capability with the latest methods. The test system in the lightning current laboratory generates lightning currents of up to 400 kA (10/350 μ s) and is therefore one of the most powerful test facilities in the world.

By the way: The DEHN Test Centre is accredited by the German accreditation authority (DAkkS) according to IEC 17025.

More information:
de.hn/bBs8h



... until power can be used safely

Protection of networked technology in the world of work

Sensitive networked technology is the basis of the modern world of work and intelligent production processes. Private power generation, consumption and storage management are analysed in real time based on intelligent, networked systems. Now and again, systems, production processes or individual building equipment may come to a standstill if individual components fail.

What DEHN offers:

- Powerful lightning and surge protection as a key component in the protection concept

The advantages for you:

- You can protect the sensitive networked components of the professional energy management systems of modern industrial and commercial operations against unnecessary damage and costly downtimes.

More information: de.hn/apb1x

Protection of networked technology in modern prosumer households

Private households are no longer mere consumers, but rather produce electricity themselves to cover a portion of their own energy requirements; e.g. for heat pumps, intelligent building technology and cheap electric vehicle charging. In addition to PV, storage technologies assume a key role in this decentralised power supply system, which feeds the networked technology in a residential building.

What DEHN offers:

- An integrated lightning and surge protection concept for residential buildings

The advantages for you:

- You can secure the entire system against faults and prevent sensitive electronic technology from failing.

More information: de.hn/V2X5t

Our testing services

- Immunity tests at the system level as per IEC 62305
- Testing of customer-specific connection units; e.g. charging posts, LED street lights, control and measuring equipment in intelligent transformer substations
- Testing the immunity of components and systems as per IEC 61000-4-5

- Testing the immunity of telecommunication systems as per ITU-T und CCITT¹⁾
- Lightning current tests of low-voltage switchgear installations
- Additional checks and tests upon request
Checking and testing protection concepts

¹⁾ ITU-T: Telecommunication Standardization Sector, a unit of the International Telecommunication Union (ITU).
CCITT: the Comité Consultatif International Téléphonique et Télégraphique is a technical Committee of the ITU.

More than just a product

Reliable technology and comprehensive services from one source. As your partner, we are ready to support you with practical solutions and expertise for all sectors of the energy industry.



Intelligent planning

Plan simply and reliably. The DEHNsupport Toolbox will help you in this regard. You save even more time with DEHNconcept when planning comprehensive lightning and surge protection concepts for intelligent power grids.



Rapid clarification regarding technical queries

Got questions regarding technical installations and on application? Get in touch personally with our technical support team – accessible via telephone: +49 9181 906-1750 or via email: technik.support@dehn.de



Expand your specialist knowledge easily

Gather practical information in the seminars of the DEHNacademy, the planning engineer forums and the "technology meet-ups". Specially conceived for your queries and requests is the power utility seminar: new to the programme of the DEHNacademy. You can find information on the Web: de.hn/ew19evu



Fair partnership for the best solution

Our goal is to be a reliable, fair partner for our industrial, commercial and technical customers all over the world. To this end, we always focus on the best protection solution. Proximity to and close contact with our customers is of great importance to us, be it on-site support by our experienced team, our telephone hotline or personal contact at trade fairs.

Worldwide presence with subsidiaries, representative offices and partners

Our sales teams in our global network in Germany, in our 20 subsidiaries and offices as well as more than 70 international partners ensure the competent and customer-oriented marketing of our products.

You can find your current local contact person on the Internet at: www.dehn-international.com/en/contact



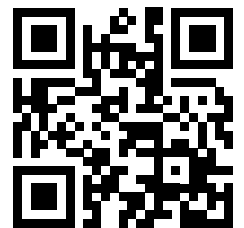
Subsidiaries and Representative Offices		
Austria:	DEHN AUSTRIA GmbH	www.dehn.at
China:	DEHN Surge Protection (Shanghai) Co. Ltd.	www.dehn.cn
Czech Republic:	DEHN s.r.o.	www.dehn.cz
Denmark:	DESITEK A/S	www.desitek.dk
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Surge Protection
Lightning Protection / Earthing
Safety Equipment
DEHN protects.

DEHN SE
Hans-Dehn-Str. 1
92318 Neumarkt
Germany

Tel. +49 9181 906-0
Fax +49 9181 906-1100
sales@dehn.de
www.dehn-international.com



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