



DEHNshield Basic

DSH B TNS
255 FM
No. 941 406

U_c	255 V (50/60 Hz)
U_p	1,5 kV
I_{imp}	7,5 kA T1
I_n	12,5 kA T2
I_{total}	30 kA (10/350)
	160 A

green: ok → red: ✘



CE



2717A
Manufactured in Germany
DEHN International GmbH
32281 Neerwinde, Germany

DEHNshield

DSH TNS
255 FM
No. 941 405

U_c	255 V (50/60 Hz)
U_p	1,5 kV
I_{imp}	12,5 kA T1
I_n	50 kA (10/350)
I_{total}	160 A



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For the protection of residential buildings

Combined arresters DEHNshield and DEHNshield Basic

The ideal solution

for the protection of residential buildings
and further applications



Wide range of applications:

- Buildings with external lightning protection according to lightning protection class III/IV
- Buildings without external lightning protection, with roof-mounted systems, e.g., antennas or satellite systems
- Buildings without external lightning protection where power is supplied via an overhead line ¹⁾
- For the protection of electrical consumers in outdoor areas, e.g., outdoor lighting, charging posts for electric mobility, barriers, LED street lighting

¹⁾ recommended in IEC 60364-5-53: Low-voltage electrical installations – Part 5-53: Selection and erection of electrical equipment – Isolation, switching and control – Devices for protection against overvoltages

The DEHNshield and DEHNshield Basic arresters are a happy medium between the type 2 arrester DEHNguard and the combined arrester DEHNventil.

DEHNshield and DEHNshield Basic impress with their compact design and excellent price-performance ratio. They are ideal for all applications calling for surge protection which can withstand lightning current at an affordable price.

Suitable for many applications

DEHNshield and DEHNshield Basic are the ideal space-saving solution for applications in residential buildings where they can be perfectly integrated in the system without the need for a backup fuse ¹⁾.



Installation upstream of the meter

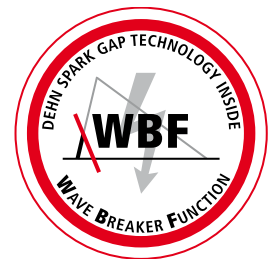
DEHNshield and DEHNshield Basic are fully compliant with the standards and regulations, for example, VDN directives. This makes them suitable for use upstream of the meter offering a significant advantage over varistor-based arresters.

Save space

DEHNshield and DEHNshield Basic only take up 4 DIN modules and are therefore ideal for installations where space is limited. What is more, no additional backup fuse is required in systems with fuse protection up to 160 A.

Protect terminal devices

DEHNshield and DEHNshield Basic both feature the Wave Breaker Function which reduces the energy from a lightning event downstream of the protective device to a minimum. In this way, they prevent any negative interaction with the electrical installation.



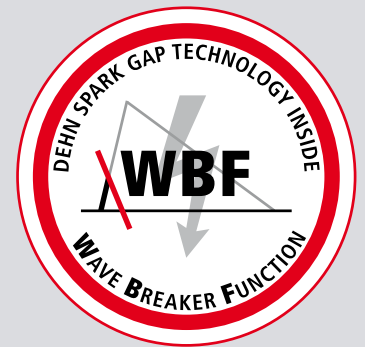
Allow simple remote monitoring

DEHNshield and DEHNshield Basic are easy to monitor via the floating remote signalling contact.

Offer optimum protective effect

DEHNshield and DEHNshield Basic can be connected in series with the help of the STAK 25 terminal – for optimum system protection.

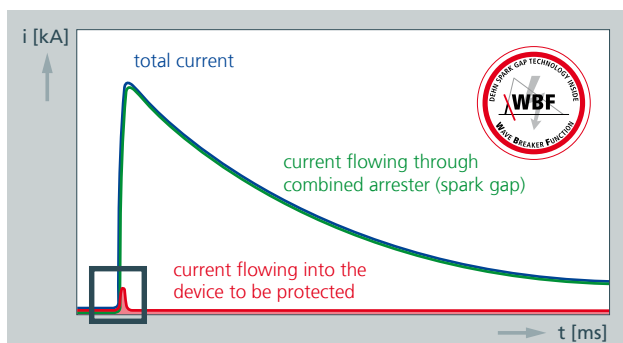
¹⁾ in case of system backup fuses up to 160 A.



DEHNshield delivers what others merely promise: Protection of terminal equipment thanks to spark gap technology

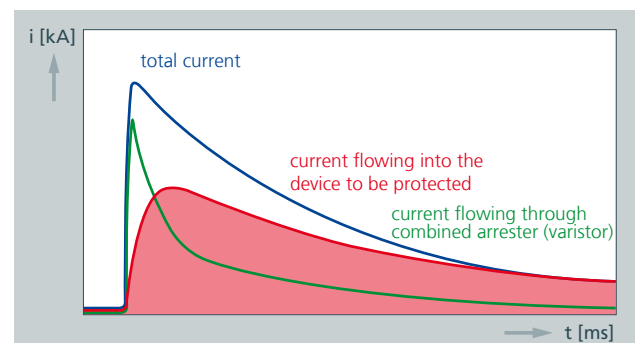
Spark gap: Comprehensive protection

- Reduced impulse time due to Wave Breaker Function
- Almost zero energy load on terminal equipment (red area)



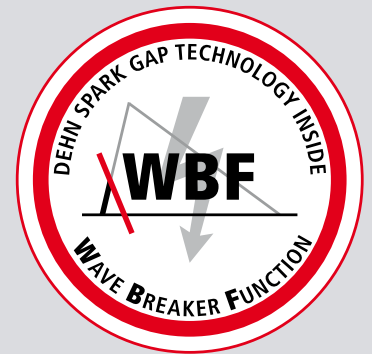
Varistor: Insufficient protection

- Current flows through the terminal equipment over the entire duration of 10/350 μ s impulse currents
- Energy overload or even destruction of terminal equipment (red area)



Only spark-gap-based combined arresters combine lightning equipotential bonding and protection of terminal equipment in a single device.

Benefits of a spark-gap-based arrester over a varistor-based arrester	DEHNshield Basic with spark gap	Combined arrester with varistor
Energy coordination with type 1 + type 2 + type 3 arresters	✓	×
Protection of terminal equipment	✓	×
Reduction of the impulse time thanks to Wave Breaker Function	✓	×
No leakage currents, thus suitable for use upstream of the meter panel	✓	×









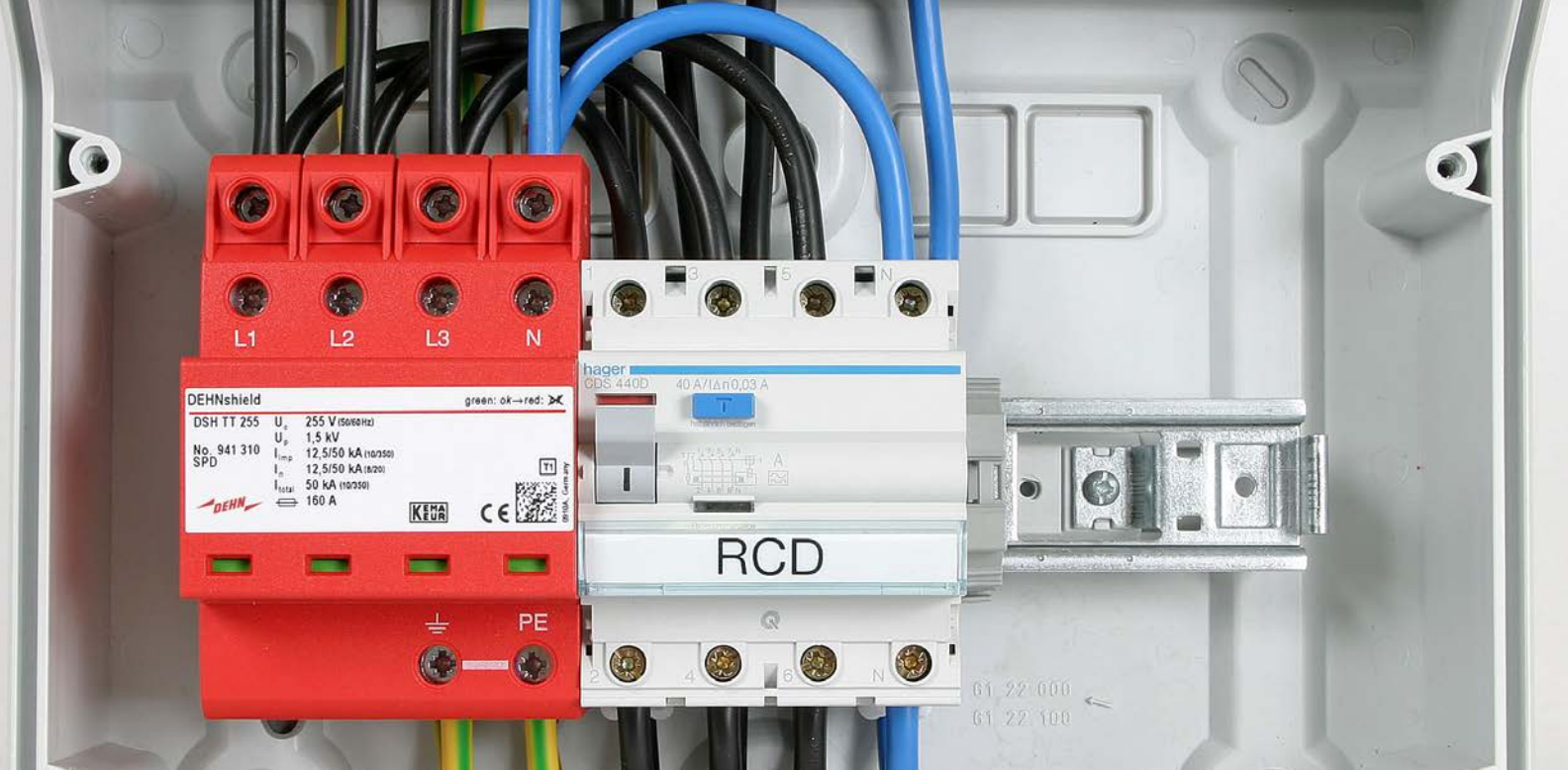
DEHNshield and DEHNshield Basic: Application-optimised, compact, good price-performance ratio

- Application-optimised and prewired spark-gap-based type 1 + type 2 combined arrester
- With remote signalling contact for remote monitoring
- Compact and space-saving design thanks to spark gap technology without venting means with a width of 1 standard DIN module/pole
- Fulfils the requirements on the lightning discharge capacity according to IEC 60364-5-53 for various application
- No interaction with the system
- Compact lightning equipotential bonding and protection of terminal equipment
- High lightning current discharge capacity up to 50 kA (10/350 μ s) – class of LPS III
- Green/red operating state/fault indication in the inspection window

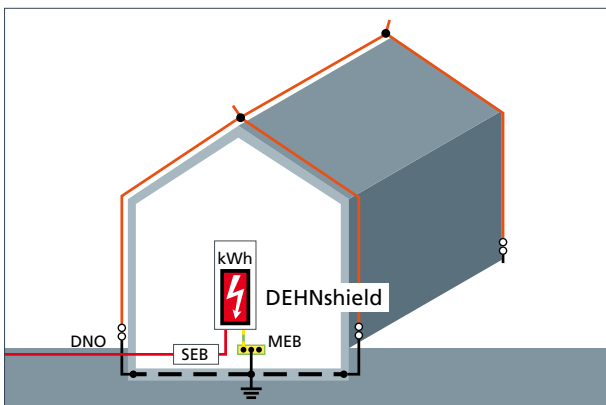
Technical data	DSH / DSH B
Nominal voltage AC U_N	230/400 V
Max. continuous operating voltage AC U_c	255 V
Lightning impulse current (10/350) I_{total}	25/50 kA
Lightning impulse current (10/350)/Pole I_{imp}	12.5 kA / 7.5 kA
Voltage protection level U_p	1.5 kV
Follow current extinguishing capability I_{fi}	25 kA _{rms}
Max. mains-side overcurrent protection	160 A gL/gG
Type of remote signalling contact	Changeover contact
Approvals	KEMA, VDE

Accessories for DEHNshield	Type	Part No.
	STAK 25	952 589

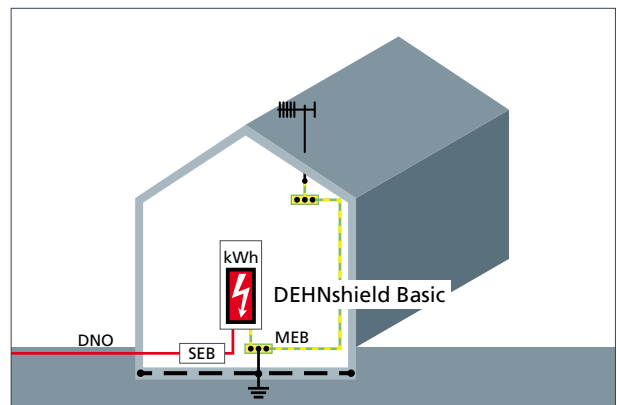
DEHNshield	Type	Part No.
	DSH TNS 255 DSH TNS 255 FM	941 400 941 405
	DSH TT 255 DSH TT 255 FM	941 310 941 315
	DSH TNC 255 DSH TNC 255 FM	941 300 941 305
	DSH TN 255 DSH TN 255 FM	941 200 941 205
	DSH TT 2P 255 DSH TT 2P 255 FM	941 110 941 115
DEHNshield Basic	Type	Part No.
	DSH B TNC 255 FM DSH B TNS 255 FM DSH B TT 255 FM	941 306 941 406 941 316



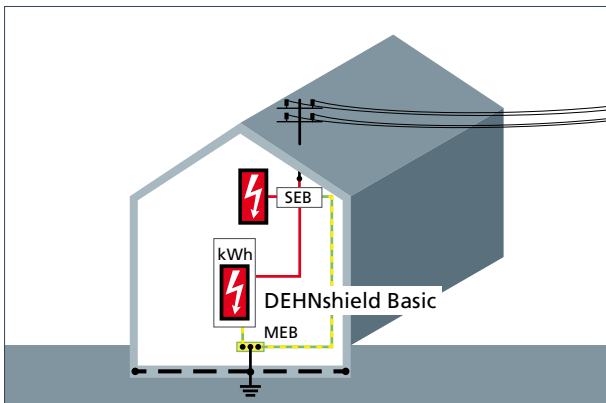
Residential buildings: Installation in the main meter distribution board



For buildings with external lightning protection.¹⁾

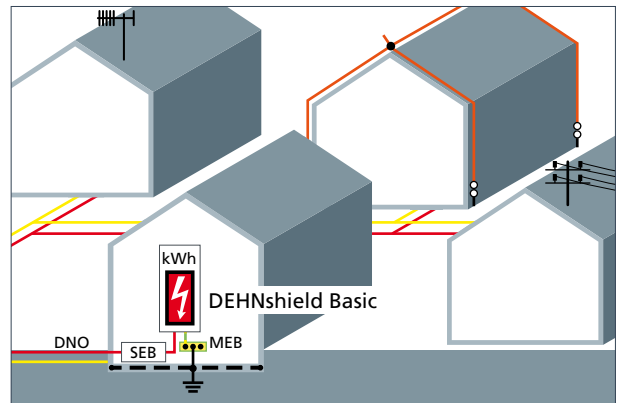


For buildings without external lightning protection system with roof-mounted systems, for example, antenna and installation upstream of the meter to protect the service entrance.



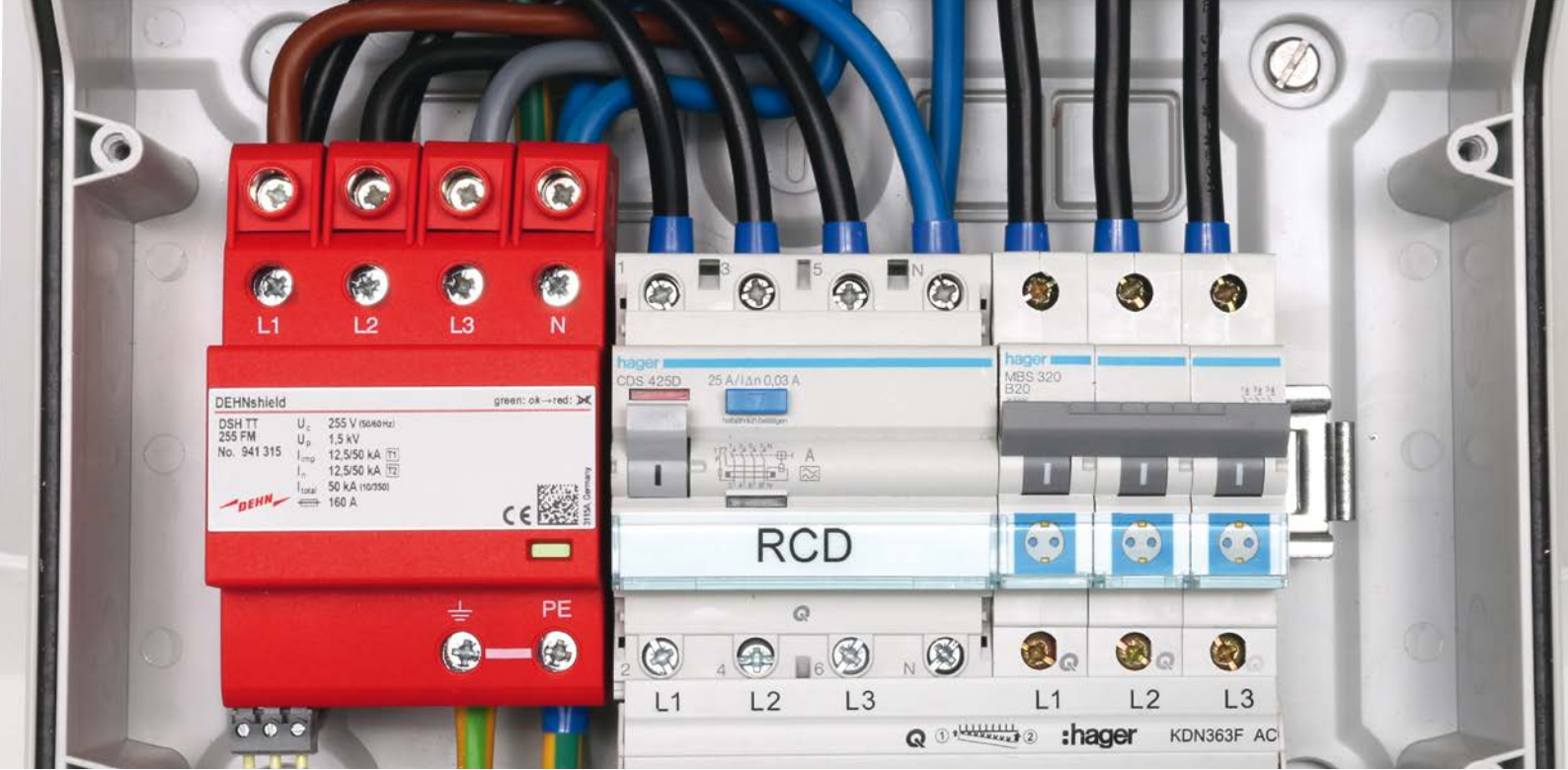
For buildings without external lightning protection where power is supplied via an overhead line.¹⁾

¹⁾ Fulfills minimum requirements of IEC 60364-5-53:
Low-voltage electrical installations

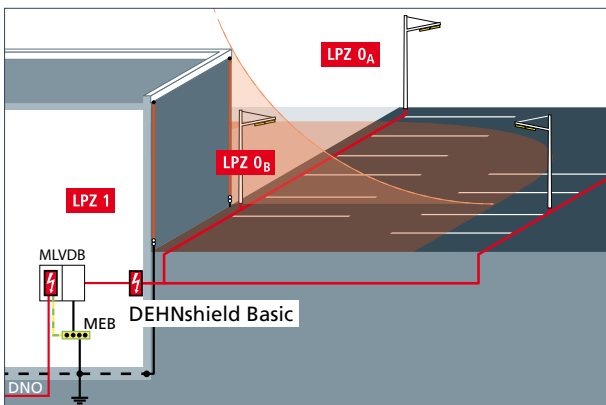


One of the aforementioned points applies to a building in the immediate vicinity.

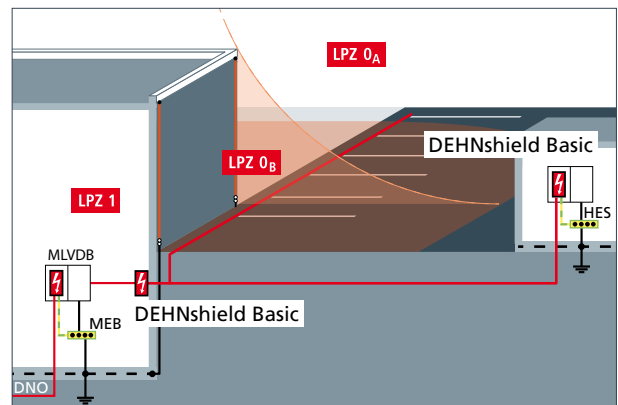
SEB: Service Entrance Box **MEB:** Main Earthing Busbar
DNO: Distribution Network Operator **MLVDB:** Main Low-Voltage Distribution Board



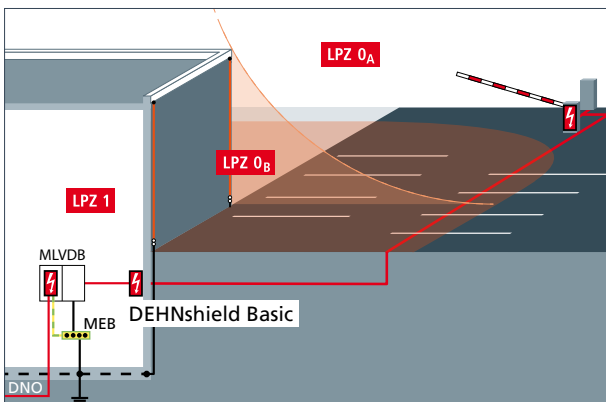
Further applications: Installation at transitions between lightning protection zones



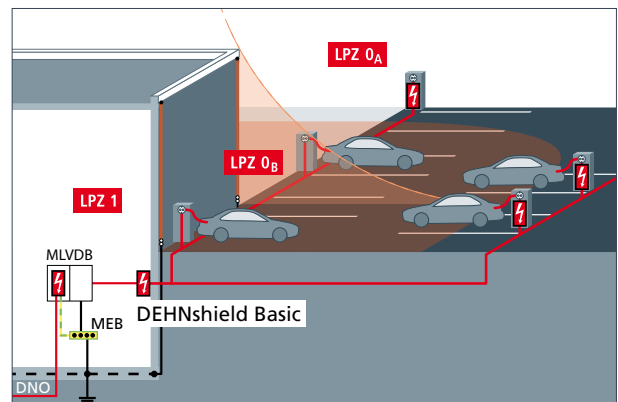
Car park lighting, outdoor lighting



Transition between buildings



Barriers

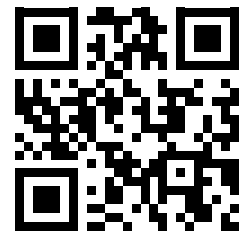


Charging posts for electric mobility

Surge Protection
Lightning Protection
Safety Equipment
DEHN protects.

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

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



de.hn/bWcbN

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