



## BLITZDUCTOR® XT: Modular Lightning Current and Surge Arrester



A photograph of an industrial facility, likely a refinery or chemical plant, featuring several tall, cylindrical distillation columns and a complex network of pipes and tanks. The scene is set against a dramatic, dark sky with multiple bright lightning bolts striking down. The lighting is high-contrast, highlighting the metallic surfaces of the equipment.

BLITZDUCTOR® XT with LifeCheck® –  
Protection and maximum availability

## DEHN protects.

Protection of workers and material assets is of utmost importance to us. Our solutions combine industry-specific knowledge with long-standing technical experience in the fields of surge protection, lightning protection and safety equipment. Economically and technically sound lightning and surge protection concepts ensure system availability and protect your investments and yields in the long term.

BLITZDUCTOR XT combined arresters with integrated LifeCheck are a perfect example of the performance, quality and safety of our products.

### BLITZDUCTOR® XT is space-saving

Compact in design, the BLITZDUCTOR XT base part and protection modules perfectly complement each other for DIN rail mounting. The universal base parts for the modules optimise storage and ease prewiring and maintenance operations.

### BLITZDUCTOR® XT is universal

BLITZDUCTOR XT ensures maximum system availability thanks to the two base parts with and without signal interruption when the protection module is removed. All protection elements are integrated in the module, thus facilitating replacement and maintenance.

### BLITZDUCTOR® XT is robust

Thanks to its snap-in mechanism, the arrester provides protection against vibration effects and shock up to a 30-fold acceleration of gravity. The function-optimised design allows easy replacement of the modules.

### BLITZDUCTOR® XT is intelligent

The unique RFID-based LifeCheck technology allows fast and easy testing of arresters without removing the module from the system circuit and immediately indicates imminent electrical or thermal overload of the components. The test devices of the DEHNrecord series contactlessly detect potentially pre-damaged arresters without interrupting the system circuit. The condition monitoring module permanently monitors the condition of the arrester, thus ensuring maximum availability.

### BLITZDUCTOR® XT is versatile

The arresters of the BLITZDUCTOR XT series were tested in external test laboratories according to application and country-specific requirements and international standards. Their suitability for use in different fields of application was also tested, for example the use of BLITZDUCTOR XT Ex (i) in potentially explosive atmospheres.

### BLITZDUCTOR® XT

- protects against lightning currents and surges
- is capable of protecting terminal equipment
- allows easy replacement of protection modules
- takes up minimal space thanks to its functional design
- is shock and vibration-resistant





## Space-saving: Maximum protection on narrow space

Space in switchgear cabinets is limited. Therefore, the base part and the protection modules are compact in design and thus ideal for DIN rail mounting. Since the base part can be used universally for every type of module, storage requirements are minimised.

Over a width of only 12 mm, up to four single cores or two pairs can be connected on two levels. For DIN rail mounting purposes, cores of a pair belonging to each other are connected on top of one another.

### BLITZDUCTOR® XT base parts:

Type / Part No.	Features
BXT BAS Part No. 920 300	Universal base part for all standard protection modules <b>Without signal when the protection module is removed</b>
BSP BAS 4 Part No. 926 304	Universal base part for all standard protection modules <b>With signal when the protection module is removed</b>
BXT BAS EX Part No. 920 301	Ex(i) base part for all intrinsically safe protection modules <b>Without signal when the protection module is removed</b>

## Universal: Two base parts for all applications

The BLITZDUCTOR XT base part is a universal four-pole feed-through terminal or terminal. In case of the standard feed-through terminal version (BXT BAS), the signal is still available when the protection module is removed while in case of the terminal version (BSP BAS 4) the signal is interrupted when the protection module is removed. With no components of the protective circuit in the base part, maintenance work is confined to just the protection modules. In case of the feed-through terminal version (BXT BAS) modules can thus be replaced without interrupting the signal circuit.

- Two base parts with / without signal interruption when the protection module is removed
- Lightning current carrying laminated contacts
- Mechanical reverse polarity protection ensures that the module is correctly plugged into the base part
- Module release spring for removing the protection module without problems
- The earthing foot ensures cost-effective installation. No additional earth connection is required since the device is earthed via the DIN rail.
- Clear identification of the "protected" side ensures correct installation
- Designation space
- High-quality screw terminals: four-pole, stranded up to a cross-section of 2.5 mm<sup>2</sup>, solid up to a cross-section of 4 mm<sup>2</sup>



## Robust: Snap-in mechanism makes the arrester vibration and shock-resistant

The function-optimised arrester design allows to safely plug the protection module into the base part and to remove it without problems. The module is secured in the base part by snapping it in (audible click).

This snap-in mechanism ensures safe operation even in case of vibration effects and shock up to a 30-fold acceleration of gravity.

A module release spring and laminated spring contacts in the base part allow to easily remove the module by pressing the grey module release button. Mechanical reverse polarity protection ensures that the module is correctly plugged into the base part.

## Intelligent: LifeCheck® detects pre-damaged arresters

LifeCheck-equipped BLITZDUCTOR XT arresters use RFID technology for monitoring the protective circuit and for communication. All arrester elements of BLITZDUCTOR XT are monitored in the protection module. Therefore, imminent electrical and thermal overload of the components is reliably detected before the arrester fails and the availability of the system to be protected is limited.

A monitoring circuit with a transponder in the arrester permanently monitors the protective circuit for pre-damage caused by overheating or impulse currents. The RFID reader reads out information within a matter of seconds without removing the arrester. Consequently, tests can be carried out during operation.

The portable DEHNrecord LC test device allows to quickly and contactlessly perform tests during operation and indicates the status of the arrester and the date of the last test. In case of pre-damage, preventive replacement of the arrester and system availability are ensured.



## Condition monitoring increases safety and system availability

Lightning strikes and surges may bring systems to a standstill. In case of airport or railway signalling systems, such a standstill represents a substantial hazard to human life. Safety is therefore a key reason for deciding in favour of condition monitoring. Another reason is the increase in productivity through maximum system availability. The lower the downtime, the higher is the production output.

The DEHNrecord SCM / MCM XT monitoring devices make condition monitoring easy. They monitor up to ten protection modules, identify pre-damage and show the module affected. Pre-damaged arresters can be easily and quickly replaced at an early stage thanks to the universal base parts. Consequently, the system is available at any time and protected against interference.

In case of imminent arrester overload, the three-coloured LED indicates this fault condition and transmits this information via the remote signalling contact. Malfunction of the condition monitoring module, for example due to a power failure, is also indicated.



DEHNrecord MCM XT monitors up to ten protection modules

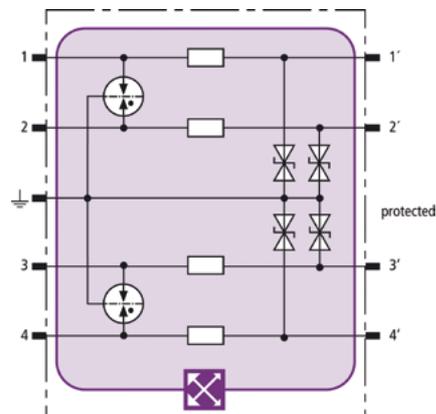


## BLITZDUCTOR® XT modules with LifeCheck®

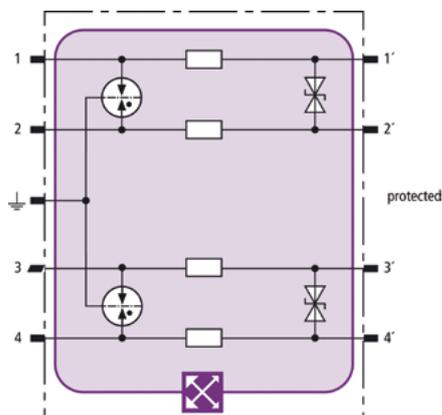
Data networks and measuring and control systems include numerous interfaces that place different requirements on the performance of the protection components. The function of arresters is not only to protect the interface against lightning strikes and surges, but also to transmit system-relevant signal parameters. The BLITZDUCTOR XT series easily masters this task: The modules, which can be plugged into the base unit, are adapted to the different interfaces, thus providing protection and availability for the signal circuits and system components.

### BLITZDUCTOR® XT modules:

Type	Features
BXT ML2	Protection of two single cores or one pair
BXT ML4	Protection of four single cores or two pairs
BXT ML B	Lightning current arrester
BXT ML BE	Combined arrester for unbalanced interfaces; with common reference potential (earth)
BXT ML BD	Combined arrester for balanced interfaces; electrically isolated, unearthed
BXT ML...HF	Combined arrester for high-frequency signal circuits
BXT ML2...S	Protection of two single cores or one pair; additional contacts for direct / indirect shield earthing
BXT ML BD EX	Protection of intrinsically safe measuring circuits in potentially explosive atmospheres



Fine limitation of surges (core-to-earth) for protection against unbalanced interference



Fine limitation of surges (core-to-core) for protection against balanced interference

## BLITZDUCTOR® XT modules

Thanks to comprehensive tests in the DEHN test laboratory, BLITZDUCTOR XT arresters comply with all relevant national and international operational safety, explosion protection and fire protection standards. A list of all certificates is available at the relevant product page at [www.dehn-international.com](http://www.dehn-international.com).

Type	Part No.	Max. continuous operating d.c. voltage $U_c$	Nominal current $I_L$	SPD class	Approval								
					HazLoc	SIL	VdS	ATEX	IEC Ex	UL	CSA	GOST	
BXT ML4 B 180	920 310	180 V	1.2 A <sup>1)</sup>	1	•	•	•	•	•	•	–	•	•
BXT ML4 BE 5	920 320	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BE 12	920 322	5 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BE 24	920 324	33 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BE 36	920 336	45 V	1.8 A <sup>1)</sup>	1	•	•	•	•	•	•	–	•	•
BXT ML4 BE 48	920 325	54 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BE 60	920 326	70 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BE 180	920 327	180 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD5	920 340	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD 12	920 342	15 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD 24	920 344	33 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD 48	920 345	54 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD 60	920 346	70 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD 180	920 347	180 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BC 5	920 350	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML4 BC 24	920 354	33 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML4 BE C 12	920 362	15 V	0.1 A <sup>1)</sup>	1	•	•	•	•	•	–	–	•	•
BXT ML4 BE C 24	920 364	33 V	0.1 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML4 BE HF 5	920 370	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD HF 5	920 371	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML4 BD HF 24	920 375	33 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML2 B 180	920 211	180 V	1.2 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BD 180	920 247	180 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BE S 5	920 220	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BE S 12	920 222	15 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BE S 24	920 224	33 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BE S 36	920 226	45 V	1.8 A <sup>1)</sup>	1	–	•	•	–	–	•	–	•	•
BXT ML2 BE S 48	920 225	54 V	0.75 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML2 BD S 5	920 240	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BD S 12	920 242	15 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BD S 24	920 244	33 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BD S 48	920 245	54 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	–	•	•	•
BXT ML2 BE HFS 5	920 270	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML2 BD HFS 5	920 271	6.0 V	1.0 A <sup>1)</sup>	1	•	•	•	•	•	•	•	•	•
BXT ML2 BD DL S 15	920 243	17 V	0.4 A <sup>2)</sup>	1	•	•	–	•	•	–	–	•	•
BXT ML4 MY 110	920 388	Core - PG 85 V	3 A <sup>3)</sup>	2	–	•	–	–	–	–	–	•	•
BXT ML4 MY 250	920 389	Core - PG 320 V	3 A <sup>3)</sup>	2	–	•	–	–	–	–	–	•	•
BXT ML2 MY E 110	920 288	Core - PG 85 V	3 A <sup>3)</sup>	2	–	•	–	–	–	–	–	•	•
BXT ML2 MY 250	920 289	Core - PG 320 V	3 A <sup>3)</sup>	2	–	•	–	–	–	–	–	•	•
BXT ML4 BD EX 24 <sup>4)</sup>	920 381	33 V	0.5 A <sup>3)</sup>	2	•	•	–	•	•	–	•	•	•
BXT ML2 BD S EX 24 <sup>4)</sup>	920 280	33 V	0.5 A <sup>3)</sup>	2	•	•	–	•	•	–	–	•	•
BXT ML4 BC EX 24 <sup>4)</sup>	920 384	33 V	0.5 A <sup>3)</sup>	2	•	•	–	•	•	–	•	•	•
BXT ML2 BD HF EX 6 <sup>4)</sup>	920 538	6 V	4.8 A <sup>3)</sup>	2	•	•	–	•	•	–	–	•	•

<sup>1)</sup> at 45 °C   <sup>2)</sup> at 70 °C   <sup>3)</sup> at 80 °C

Protection modules can be plugged into the universal base parts

**BXT BAS (Part No. 920 300)**  
**BSP BAS 4 (Part No. 926 304)**  
**BXT BAS EX (Part No. 920 301)**

**SIL** Safety Integrity Level (Germany)

**ATEX** Explosion protection (EU)

**GOST** Gossudarstvenny Standart (Russia)

**CSA** Canadian Standards Association (Canada)

**VdS** Vertrauen durch Sicherheit (Germany)

**UL** Underwriter Laboratories Inc. (USA)

**HazLoc** CSA and USA Hazardous Locations Standards

**IEC Ex** International Electrotechnical Commission System

## BLITZDUCTOR® XT selection guide according to interface / signal

### The right arrester for every interface and signal:

Our online selection table makes it easy to find the right arrester for the applications and signal circuits to be protected:  
[www.dehn-international.com/en/search-interface-yellowline](http://www.dehn-international.com/en/search-interface-yellowline)

Interface Signal	Four-pole module	Two-pole module		Interface Signal	Four-pole module	Two-pole module	
0-20 mA, 4-20 mA (also with HART)	920 324	920 224		LUXMATE bus	920 344	920 244	•
4-20 mA (also with HART) according to NAMUR recommendation NE 21 or EN 61000-4-5, open-circuit voltage 1 kV line-PG	920 344	920 244	•	M-bus	920 345	920 245	•
a/b cores	920 347		•	MODBUS	920 371	920 271	•
ADVANT	920 370	920 270		Modem M1	920 322	920 222	
ADSL	920 347	920 247		MPI bus	920 371	920 271	•
ADSL 2+	920 347			N1 LAN	920 371 920 370	920 271 920 270	
Binary signals	920 320 – 327	920 220 – 225		N2 bus (Johnson Controls, LON, FTT 10)	920 371	920 271	
Bitbus	920 370	920 270		Optocoupler interface	920 364		
BLN	920 342 920 345	920 242 920 245		Procontic CS31 (RS 232)	920 322		
CAN bus (data line only)	920 371	920 271	•	Procontic T200 (RS 422)	920 371		•
C-bus (Honeywell)	920 371	920 271	•	PROFIBUS-DP/FMS	920 371	920 271	
DALI bus		920 244		PROFIBUS-PA	920 344	920 244	•
Data Highway Plus	920 342	920 242	•	PROFIBUS-PA Ex (i)	920 381	920 538	
Datex-P	920 375			PROFIBUS SIMATIC NET	920 371	920 271	•
Delta Net Peer Bus	920 370	920 270		PSM-EG-RS 422	920 371		•
Device Net (data line only)	920 371	920 271	•	PSM-EG-RS 485	920 371	920 271	•
DMX	920 371			Rackbus (RS 485)	920 371	920 271	•
DSL	920 347	920 247		R-bus	920 340	920 240	•
Dupline		920 243	•	RS 485	920 371	920 271	•
E1	920 375			RS 422, V11	920 371	920 271	•
E-bus (Honeywell)	920 345	920 245	•	S-bus	920 370	920 270	
EIB	920 310	920 211		SafetyBUS p	920 371	920 271	•
Electro-acoustic systems	920 347			SDLC	920 370	920 270	
ET 200	920 370	920 270		Securilan-LON-BUS	920 340	920 240	
Ex (i) measuring circuits	920 381	920 280		SDSL	920 375		•
Fieldbus Foundation	920 344	920 244	•	SHDSL	920 375	920 211	•
Fieldbus Foundation Ex (i)	920 381	920 538		SIGMASYS	920 345 920 325	920 245 920 225	
FIPIO/FIPWAY	920 344	920 244		SINEC L1	920 370	920 270	
FIP I/O	920 370	920 270		SINEC L2	920 370	920 270	
FSK	920 371	920 271	•	SS97 SINIS (RS 232)	920 322	920 222	
Genius I/O bus	920 342	920 242		SUCONET	920 371	920 271	•
HDSL	920 375			Telephones, system telephones, e.g. Siemens, HICOM, Alcatel	920 347	920 247	•
IEC bus (RS 485)	920 371	920 271	•	Temperature measurement PT 100, PT 1000, Ni 1000, NTC, PTC	920 322	920 222	
INTERBUS INLINE (I/O)	920 345		•	Temperature measurement Ex (i)	920 384		
Interbus INLINE remote bus	920 371	920 271	•	Telecommunications systems	920 347	920 247	•
K-bus	920 344	920 244		TTL	920 322	920 222	•
KBR energy bus	920 370	920 270		TTY	920 364 920 362		
KNX bus	920 310	920 211		TTY 4-20 mA	920 324	920 224	
ISDN S <sub>0</sub>	920 375		•	Universal lightning equipotential bonding	920 310	920 211	
ISDN S <sub>2m</sub> / U <sub>2m</sub>	920 375		•	V 24 (RS 232 C)	920 322		
ISDN U <sub>K0</sub> / U <sub>P0</sub>	920 347	920 247	•	VDSL	920 310	920 211	
LON TP/XF 78	920 340	920 240		Video (two-wire)	920 371	920 271	•
TP/FTT 10 up to 1 A and TP/LPT10	920 345	920 245					
TP/FTT 10	920 371	920 271					
LUXMATE bus	920 344	920 244	•				



### BLITZDUCTOR® XTU with actiVsense® technology:

The actiVsense technology automatically detects the operating voltage and optimally adapts the voltage protection level to this voltage. The interfaces marked with this symbol are protected by BLITZDUCTOR XTU with actiVsense technology.



## Accessories for BLITZDUCTOR® XT

### Accessories for use in non-hazardous areas

#### 1 BXT M4 E earthing module

The plugged-in earthing module short-circuits all cores connected to the base part for equipotential bonding. It allows to directly earth unused cable cores that are already connected to the base part.

- To be plugged into BLITZDUCTOR XT base parts
- Easy to use
- Quick retrofitting of a protection module by simply replacing the earthing module

#### 2 BXT M4 T test / disconnection module

The plugged-in test / disconnection module interrupts the cable run of the cores connected to the BLITZDUCTOR XT base part and leads them to a test socket at the front of the module. This allows to carry out measurements in the system without removing the cores from the base part.

- To be plugged into BLITZDUCTOR XT base parts
- Easy maintenance and troubleshooting
- Measuring lines are available as accessory

#### 3 SAK BXT LR shield terminals

Two spring terminals which are adapted to the BLITZDUCTOR XT base part ensure permanent low-impedance contact with the cable shield in a signal circuit. An insulating cap allows optional indirect shield earthing.

- Capable of carrying lightning currents
- Low-impedance flat conductor
- Flexible spring terminal

#### 4 DEHNrecord test device

The portable DEHNrecord test devices with LifeCheck sensor can be used to quickly and easily test arresters for pre-damage. Stored in a transport case, the devices can be flexibly used and are reliably protected in rough environments. Two test devices are available:

##### DRC LC M1+

This portable test device allows easy and intuitive operation. The operating state, charging state and the results of the LifeCheck test are indicated via LEDs. Country-specific adapters for the charging unit are included in delivery.

- Easy and fast testing of arresters
- Hand-held test device can be operated intuitively
- Country-specific adapters for the charging unit

##### DRC LC M3+

The test device features a visual and acoustic indication. Moreover, the test results can be documented via the integrated USB connection and the database software. The hand-held test device allows to parameterise arresters for condition monitoring.

- Hand-held test device is easy to transport and operate
- Database function for documentation
- Easy and fast parameterisation of arresters for condition monitoring

#### 5 DEHNrecord condition monitoring system

The DIN rail mounted DEHNrecord device with integrated LifeCheck sensor is used for condition monitoring of max. ten



6



7



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BLITZDUCTOR XT arresters. A three-coloured LED and a remote signalling contact indicate the condition of the arrester. The free "Status Display and Service Console" software can be optionally used via an RS485 interface converter.

#### DRC SCM XT:

- Up to 10 BXT arresters can be monitored in small-sized systems
- Remote signalling contact (break contact)

#### DRC MCM XT:

- Up to 150 BXT arresters can be monitored in large-scale systems; with bus wiring of max. 15 MCM XT modules
- Remote signalling contact (break / make contact)

#### 6 USB-NANO-485 USB interface converter

USB-NANO-485 converts between USB and RS-485 signals and is specifically designed for two-wire RS-485 buses. LEDs integrated in the converter indicate operation (yellow), receiver (green) and transmitter (red). USB-NANO-485 is ideally suited for use with notebooks, however, stationary use is also possible.

- Compact dimensions
- LED indication
- Terminating resistors adjustable via switch

#### 7 DIN rail mounted power supply unit

High-performance power supply unit in a DIN rail mounted enclosure with single-phase wide-range input for different supply systems. The operating state indication on the front panel indicates that the output voltage (24 V d.c.) is present.

## Accessories for use in hazardous areas

### 8 Partition for BLITZDUCTOR XT Ex (i) base parts: TW DRC MCM EX

Certain conditions must be fulfilled when installing BLITZDUCTOR XT Ex (i) modules in intrinsically safe circuits. In accordance with EN 60079-11;2007 a minimum distance of 50 mm must be maintained between bare conductive parts of terminals in intrinsically and non-intrinsically safe circuits. When using the Ex (i) partition of type TW DRC MCM EX, this minimum distance between the terminals is also maintained if the surge protective devices are arranged directly next to one other.

- Allows devices for non-intrinsically circuits to be placed directly next to Ex i circuits
- Suitable for mounting rails with a height of 7.5 mm and 15 mm
- Easy installation by simply snapping the partition onto a mounting rail

### 9 Terminal box for information technology systems (ITAK)

Typically, ITAKs are a combination of enclosure, arresters and terminals or shield terminals. The built-in arresters are tested to ATEX and FISCO requirements. The terminal boxes can be tailored to customer needs.



## BLITZDUCTOR® XT protects ...

### ... petrochemical plants

In refineries crude oil is processed into liquid gas, petrol, kerosene, heating oil and bitumen. Modern pipeline systems connect refineries with consumers such as industrial parks and ensure trouble-free transport of the products. To ensure that processes run smoothly even during a thunderstorm, the process industry relies on DEHN. Surge arresters with condition monitoring are used for protecting the control systems: Space-saving DIN rail mounted BLITZDUCTOR XT arresters for use in intrinsically safe circuits. The DEHNrecord MCM XT condition monitoring system indicates imminent arrester overload, thus ensuring that service measures can be taken in time.

**DEHN protects the process industry.**

### ... level-crossing protection systems

Level crossings are critical points that must be reliably protected. Fully electronic level crossing protection systems are vulnerable to surges and the peripheral elements are often far away from the signal distributor.

Together with industrial companies and German Federal Railways, DEHN developed a lightning and surge protection system for railway signalling equipment. This system includes BLITZDUCTOR XT BE 36 combined arresters for information technology systems, the DEHNrecord MCM XT condition monitoring system and type 2 DEHNguard arresters for power supply systems. These surge protective devices can be flexibly used according to the physical system structure. The protection concept was approved by the German Federal Railway Authority.

**DEHN protects railway traffic.**



### ... wind turbines

Due to their exposed location and height, wind turbines are susceptible to lightning strikes. This may damage the rotor blades or electrical and electronic components, resulting in downtime and high repair costs. To ensure uninterrupted operation and amortisation of the high investment costs, wind turbines must be integrated in a lightning and surge protection concept.

Leading wind turbine manufacturers rely on lightning and surge protection solutions from DEHN, a market leader with long-standing experience and international presence. DEHN does not only offer surge protective devices, but also external lightning protection systems including air-termination systems, down conductors and earth-termination systems. The company also develops new customised solutions such as BLITZDUCTOR XT combined arresters, which are used to protect pitch controls and data systems, e.g. when measuring the wind speed and direction.

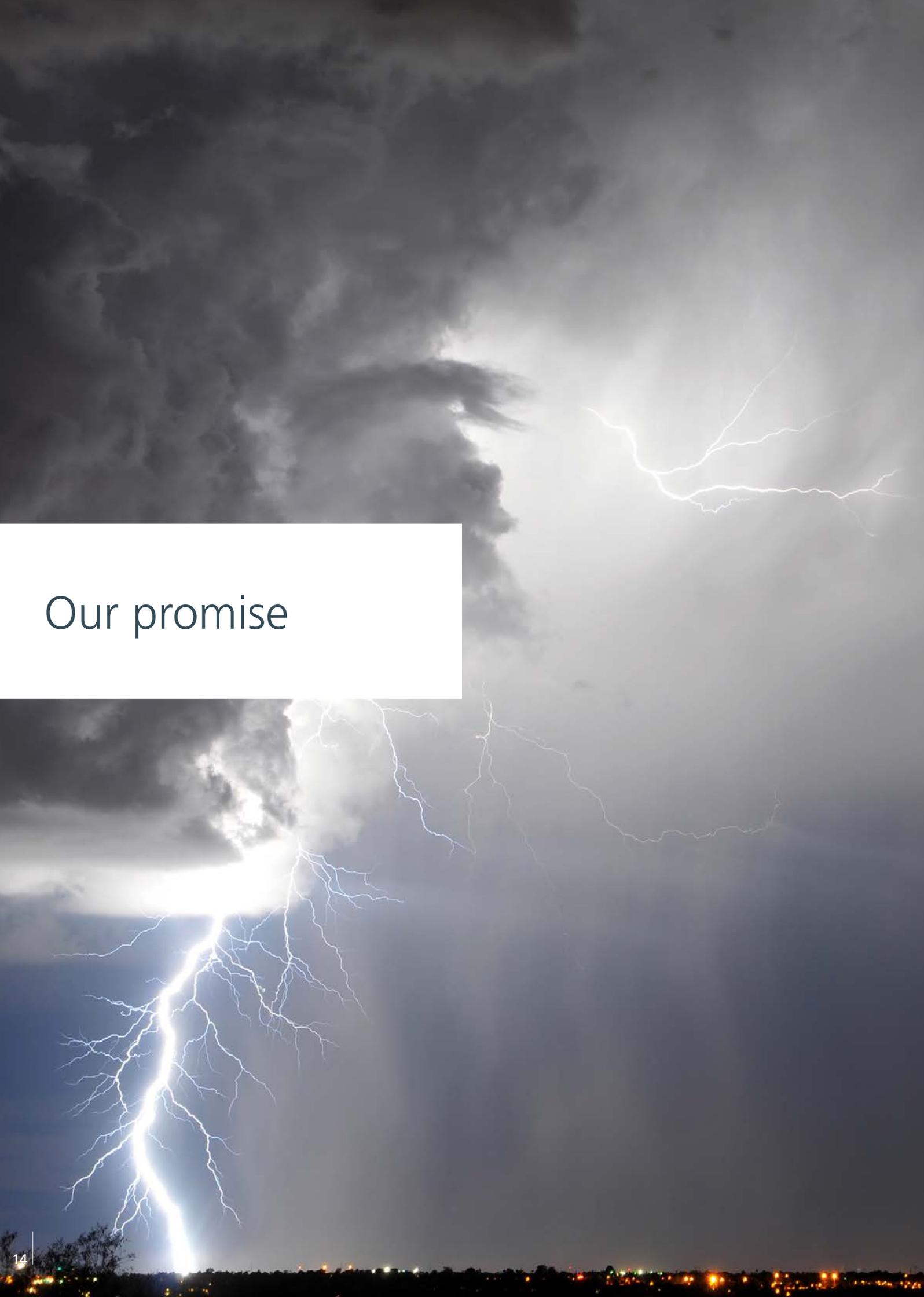
**DEHN protects investments in wind turbines.**

### ... protects hazard warning systems

If lightning strikes or surges destroy hazard warning systems, safety-relevant functions of the system may fail. Emergency call or fire alarm systems are no longer available, thus placing persons at risk. Surges also frequently cause false alarms and thus high follow-up costs. For these reasons, it is essential to integrate hazard warning systems in a lightning and surge protection concept.

Hazard warning system manufacturers have tested and approved BLITZDUCTOR XT combined arresters. These arresters are also VdS\*-certified.

**DEHN protects human life in dangerous situations.**



Our promise

## DEHN protects.

Our family-owned company specialises in surge protection, lightning protection and safety equipment. For more than 105 years, our pioneering spirit and innovative ideas have defined our company and made us a market leader with more than 1,600 employees. Our new products and safety concepts address market needs and reflect our determination and innovative ideas.

As early as in 1923, our founder Hans Dehn started to produce external lightning protection and earthing components to optimise the protection of buildings and installations. In 1954, we launched the world's first series of surge protective devices. Constant further development of these devices ensures safe operation and permanent availability of electrical and electronic installations. Also during the 1950s, our third sector, safety equipment, was added to our portfolio.

The Bavarian town of Neumarkt in der Oberpfalz is the heart of our activities where product managers and developers advance our protection technologies. Here we manufacture our high-quality safety products.

## Fair partnership for the best solution

Our goal is to be a reliable and fair partner for our industrial, commercial and handicraft customers all over the world. To this end, we always focus on the best solution to protection problems. Highly qualified sales teams, a global network of 19 subsidiaries and offices as well as sales partners ensure competent and customer-oriented marketing of our products in more than 70 countries. Proximity and close contact to our customers is of utmost importance to us, be it on-site support by our experienced team, our telephone hotline or personal contact at trade fairs. In hundreds of seminar, workshops and conferences held every year throughout the world, we impart practical knowledge on our products and solutions. Our "Lightning Protection Guide" and brochures will broaden your practical knowledge.

Visit us at [www.dehn-international.com](http://www.dehn-international.com)





**Surge Protection  
Lightning Protection  
Safety Equipment  
DEHN protects.**

DEHN + SÖHNE  
GmbH + Co.KG.

Hans-Dehn-Str. 1  
Postfach 1640  
92306 Neumarkt  
Germany

Tel. +49 9181 906-0  
Fax +49 9181 906-1100  
[info@dehn.de](mailto:info@dehn.de)  
[www.dehn-international.com](http://www.dehn-international.com)

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