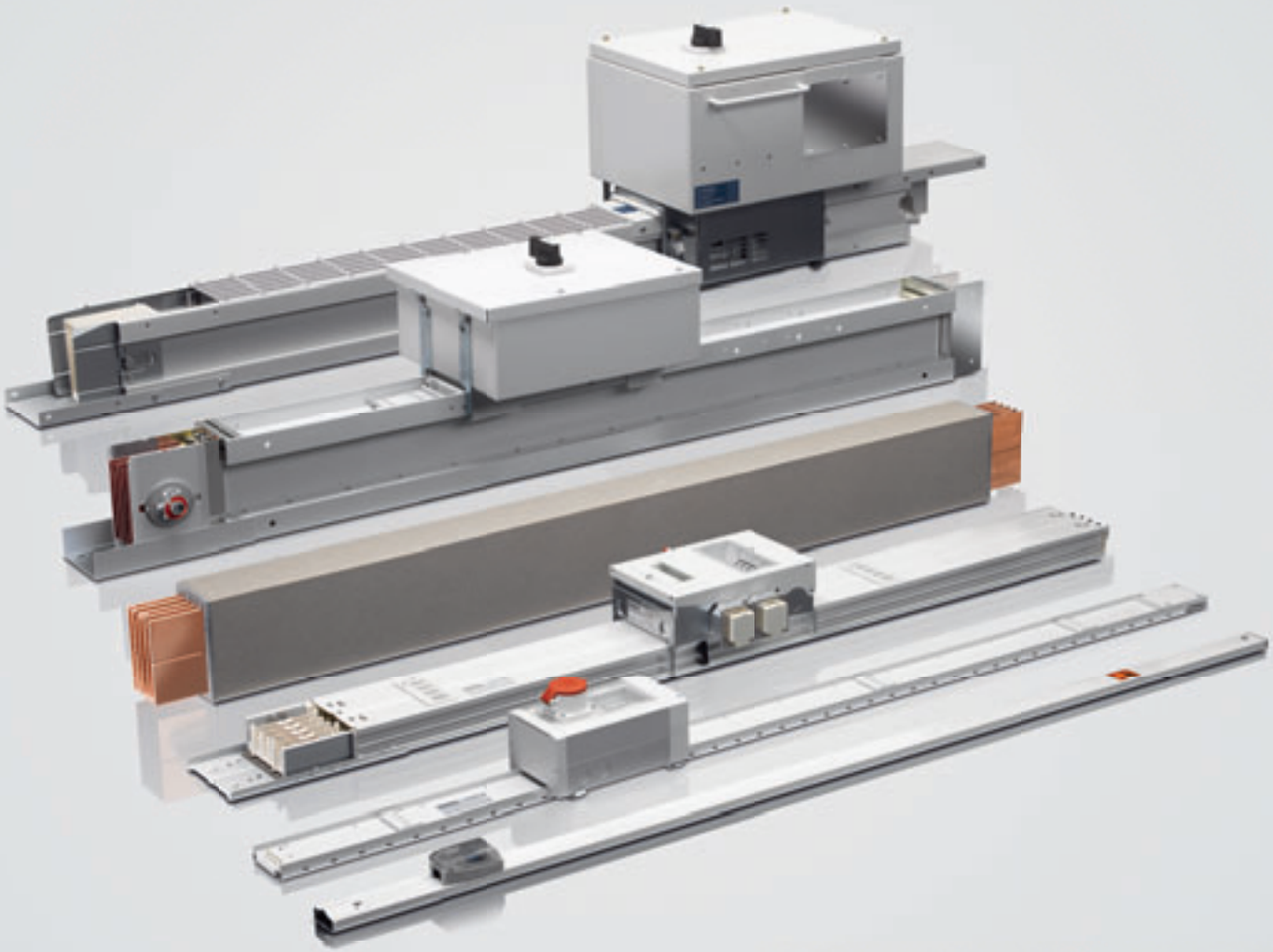
For Safe Power Flows

SIVACON 8PS Busbar Trunking Systems



SIVACON

Answers for industry.

SIEMENS

We offer systematic support.

High power volumes, countless consumers, maximum availability around the clock? No matter how turbulent your power distribution requirements – our integrated low-voltage power distribution products and systems support you with competently mastering your power requirements.

Risk

Our matched and powerful components help you to considerably reduce your investment costs and risks. You will benefit from the components' modularity and intelligence over the complete utilization period and thus keep a tight control of your operating costs while maximizing system availability.
As an essential component of the "Totally Integrated Power" concept by Siemens, we provide integrated power distribution solutions from the medium-voltage supply right to the socket outlet. Communication capability and software modules allow for efficient connection to industrial and building automation, which bears further significant saving potentials.

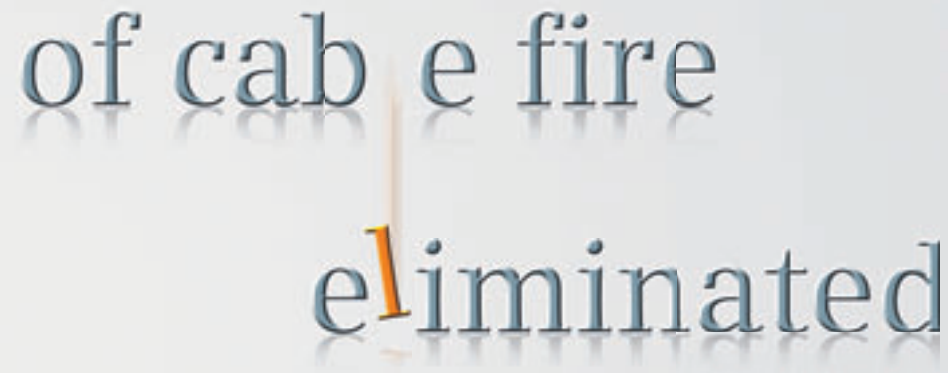
With our systematic support, you no longer need to worry about your power distribution.

Power management system

SIVACON power distribution boards

SIVACON busbar trunking systems

SENTRON switching, protection and measuring devices

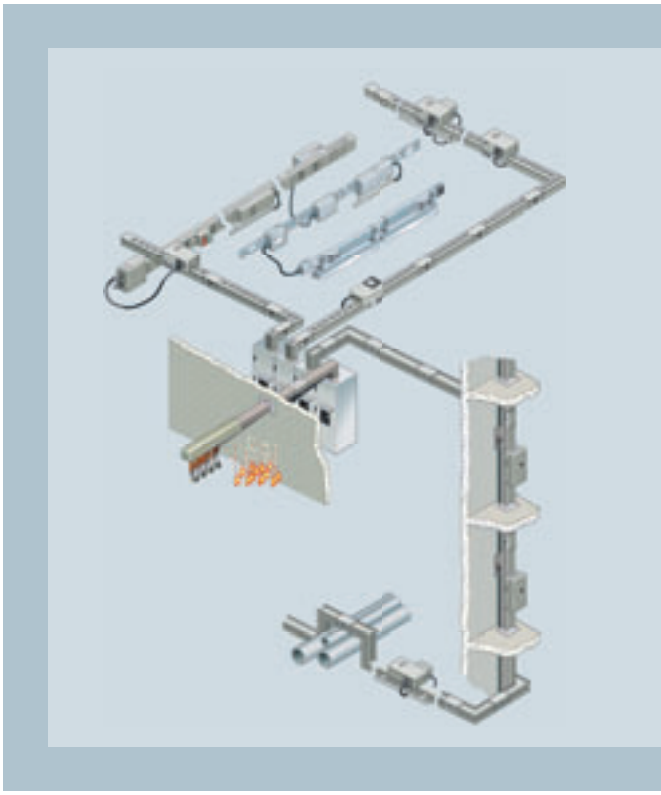


"I" as in "low thermal load" –
for more safety in the power distribution

SIVACON 8PS

Power transportation and distribution perfectly mastered: SIVACON 8PS

Benefit from safe and efficient power flows with SIVACON 8PS busbar trunking systems. As an important component of our comprehensive low-voltage power distribution portfolio and integral part of Totally Integrated Power, our integrated concept for power distribution from medium voltage to the socket outlet, the SIVACON 8PS products ensure an optimum power transmission and distribution in the most diverse applications.



A total of six different systems offer everything required for modern power transmission and distribution matched to your individual requirements – from simple planning and rapid mounting to reliable operation down to particularly flexible adjustability and expandability. With SIVACON 8PS, you will not only benefit from a transparent and flexible, yet simple solution for controlling the increasingly complex area of building technology, but also considerably improve the efficiency of industrial applications by ensuring a safe and reliable power supply.

Profiting all along the line with SIVACON 8PS

Improved safety

- High short-circuit rating and low fire load
- Improved planning reliability

Improved cost-effectiveness

- Reduced space requirements
- Transparent network layout
- Rapid mounting
- Easy retrofitting in case of spontaneously changed locations and consumer ratings

Improved consistency

- Complete spectrum from 25 A to 6300 A for trade and office applications down to production halls
- Communication-capable components
- Connections to SIVACON power distribution boards

Country-specific approvals

Russia	GOST-R	
Ukraine	Ukrain-GOST	
China	CCC	
South Africa	SABS	

Marine classification societies

Det Norske Veritas (DNV)

Reliable and safe power transmission
High calculation expenditures, laborious installations and high power losses are a thing of the past. With SIVACON 8PS busbar trunking systems for power transmission, you can avoid parallel cable circuits, complicated routing and asymmetric power supply. For application between the transformer, main distribution and subdistributions, we offer trunking units without tap-off points, optionally in the standard design or with customized lengths.

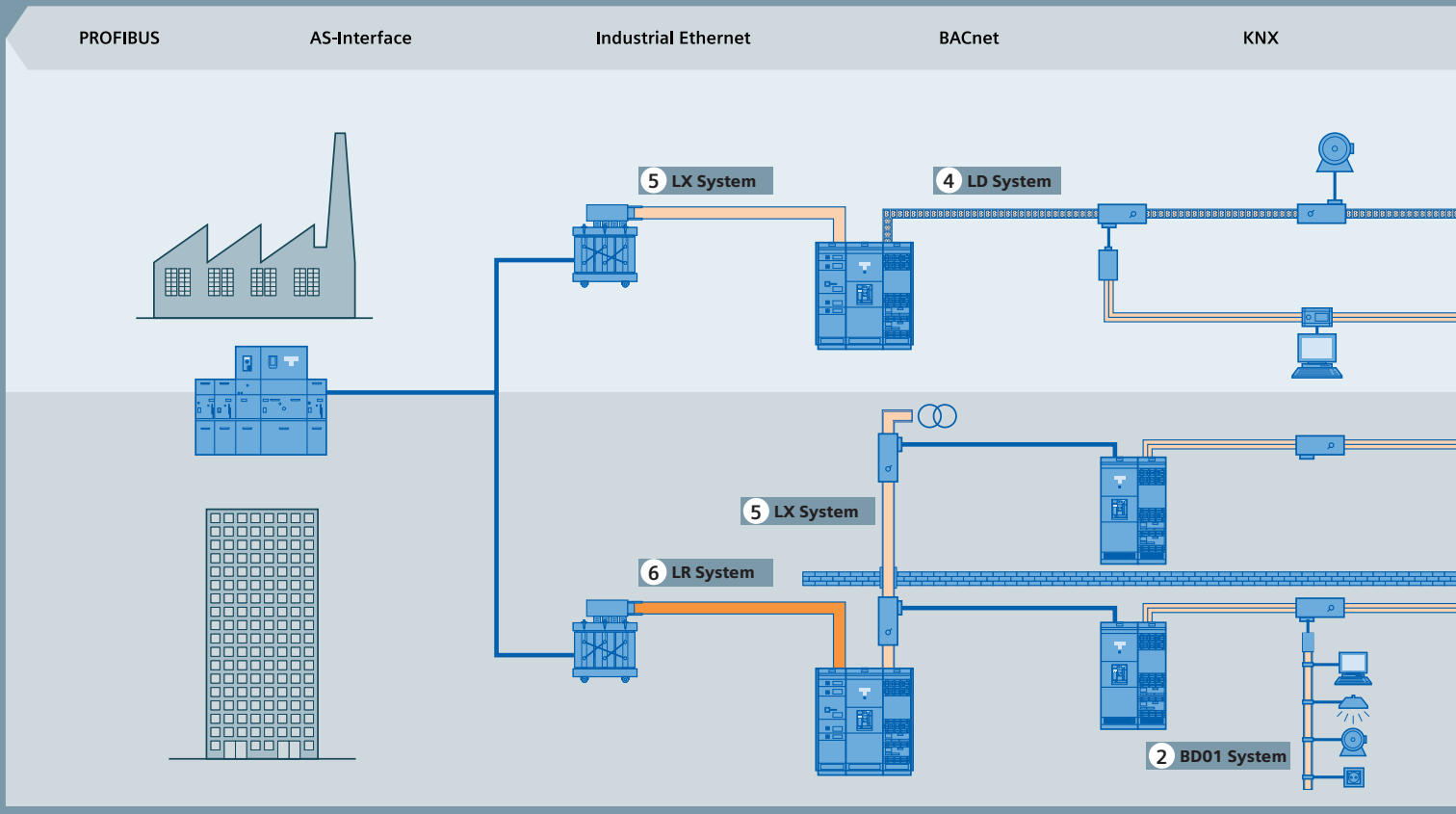
Easy planning and flexible adjustment of the power distribution
Particularly in the area of power distribution, the SIVACON 8PS system demonstrate their strengths. They facilitate a variable arrangement of the distribution system, optionally in a linear, full-coverage or also decentralized assembly.

In contrast to conventional cable installations, with which the current can only be taped off at the pre-defined points, current tap-offs can be individually varied by simply plugging the tap-off unit onto the tap-off points attached to one or both sides of the busbar to prepare the assembly for power pickup and connection to the consumer. A wide selection of respective tap-off units is offered for the individual systems.

Integrated communication
The high requirements placed upon the efficiency, flexibility and transparency of building and industrial automation applications make the trend towards decentralized power distribution and automation irreversible. In this strained environment, intelligent power distribution concepts, e.g. based on our communication-capable SIVACON 8PS busbar trunking systems, open up saving potentials and reduce the interfaces to the automation world.

With the flexible modules, the most various solution packages for individual customer requirements can be realized. As with all SIVACON 8PS systems, the benefits include a short planning and configuration phase, fast installation of the power distribution and automation, easy commissioning as well as high flexibility with regard to space utilization changes.

The systems at a glance



1 CD-L System

for the power supply of lighting systems and small consumers in shopping malls, logistic warehouses and any type of buildings.

- 25 A and 40 A
- 400 V U_e max.
- IP55

3 BD2 System

for power transmission and distribution in office buildings and transfer lines in all industrial application areas.

- 160 A to 1250 A
- 690 V U_e max.
- Up to IP55

2 BD01 System

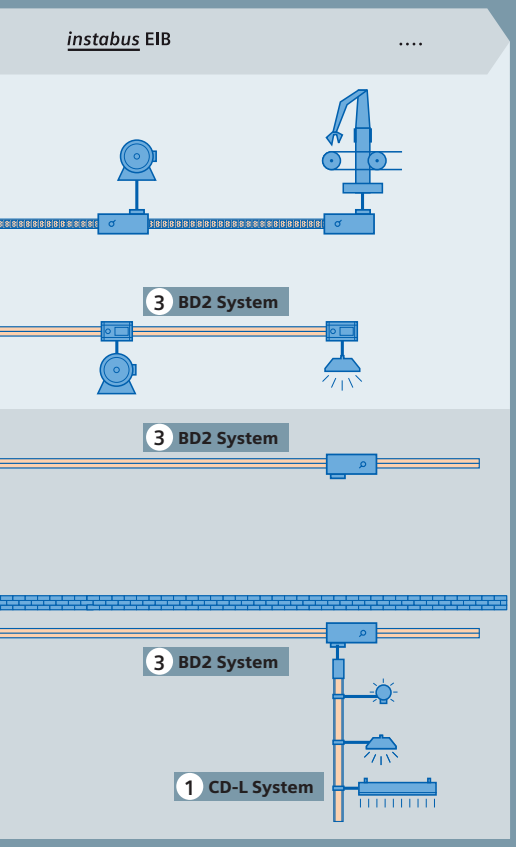
for the power supply of electrical tools in workshops as well as lighting systems.

- 40 A to 160 A
- 400 V U_e max.
- Up to IP55

4 LD System

for power distribution and transmission in trade show halls, in the automotive industry, heavy industry and on ships.

- 1100 A to 5000 A
- 1000 V U_e max.
- IP34/IP54



5 LX System

for power distribution and transmission of high currents in large buildings, broadcasting stations, data centers and in chip and semiconductor production applications.

- 800 A to 6300 A
- 690 V U_e max.
- Up to IP55

6 LR System

for the transmission of large power volumes in rough ambient conditions, for the supply of tunnels or for outdoor power transmission between buildings as well as for power transmission in the chemical industry.

- 630 A to 6300 A
- 1000 V U_e max.
- Up to IP68

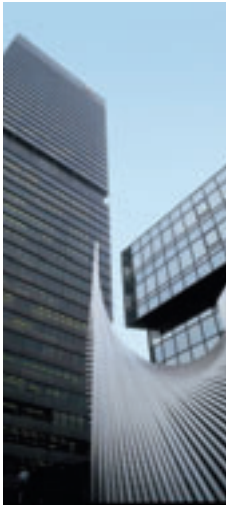
SIVACON 8PS offers benefits for everyone: the advantages

SIVACON 8PS ensures a safe and efficient power flow for users

High safety through:
- type-tested systems
- high short-circuit rating
- minimum fire load (compared to cables/lines)
- better EMC characteristics than cables

Optimum cost-effectiveness through:
- minimum space requirements
- easy system adjustability and expandability
- low maintenance costs

Simple consistency through:
- communication capability
- solutions from a single source



With SIVACON 8PS, electrical planning is safely and competently mastered

High planning reliability through:
- targeted material usage
- compliance with applicable standards and regulations for controlgear assemblies

Perfect cost-effectiveness through:
- prepared concepts
- simplified cost estimation
- Siemens planner support

Optimum consistency through:
- trendsetting technology, e.g. communication capability
- modularly matched systems

With SIVACON 8PS, electrical installations are easily controllable

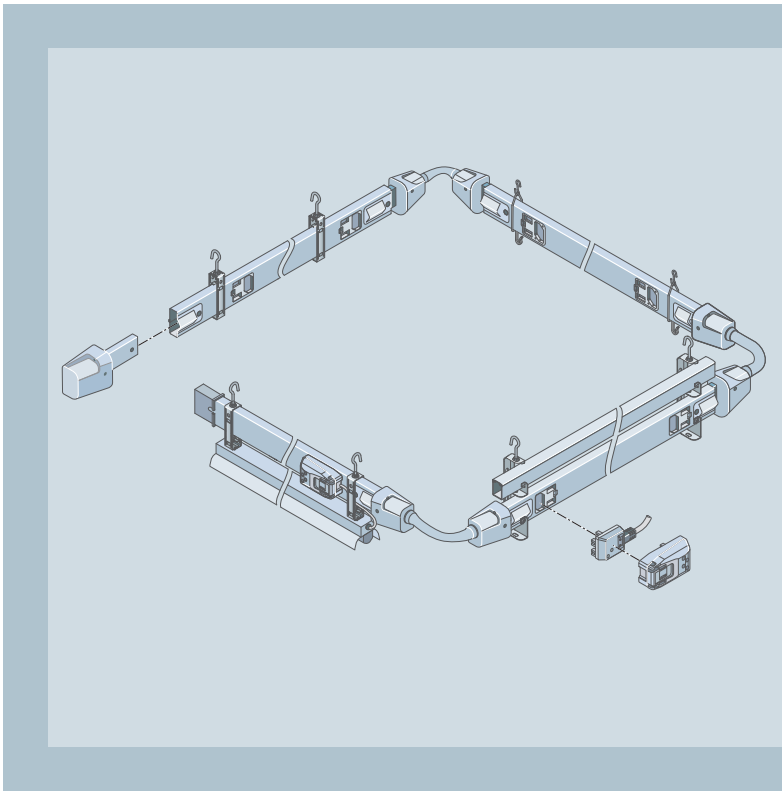
High safety through:
- easy calculation
- safe mounting
- factory-assembled and tested fire barrier

Perfect cost-effectiveness through:
- easy and fast planning
- rapid mounting
- no special tools

Optimum consistency through:
- easy realization from the transformer down to the socket outlet

CD-L System

the busbar with the suitable design for lighting systems and small consumers



Plug-in connections facilitate the trunking units' fast and uncomplicated assembly with a Phillips screwdriver as tool.

The CD-L system is ideally suited for the efficient power supply of lighting systems and small consumers of 25 A and 40 A. Thanks to its appealing design, it is applied wherever good looks are essential, e.g. in department stores, supermarkets or furniture stores.

However, thanks to its standard degree of protection IP55, it is also suitable for other ambient conditions, for instance in greenhouses. The CD-L system is characterized by maximum flexibility and its particular ease of mounting and disassembly in case of changed installation conditions.

Lighting systems of all renowned manufacturers can be easily suspended from any point along the trunking units.

Practical Examples

New lighting systems for deformation technology

Requirements
Machines with connected loads of up to 125 A had to be displaced without major expenditures, partially also during ongoing operation[1)], and new machines easily integrated. A further target was an optimum light distribution at all workplaces.

Solution
- Infeed of the CD-L system via BD2
- 2 x 5-pole CD-L system – as power pick-off for illuminants and lamp control
- Codable tap-off plugs for clear assignment and prevention of the strobe effect
- Finger-safe plug technology for rapid mounting and safe assembly

Result
- High flexibility and safety
- Low warehousing expenditures through standardized power concept
- Power savings through individual connection of the lighting components

Flexible solution for department stores

Requirements
The consistent and flexible power distribution had to ensure a high convertibility and reliability of the lighting system. With a central operation concept, lamps must be switched in groups.

Solution
- Infeed of the CD-L system via BD01
- Communication-capable busbar trunking systems for consumption detection and control
- Pre-fabricated tap-off units for 1/3, 2/3 and 3/3 lamp control
- Tap-off units plugged close to the consumers and displaceable while energized[1)], incl. lamp protection and control

Result
- Comprehensive transparency of operation and function
- Rapid and easy implementation of conversions and expansions
- High safety through system with low fire loads

Advantages

Improved safety
- Safe operation through type-tested low-voltage switchgear and controlgear assemblies (TTA) in acc. with IEC/EN 60439-1 and -2
- Splash water protection through high degree of protection IP55
- Low fire load through sheet-steel enclosure
- Safe mounting through anti-rotation protection and consumer assignment via codable tap-off points

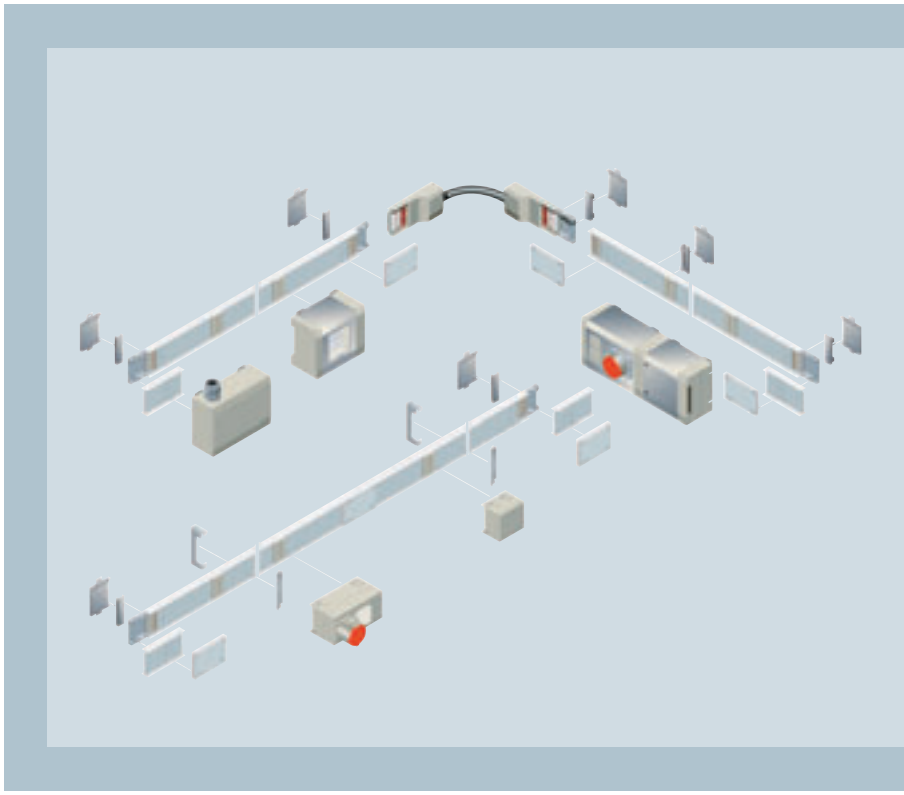
Improved cost-effectiveness
- Easy planning and warehousing through system up to 40 A in one size with 2 current strengths
- Optimum utilization of the busbar run through emergency and mains power supply in a single system
- Easy configuration through 3- and 5-pole tap-off plug with identical width
- Guided, fast and fault-free mounting through pluggable rapid connection
- Fast and easy adjustability and expandability through tap-off plugs pluggable while energized[1)]

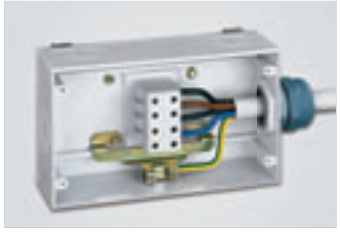
Improved consistency
- Application of AC and three-phase current consumers through 3- and 5-pole tap-off plugs
- Operational transparency through communication-capable busbar system for lighting control

1) In acc. with DIN EN 50110-1 (VDE 0105-1); please always observe national regulations/standards

BD01 system

the flexible power supplier for trade





The feeder unit can be plugged on each joint.

The BD01 system is designed for loads from 40 A to 160 A and is employed in trade and industry to safely supply small consumers with power or realize the infeed of the CD-L system. The joint design ensures a fault-free installation. The operating personnel is reliably protected by the guided plugging of the tap-offs. The tap-off points are only automatically opened upon the tap-off units' connection. As soon as these units are removed, the tap-off points close automatically.

The BD01 system offers particular ease of planning and ensures a flexible power supply. The available pre-wired tap-off units, which can be individually equipped, can be supplemented by numerous add-on devices such as protective devices or combinations with socket outlets.

Ancillary equipment units provide space for additional installations besides tap-off and feeder units.

Practical Examples

Production expansion for metal construction firm

Requirements
Within the scope of a production expansion, an octagonal building, which was previously used as exhibition hall, had to be rapidly converted for production. The machines' positions were not yet determined at the time of the power supply's realization.

Solution
- Two separate BD01 systems for consumer supply up to 63 A
- Flexible junction units for adaptation to the octagonal building
- Perfectly fitting installation of the busbar sections – below the roof base directly dowelled to the porous concrete wall

Result
- Accurate adaptation to structural conditions
- Fast realization, easy mounting
- Modular design and possibility of realizing tap-offs with 50 cm distance – for flexible production adjustments

Modernized power supply for packing industry

Requirements
In addition to a production expansion, the existing production lines had to be comprehensively modernized. A multitude of new machines had to be placed optimally with the focus on a transparent structure of the complete power supply.

Solution
- Five BD01 systems up to 63 A connected via feeder units
- Mounting at the hall roof construction via threaded rods
- Individually configurable tap-off units, pluggable while energized[1)]

Result
- Flexible convertibility of the machinery through connection or disconnection of tap-off units while energized[1)]
- Improved transparency of the supply – for fast fault localization of consumers

Advantages

Improved safety
- Safe operation through type-tested low-voltage switchgear and controlgear assemblies (TTA) in acc. with IEC/EN 60439-1 and -2
- Splash water protection through high degree of protection IP55
- Low fire load through sheet-steel enclosure
- Safe mounting through anti-rotation feature protection and consumer assignment via codable tap-off points and units
- Reliable mechanical and electrical connection system through asymmetric design of joint blocks
- Finger-safe connection through guaranteed opening and shutting of the tap-off point
- Reliable fire protection through tested fire barrier

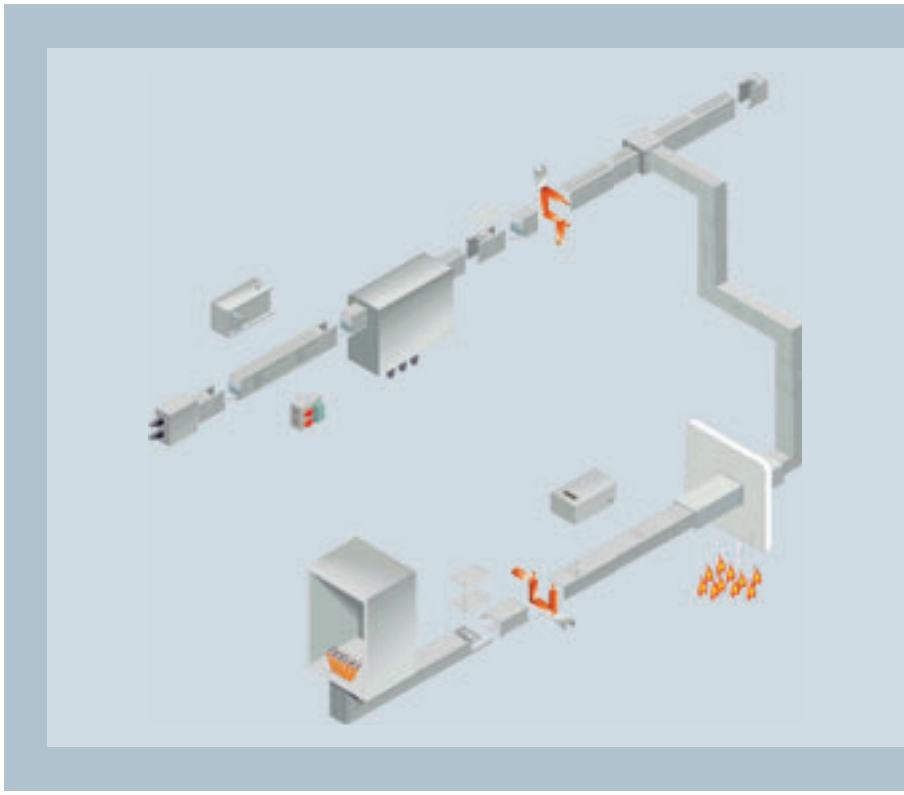
Improved cost-effectiveness
- Optimum planning and reduced warehousing through system up to 160 A in one size with 5 current strengths
- Flexible adjustment to all building structures through 3-D junction units
- Easy planning and warehousing through tap-off units which can be plugged onto all system sizes and feeder units usable as incoming, end or central feeder unit
- Easy configuration and handling through connection flanges with built-in expansion compensation
- Fast and easy adjustability and expandability through tap-off units pluggable while energized[1)] up to 63 A

Improved consistency
- Easy planning of modern network structures through 5-conductor offer
- Operational transparency through communication-capable busbar system for lighting control

1) In acc. with DIN EN 50110-1 (VDE 0105-1); please always observe national regulations/standards

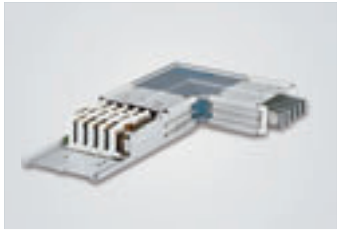
BD2 system

the universal solution for maximum power in minimum space



Compact feeder units are available for current infeed.

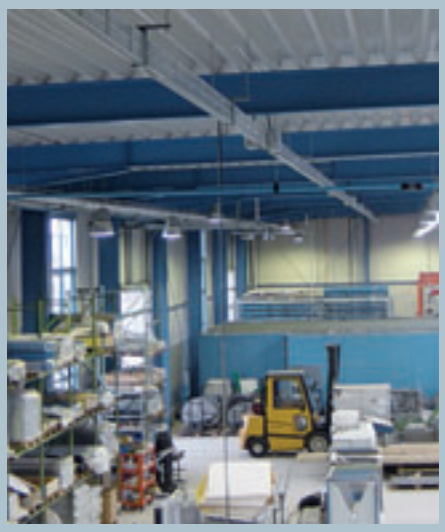
Individually equipped tap-off units up to rated currents of 630 A can be displaced while energized[1)].



Components for change of direction facilitate an optimum adjustability to the building structures.

The BD2 system is particularly suited for applications from 160 A to 1250 A with increased safety requirements. Anti-rotation feature, guided mounting, tested fire barrier and functional endurance in case of fire ensure a high degree of safety – and thus represent an optimum solution for large buildings, industrial applications as well as for shipbuilding. The compact system not only stands out for its safe operational behavior, but also for its minimum space requirements. In addition to these advantages, it can be used for the infeed of the smaller CD-L and BD01 systems.

Practical Examples



Production relocation, incl. electrical installations

Requirements
Large machinery, flexible tap-offs for machines and manual workplaces, completion within few months: All of these aspects had to be considered for the comprehensive relocation of a production hall.

Solution
- Two busbar trunking runs in longitudinal direction
- Two compact feeder units with 400 A each
- BD2 system (180 m long) suspended from the ceiling with 50 cm distance
- Tap-off units for individual equipping
- Load feeders with 50 cm distance
- Easy connection of suspended cubes with integrated CEE socket outlets

Result
- Extremely fast realization through modular assembly and easy mounting
- Fast and flexible adjustability to production changes

Space-saving power distribution for new production hall

Requirements
When moving into an additional production hall, difficult framework conditions required a space-saving and safe power distribution, including the fire barrier.

Solution
- Five BD2 systems – longitudinally across the entire hall, transversely to the LD main busbars
- Dimensioning of each individual run for up to 1000 A
- Load feeders in 50 cm distance
- CEE socket outlets for the supply of small auxiliary units

Result
- Fast planning, installation and retrofitting of finger-safe tap-offs pluggable while energized[1)]
- Space savings in favor of production capacity
- Direct infeed of large machines via tap-off units
- Safety through tested fire barrier
- Easy connection, disconnection and displacement of auxiliary units

Advantages

Improved safety
- Safe operation through type-tested low-voltage switchgear and controlgear assembly (TTA) in acc. with IEC/EN 60439-1 and -2
- Splash water protection through high degree of protection IP55
- Low fire load through sheet-steel enclosure
- Safe mounting through anti-rotation feature protection and consumer assignment via codable tap-off points and units
- Protection against unauthorized access through sealable tap-off points
- Reliable fire protection through tested fire barrier

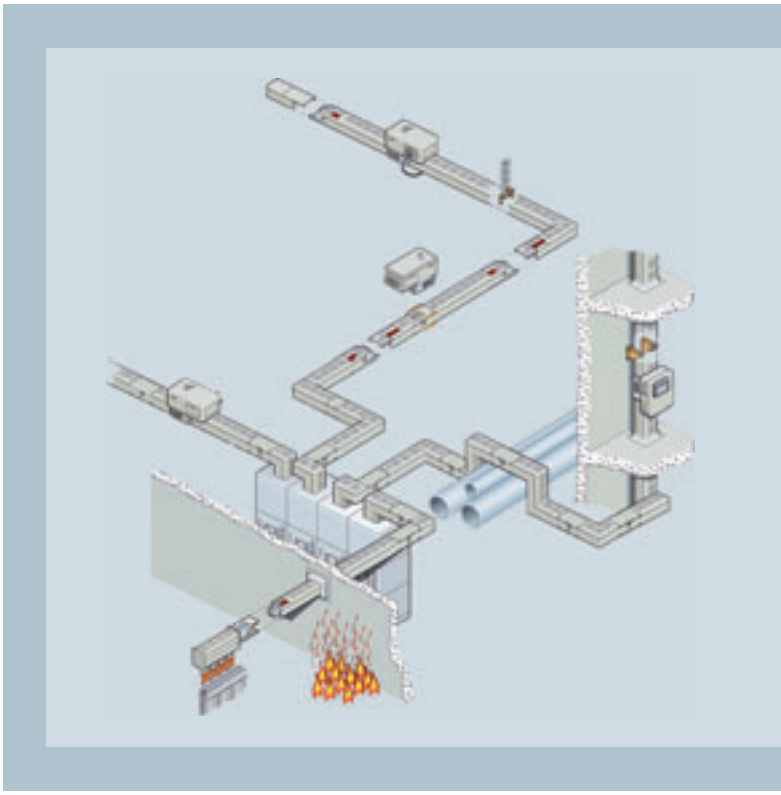
Improved cost-effectiveness
- Easy planning and reduced warehousing through system up to 1250 A in two sizes with nine current strengths in Al or Cu
- Flexible adjustment to all building structures through 3-D junction units up to 800 A
- Eased configuration through tap-off units pluggable throughout the system
- Easy and fast mounting through clamp terminal with built-in expansion compensation; plug-in terminal up to 400 A and single-bolt terminal > 400 A
- Fast and easy adjustability and expandability through tap-off units pluggable while energized[1)]

Improved consistency
- Easy planning of modern network structures through 5-conductor offer
- Operational transparency through communication-capable busbar system for consumer detection, remote operation and monitoring as well as lighting control

1) In acc. with DIN EN 50110-1 (VDE 0105-1); please always observe national regulations/standards

LD system

the safe busbar for production



The current infeed from the transformer to the LD busbar trunking system is realized via feeder units with connection lugs prepared for transformer lug distances from 150 mm to 750 mm.

The LD system offering rapid and safe mounting covers the current range from 1100 A to 5000 A. It transmits and distributes the power between the transformer, main power distribution board and sub-power distribution boards on production sites with high power requirements, e.g. for welding lines in the automotive industry.

A separate PE busbar increases the conductor cross-section and ensures a low impedance in fault cases. It facilitates longer busbar runs as well as an assured response of the protective device, also with long current paths.

Practical Examples

New power distribution concept for kitchen manufacturer

Requirements
To fully exploit rationalization potentials, a new power distribution concept was implemented within the scope of a production expansion. A standardized – yet flexible – positioning of all machines had to be facilitated in the new production hall spanning a length of 120 m.

Solution
- 250 m long 5-pole LD system for supply of the planned machines and additional tap-off options
- General installation of separate PE busbar for reliable protective device tripping
- Tap-off units pluggable while energized[1)] up to 1250 A
- Communication-capable SENTRON 3VL circuit breakers

Result
- Fast commissioning, space-optimized mounting for the benefit of other assembly sections
- Reduced power losses
- Transparent network structure – all disconnection and safety organs are accommodated in the tap-off units on the supply lines
- Flexible and fast expandability and adjustability of the machinery

Increased production capacity for solar technology

Requirements
The construction of a new production hall for solar technology also called for a power supply meeting the highest of demands. Extremely power-intensive production processes as well as complicated local conditions had to be considered.

Solution
- Connection between the five transformers and the low-voltage main power distribution board via five busbar runs
- Eight runs up to 4000 A for consistent power distribution; tap-off units pluggable while energized[1)] up to 1250 A
- Two spare runs with 2500 A each for future system expansions

Result
- Compact construction thanks to space-saving solution with appealing design
- Maximum operational transparency thanks to communication capability
- Maximum safety for high short-circuit rating and low fire loads
- Easy and flexible planning and adjustability to structural conditions

Advantages

Improved safety
- Safe operation through type-tested low-voltage switchgear and controlgear assemblies (TTA) in acc. with IEC/EN 60439-1 and -2
- Safe and easy planning of the power distribution through type-tested connection to SIVACON power distribution boards and transformers
- High splash water protection available for ventilated system with IP34 as well as IP54 (sprinkler-suitable)
- Low fire load through sheet-steel enclosure
- High surface protection of the current conductors through wear-resistant epoxy coating
- High short-circuit rating of the tap-off units technology

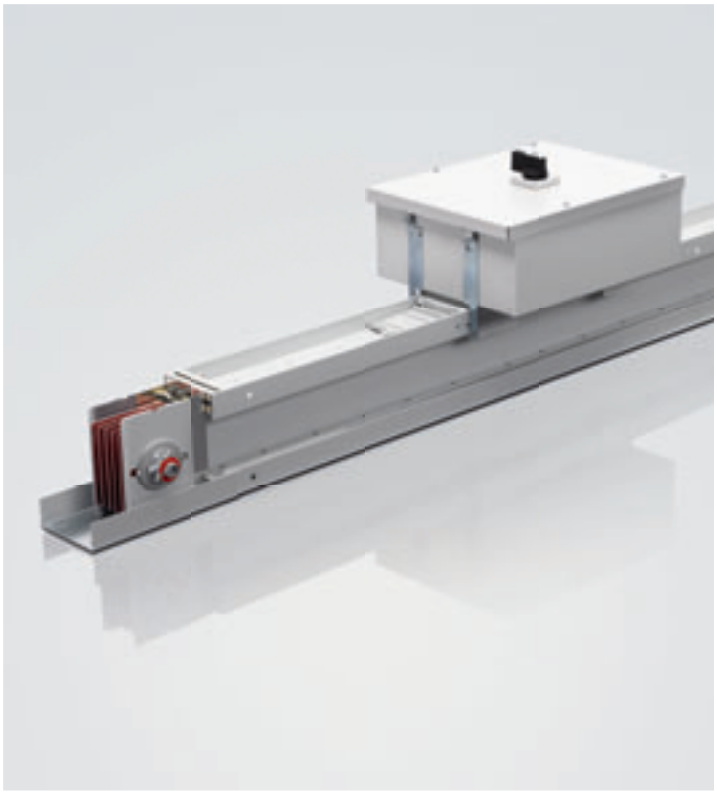
Improved cost-effectiveness
- Optimum and easy planning through only two enclosure sizes of the system up to 5000 A
- Easy and fast mounting through single-bolt terminal connection with hook/bolt technology
- High availability through tap-off units with circuit breakers up to 1250 A
- Fast and easy adjustability and expandability through tap-off units pluggable while energized[1)]

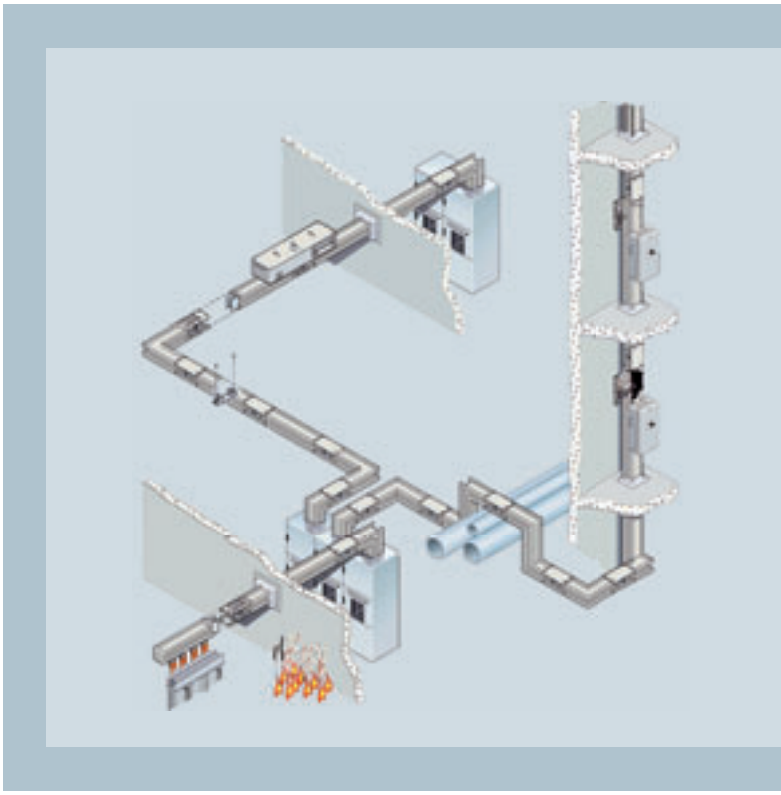
Improved consistency
- 4-/5-conductors enable easy planning of modern network structures
- Operational transparency through communication-capable busbar system for consumer detection, remote operation and monitoring

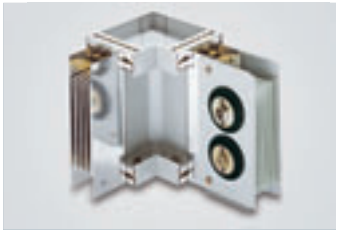
1) In acc. with DIN EN 50110-1 (VDE 0105-1); please always observe national regulations/standards

LX system

the flexible system for multi-storey power supply







Optimum adjustability to the building structures.

Fast and safe mounting to the structure.

The LX system is particularly suited for applications from 800 A to 6300 A which involve the flexible transmission of large power volumes over long distances, for example in multi-storey buildings.
Thanks to its compact sandwich design with low impedance and current-carrying capacity regardless of the mounting position, the system masters this task safely and, foremost, cost-effectively – with a high degree of protection up to IP55, also in heavily polluted or humid environments. Furthermore, the LX system also demonstrates its strength with sensitive consumers thanks to its conductor configuration with double N conductors and clean earth.

Practical Examples

Redundancy concept for multi-storey building

Requirements
A reliable power supply in minimum space is of the essence for multi-storey buildings. A respective power distribution had to be realized both with a functional endurance for emergency current as well as with flexible tap-offs in the normal network.

Solution
- Redundancy concept: two parallel transformers feed a coupled low-voltage main power distribution board
- The LX system supplies the stories via the main distribution and thus simultaneously serves as a flexible subdistribution board
- An additional duct made of mineral compound encloses the LX run and ensures the power supply in fire cases for up to 120 min., depending on the functional endurance class.

Result
- Significant reduction of the wiring and fire load
- Minimum space requirements in vertical ducts, scaled down the power distributions
- Flexible consumer replaceability
- Adjustability of redundancy requirements

Demanding supply in a hospital

Requirements
Particularly in medical applications, the requirements placed upon safety and reliability are extremely high. For the realization of a hospital power supply, manifold protective measures against interruptions and faults of the supply lines thus had to be taken.

Solution
- System-spanning power distribution concept: medium-voltage power distribution board via transformer to the low-voltage main power distribution board and the LX system
- Communication-capable busbar trunking systems for the central detection of power data

Result
- Arc-resistant system
- High supply reliability
- Minimum fire loads compared to
- Low emission of magnetic fields
- Minimum space requirements

Advantages

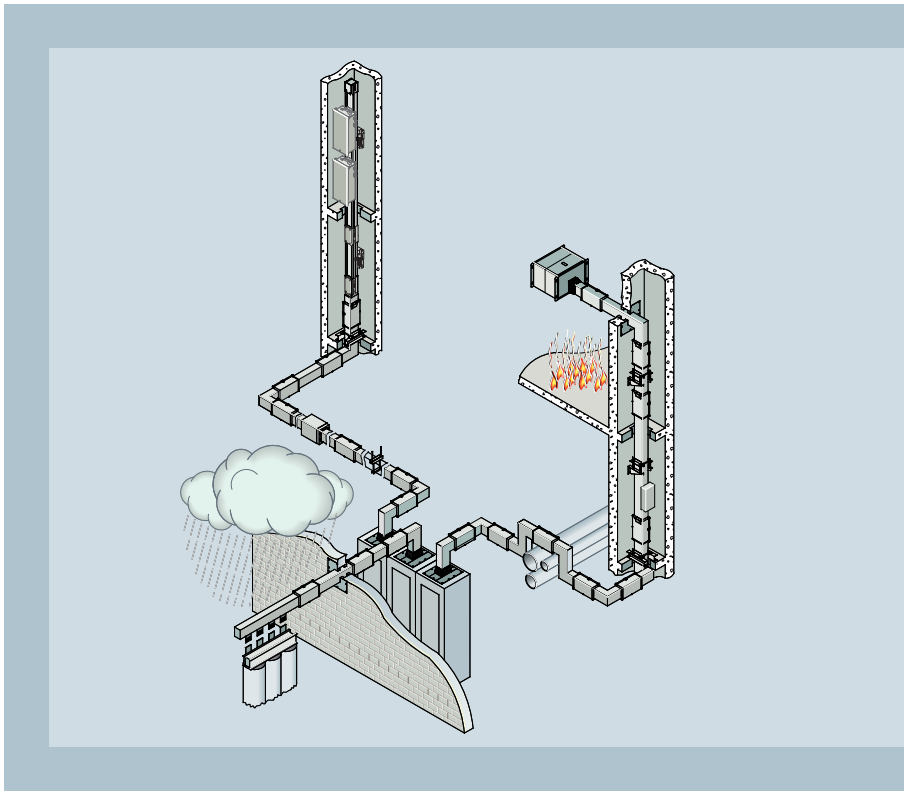
Improved safety
- Safe operation through type-tested low-voltage switchgear and controlgear assembly (TTA) in acc. with IEC/EN 60439-1 and -2
- Safe and easy planning of the power distribution through type-tested connection to SIVACON power distribution boards and transformers
- Splash water protection through high degree of protection IP55 (also sprinkler-suitable)
- Low fire load and high corrosion resistance through aluminum enclosure

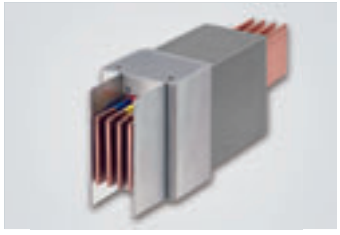
Improved cost-effectiveness
- Easy and fast mounting through bolt terminal block with shearable nut
- Fast and easy adjustability and expandability through tap-off units pluggable while energized[1)] up to 630 A
- High availability through junction boxes with circuit breakers up to 1250 A
- Transmission of high currents with low voltage drop through sandwich design

Improved consistency
- Operational transparency through communication-capable busbar system for consumer detection, remote operation and monitoring

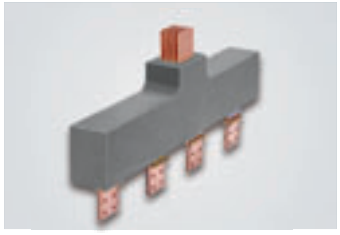
LR system

the reliable busbar for maximum protection in rough environments

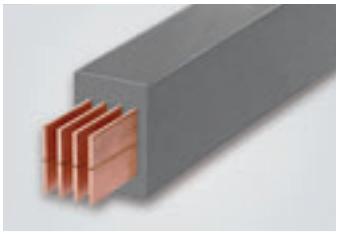




The LR system can be connected to the LX busbar trunking system via an adapter.



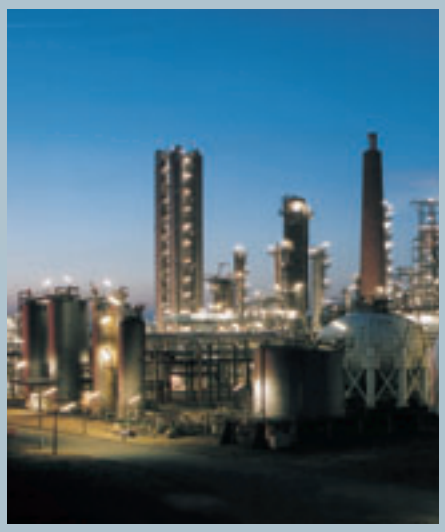
For safe power transportation, the LR system offers a multitude of transformer connections.



The epoxy cast-resin enclosure offers the high degree of protection IP68, which makes it optimally suitable for rough ambient conditions.

Thanks to its enclosure made of epoxy cast-resin with a high degree of protection IP68 as well as its high short-circuit rating, the LR system ensures reliable power transportation even under the most adverse ambient conditions. Environmental factors such as air humidity, corrosive or salty atmospheres cannot harm this powerful system. Depending on the individual requirements, the system can be installed in a flat, edgewise, vertical or horizontal assembly in applications from 630 A to 6300 A. With only minimum space requirements, it can be optimally adjusted to the construction conditions with angles, connectors and T-pieces for change of direction. The LR system is also perfectly suited for outdoor applications.

Practical Examples



Modernized power transportation for oil refinery

Requirements
To meet current and future safety standards, the realization of the power supply for a petrochemical plant required high degrees of protection, both for the indoor and outdoor applications.

Solution
- LR system with IP68 for outdoor power transportation – between outdoor transformers and internal power distribution boards
- Type-tested standard connection between the LR and LX systems for further power distribution inside the building with LX

Result
- Safety through type-tested components, connection pieces and high degree of protection
- Easy planning and mounting through standard connection components between the busbar trunking systems and power distribution boards
- Safe, compact and cost-effective solution

Safe power distribution in subway tunnel

Requirements
A safe power distribution solution was required for the smoke fans and consumers in the track section of a subway infrastructure. Important factors entailed a high personal protection and prevention of vandalism.

Solution
- Consistent application of the LR system
- Functional endurance with additional measures
- High degree of protection IP68

Result
- High availability through maintenance-free technology
- Minimum space requirements through compact dimensions
- High resistance through epoxy cast-resin enclosure
- Ideal personal and system protection

Advantages

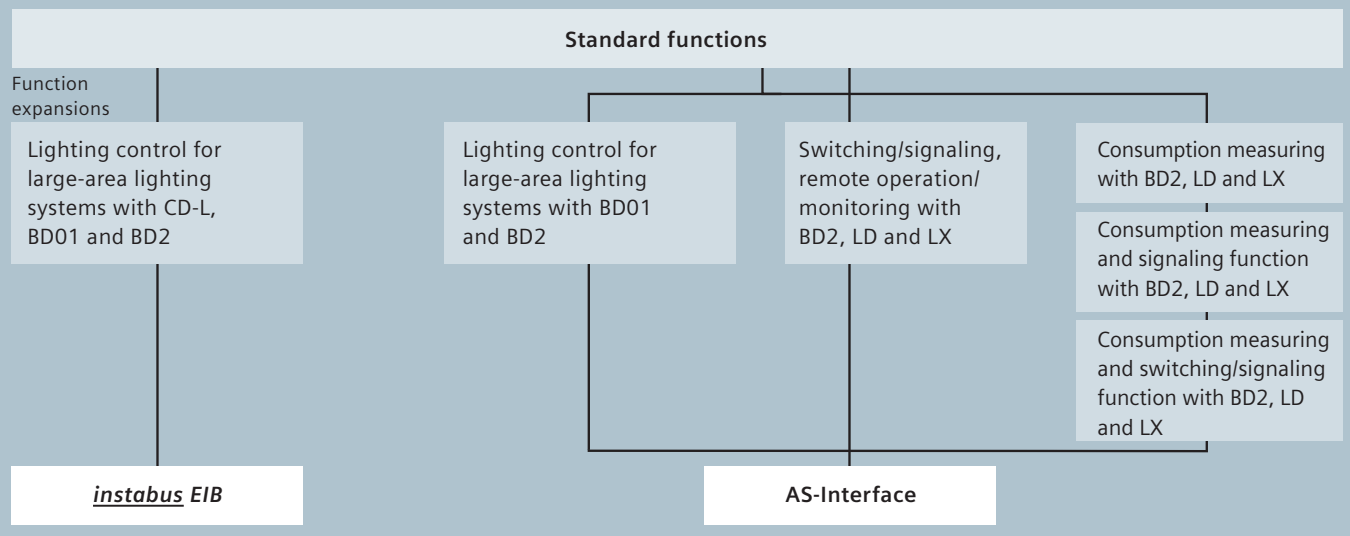
Improved safety
- Safe operation through type-tested low-voltage switchgear and controlgear assemblies (TTA) in acc. with IEC/EN 60439-1 and -2
- Suitable for outdoor applications through high degree of protection IP68
- High resistance to chemical substances and excellent mechanical stability through encapsulated epoxy cast-resin enclosure
- Reliable tripping of protective device over long distances through full PE

Improved cost-effectiveness
- Easy and fast mounting through bolt terminal block
- High availability through outgoing feeder points for junction boxes up to 630 A
- Suitable for outdoor applications through encapsulated epoxy cast-resin enclosure

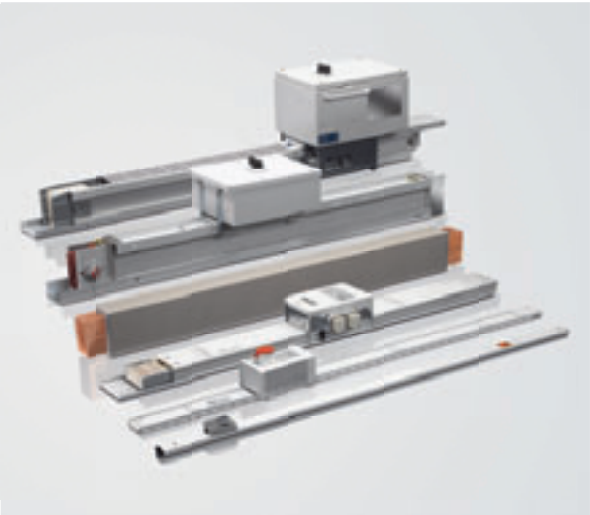
Improved consistency
- Easy planning of integrated systems through systematic connection to the LX system

Communication-capable busbar trunking systems:

cost-effectiveness and flexibility perfectly combined



Further technical data can be obtained from your Siemens contact partner.



Tap-off ancillary equipment unit combination on a BD01 system, networked via *instabus EIB*, facilitates the switching of the L1 to L3 external conductors of the connected distributions. Thanks to the connection of the CD-L system, the control of a large-area lighting system can be easily and rapidly realized.

Tap-off/ancillary equipment unit combination on a BD2 system, networked via AS-Interface, e.g. for the remote monitoring and operation of switch disconnectors. The bus line connection via cable for penetration technique ensures the application's flexibility.

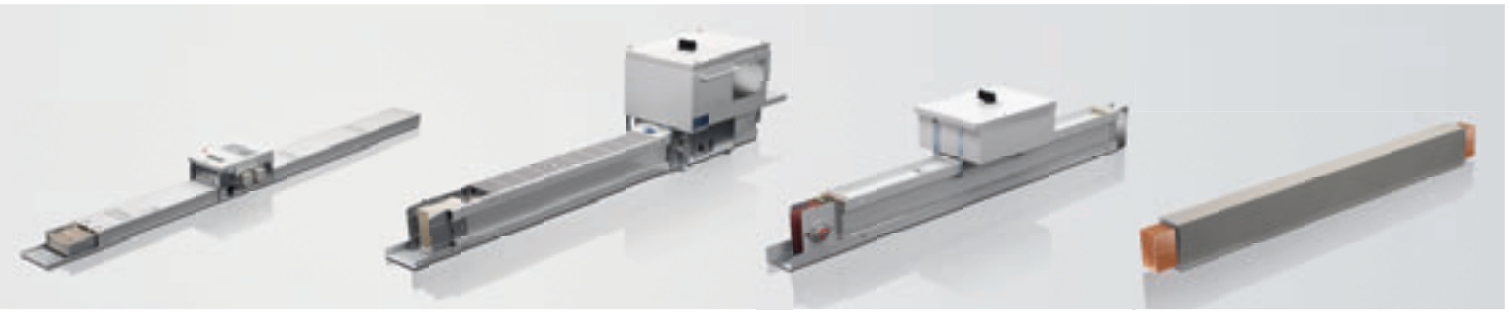
The intelligent networking of all installed assembly sections is one of the trends of modern building and industrial automation. To optimally satisfy the requests for transparent switching states and the central detection of operating states and data, we offer you communication-capable components plus accessories for the CD-L, BD01, BD2, LD and LX systems. These combinations consisting of tap-off and ancillary equipment units as well as interoperable, manufacturer-independent bus systems facilitate the networking of all current sections and can also be easily retrofitted in existing systems.
In building installation technology, for example for lighting control, the functional variety and easy parameterization with *instabus EIB* can thus be utilized, whereas, in industrial applications, the ruggedness and rapid installation concept of the AS-Interface system can be exploited.

Technical Data

	CD-L System	BD01 System
Rated insulation voltage U_i	690 V AC/DC	400/400 V AC/DC
Rated operational voltage U_e	400 V AC	400 V AC
Degree of protection	IP55	IP54, IP55
Rated current I_e	25 and 40 A	40 to 160 A
Rated peak withstand current I_{pk}	Up to 10.6 kA	Up to 15.30 kA
Rated short-time withstand curren I_{cw} (1 s)	Up to 6.16 kA	Up to 2.5 kA
Number of conductors	2, 4, 6, 2+2, 4+2, 4+4, 6+6 (PE = enclosure)	4 (PE = enclosure)
Fire load	Max. 0.750 kWh/m	Max. 0.76 kWh/m
Fire load (per tap-off point)	–	–
Tap-off point	0.5 m each, 1 m and 1.5 m on one side or both sides	Optionally 0.5 m or 1 m on one side
Tap-off unit changeable while energized[1)]	Up to 16 A	Up to 63 A
Connection system	Plug-in quick connection with Phillips screwdriver as tool	Connection flange with integrated expansion compensation
Conductor material	Isolated Cu conductors	Isolated Cu conductors or Al conductors
Enclosure material	Galvanized and unvarnished/ varnished sheet-steel	Galvanized and varnished sheet-steel

1) In accordance with DIN EN 50110-1 (VDE 0105-1); please always observe national regulations/standards
2) Upon request

Further technical data are available in the LV70 catalog at www.siemens.com/lowvoltage/catalogs



BD2 System	LD System	LX System	LR System
690/800 V AC/DC	1000/1200 V AC/DC	1000 V AC/DC	1000 V AC/DC
690 V AC	1000 V AC	690 V AC	1000 V AC
IP52, IP54, IP55	IP34, IP54	IP54, IP55	IP68
160 to 1250 A	1100 to 5000 A	800 to 6300[2)] A	630 to 6300 A
Up to 90 kA	Up to 286 kA	Up to 255 kA	220 kA
Up to 34.0 kA	Up to 116 kA	Up to 150 kA	Up to 100 kA
5	4, 5	3, 4, 5, clean earth, optionally 200% N conductor	3 and PEN or 3, N and PE
Max. 2.0 kWh/m	Max. 8.83 kWh/m	Max. 16.6 kWh/m	Max. 77.3 kWh/m
–	Max. 10.80 kWh	2.9 kWh	–
Optionally 0.25 m each or 0.5 m offset on both sides	1 m each on one side	0.5 m each on both sides	1 m each on one side
Up to 630 A	Up to 1250 A	Up to 630 A	–
With integrated expansion compensation, plug-in terminal up to 400 A, single-bolt terminal up to 400 A	Single-bolt terminal connection with hook/bolt technology	Bolt-type terminal block with shearing nut	Bolt-type terminal block
Al conductors or Cu conductors	Al bar or Cu bar (conductor surfaces galvanized), epoxy coating of conductors	Isolated Al bar or Cu bar	Cu bar
Galvanized and varnished sheet-steel	Varnished sheet-steel	Varnished Al	Epoxy resin

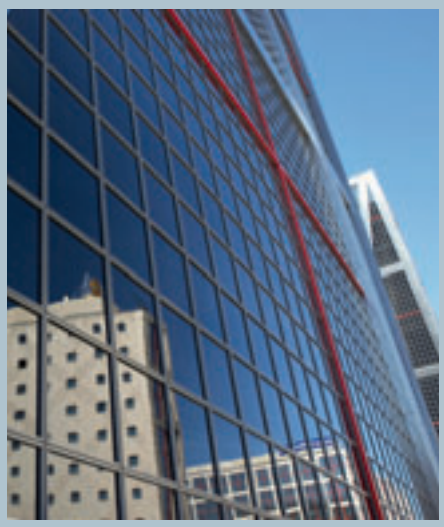
Practical Examples

Supply of large-area hall complexes

Requirements
For the supply of large-area hall complexes within the scope of a tradeshow, the main focus was placed on reliability, efficiency and safety. Also a flexible design of the power supply was greatly important.

Solution
- Communication-capable busbar trunking systems for safe distribution and transparent detection inside the trade show hall
- LD system from the transformer to the power distribution board and individual trade show booths
- Busbar trunking systems in crawl spaces, raised floors or supply ducts
- Tap-off units pluggable while energized[1)] up to 630 A
- Measuring transformer and power meter in the tap-off units and distributed consumption detection – for individual allocation of power consumption

Result
- Drastic reduction of wiring / control wiring
- Minimized fire load, high short-circuit rating
- Minimum space requirements in supply ducts, crawl spaces and raised floors
- High flexibility for continuously changing consumers
- Transparency through distributed consumption detection



Reliable supply of a data center

Requirements
Maximum supply reliability and consistently high transparency: For the development of a data center power supply, these and many further aspects had to be considered.

Solution
- Redundant busbar trunking systems, e.g. BD2 as power backbone
- Busbar trunking system as spur in the underfloor – for direct rack supply
- Networked connection via ancillary equipment unit and parallel wired standard bus system

Result
- Full distribution transparency
- High supply reliability and automatic consumption detection of the racks
- Maximum future protection – through expandability according to individual requirements

Advantages

Improved safety
- Fast troubleshooting through remote monitoring and operation of the consumers

Improved cost-effectiveness
- High operational transparency and availability through detection of switching and operating states
- Efficient operation through the remote control of large-area lighting systems
- High flexibility through retrofittable system

Improved consistency
- Easy and efficient planning through standard portfolio from 25 A to 6300 A
- Efficient planning through selection option of *instabus EIB* for building installation technology and AS-Interface for industrial applications

1) In acc. with DIN EN 50110-1 (VDE 0105-1); please always observe national regulations/standards

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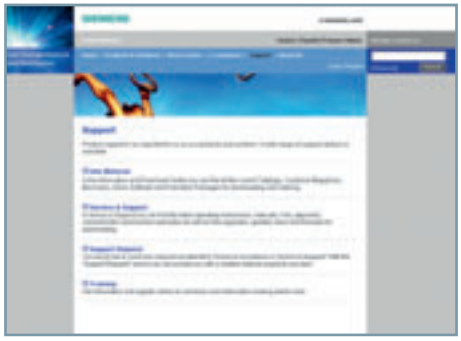

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