

The Siemens logo is in the top left corner. The background shows a person's hands holding a tablet displaying a 3D model of a busbar trunking system. The scene is set against a backdrop of a city skyline and water.

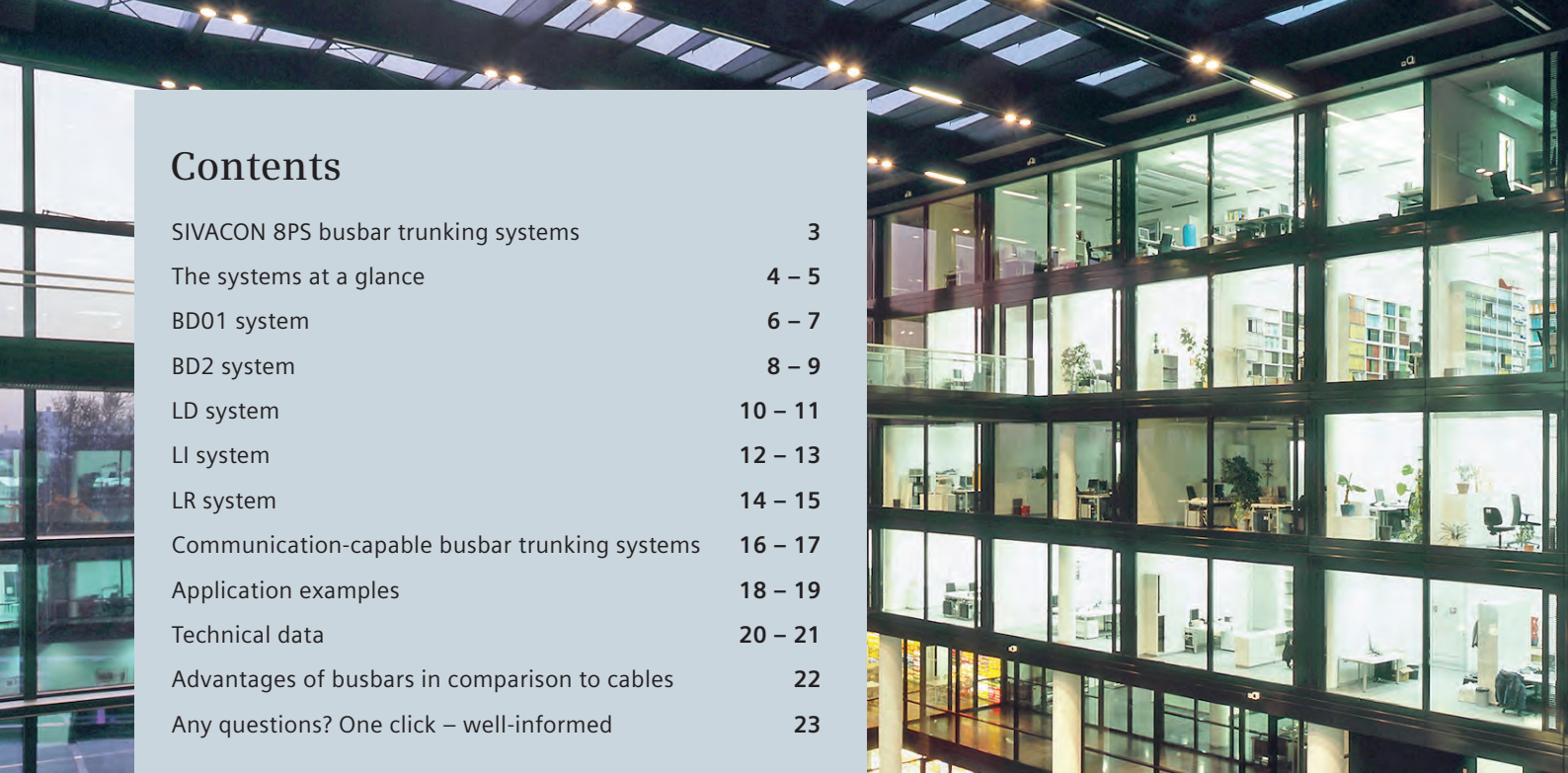
SIEMENS

Totally Integrated Power – SIVACON 8PS

For safe power flows

SIVACON 8PS busbar trunking systems

www.siemens.com/busbar



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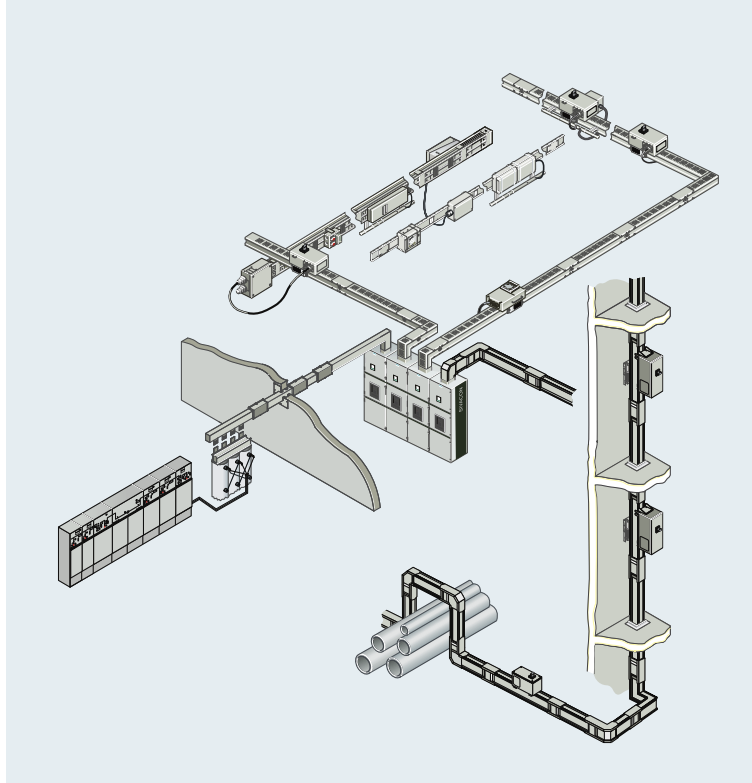
Totally Integrated Power (TIP) – We bring power to the point.

Our products, systems, and solutions for low- and medium-voltage make power distribution efficient, reliable, and safe – in cities, infrastructure, buildings, and industrial plants. They can be linked to industrial and building automation, and are rounded out by comprehensive support throughout the entire lifecycle.

As part of the Totally Integrated Power concept, the SIVACON 8PS busbar trunking systems embody the motto “We bring power to the point”.

High power volumes, countless consumers, maximum availability around the clock? No matter how turbulent your power distribution requirements – our powerful, integrated SIVACON 8PS low-voltage busbar trunking systems ensure that power is reliably transmitted and distributed at all times. Thus they support you, competently mastering your power requirements.

You will benefit from the modularity and intelligence of the components over the complete utilisation period and thus keep a tight control of your operating costs while maximising system availability.



The consistent SIVACON 8PS busbar trunking systems from 40 A to 6300 A offer flexible options for all low-voltage power distribution requirements. This applies to power transmission, for application between transformer, primary distribution system and the sub-distribution systems as well as in power distribution to the end consumer.

SIVACON 8PS busbar trunking systems

Living up to complex requirements at all times

A total of five different busbar trunking systems offer everything required for modern power transmission and distribution matched to your individual requirements. With the SIVACON 8PS busbar trunking systems, you will not only benefit from a transparent and flexible solution for controlling the increasingly complex area of building management, but also considerably improve the efficiency of industrial applications by ensuring a safe and reliable power supply.

Reliable and safe power transmission

The SIVACON 8PS busbar trunking systems offer optimum safety thanks to tested low-voltage switchboard and controlgear assemblies (BD01, BD2, LD, LR type-tested in accordance to IEC 60439-1/-2¹⁾; LI design verified in accordance to IEC 61439-1/-6). The high short-circuit rating and low fire load due to the metal housing of the systems increase safety for people and buildings.

Easy planning and flexible modification of power distribution

High calculation expenditures, laborious installations and high power losses are a thing of the past. With SIVACON 8PS busbar trunking systems, you can easily plan and quickly assemble the power distribution within building complexes and in outdoor areas. Modifications and expansions are possible at any time, if the use of space changes. In contrast to conventional cable installations, with which the current can only be tapped off at the pre-defined points, current tap-offs can be individually varied with the SIVACON 8PS busbar trunking systems thanks to flexibly deployable tap-off units.

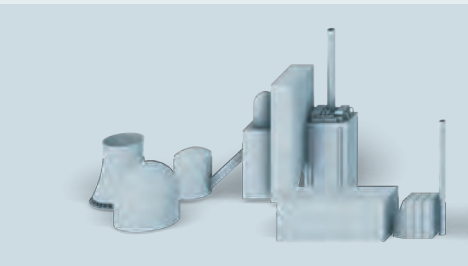
SIVACON 8PS – the advantages at a glance

- **Consistency**
Full range from 40 A to 6300 A for industrial applications and infrastructure
- **Safety**
Tested low-voltage busbar trunking systems and switchboards
- **Flexibility**
Variety of feeding units, junction units and conductor configurations for planning as well as easy modification or expansion with plug-on/-off tap-off units in operation
- **Efficiency**
SIMARIS software tools and online support in all project phases.
Compact design for low space requirement
- **Reliability**
Tested low-voltage busbar trunking systems and high short-circuit rating in operation
- **One-stop shop**
From planning via installation to operation
- **Advanced technology**
Communication-capabilities for energy management

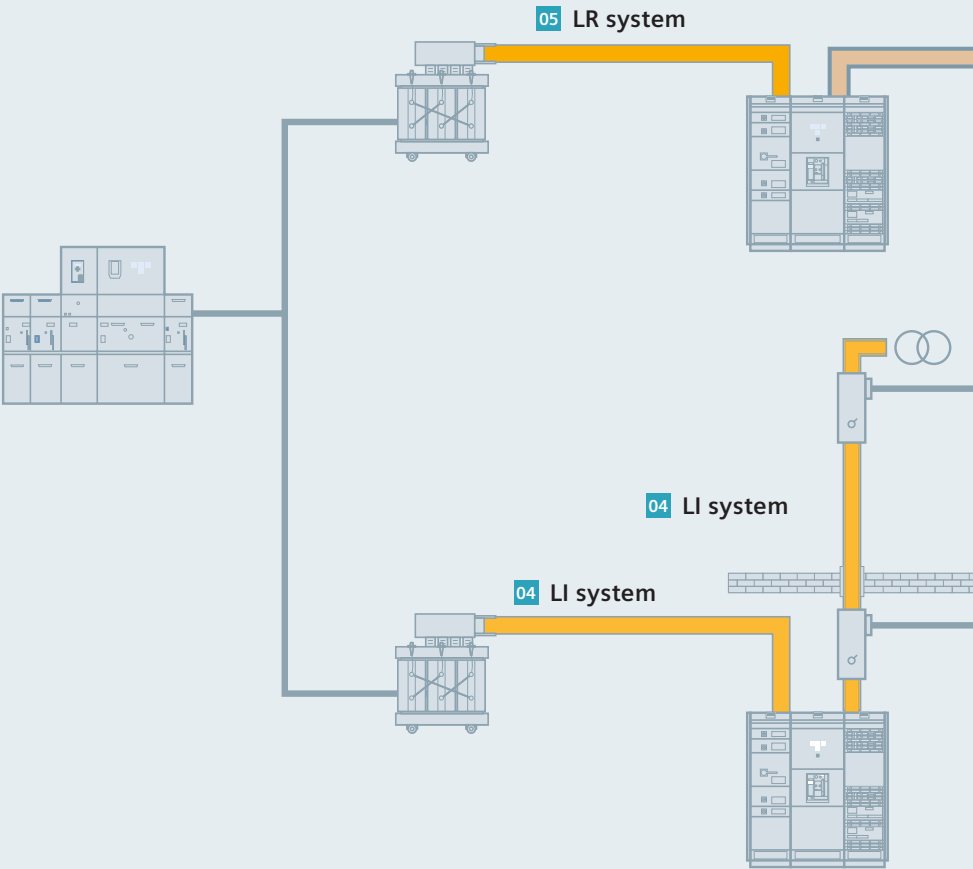
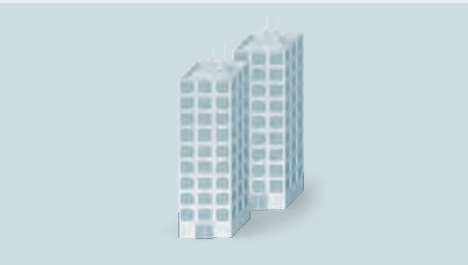
1) BD01, BD2, LD, LR design verified according to IEC 61439-1/-6 in preparation

The systems at a glance

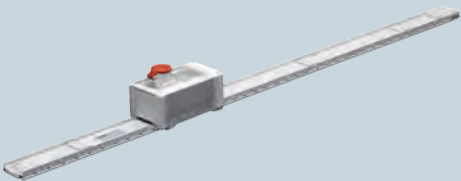
Industry



Infrastructure



01 BD01 system

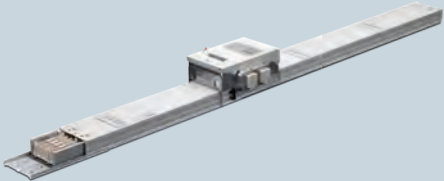


40 A to 160 A

400 V U_e max.

Power distribution with communication capabilities for small consumers in workshops and lighting systems

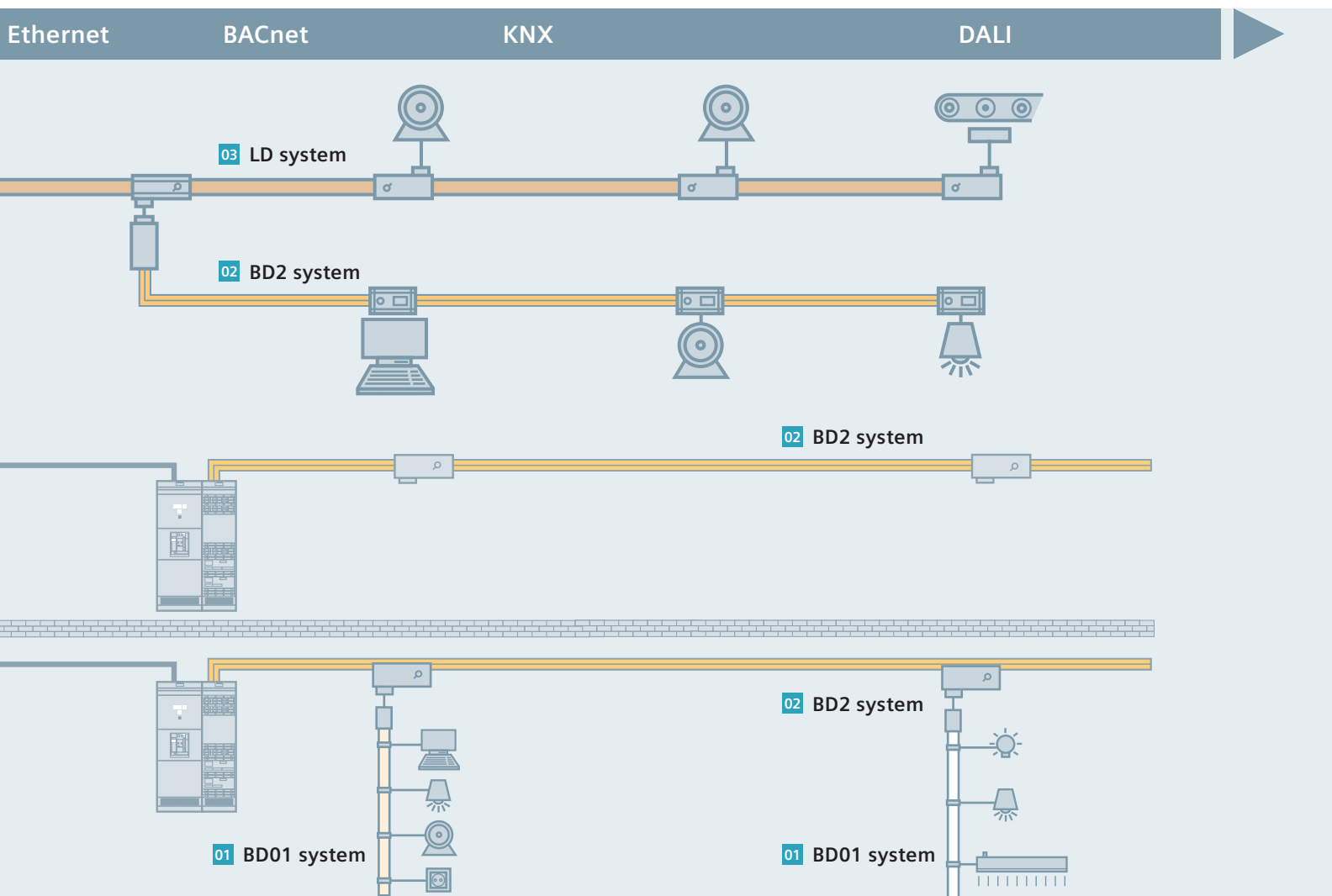
02 BD2 system

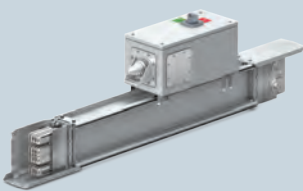
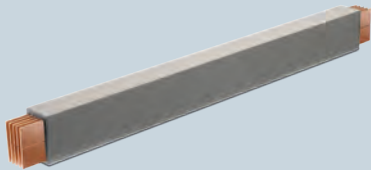


160 A to 1250 A

690 V U_e max.

Power transmission and distribution with communication capabilities in office buildings and transfer lines in all industrial application areas



03 LD system	04 LI system	05 LR system
		
1100 A to 5000 A	800 A to 6300 A	400 A to 6150 A
1000 V U_e max.	1000 V U_e max.	1000 V U_e max.
Power distribution and transmission with communication capabilities in wind turbines, exhibition halls, in the automotive industry, heavy industry, and on ships	Power distribution and transmission of high currents with communication capabilities in large buildings, data centres as well as in industrial applications such as chip and semiconductor industry or chemicals	Transmission of large power volumes in harsh ambient conditions, for the supply of tunnels or networking of building sections, and for power transmission in the chemical industry

BD01 system

Highlights

- Finger-safe connection through guaranteed opening and shutting of the tap-off point
- Easy configuration and handling through connection flanges with built-in expansion compensation
- Reliable protection in case of fire due to tested fire barrier

Safe, demand-oriented power supply

The BD01 system is designed for applications from 40 A to 160 A. It is employed in trade and industry enterprises to safely supply small consumers with power or realise the infeed of a lighting system. Planning is especially simple and it ensures a flexible power supply. In addition to the pre-wired tap-off units, which can also be individually equipped with components, numerous add-on devices such as protective devices or combinations with SCHUKO or CEE socket outlets are available.

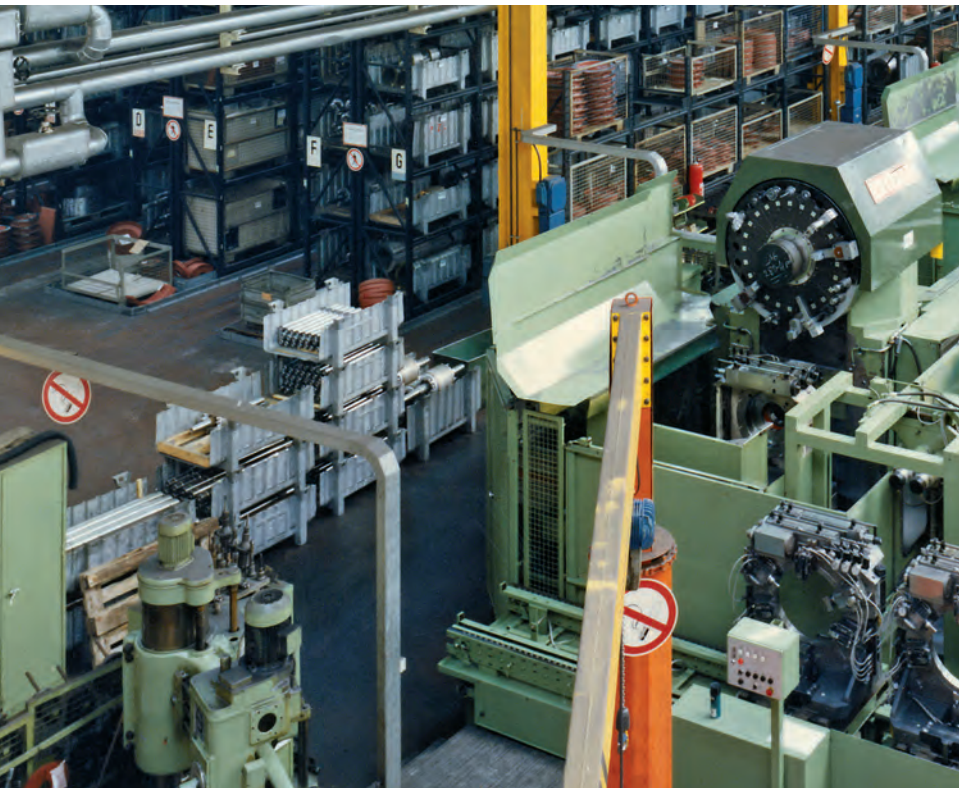
Guided mounting and clear consumer assignment

The reliable mechanical and electrical connection technology guarantees error-free installation thanks to the asymmetry of the connection point of the BD01 system. The codable tap-off points and units can be clearly assigned to the consumers.

The operating personnel are afforded a high degree of protection by the guided mounting of the tap-off units. The tap-off points are only automatically opened upon connection of the tap-off units. As soon as these units are removed, the tap-off points close automatically.

Simple planning of a modern network structure

The tap-off units can be plugged onto all system sizes. Feeder units can be used as incoming, end or centre feeding unit. These two facts make both planning and stock keeping easier. Numerous components are available, and so the power supply can be flexibly adapted to all building structures using 3D junction units.

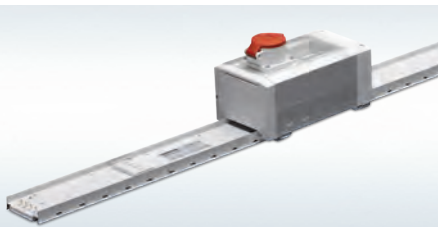
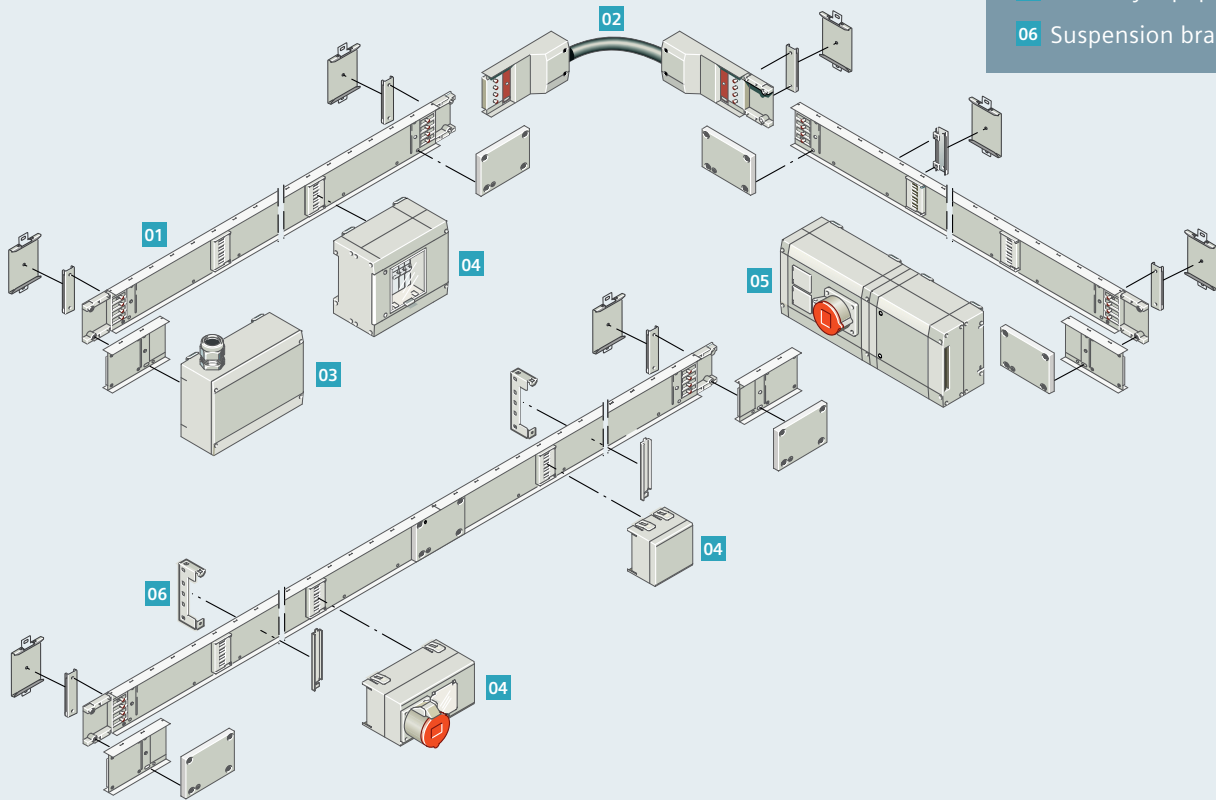


The power distribution in production facilities must be matched precisely to structural factors.

The BD01 system offers the necessary flexibility, including for when consumer loads change at a later time. It allows quick and simple modification or expansion through tap-off units up to 63 A that can be plugged in with the system live¹⁾.



- 01 Busbar trunking unit
- 02 Junction unit
- 03 Feeding unit
- 04 Tap-off unit
- 05 Ancillary equipment unit
- 06 Suspension bracket



The BD01 busbar trunking system is available up to 160 A in one size with five current ratings.



The infeed can be fitted to any connection point.



In addition to tap-off and feeding units, ancillary equipment units provide space for additional installations.

Technical data

Rated insulation voltage U_i	400 V AC	Fire load	Max. 0.76 kWh/m
Rated operational voltage U_e	400 V AC	Fire load (per tap-off point)	–
Degree of protection	IP54, IP55	Tap-off point	Either 0.5 m or 1 m on one side
Rated current I_n	40 A to 160 A	Tap-off unit	Up to 63 A
Rated peak withstand current I_{pk}	Up to 15.3 kA	Joining system	Connection flange with integrated expansion compensation
Rated short-time withstand current I_{cw} (1 s)	Up to 2.5 kA	Conductor material	Insulated Al or Cu conductors
Number of conductors	4 (PE = housing)	Housing material	Galvanised and painted sheet steel

BD2 system

Highlights

- Flexibility thanks to two sizes with seven current ratings up to 1250 A, in aluminium or copper
- Protection against unauthorised access by sealable tap-off points
- 3D junction unit up to 800 A allows flexible adjustment to all building structures

Safe operation and reliable fire protection

The BD2 system is particularly suited for applications from 160 A to 1250 A with increased safety requirements. The 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 behaviour, but also for its minimum space requirements. It can also be used for the infeed of the smaller BD01 system.

Easy and quick installation with access protection

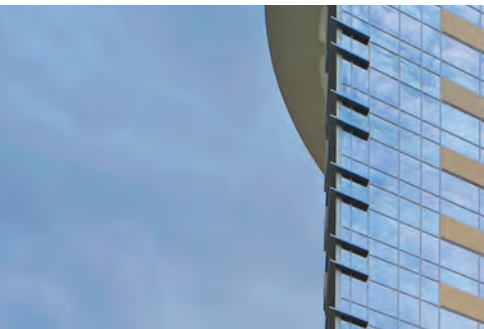
The anti-rotation feature and guided installation increase safety during the installation of the system. The clamp terminal, which includes a single-bolt

terminal, permits simple and quick installation with built-in expansion compensation. Sealable tap-off points protect against unauthorised access.

In addition, numerous components for 3D junction units permit a flexible adaptation to the building structure in question.

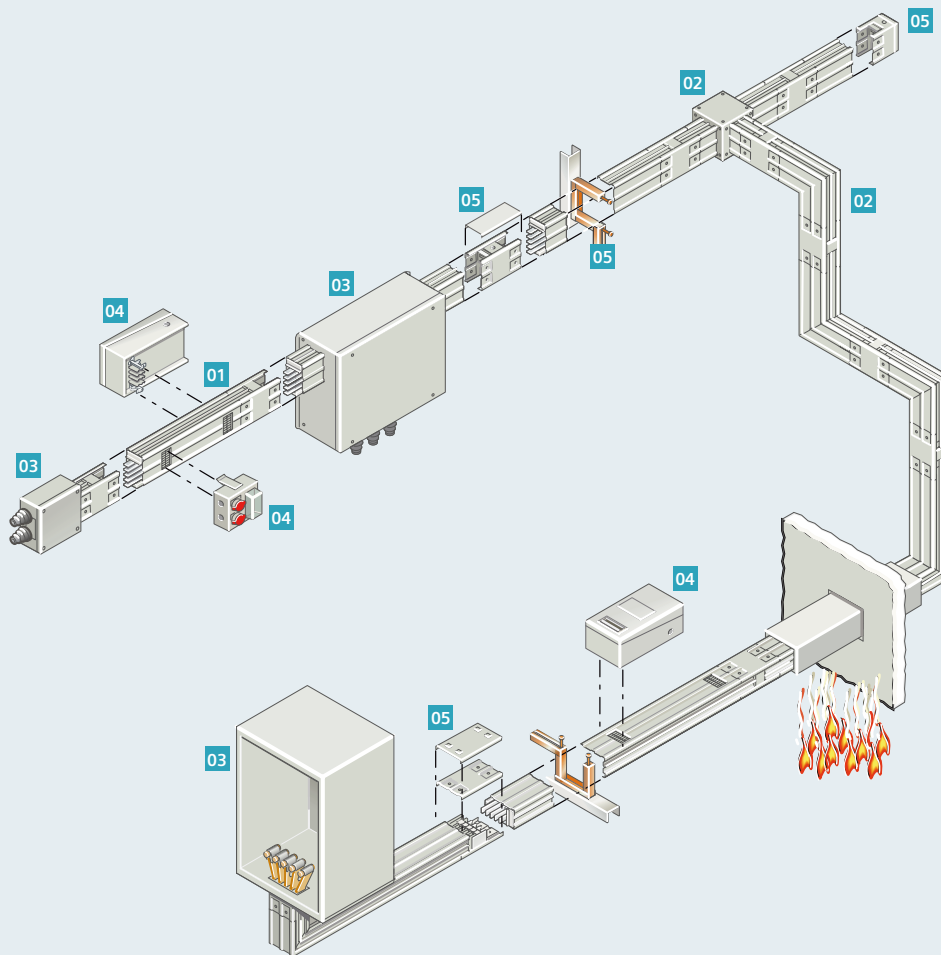
Increased transparency of operation thanks to communication capability

The communication-capable BD2 busbar trunking system with its load detection, remote monitoring and switching, as well as its lighting control increases system availability, ensuring greater transparency in your operation.

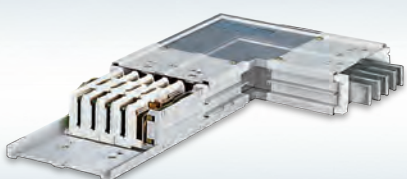


Reliable protection in case of fire thanks to a tested fire barrier, and safe operating behaviour are important for the power supply of office complexes.

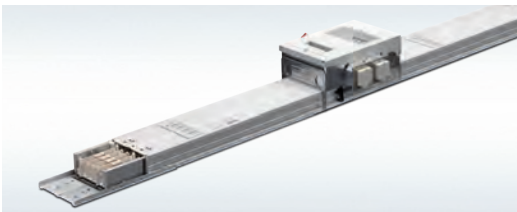




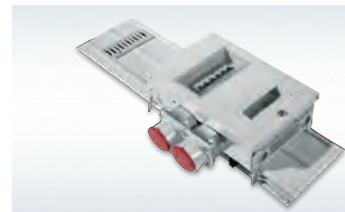
- 01 Trunking unit
- 02 Junction unit
- 03 Feeding unit
- 04 Tap-off unit
- 05 Accessories



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



The communication capable BD2 system with load value detection, remote monitoring and switching increases transparency of operation.



Individually equipped tap-off units up to 530 A rated current can be displaced while energised¹⁾.

Technical data

Rated insulation voltage U_i	690 V AC	Fire load	Max. 2.0 kWh/m
Rated operational voltage U_e	690 V AC	Fire load (per tap-off point)	–
Degree of protection	IP52, IP54, IP55	Tap-off point	Every 0.5 m on one side, offset on both sides every 0.25 m
Rated current I_n	160 A to 1250 A	Tap-off unit	Up to 530 A
Rated peak withstand current I_{pk}	Up to 90 kA	Joining system	With built-in expansion compensation, single-bolt terminal
Rated short-time withstand current I_{cw} (1 s)	Up to 34 kA	Conductor material	Al or Cu conductors
Number of conductors	5	Housing material	Galvanised and painted sheet steel

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

LD system

Highlights

- Reliable and easy planning due to type-tested connection to SIVACON switchboards and transformers
- Adequate protection against water (sprinkler-suitable)
- High availability through tap-off units with circuit-breakers up to 1250 A
- Cost-efficient infrastructure due to compact design
- High degree of safety due to tap-off units resistant to arc faults

Reliable power transmission for high power requirements

The LD system, easy and fast to install, 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-distribution boards on production sites with high power requirements, e.g. for welding lines in the automotive industry.

More safety at long distances

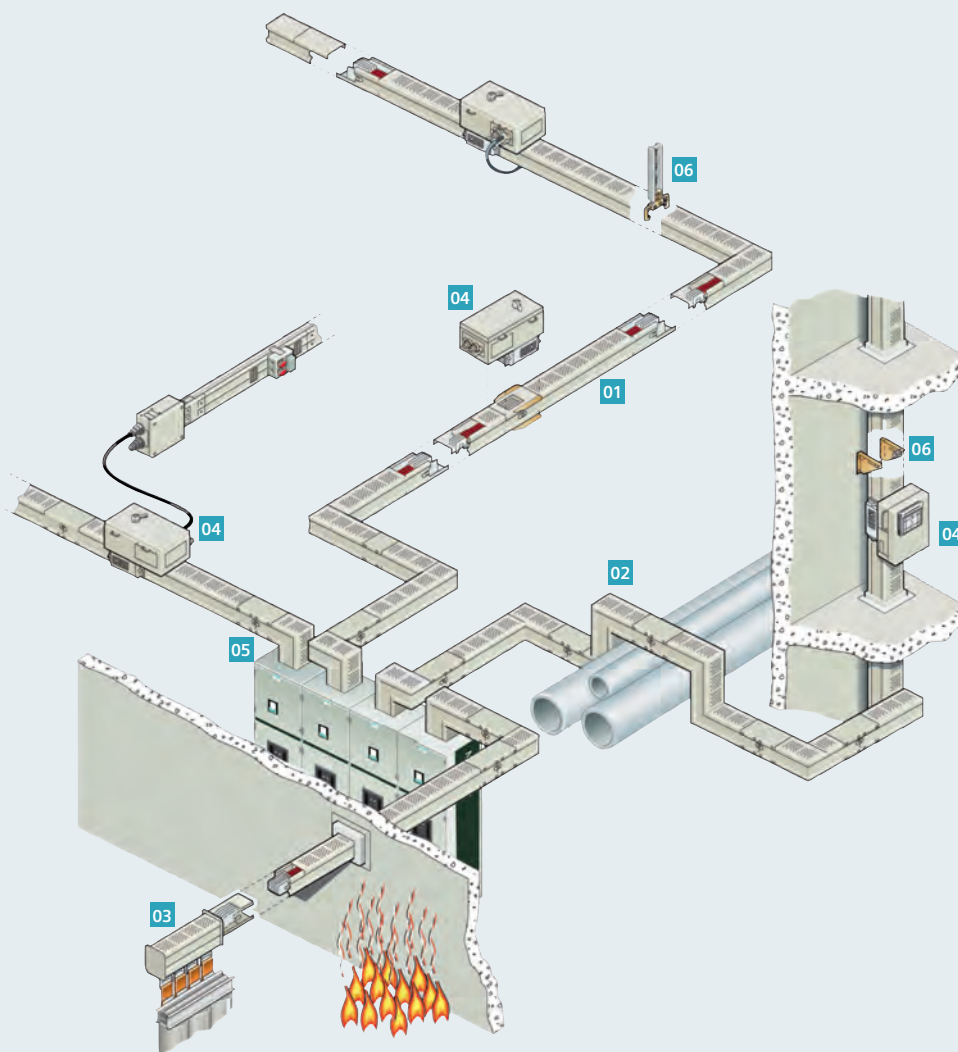
A separate PE conductor increases the cross-section of the protective conductor and ensures a low impedance in the event of faults. It facilitates longer busbar runs as well as an assured response of the switching device, also with long current paths. In addition, tap-off units with circuit-breakers up to 1250 A increase the availability of power distribution.

Numerous usage options due to high short-circuit rating

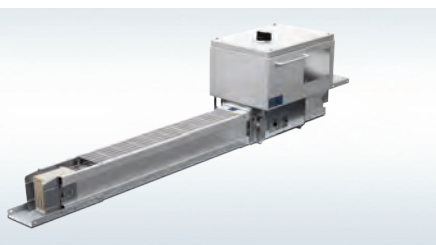
Power distribution can be reliably and simply planned thanks to the type-tested connection to SIVACON switchboards and safe connection to transformers. The high short-circuit rating and compact design open up many fields of application. In the ventilated system (IP34), the epoxy coating of the conductors offer additional protection against water (sprinkler-suitable).

The high power requirement of production lines is provided decentrally with the LD system. The communication capability of the LD system allows operating transparency for recording consumption, and for remote switching and monitoring.

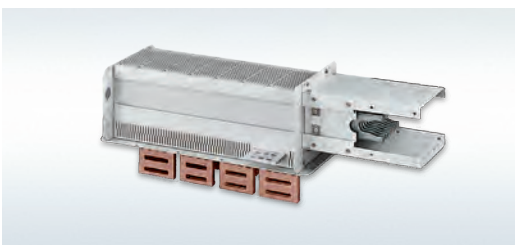




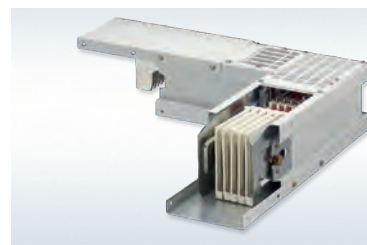
- 01 Trunking unit
- 02 Junction unit
- 03 Feeding unit
- 04 Tap-off unit
- 05 Flanged end unit
- 06 Accessories for mounting



The LD system is characterised by a robust and compact design with only two sizes for 1100 A to 5000 A.



Current is supplied from the transformer to the LD busbar trunking system via feeding units.



Components for change of direction allow the power supply to be adapted to building structures.

Technical data

Rated insulation voltage U_i	1000 V AC	Fire load	Max. 8.83 kWh/m
Rated operational voltage U_e	1000 V AC	Fire load (per tap-off point)	Max. 10.8 kWh
Degree of protection	IP34, IP54	Tap-off point	Every 1 m, on one side
Rated current I_n	1100 A to 5000 A	Tap-off unit	Up to 1250 A
Rated peak withstand current I_{pk}	Up to 286 kA	Joining system	Single-bolt terminal connection with hook and bolt connection
Rated short-time withstand current I_{cw} (1 s)	Up to 116 kA	Conductor material	Al or Cu conductor (galvanised conductor surfaces), epoxy coating of conductors
Number of conductors	4, 5	Housing material	Painted sheet steel

LI system

Highlights

- Safe operation as design verified in accordance with current standard IEC 61439-1/-6
- High degree of protection IP55
- Fire barriers tested in accordance with European Standard EN 1366-3
- Integrated, efficient and future-proof solution due to integration of measuring devices in energy management solutions in accordance with ISO 50001
- Cost-efficient infrastructure through compact sandwich design
- Reliable installation through hook and bolt connection

Reliable in operation.

Secure your system availability

The LI system is particularly suited for applications from 800 A to 6300 A in which large amounts of power have to be flexibly transmitted over long distances, in infrastructure – for example in multi-storey buildings – as well as in industrial applications.

Thanks to its compact sandwich design, the system allows power transmission with a low voltage drop. The LI system can run at full load at high ambient temperatures up to 40°C without derating.

Safe for people and plant.

Safeguard your investment

The LI system offers a large range of design verified trunking and tap-off units in accordance with the new IEC 61439-1/-6 standards, enabling high personnel and system safety as well as improved operational availability.

Furthermore, the fire barrier for the LI system has been tested for fire resistance classes EI90 and EI120¹⁾ in accordance with EN 1366-3 to meet European standard building requirements.

Integrated and future-proof.

Invest in an efficient power supply solution

Innovative technical features such as tap-off units with communication-capable measuring and switching devices enable modern energy management in accordance with ISO 50001 – meeting the latest demands for increased power efficiency and energy performance.

Efficient and flexible in planning and operation.

Design your safe and sustainable solution

The compact design of the LI system facilitates integration into narrow buildings in order to achieve a cost-efficient infrastructure. The LI system allows you to design your power supply flexibly, with e.g. different conductor configurations, modular tap-off units equipped with circuit-breakers or fuse-switch-disconnectors, or various junction units. Furthermore, in operation, when production lines might require new tap-off units for the machines and workplaces, tap-off units up to 1250 A²⁾ connectable on energised runs³⁾ support easy modifications.



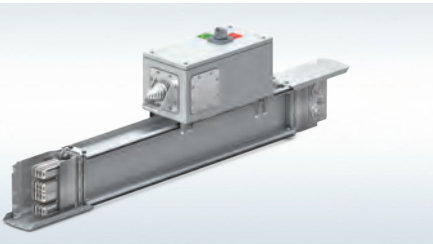
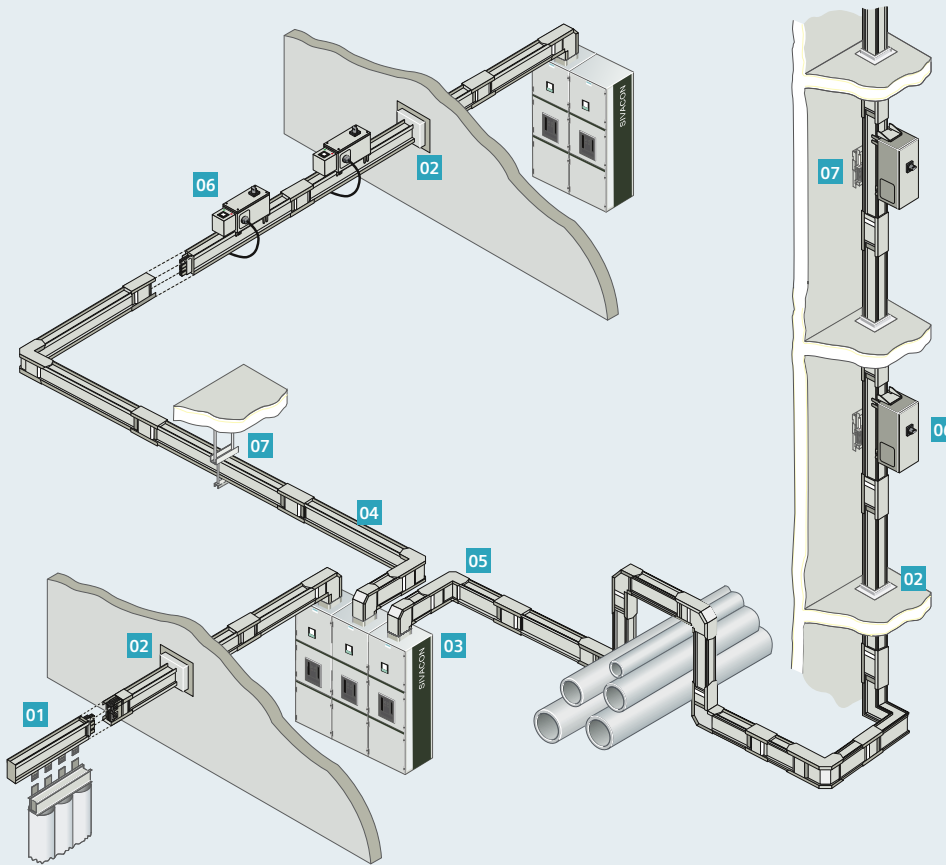
With the LI system, large amounts of power can be transmitted over long distances and in an extremely small space in large building complexes. A corresponding power distribution requires functional integrity for emergency power as well as flexible current tap-offs in the normal power supply network.

1) In preparation

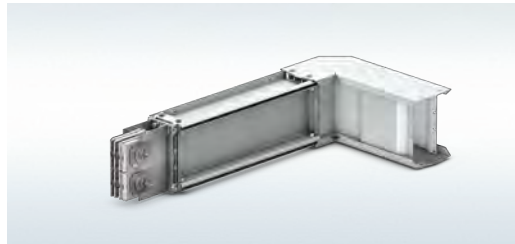
2) Tap-off units from 800 A up to 1250 A in preparation

3) In accordance with EN 50110-1 (VDE 0105-1); please always observe national regulations

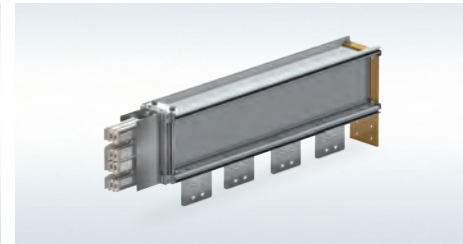
- 01 Transformer feeding unit
- 02 Fire barrier
- 03 Feeding unit to SIVACON S8
- 04 Straight trunking unit
- 05 Junction unit
- 06 Tap-off unit
- 07 Accessories for mounting



Thanks to its sandwich design, the LI system is characterised by low voltage drop when transmitting high currents.



Optimum adaptation to building structures is no problem thanks to the various components of the busbar trunking system.



For safe power transmission, a multitude of transformer connections are available.

Technical data

Rated insulation voltage U_i	1000 V AC	Fire load	On request
Rated operational voltage U_e	1000 V AC	Fire load (per tap-off point)	On request
Degree of protection	IP55	Tap-off point	Up to 3 per 3 m length (per side)
Rated current I_n	800 A to 6300 A	Tap-off unit or junction box	Up to 1250 A ¹⁾
Rated peak withstand current I_{pk}	Up to 330 kA	Joining system	Hook and bolt connection with shearing nut
Rated short-time withstand current I_{cw} (1 s)	Up to 150 kA	Conductor material	Insulated Al or Cu conductors
Number of conductors	3, 4, 5, clean earth, optionally 200 % N conductor	Housing material	Painted Al

1) Tap-off units from 800 A up to 1250 A in preparation

LR system

Highlights

- Suitable for external applications thanks to high degree of protection IP68
- Strong resistance to chemical substances and high mechanical rigidity through the use of epoxy cast-resin housing
- Flexibility and consistency thanks to integrated connection to the LI and LD systems

For the most adverse ambient conditions

Thanks to its housing made of epoxy cast resin with a high degree of protection IP68 and high short-circuit rating, the LR system provides reliable power transmission even under the most adverse ambient conditions. It is impervious to environmental factors such as air humidity, and corrosive or salty atmospheres.

Flexible power transmission for both indoor and outdoor applications

The robust system can be laid flat, upright, vertically or horizontally as required in applications from 400 A to 6150 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.

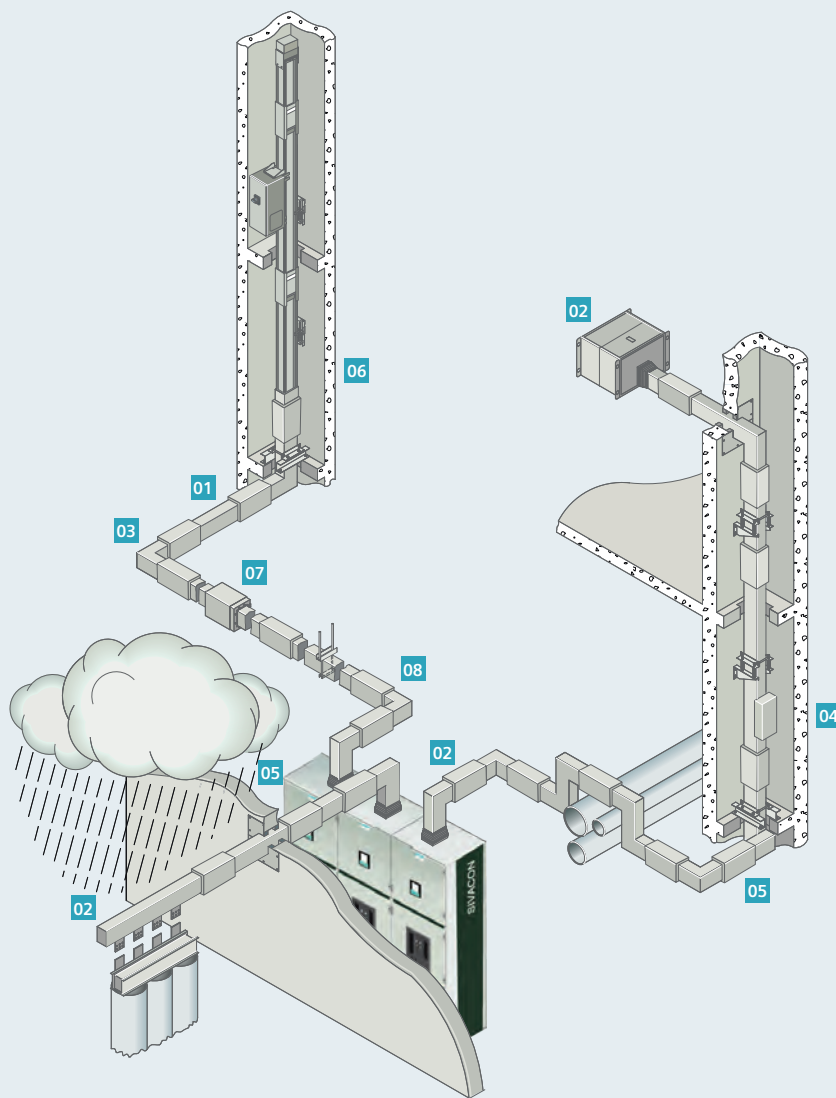
Consistency of the busbar trunking system with high currents

The LR system can be simply and quickly fitted using the bolt-type terminal block. It is consistent and can be easily combined with the LI and LD systems for indoor applications.

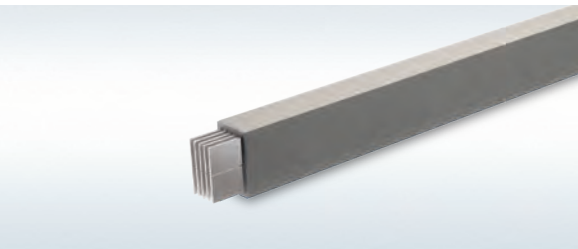


The LR system's epoxy cast resin housing ensures excellent mechanical stability, and its IP68 protection rating allows applications in harsh environments and in outdoor area.

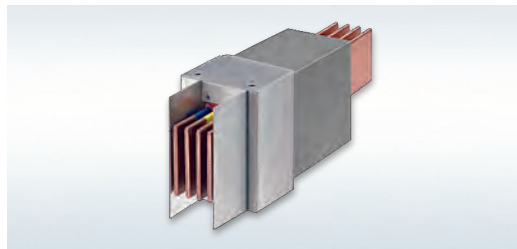




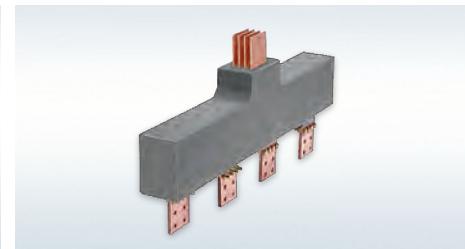
- 01 Straight busbar trunking unit
- 02 Feeding unit
- 03 Junction unit
- 04 Junction boxes
- 05 Accessories
- 06 Adapter to the LI system
- 07 Expansion compensation
- 08 Cast connection element



The LR busbar trunking system is available Al or with Cu busbars.



The LR system can be connected to the LI or LD system by means of an adapter.



For reliable power transmission, the LR system provides numerous transformer terminal fittings.

Technical data

Rated insulation voltage U_i	1000 V AC	Fire load	Max. 77.3 kWh/m
Rated operational voltage U_e	1000 V AC	Fire load (per junction point)	–
Degree of protection	IP68	Junction point	Every 1 m, on one side
Rated current I_n	400 A to 6150 A	Junction box	On request
Rated peak withstand current I_{pk}	Up to 220 kA	Joining system	Bolt-type terminal block
Rated short-time withstand current I_{cw} (1 s)	Up to 100 kA	Conductor material	Al or Cu conductors
Number of conductors	3 and PEN or 3, N and PE	Housing material	Epoxy resin

Future-proof solutions with communication-capable busbar trunking systems

Highlights

- Integrated, efficient and future-proof solution due to integration of measuring devices in energy management solutions in accordance with ISO 50001
- Flexible with plug-in tap-off units incl. measuring devices
- Cost-efficient with higher transparency of the power consumption
- Reliable due to a central control of the power distribution

Power distribution including energy management

The increase of complete power distribution solutions with energy management is one of the trends of modern building and industrial automation. The basic solution is a flexible & safe backbone for the supply of high electrical power in combination with intelligent networking of all installed assembly sections for smart tapping off the electrical power.

The basis of energy management is transparency; only when the energy flows within the power distribution are known and clearly depicted can optimisation respectively energy management be put into practise.

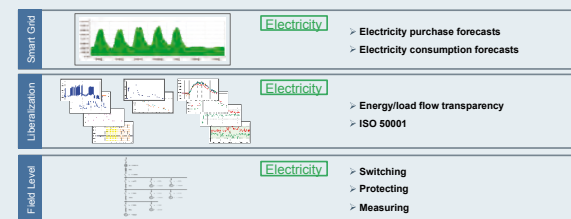
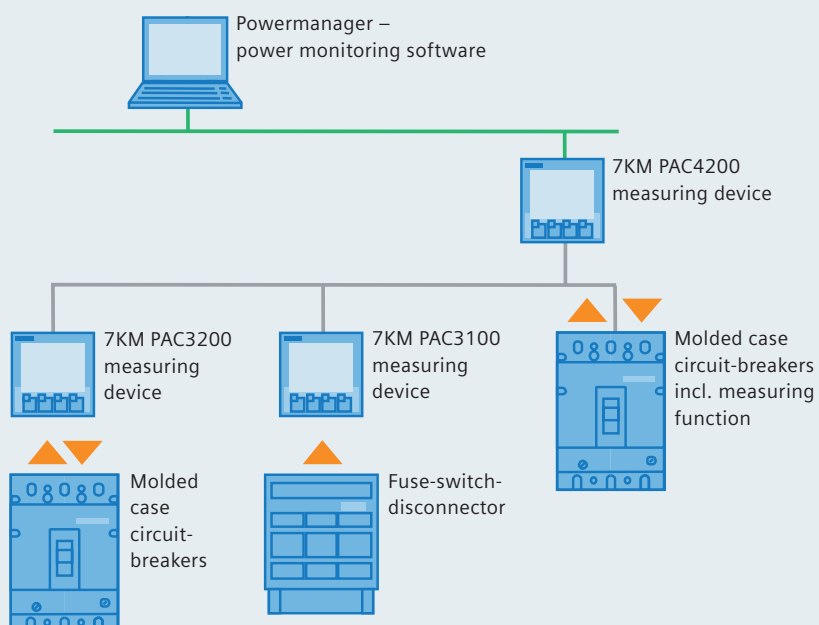
To optimally satisfy the requests for power metering, transparent switching states, or the central detection of operating states and data, we offer you communication-capable components with accessories for the BD01, BD2, LD and LI systems.

Versatile functions for infrastructure, buildings and industry

The combinations of tap-off units and accessories permit to shape an efficient power supply for the infrastructure. From monitoring and measuring through switching and signalling to load measurement, the communication-capable SIVACON 8PS busbar trunking systems support transparency of the energy flows in your building, as well as easy implementation of energy management systems.

In industrial applications, the robust and quick installation is an advantage. Remote monitoring and remote actuation of consumers make it possible to quickly eliminate faults, for example. Furthermore, the detection of switching and operating states increases operating transparency and the availability of the system.

Integrated solution for smart power distribution Example for power monitoring



The basis of energy management is transparency

LI tap-off unit with PAC



8PS busbar trunking systems – expandable and communication-capable

Basic function: Power distribution / transmission



Function expansions

Control of
building

Switching,
signalling,
remote operation

Consumption
measuring and
remote monitoring

Networking
of different
engineering
disciplines

Communication systems

KNX

PROFIBUS

PROFINET

Modbus



Application examples



Rapid relocation of production thanks to modular system design

Requirement

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

Solution

- Two busbar trunking runs in longitudinal direction
- Two compact feeding 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 feeding with 50 cm distance
- Easy connection of suspended cubes with integrated CEE socket outlets

Result

The modular design and simple assembly make it possible to convert the workshop in a short space of time. In addition, it is possible to respond to future production changes quickly and flexibly.



Sophisticated power distribution with high currents

Requirement

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

Solution

- Connection between the five transformers and the low-voltage main power distribution board via five system LD busbar runs
- Eight runs up to 4000 A for consistent power distribution; tap-off units pluggable while energised¹⁾ up to 1250 A
- Two spare runs with 2500 A each for future system expansions

Result

The compact design of the busbar distribution system offers a space-saving solution with an attractive design. Extremely high operating transparency is achieved thanks to its communication capability. The high short-circuit rating and the low fire load lead to greater safety. Configuration is made easier by simple and flexible planning or adaptation to the building structure.



Reliable, transparent power supply in the data centre

Requirement

Supplying power to data centres requires the maximum possible power supply reliability and consistently high transparency. Further requirements are a low fire load and low susceptibility to electromagnetic fields.

Solution

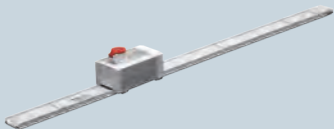
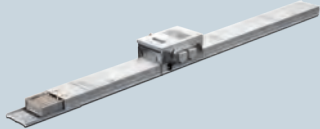
- Redundant busbar trunking systems, e.g. the BD2 system as power backbone
- Busbar trunking system as spur in the underfloor, for direct rack supply
- Networked connection via ancillary equipment units and parallel-wired standard bus system

Result

The power distribution is characterised by full transparency. In addition, the racks have high supply reliability and automatic load detection. The demand-oriented expandability keeps all options open.



Technical data

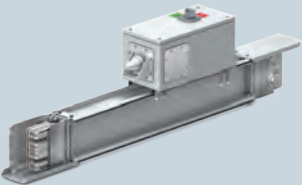
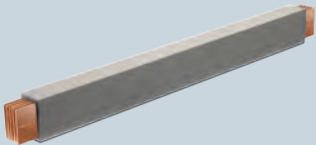
	BD01 system	BD2 system
	 1) 2) 4) 5) 6)	 1) 2) 3) 4) 5) 6)
Rated insulation voltage U_i	400 V AC	690 V AC
Rated operational voltage U_e	400 V AC	690 V AC
Degree of protection	IP54, IP55	IP52, IP54, IP55
Rated current I_n	40 A to 160 A	160 A to 1250 A
Rated peak withstand current I_{pk}	Up to 15.3 kA	Up to 90 kA
Rated short-time withstand current I_{cw} (1 s)	Up to 2.5 kA	Up to 34 kA
Number of conductors	4 (PE = housing)	5
Fire load	Max. 0.76 kWh/m	Max. 2.0 kWh/m
Fire load (per tap-off point)	—	—
Tap-off point / junction point	Either 0.5 m or 1 m on one side	Every 0.5 m on one side, offset on both sides every 0.25 m
Tap-off unit / junction box	Up to 63 A	Up to 530 A
Joining system	Connection flange with integrated expansion compensation	With built-in expansion compensation, single-bolt terminal
Conductor material	Insulated Al or Cu conductors	Al or Cu conductors
Housing material	Galvanised and painted sheet steel	Galvanised and painted sheet steel

Country-specific approvals

1) Russia	GOST-R	
2) Ucraina	Ukrain-GOST	
3) China	CCC	

Marine classification societies

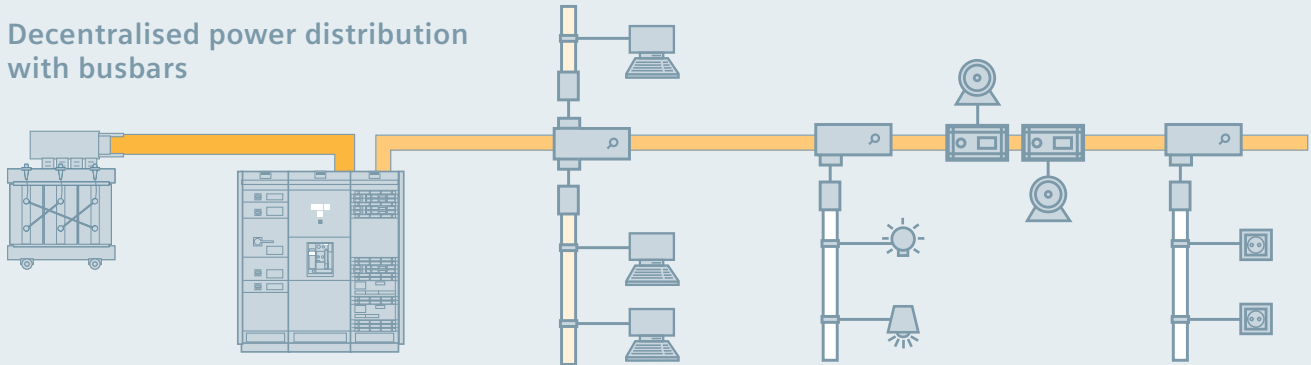
4) Det Norske Veritas (DNV)	
5) Bureau Veritas	
6) Lloyd's Register of Shipping	

LD system	LI system	LR system
 1) 2) 3) 4) 5) 6)		 1) 2)
1000 V AC	1000 V AC	1000 V AC
1000 V AC	1000 V AC	1000 V AC
IP34, IP54	IP55	IP68
1100 A to 5000 A	800 A to 6300 A	400 A to 6150 A
Up to 286 kA	Up to 330 kA	Up to 220 kA
Up to 116 kA	Up to 150 kA	Up to 100 kA
4, 5	3, 4, 5, clean earth, optionally 200 % N conductor	3 and PEN or 3, N and PE
Max. 8.83 kWh/m	On request	Max. 77.3 kWh/m
Max. 10.8 kWh	On request	–
Every 1 m, on one side	Up to 3 per 3 m length (per side)	Every 1 m, on one side
Up to 1250 A	Up to 1250 A ⁷⁾	–
Single-bolt terminal connection with hook- and bolt connection	Bolt-type terminal block with shearing nut	Bolt-type terminal block
Al or Cu conductor (conductor surface galvanised), epoxy coating of conductors	Al or Cu conductors	Al or Cu conductors
Painted sheet steel	Painted Al	Epoxy resin

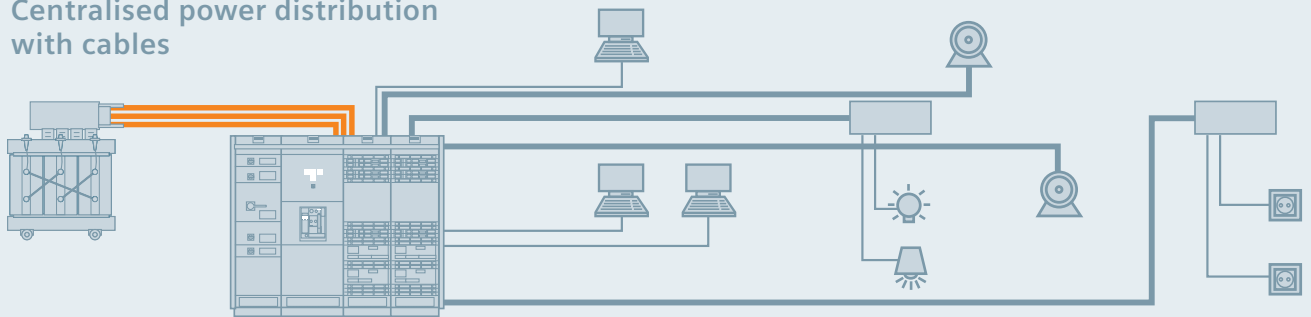
7) Tap-off units from 800 A up to 1250 A in preparation

Advantages of busbars in comparison to cables

Decentralised power distribution with busbars



Centralised power distribution with cables



Feature	Busbars	Cables
Tested power switchgear and controlgear assemblies	High operational reliability and short-circuit rating due to testing according to IEC 60439-1/-2 or IEC 61439-1/-6	The operational reliability depends on the quality of execution
Fire load	Very low; values can be read off from table on page 20	Very high; dependent on cable type
PVC- / halogen-free	On principle, busbar trunking units are halogen-free	Standard wires are not PVC- or halogen-free; halogen-free wires are extremely expensive and have long delivery times
Flexibility in the event of changes, expansions or the relocation of load focal points	Very high flexibility thanks to variable tap-off units, which can be changed, amended or replaced as desired, even whilst energised ¹⁾ ; no downtimes; adaptable power supply	New installation usually required or high expense due to new splicings, clamping points, sleeving, parallel wires, etc.; high downtimes; rigid power supply
Space requirement	Very low due to compact design along the contours of the building; clear current carrying capacity	Enormously high due to bending radii, laying method, cable accumulation and current carrying capacity
Space requirement for low-voltage main power distribution	Lower space requirement because switching and protective devices can be arranged decentrally in the tap-off units	High space requirement
Troubleshooting and fault elimination	Easy due to clear installation, and switching devices close to consumers	Very time-consuming due to complicated installation, and switching devices a long way from consumers
Electromagnetic susceptibility	Low susceptibility due to favourable conductor arrangement	Relatively high with standard cables; no defined conductor arrangement
Mounting time	Short mounting times; high turnover with same personnel cost; high added value	Long mounting times; high personnel cost with low turnover; low added value

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