Schneider busway
from 20 to 800 A
Canalis®

Catalogue 2012

What is new?

- Integrated Lighting Solution with DALIcontrol
- iBusway Solution, Data Center & EV Lnk

Schneider Electric

Contents

Schneider busway,
a comprehensive and consistent for lighting and power distribution

A new path for achieving your electrical installations

Schneider busway is part of a comprehensive offer of products that are perfectly coordinated to meet all medium and low voltage electrical distribution requirements.

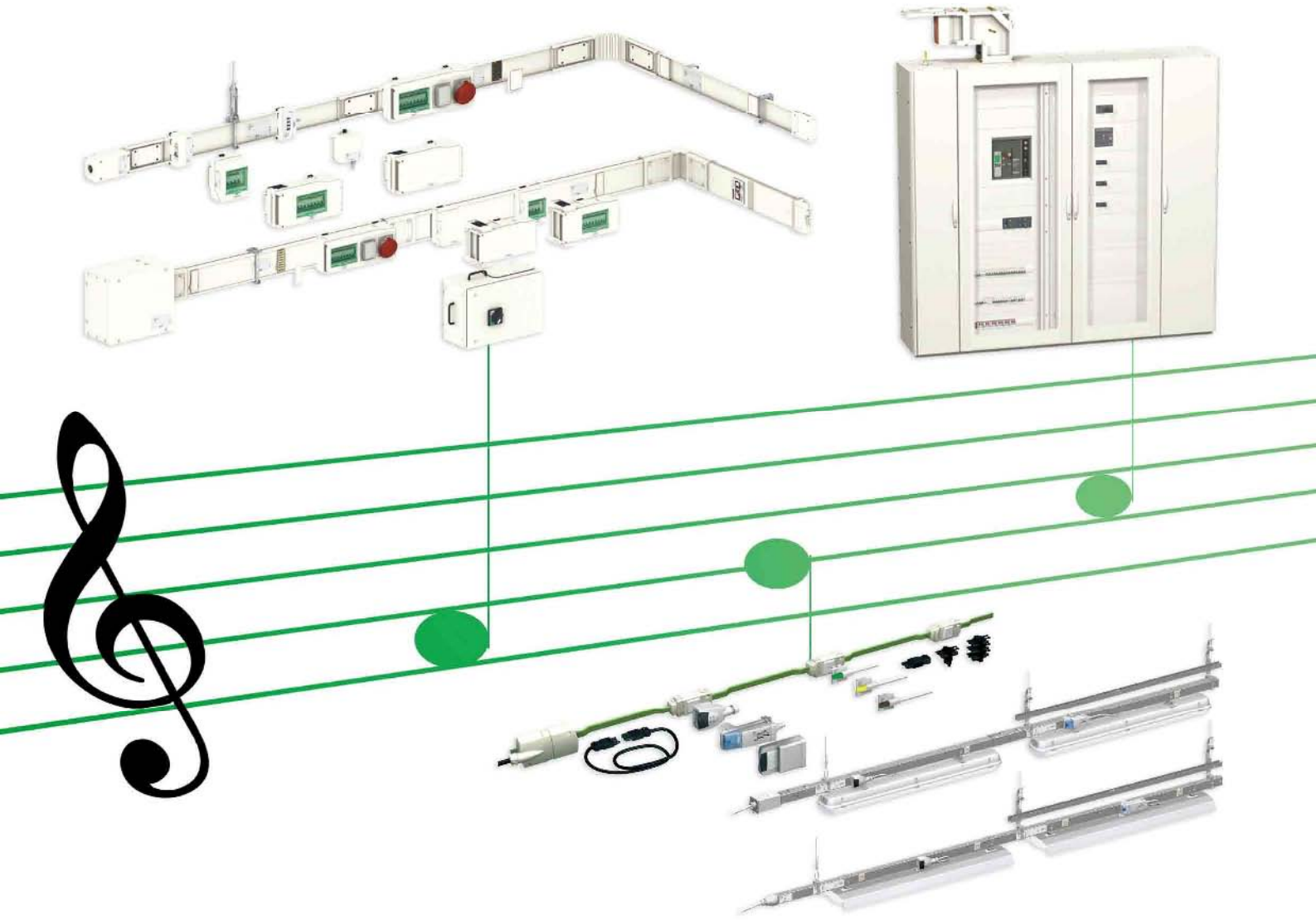
All of these products have been designed to work together: electrical, mechanical and communication compatibility.

The electrical installation is thus both optimised and high-performance.

Optimum system performance is ensured by coordination between the protection circuit breakers and the busway used for decentralised distribution.

Decentralised electrical distribution with total coordination perfectly satisfies all your requirements in terms of safety, continuity of service, upgradeability and simplicity.

Decentralised electrical distribution with total coordination is the ideal solution for a wide range of applications including factories, warehouses, commercial premises and laboratories.



busway system
in all types of buildings

Easier

Coordination
Schneider Electric proposes coordinated busway and circuit breaker combinations for all your applications.

For typical applications with power ratings up to 630 kVA, a solution including the low-voltage electrical switchboard, circuit breakers and Schneider busway ensures an installation sized to handle all short-circuit levels encountered.

Design
With Schneider busway, electrical power is available throughout your installation.

The electrical installation can be designed without knowing the exact location of the equipment to be supplied.

Operation
Schneider opens the door to total upgradeability throughout the installation.

Tap-off units with standard performance circuit breakers can be installed at any point along the busway run, whatever the prospective short-circuit current.

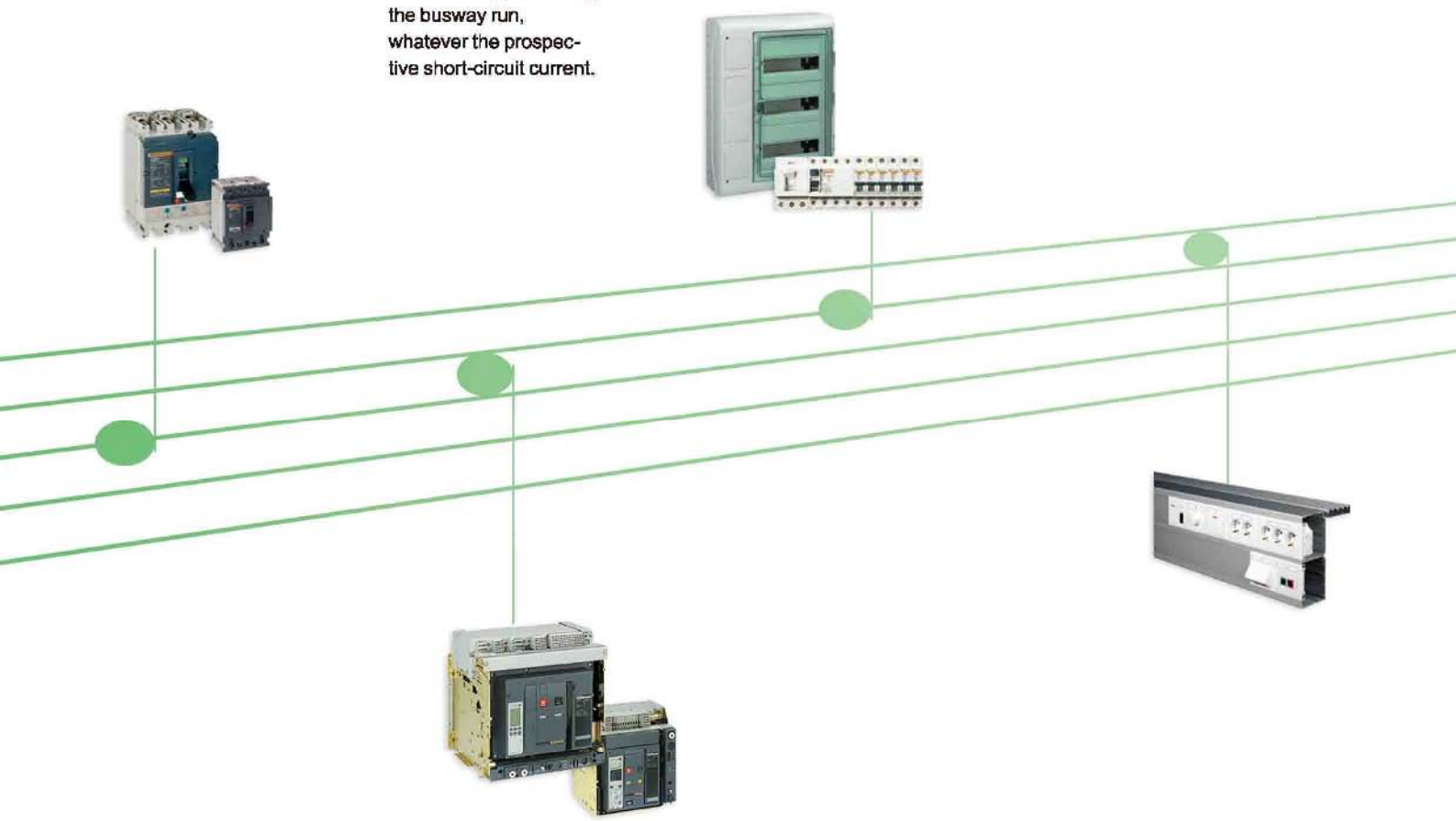
Safer

Decentralised distribution system
When all aspects are coordinated, safety and continuity of service are maximised.
The combination of cascading and discrimination techniques guarantees optimum safety and continuity of service.

Design
Total discrimination for enhanced protection as standard and at a lower cost.

Operation
Any changes to your installation are carried out in complete safety.
Tap-off units can be plugged in and out with the busway live. They are equipped with interlocking systems to prevent incorrect mounting.

Coordination guarantees their installation at any point on the busway system.



In decentralised distribution, Schneider Busway hits the high note!

PD2110024

More than 70,000 km of Schneider busway has been sold around the world.

Schneider Busway on its second world tour

To better meet your needs, Schneider extends its system solutions.
- New low and medium power busbar trunking products.
- Pre-equipped luminaires.
- Strip lighting.

Schneider Busway, closer to you

Manufacturing sites on every continent.

A total coordination with the Schneider Electric system

Schneider Busway is now part of a comprehensive offering of Schneider Electric products designed to operate together. This concept covers all low and medium voltage electrical distribution components. The result is an optimised electrical installation with even higher performance through full electrical, mechanical and communication compatibility.
With the Canalis range, you get a complete, tested distribution solution that complies with standards. It is perfectly suited to traditional applications (factories, warehouses, etc.) and to the distribution of electrical power from the incoming transformer on through to all types of loads in offices, commercial premises, laboratories, etc.

Schneider is evolving to better integrate into your environment

They contribute to improving the working environment, whether in industrial buildings or retail outlets.
Schneider Busway will now quite naturally fit into the Schneider Electric range of electric power distribution products (Prisma Plus, Kaedra, etc.).

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With Schneider Busway, you play all the right notes!

Distribution systems

Schneider Electric offers different distribution systems to fit your operating needs.

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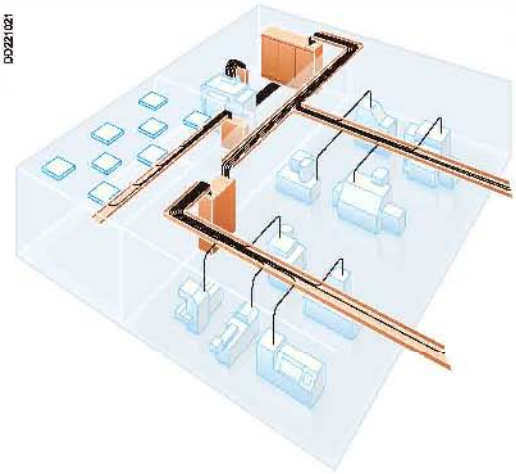


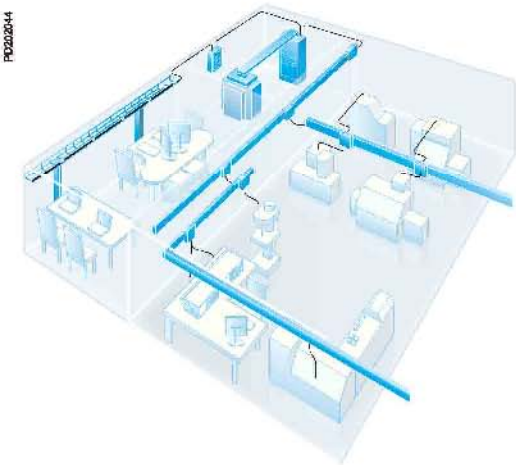
Centralised distribution

- For all continuous processes:
  - cement plants
  - oil and gas
  - petrochemicals
  - steel
  - paper, etc.
- Centralised distribution offers:
  - continuity of service
  - combined distribution of power, control and monitoring circuits
  - supervision, etc.

Our solutions:

- Prisma Plus and Okken switchboards.

PD2202044



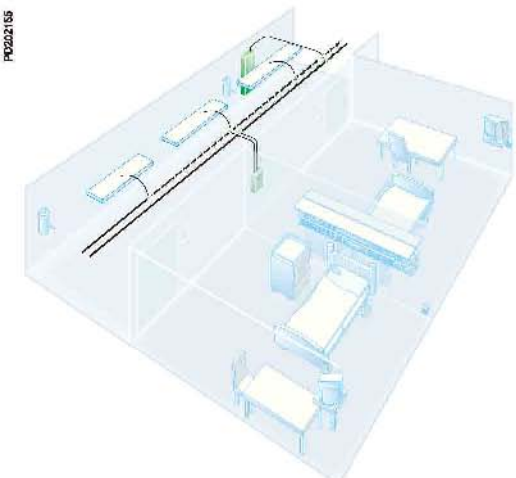
Decentralised distribution

- For manufacturing industries:
- Mechanical
  - textiles
  - lumber
  - injection moulding
  - electronics
  - pharmaceuticals
  - livestock, etc.
- Decentralised distribution lets you:
  - design installations without layout details
  - upgrade without shutting down production
  - get systems up and running sooner thanks to faster installation
  - generate savings depending on the number of loads.

Our solutions:

- Prisma Plus switchboards
- Schneider busway.

PD2202155



Combined distribution

Where the advantages of both centralised and decentralised distribution are required.

- Commercial and service buildings:
  - offices
  - stores
  - hospitals
  - exhibition halls, etc.
  - Infrastructures:
  - airports
  - telecommunications
  - internet data centres
  - tunnels, etc.
  - Industrial facilities:
  - pharmaceuticals
  - food processing, etc.

Our solutions:

- Prisma Plus and Okken switchboards
- Schneider busway.

With Schneider Busway, you play all the right notes!

The Schneider Busway decentralised distribution concept

PD2202373

Electrical power available at all points, throughout the installation.

Exclusive features of the Schneider Electric system

Total coordination of the Schneider Electric system provides maximum safety of life and property, continuity of service, upgradeability and ease of installation.
Product characteristics are checked by calculations and tests carried out in our laboratories.

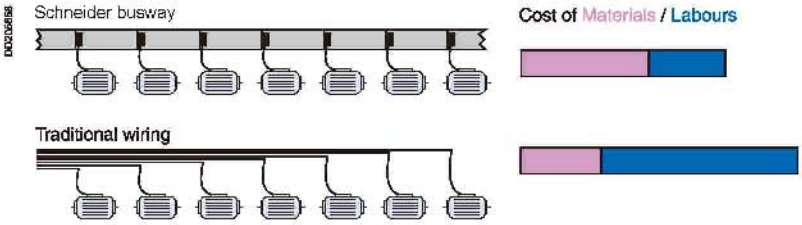
A competitive installation.

Simplicity, upgradeability, safety and continuity of service and operation.

Savings start with installation

With tap-off points every 3 metres, Canalis busbar trunking reduces installation costs.
Given the low cost of adding new circuits, savings increase as the number of loads increases, a natural consequence of the growth of your business.

DD205858



Upgradeable during operation

In decentralised distribution, evolving operating requirements and costs are integrated right from the start.
■ The addition, relocation or replacement of load equipment can be carried out quickly, without de-energising the supply trunking or shutting down operation.
■ The cost of making such changes is greatly reduced:
• loads are located close to supply points
• tap-off points are always available
• tap-units can be reused or new ones added quickly for load relocation or replacement needs.

Reusable in the event of major changes

When making major modifications to your installation, the existing trunking can be easily dismantled and reused.

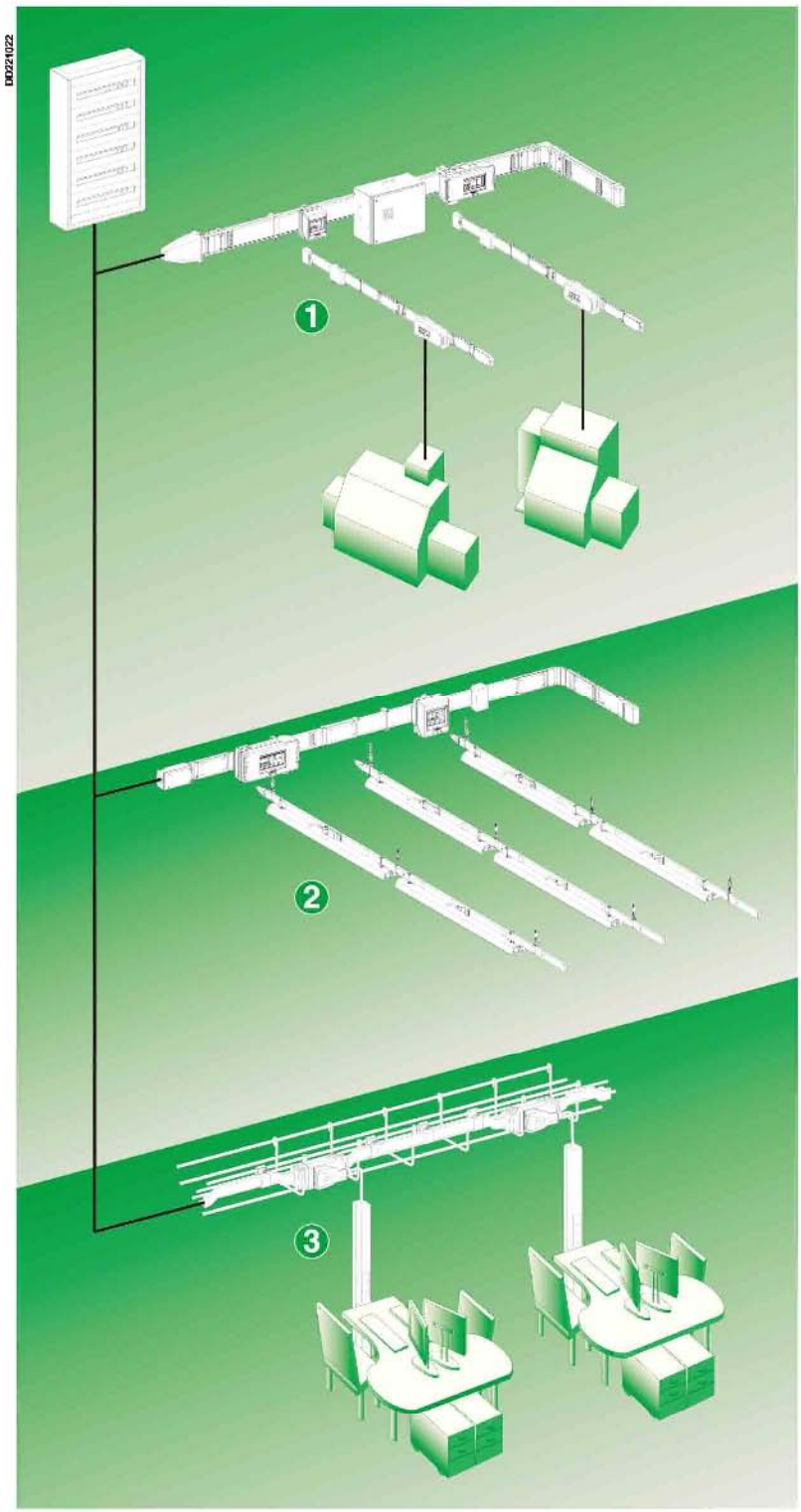
For decentralised distribution in tune with your needs!

Decentralised distribution for small sites

Maximum power available throughout the installation.
The main busway distributes the full power of the source.

Continuity and flexibility
The large number of tap-off points makes it easy to supply new loads.
Anyone can connect and disconnect loads quickly and safely.
These additions or modifications are carried out without shutting down the installation.

Thanks to rational design, the reliability of Schneider busway installations is far less dependent on installation skills.
Schneider busway is an industrial product. Stringent inspection at all stages of production ensures a long service life.



Small sites (buildings < 5000 m²)

1. Medium-power distribution.
2. Low-power distribution.
3. Lighting.

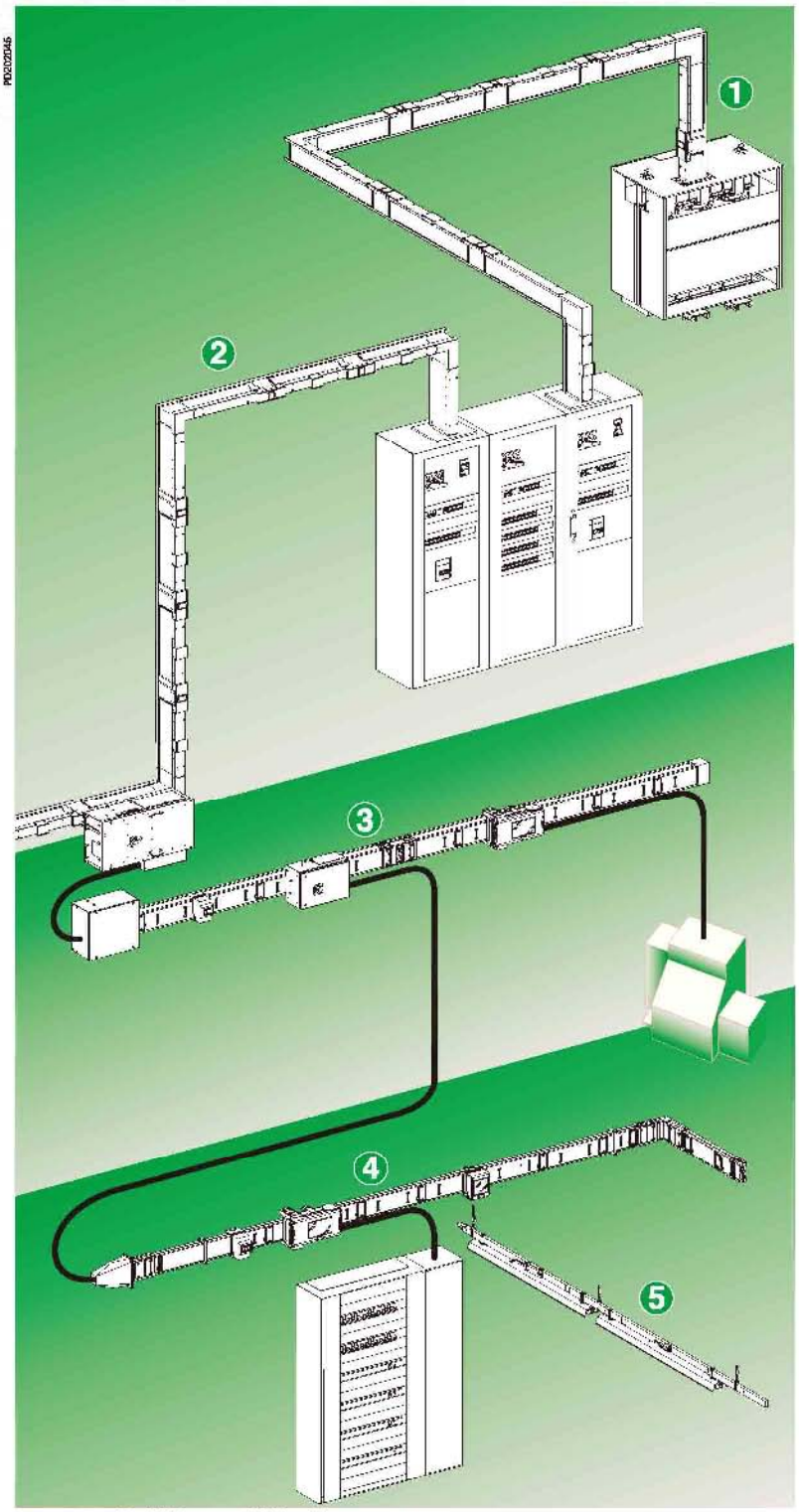
For decentralised distribution in tune with your needs!

Decentralised distribution for large sites

The simplicity of decentralised distribution systems
The distribution system can be designed without detailed knowledge of load locations. Only the source and load characteristics are needed.
Busway is selected in advance with optimum results.

Easy upgrading
Schneider busway can easily adapt to installation modifications or extensions. Simply move an existing tap-off unit or add a new one at the desired location.

Total safety
Tap-units can be connected and disconnected without de-energising the trunking.
Changes can therefore be made safely on live installations:
- Protection against direct contact
- Mismatch prevention for tap-off units and automatic compatibility between the performance levels of tap-units equipped with circuit breakers and the prospective short-circuit current at the point of installation.



Large sites (buildings > 5000 m²)
1. Transformer to low-voltage switchboard supply.
2. High-power distribution.
3. Medium-power distribution.
4. Low-power distribution.
5. Lighting.

Schneider busway , in total harmony with the environment!

Safety of life and property

Example:
Consequences of a fire in a 100 m² office with electrical distribution by cables.
200 kg of cables (i.e. 20 kg of PVC) produces:
- 4400 m³ of smoke
- 7.5 m³ of hydrochloric acid
- 3.7 kg of corroded steel.

With Schneider busway, no toxic emission in case of fire
Schneider busway is halogen-free.

Halogen-sensitive applications

- Public buildings (infrastructures, hospitals, schools, etc.).
- Buildings with evacuation difficulties (high-rises, ships, etc.) and service-activity buildings.
- Sensitive processes (production of electronic components, etc.).

Schneider busway contains no PVCs

When PVCs burn, they produce large amounts of smoke that can be a serious safety hazard.
- Reduced visibility:
  - risk of panic
  - complicates rescue work
- Smoke toxicity:
  - hydrogen chloride gas (highly toxic)
  - carbon monoxide (danger of asphyxiation).

Health

Schneider busway reduces the risk of exposure to electromagnetic fields

According to the WHO (World Health Organisation), exposure to electromagnetic fields can be a health hazard starting at levels as low as 0.2 micro-Teslas and could represent a long-term risk of cancer. Some countries have created standards that stipulate limits (e.g. 0.2 µT at 1 metre in Sweden).

All electrical conductors generate magnetic fields proportional to the distance between them. The design of Schneider busway with tightly spaced conductors in a metal enclosure helps to considerably reduce radiated electromagnetic fields.

The electromagnetic field characteristics of Schneider busway are well-defined and measurements show that they are far below potentially dangerous levels.

Schneider busway, in total harmony with the environment!

DD206573

Environment

Example:
1 kg of PVC generates 1 kg of waste.

Schneider busway is fully recyclable

■ Schneider busway can be reused.
Schneider busway is designed for a long service life and can easily be dismantled, cleaned and reused.

■ All packaging materials can be recycled (cardboard or recyclable polyethylene film).

■ All Schneider products are designed for safe end-of-life recycling. PVC, on the other hand, requires neutralisation of the hydrochloric acid produced using lime and generates dioxins that are extremely toxic.

Schneider busway helps conserve natural resources

The depletion of raw materials (copper, plastics, etc.) is one of our ongoing concerns. For this reason, we have optimised the used of all materials used to make our busbar trunking.

■ Reduction of dangerous or polluting materials. We design our products to meet future European directives.

■ Reduction in the weight of insulating materials.

■ Reduction in the use of plastics for improved fire performance: less energy released during combustion, thereby limiting propagation and facilitating extinction (lower calorific value).

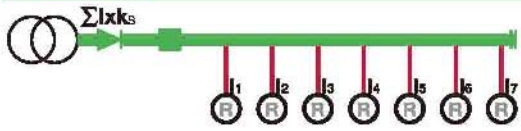
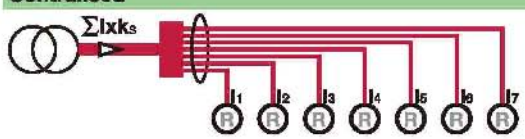
Conservation of natural resources

Schneider busway reduces your line losses by 20 %
Schneider busway divides your consumption of plastic by a factor of four

The cost of an electrical installation includes the initial investment for the equipment and its installation, the cost of maintenance and the cost of energy losses during operation.
The concept of decentralised distribution is a way to merge all the circuits in one and thus to reduce to the maximum the low cross-section lengths and the weight of insulating materials.

Example:
34 m of **250 A** busway equipped with 14-pole 25 A feeders.

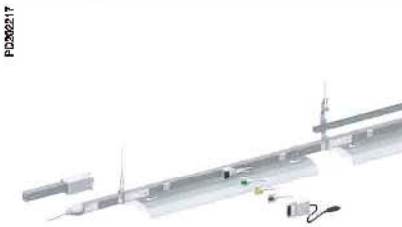
DD206596

Type of distribution	Insulation	Consumption
Decentralised		
	 23 kg	 1600 Joules
k_s: diversity coefficient = 0.6		
Centralised		
	 90 kg	 2000 Joules
k_s: diversity coefficient = 0.6		

Canalis, fortissimo throughout the range!

Panorama of Canalis lighting solutions

Lighting distribution

Range	Canalis KDP	Canalis KBA
		
Run components		
Degree of protection	IP55	IP55
Number of circuits	1	1
Rating	20 A	25 and 40 A
Tap-off intervals	1200 - 1350 - 1500 - 2400 - 2700 - 3000 mm	500 - 1000 - 1500 mm
Standard lengths	24 and 192 meters	2 and 3 meters
Finish	-	Galvanised steel
Maximum distance between fixing points	0.7 meter	3 meters
Tap-off units		
		
Rating	10 and 16 A	10 and 16 A

Canalis, fortissimo throughout the range!

Canalis KBB

PD2022218

IP55
1 or 2
25 and 40 A
500 and 1000 mm
2 and 3 meters
Galvanised steel
5 meters

PD2012226

10 and 16 A

Canalis, fortissimo throughout the range!

Panorama of Canalis medium power solutions

Power distribution

Range	Canalis KS

Run components	
Degree of protection	IP52/IP54
Polarity	3L + N + PE
Rating	100, 160, 250, 400, 500, 630, 800A
Tap-off intervals	500mm
Standard lengths	1.5/2/3 meters
Finish	
Maximum distance between fixing points	3 meters

Tap-off units

Rating	Plug-in	25 to 400 A
	Bolt-on	-

Canalis, fortissimo throughout the range!

Canalis KS rising mains

PD2002223

	IP52/IP54
	3L + N + PE
	100, 250, 400, 500, 630, 800A
	500 mm
	1.5/2/3 meters
	Depending on the distance between floors

PD2002214

	25 to 400 A
	-

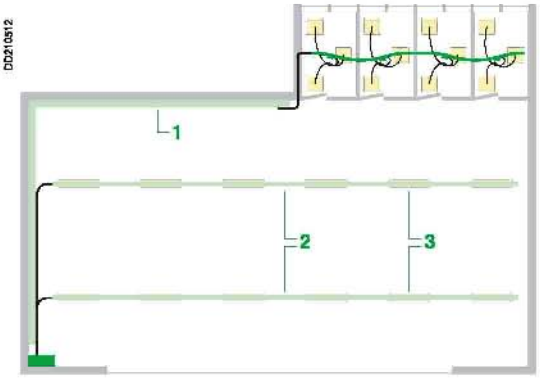
Canalis, an installation that matches your inspiration!

Where to use Canalis

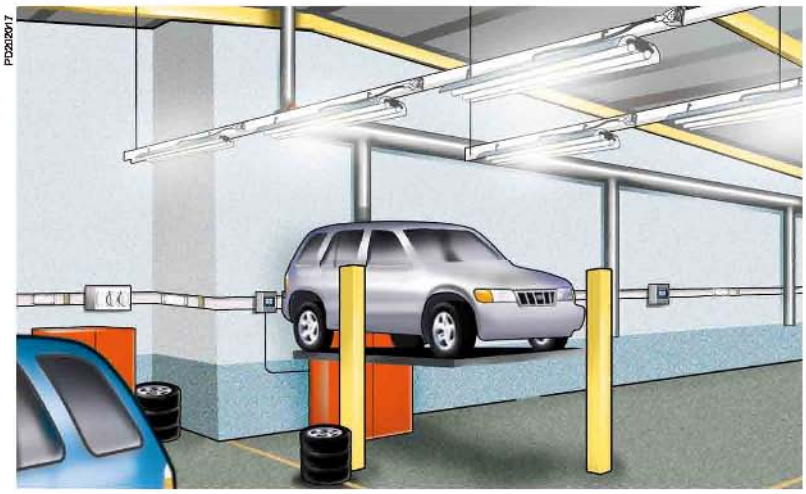
Canalis in workshops and factories

In a garage

Characteristics of the garage:
- Area 300 m² (20 x 15 m)
- Loads:
  - 3 car lifts
  - 1 compressor
  - 1 wheel balancing machine
  - portable tools
  - fluorescent lighting.



Prisma Plus System G electrical distribution switchboard



Canalis products installed:
- For power distribution:

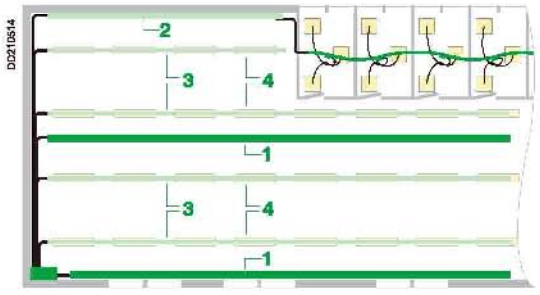
(1) 1 KS run, 30 m long, wall-mounted, with 10 single-phase tap-off units, 3 three-phase tap-off units and 5 power socket units.
- For lighting:

(2) 2 KBA lighting runs, 18 m long, each equipped with (3) Industrial luminaires (2 x 58 W).

Like your workshop, modernise your electrical installation.

In a plastics factory

Characteristics of the factory:
- Area 1500 m² (50 x 30 m)
- Loads:
  - 30 plastic injection presses
  - fluorescent lighting.



Prisma Plus System G electrical distribution switchboard

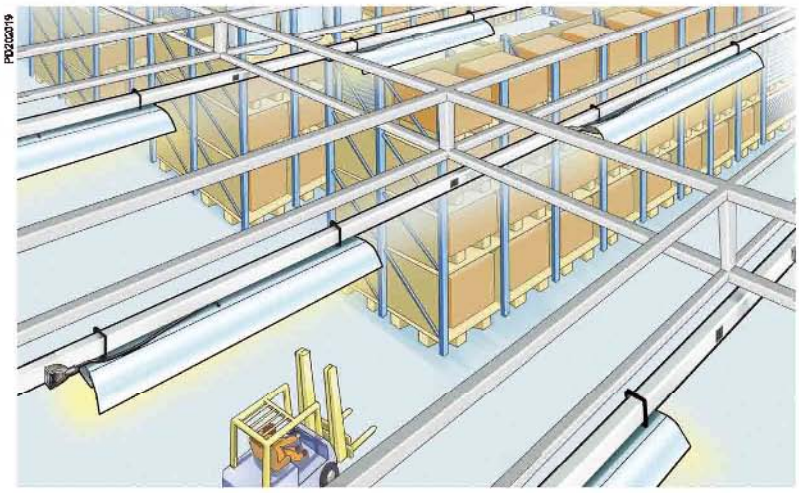
Canalis products installed:
- For power distribution:
  - (1) 2 KS 400 A runs, 48 m long, equipped with cable trays, 15 x 50 A tap-off units and 4 x 100 A tap-off units
  - (2) 1 KS 100 A run, 24 m long, equipped with 5 x 16 A tap-off units and 1 x 25 A tap-off unit
- For lighting:

(3) 3 KBA lighting runs, 3 x 48 m and 1 x 21 m long to supply
(4) 48 KBL industrial luminaires (2 x 58 W).

Electricity where you need it.

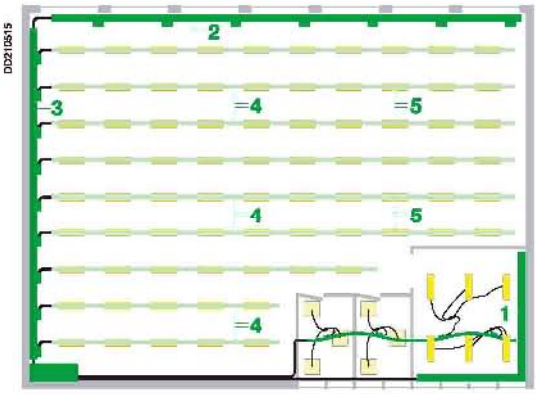
Schneider Electric

Canalis, an installation that matches your inspiration!



Canalis in warehouses

Characteristics of the warehouse:
- Area 4800 m² (60 x 80 m)
- Loads:
  - automatic doors
  - battery chargers for forklifts
  - T5 fluorescent lighting (2 x 80 W).



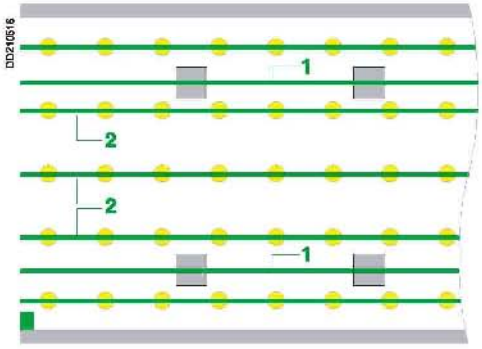
Prisma Plus System G electrical distribution switchboard

Canalis products installed:
- For power distribution:
  - (1) 1 KS 160 A run, 15 m long, to supply the battery chargers
  - (2) 1 KS 63 A run, 75 m long, to supply the automatic doors
- For lighting:
  - (3) 1 KS run, 57 m long, to supply the lighting circuits
  - (4) 9 KBA 25 A runs, 6 x 75 m long, 1 x 42 m long and 2 x 29 m long, to supply
  - (5) 90 T5 2 x 80 W luminaires.

Even with few lighting points, Canalis is competitive.

Canalis in egg-laying facilities

Characteristics of the building:
- Area 3000 m² (150 x 20 m).
- Loads:
  - 60 air extractors
  - lighting by 40 W incandescent light bulbs.



Prisma Plus System G electrical distribution switchboard

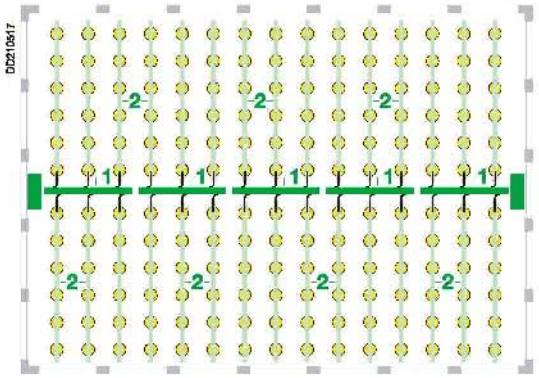
Canalis products installed:
- For power distribution:
  (1) 2 KDP 20 A runs, 148 m long, equipped with 60 x 10 A tap-off units to supply the air extractors
- For lighting:
  (2) 5 KDP lighting runs, 148 m long, with 300 x 10 A tap-off units to supply 300 x 40 W incandescent light bulbs.

Canalis is fully sealed and easy to install.

Canalis, an installation that matches your inspiration!

Canalis in a greenhouse

Characteristics of the building:
- Area 15000 m² (150 x 100 m)
- Loads:
  - lighting by 600 W horticultural lamps
  - rolling shutters.



Prisma Plus System G electrical distribution switchboard

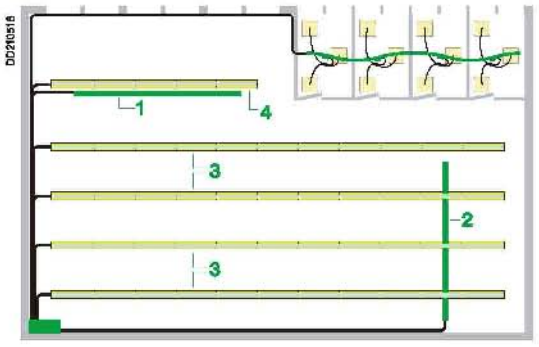
KBB Canalis is strong: only 1 fixing point is needed every 5 metres

Canalis products installed:
- For power distribution:

(1) 5 KS 250 A runs, 30 m long, installed as feeders to supply the lighting circuits
- For lighting:
  - (2) 30 two-circuit KBB runs, 21 m long, for 180 luminaires equipped with 600 W bulbs
  - 30 KDP runs, 15 m long, to supply the rolling shutters.

Canalis in a supermarket

Characteristics of the building:
- Area 600 m² (30 x 20 m)
- Loads:
  - refrigerated display cases and cash registers
  - fluorescent lighting.



Prisma Plus System G electrical distribution switchboard

Canalis lights up your business.

Canalis products installed:
- For power distribution:

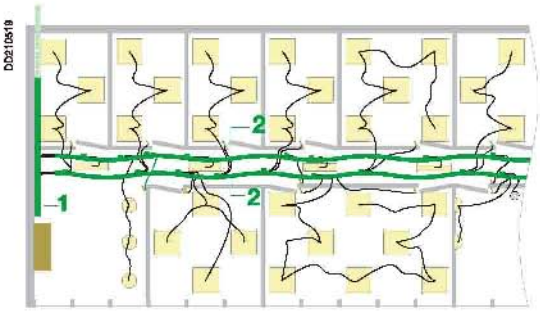
(1)(2) 2 KBA 25 A runs, 12 m long, to supply the cash registers and refrigerated display cases
- For lighting:
  - (3) 25 m of 2 x 58 W strip lighting run for the store
  - (4) 12 m of 2 x 58 W strip lighting run for the cash registers.

Canalis, an installation that matches your inspiration!

Canalis in offices

In a partitioned office

Characteristics of the office:
- Area 1000 m² (40 x 25 m)
- Loads:
- •



Prisma Plus System G electrical distribution switchboard

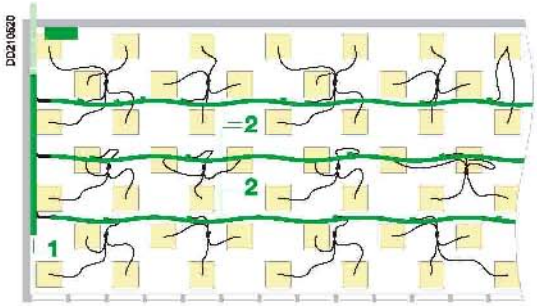
Canalis products installed:
- For power distribution:

(1) 2 KS 100 A runs, 21 m long, installed as feeders to supply the lighting circuits
- For lighting:
- (2) 4 KDP runs, 21 m long, to supply the 180 3 x 36 W luminaires
- 7 KBC single-switch units for the offices
- 1 KBC two-way switch unit for the meeting room
- 3 timer switch units for the entrance, washrooms and hall.

Canalis for easy layout modifications.

In an open-plan office

Characteristics of the office:
- Area 1000 m² (40 x 25 m)
- Loads:
- power: supply to power sockets and VDI network
- fluorescent lighting (3 x 36 W).



Prisma Plus System G electrical distribution switchboard

Canalis products installed:
- For power distribution:

(1) 2 KS 100 A runs, 21 m long, installed as feeders to supply the lighting circuits
- For lighting:

(2) 4 KDP runs, 21 m long, to supply the 180 3 x 36 W luminaires.

Electricity where you need it.

Canalis KDP, 20 A
Busbar trunking for lighting and power socket distribution

Run component characteristics

Rating of trunking (A)				KDP	20
General characteristics					
Compliance with standards					IEC/EN 60439-2
Degree of protection:				IP	55
Mechanical impacts				IK	07
Rated current at an ambient temperature of 35°C				I_{nc}	A 20
Rated insulation voltage				U_i	V 690
Rated operational voltage				U_e	V 230...400
Rated impulse voltage				U_{imp}	kV 4
Rated frequency				f	Hz 50/60
Conductor characteristics					
Phase conductors					
Mean resistance at an ambient temperature of 20°C				R_{20}	mΩ/m 6.80
Mean resistance at I_{nc} and 35°C				R_1	mΩ/m 8.30
Mean reactance at I_{nc}, 35°C and 50 Hz				X_1	mΩ/m 0.02
Mean impedance at I_{nc}, 35°C and 50 Hz				Z_1	mΩ/m 8.30
Protective conductor (PE)					
Mean resistance at an ambient temperature of 20°C					mΩ/m 7.25
Fault loop characteristics					
Symmetrical components method	Ph/N at 20°C	Mean resistance		$R_{0\ ph/N}$	mΩ/m 27.21
		Mean reactance		$X_{0\ ph/N}$	mΩ/m 0.85
		Mean impedance		$Z_{0\ ph/N}$	mΩ/m 27.22
	Ph/PE at 20°C	Mean resistance		$R_{0\ ph/PE}$	mΩ/m 27.21
		Mean reactance		$X_{0\ ph/PE}$	mΩ/m 0.85
		Mean impedance		$Z_{0\ ph/PE}$	mΩ/m 27.22
Impedance method	At 20°C	Mean resistance	Ph/Ph	$R_{b0\ ph/ph}$	mΩ/m 13.61
			Ph/N	$R_{b0\ ph/N}$	mΩ/m 13.61
			Ph/PE	$R_{b0\ ph/PE}$	mΩ/m 13.61
	For I_{nc} at 35°C	Mean resistance	Ph/Ph	$R_{b1\ ph/ph}$	mΩ/m 16.60
			Ph/N	$R_{b1\ ph/N}$	mΩ/m 16.60
			Ph/PE	$R_{b1\ ph/PE}$	mΩ/m 16.60
	For Inc at 35°C and 50 Hz	Mean reactance	Ph/Ph	$X_{b\ ph/ph}$	mΩ/m 0.04
			Ph/N	$X_{b\ ph/N}$	mΩ/m 0.04
			Ph/PE	$X_{b\ ph/PE}$	mΩ/m 0.04
Other characteristics					
Short-circuit withstand capacity					
Rated peak withstand current				I_{pk}	kA 3.6
Maximum thermal limit I^2t					A^2s $120x10^3$
Rated short-time withstand current (t = 1 s)				I_{cw}	kA 0.34
Voltage drop					
					Composite voltage drop (hot state) expressed in V/100 m/A (50 Hz) with the load uniformly distributed over the run. If the load is concentrated at one end of the run, the voltage drop is twice the value indicated in the table.
For a power factor of				1	V/100 m/A 0.72
				0.9	V/100 m/A 0.65
				0.8	V/100 m/A 0.58
				0.7	V/100 m/A 0.50
					This table is given for three-phases network. The single phase voltage drop is obtained by dividing the three-phase voltage drop indicated below by 0.866
Radiated magnetic field					
Radiated magnetic field strength 1 metre from the trunking				B	µT $< 2x10^{-3}$
Product selection when harmonics are present (for details, see the "Special Applications" section)					
Operational current as a function of 3rd-order harmonic content				THD ≤ 15%	20
				15% < THD ≤ 33%	16
				THD > 33%	14

Permissible current as a function of ambient temperature								
Ambient temperature	°C	< 35	35	40	45	50	55
Coefficient K1	%	n/a	1	0.93	0.85	0.76	0.66

Run component characteristics

Rating of trunking (A)			KBA	25	40
General characteristics					
Compliance with standards				IEC/EN 60439-2	IEC/EN 60439-2
Degree of protection:	IP			55	55
Mechanical impacts	IK			06	06
Number of live conductors				2 or 4	2 or 4
Rated current at an ambient temperature of 35°C	I_{nc}		A	25	40
Rated insulation voltage	U_i		V	690	690
Rated operational voltage	U_e		V	230...400	230...400
Rated impulse voltage	U_{imp}		kV	4	4
Rated frequency	f		Hz	50/60	50/60
Conductor characteristics					
Phase conductors					
Mean resistance at an ambient temperature of 20°C	R_{20}		mΩ/m	6.80	2.83
Mean resistance at I_{nc} and 35°C	R_1		mΩ/m	8.30	3.46
Mean reactance at I_{nc}, 35°C and 50 Hz	X_1		mΩ/m	0.02	0.02
Mean impedance at I_{nc}, 35°C and 50 Hz	Z_1		mΩ/m	8.33	3.46
Protective conductor (PE)					
Mean resistance at an ambient temperature of 20°C			mΩ/m	1.57	1.57
Fault loop characteristics					
Symmetrical components method — Ph/N at 20°C	Mean resistance		$R_{0\ ph/N}$	mΩ/m	27.21	19.40
	Mean reactance		$X_{0\ ph/N}$	mΩ/m	0.85	0.38
	Mean impedance		$Z_{0\ ph/N}$	mΩ/m	27.22	19.41
Ph/PE at 20°C	Mean resistance		$R_{0\ ph/PE}$	mΩ/m	19.40	13.83
	Mean reactance		$X_{0\ ph/PE}$	mΩ/m	0.38	0.73
	Mean impedance		$Z_{0\ ph/PE}$	mΩ/m	19.41	13.85
Impedance method — At 20°C	Mean resistance	Ph/Ph	$R_{b0\ ph/ph}$	mΩ/m	13.61	5.68
		Ph/N	$R_{b0\ ph/N}$	mΩ/m	13.61	5.68
		Ph/PE	$R_{b0\ ph/PE}$	mΩ/m	11.01	7.66
For I_{nc} at 35°C	Mean resistance	Ph/Ph	$R_{b1\ ph/ph}$	mΩ/m	16.60	6.91
		Ph/N	$R_{b1\ ph/N}$	mΩ/m	16.60	6.91
		Ph/PE	$R_{b1\ ph/PE}$	mΩ/m	12.50	8.70
For I_{nc} at 35°C and 50 Hz	Mean reactance	Ph/Ph	$X_{b\ ph/ph}$	mΩ/m	0.04	0.90
		Ph/N	$X_{b\ ph/N}$	mΩ/m	0.04	0.90
		Ph/PE	$X_{b\ ph/PE}$	mΩ/m	0.035	0.035
Other characteristics					
Short-circuit withstand capacity					
Rated peak withstand current	I_{pk}		kA	4.40	9.60
Maximum thermal limit I^2t			A^2s	$195x10^3$	$900x10^3$
Rated short-time withstand current (t = 1 s)	I_{cw}		kA	0.44	0.94
Voltage drop					
	Composite voltage drop (hot state) expressed in V/100 m/A (50 Hz) with the load uniformly distributed over the run. If the load is concentrated at one end of the run, the voltage drop is twice the value indicated in the table.				
For a power factor of	1		V/100 m/A	0.72	0.30
	0.9		V/100 m/A	0.67	0.28
	0.8		V/100 m/A	0.61	0.25
	0.7		V/100 m/A	0.54	0.22
	This table is given for three-phases network. The single phase voltage drop is obtained by dividing the three-phase voltage drop indicated below by 0.866				
Radiated magnetic field					
Radiated magnetic field strength 1 metre from the trunking	B		µT	$< 2x10^{-3}$	$< 2x10^{-3}$
Product selection when harmonics are present (for details, see the "Special Applications" section)					
Operational current as a function of 3rd harmonic content	THD≤15%			25	40
	15% < THD≤33%			20	32
	THD > 33%			16	28

Permissible current as a function of ambient temperature								
Ambient temperature	°C	< 35	35	40	45	50	55
Coefficient K1	%	n/a	1	0.96	0.93	0.89	0.85

Run component characteristics

Rating of trunking (A)			KBB	25			40		
General characteristics									
Compliance with standards				IEC/EN 60439-2			IEC/EN 60439-2		
Degree of protection:			IP	55			55		
Mechanical impacts			IK	06			06		
Number of live conductors				2 or 4	4 + 2	4 + 4	2 or 4	4 + 2	4 + 4
Number of circuits				1	2	2	1	2	2
Rated current at an ambient temperature of 35°C			I_{nc}	A	25	25	20	40	40	32
Rated insulation voltage			U_i	V	690			690		
Rated operational voltage			U_e	V	230...400			230...400		
Rated impulse voltage			U_{imp}	kV	4			4		
Rated frequency			f	Hz	50/60			50/60		
Conductor characteristics									
Phase conductors									
Mean resistance at an ambient temperature of 20°C			R_{20}	mΩ/m	6.80			2.83		
Mean resistance at I_{nc} and 35°C			R_1	mΩ/m	8.30			3.46		
Mean reactance at I_{nc}, 35°C and 50 Hz			X_1	mΩ/m	0.02			0.02		
Mean impedance at I_{nc}, 35°C and 50 Hz			Z_1	mΩ/m	8.33			3.46		
Protective conductor (PE)									
Mean resistance at an ambient temperature of 20°C				mΩ/m	0.80			0.80		
Fault loop characteristics									
Symmetrical components method	Ph/N at 20°C	Mean resistance	$R_{0\ ph/N}$	mΩ/m	27.21			17.28		
		Mean reactance	$X_{0\ ph/N}$	mΩ/m	0.85			5.25		
		Mean impedance	$Z_{0\ ph/N}$	mΩ/m	27.22			18.06		
	Ph/PE at 20°C	Mean resistance	$R_{0\ ph/PE}$	mΩ/m	17.28			13.83		
		Mean reactance	$X_{0\ ph/PE}$	mΩ/m	5.25			0.73		
		Mean impedance	$Z_{0\ ph/PE}$	mΩ/m	18.06			13.85		
Impedance method	At 20°C	Mean resistance Ph/Ph	$R_{b0\ ph/ph}$	mΩ/m	13.61			5.68		
		Ph/N	$R_{b0\ ph/N}$	mΩ/m	13.61			5.68		
		Ph/PE	$R_{b0\ ph/PE}$	mΩ/m	10.26			6.92		
	For I_{nc} at 35°C	Mean resistance Ph/Ph	$R_{b1\ ph/ph}$	mΩ/m	16.59			6.92		
		Ph/N	$R_{b1\ ph/N}$	mΩ/m	16.59			6.92		
		Ph/PE	$R_{b1\ ph/PE}$	mΩ/m	11.77			7.14		
	For Inc at 35°C and 50 Hz	Mean reactance Ph/Ph	$X_{b\ ph/ph}$	mΩ/m	0.35			0.90		
		Ph/N	$X_{b\ ph/N}$	mΩ/m	0.35			0.90		
		Ph/PE	$X_{b\ ph/PE}$	mΩ/m	0.07			1.85		
Other characteristics									
Short-circuit withstand capacity									
Rated peak withstand current			I_{pk}	kA	4.40			9.60		
Maximum thermal limit I^2t				A^2s	$195x10^3$			$900x10^3$		
Rated short-time withstand current (t = 1 s)			I_{cw}	kA	0.44			0.94		
Voltage drop									
					Composite voltage drop (hot state) expressed in V/100 m/A (50 Hz) with the load uniformly distributed over the run. If the load is concentrated at one end of the run, the voltage drop is twice the value indicated in the table.					
For a power factor of			1	V/100 m/A	0.72			0.30		
			0.9	V/100 m/A	0.67			0.28		
			0.8	V/100 m/A	0.61			0.25		
			0.7	V/100 m/A	0.55			0.22		
					This table is given for three-phases network. The single phase voltage drop is obtained by dividing the three-phase voltage drop indicated below by 0.866					
Radiated magnetic field									
Radiated magnetic field strength 1 metre from the trunking			B	µT	$< 2x10^{-3}$			$< 2x10^{-3}$		
Product selection when harmonics are present (for details, see the "Special Applications" section)									
Operational current as a function of 3rd harmonic content			THD ≤ 15%		25			40		
			15% < THD ≤ 33%		20			32		
			THD > 33%		16			28		
Permissible current as a function of ambient temperature										
Ambient temperature				°C	< 35	35	40	45	50	55
Coefficient K1				%	n/a	1	0.96	0.93	0.89	0.85

IP55
Ue = 230...400 V

Tap-off unit characteristics

Type of tap-off unit			KBC 10	KBC 16DCB	KBC 16DCF
General characteristics					
Compliance with standards			IEC/EN 60439-2		
Degree of protection:	IP		55	55	55
Rated current at an ambient temperature of 35°C	I_{nc}	A	10	16	16
Rated insulation voltage	U_i	V	690	690	400
Rated operational voltage	U_e	V	230...400	230...400	230...400
Rated frequency	f	Hz	50/60	50/60	50/60

Canalis KSA, 100 to 800 A
Busbar trunking for medium-power distribution

Run component characteristics

Rating of trunking (A)		KSA	100	160	250	400	500	630	800
General characteristics									
Compliance with standards			IEC/EN 60439-1/2						
Mechanical impacts	IK		08	08	08	08	08	08	08
Rated current at an ambient temperature of 35°C	I_{nc}	A	100	160	250	400	500	630	800
Rated insulation voltage	U_i	V	690	690	690	690	690	690	690
Rated operational voltage	U_e	V	690	690	690	690	690	690	690
Rated frequency	f	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Conductor characteristics									
Phase conductors									
Mean resistance at an ambient temperature of 20°C	R_{20}	mΩ/m	1.059	0.490	0.206	0.142	0.091	0.074	0.045
Mean resistance at I_{nc} and 35°C	R_1	mΩ/m	1.395	0.661	0.294	0.190	0.123	0.101	0.061
Mean reactance at I_{nc}, 35°C and 50 Hz	X_1	mΩ/m	0.457	0.233	0.192	0.112	0.110	0.070	0.071
Protective conductor (PE)									
Mean resistance at an ambient temperature of 20°C		mΩ/m	0.279	0.216	0.216	0.105	0.105	0.061	0.061
Fault loop characteristics									
Between live conductor	Rb1 ph ph	mΩ/m	2.790	1.322	0.588	0.380	0.247	0.202	0.122
Average resistance of loop (thermal stabilisation temp .θ1)	ph ph	mΩ/m	2.790	1.322	0.588	0.380	0.247	0.202	0.122
	ph PEN	mΩ/m	1.632	0.842	0.431	2.261	0.182	0.141	0.093
Average resistance of loop (short - circuit convertional temp.)	Rb2 ph ph	mΩ/m	3.303	1.565	0.696	0.450	0.291	0.239	0.144
	ph ph	mΩ/m	3.303	1.565	0.696	0.450	0.291	0.239	0.144
	ph PEN	mΩ/m	1.951	1.005	0.512	0.311	0.217	0.169	0.110
Average reactance of loop	Xb ph ph	mΩ/m	0.937	0.505	0.393	0.252	0.252	0.154	0.148
	ph N	mΩ/m	0.739	0.505	0.457	0.292	0.295	0.197	0.190
	ph PEN	mΩ/m	0.559	0.287	0.282	0.212	0.211	0.143	0.140
Between live conductor and PE Average resistance of loop (thermal stabilisation temp .θ1)	Rb1 ph PE	mΩ/m	1.681	0.911	0.549	0.304	0.238	0.167	0.128
Average resistance of loop (short circuit convertional temp.)	Rb2 ph PE	mΩ/m	2.017	1.094	0.659	0.365	0.285	0.201	0.153
Average reactance of loop	Xb ph PE	mΩ/m	0.605	0.292	0.323	0.303	0.295	0.225	0.226
Other characteristics									
Short - circuit withstand capacity	Icw	kA	2.6	4.5	10.0	18.8	27.1	32.1	37.4
Short- circuit rated peak current	Ipk	kA	3.9	6.8	17.0	39.5	56.9	67.4	78.5
Degree of protection	IP52	In normal mounting position, horizontal, edgewiseinstallation. Option IP54							
	IP50	Other positions: horizontal Installation, flat, vertical Installation. Option IP50							
Voltage drop	3phase50Hz with load distrbuted along the run. If the load is concentrated at the end of the run, the voltage drop are twice the values the table.								
	Cos. φ = 1,0	V/100 m/A	0.12081	0.05724	0.02546	0.01645	0.01065	0.00875	0.00528
	Cos. φ = 0,9	V/100 m/A	0.12598	0.06031	0.03016	0.01904	0.01397	0.01051	0.00743
	Cos. φ = 0,8	V/100 m/A	0.12039	0.05790	0.03034	0.01898	0.01455	0.01063	0.00792
	Cos. φ = 0,7	V/100 m/A	0.11283	0.05448	0.02970	0.01844	0.01463	0.01045	0.00805
Derating / uprating factor Determination of permissible Lz according to ambient temperature	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C
	1.11	1.08	1.06	1.03	1.00	0.97	0.94	0.91	0.87

Run component characteristics

Rating of trunking (A)		KSC	100	160	250	400	500	630	800
General characteristics									
Compliance with standards			IEC/EN 60439-1/2						
Mechanical impacts	IK		08	08	08	08	08	08	08
Rated current at an ambient temperature of 35°C	I_{nc}	A	100	160	250	400	500	630	800
Rated insulation voltage	U_i	V	690	690	690	690	690	690	690
Rated operational voltage	U_e	V	690	690	690	690	690	690	690
Rated frequency	f	Hz	50/60	50/60	50/60	50/60	50/60	50/60	50/60
Conductor characteristics									
Phase conductors									
Mean resistance at an ambient temperature of 20°C	R_{20}	mΩ/m	0.972	0.625	0.206	0.118	0.054	0.067	0.029
Mean resistance at I_{nc} and 35°C	R_1	mΩ/m	1.224	0.854	0.275	0.154	0.071	0.090	0.039
Mean reactance at I_{nc}, 35°C and 50 Hz	X_1	mΩ/m	0.457	0.233	0.192	0.112	0.116	0.070	0.071
Protective conductor (PE)									
Mean resistance at an ambient temperature of 20°C		mΩ/m	0.273	0.243	0.243	0.105	0.105	0.061	0.061
Fault loop characteristics									
Between live conductor	Rb1 ph ph	mΩ/m	2.448	1.708	0.550	0.307	0.142	0.180	0.077
Average resistance of loop (thermal stabilisation temp .θ1)	ph ph	mΩ/m	2.448	1.708	0.550	0.307	0.142	0.180	0.077
	ph PEN	mΩ/m	1.458	1.052	0.408	0.218	0.115	0.128	0.063
Average resistance of loop (short - circuit convertional temp.)	Rb2 ph ph	mΩ/m	2.938	2.050	0.661	0.369	0.171	0.216	0.092
	ph ph	mΩ/m	2.938	2.050	0.661	0.369	0.171	0.216	0.092
	ph PEN	mΩ/m	1.750	1.262	0.490	0.262	0.138	0.153	0.075
Average reactance of loop	Xb ph ph	mΩ/m	0.937	0.505	0.393	0.252	0.252	0.154	0.148
	ph N	mΩ/m	0.739	0.505	0.457	0.292	0.295	0.197	0.190
	ph PEN	mΩ/m	0.559	0.287	0.282	0.212	0.211	0.143	0.140
Between live conductor and PE Average resistance of loop (thermal stabilisation temp .θ1)	Rb1 ph PE	mΩ/m	1.513	1.112	0.533	0.265	0.183	0.155	0.103
Average resistance of loop (short circuit convertional temp.)	Rb2 ph PE	mΩ/m	1.816	1.334	0.639	0.318	0.219	0.186	0.124
Average reactance of loop	Xb ph PE	mΩ/m	0.605	0.292	0.323	0.303	0.295	0.225	0.226
Other characteristics									
Short - circuit withstand capacity	Icw	kA	2.6	4.1	10	21.5	25	31	34
Short - circuit peak current	Ipk	kA	3.9	6.2	17.0	45.2	52.5	65.1	71.4
Degree of protection	IP52		In normal mounting position, horizontal, edgewiseinstallation. Option IP54						
	IP50		Other positions: horizontal installation, flat, vertical installation. Option IP50						
Voltage drop	3phase50Hz with load distrbuted along the run. If the load is concentrated at the end of the run, the voltage drop are twice the values the table.								
	Cos. φ = 1,0	V/100 m/A	0.10600	0.07395	0.02383	0.01331	0.00617	0.00779	0.00334
	Cos. φ = 0,9	V/100 m/A	0.11265	0.07535	0.02870	0.01621	0.00993	0.00965	0.00568
	Cos. φ = 0,8	V/100 m/A	0.10584	0.07127	0.01904	0.01647	0.01096	0.00987	0.00636
	Cos. φ = 0,7	V/100 m/A	0.10246	0.06618	0.02856	0.01624	0.01149	0.00978	0.00673
Derating / uprating factor Determination of permissible Lz according to ambient temperature	15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C	55°C
	1.11	1.08	1.06	1.03	1.00	0.97	0.94	0.91	0.87

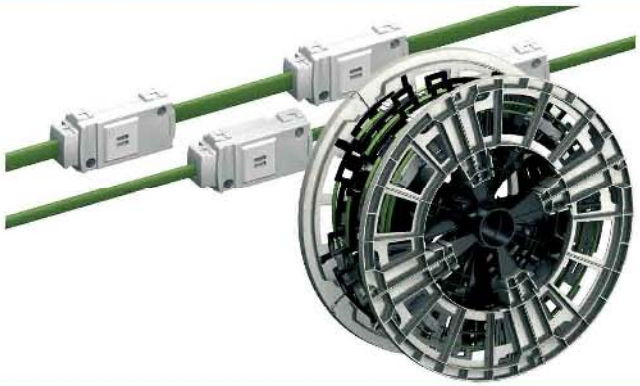
Canalis Lighting Busway

Canalis KDP
For lighting and power socket distribution

1. Run components

- Rating: 20 A.
- 2 or 4 live conductors.
- Available in 24 or 192-metre reels.

PD2202156



2. Feed units and end covers

- The feed units deliv*ered with end covers receive the cables supplying one end of Canalis KDP trunking.

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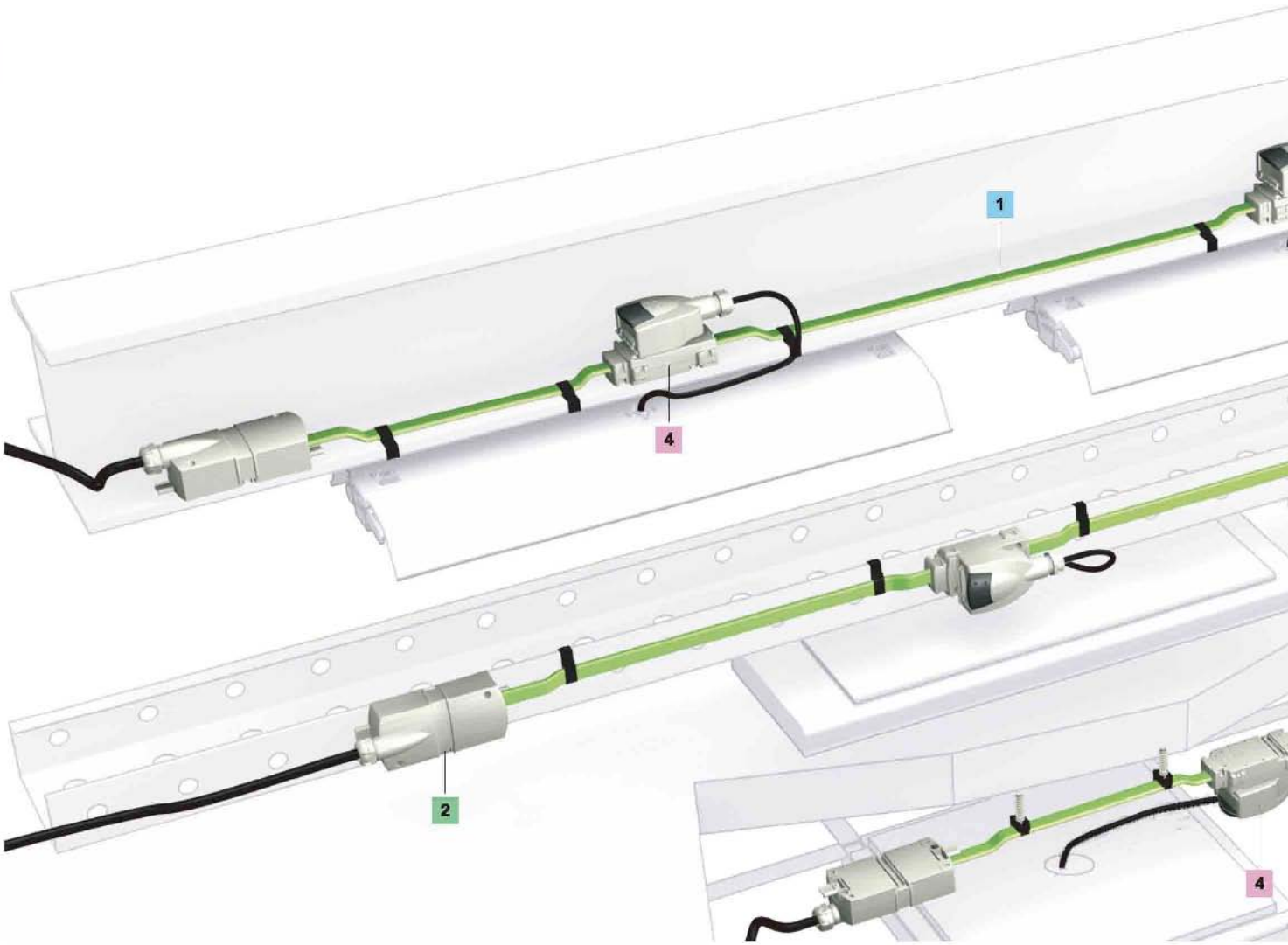


Schneider Electric

Canalis KDP
For lighting and power socket distribution

3. Fixing system

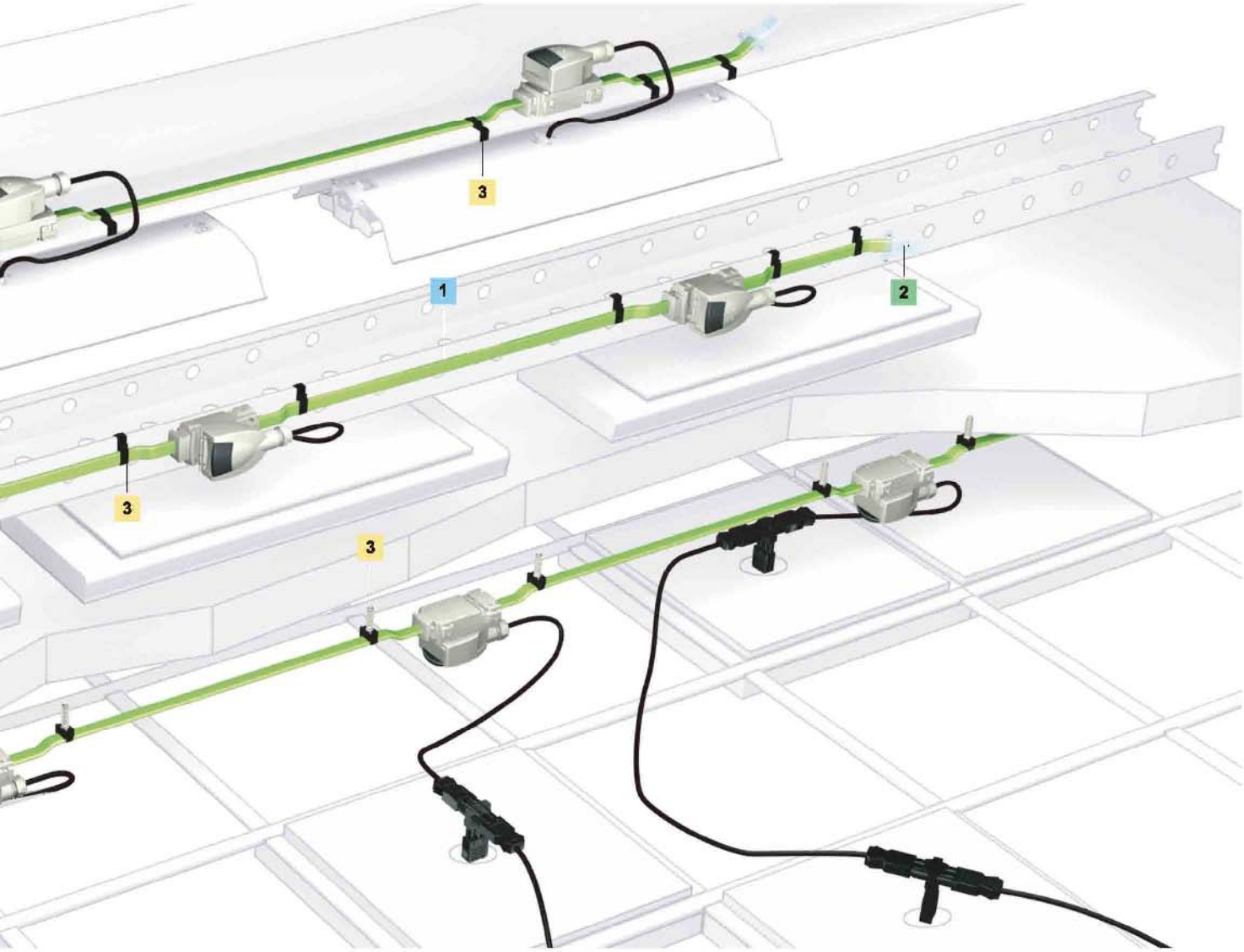
■ The fixing system is used to attach Canalis KDP to the sides of cable trays, metal structures or concrete slabs.

PD2021158

4. Tap-off units

■ The 10 and 16 A tap-off units, pre-wired or not, single-phase with fixed polarity or multi-phase with phase selection, can be used on the entire lighting range.
■ Fitted with automatic interlocking devices
■ Selection is available via a transparent window
■ 16A tap-off unit with fuse holder can also be supplied

PD2021159



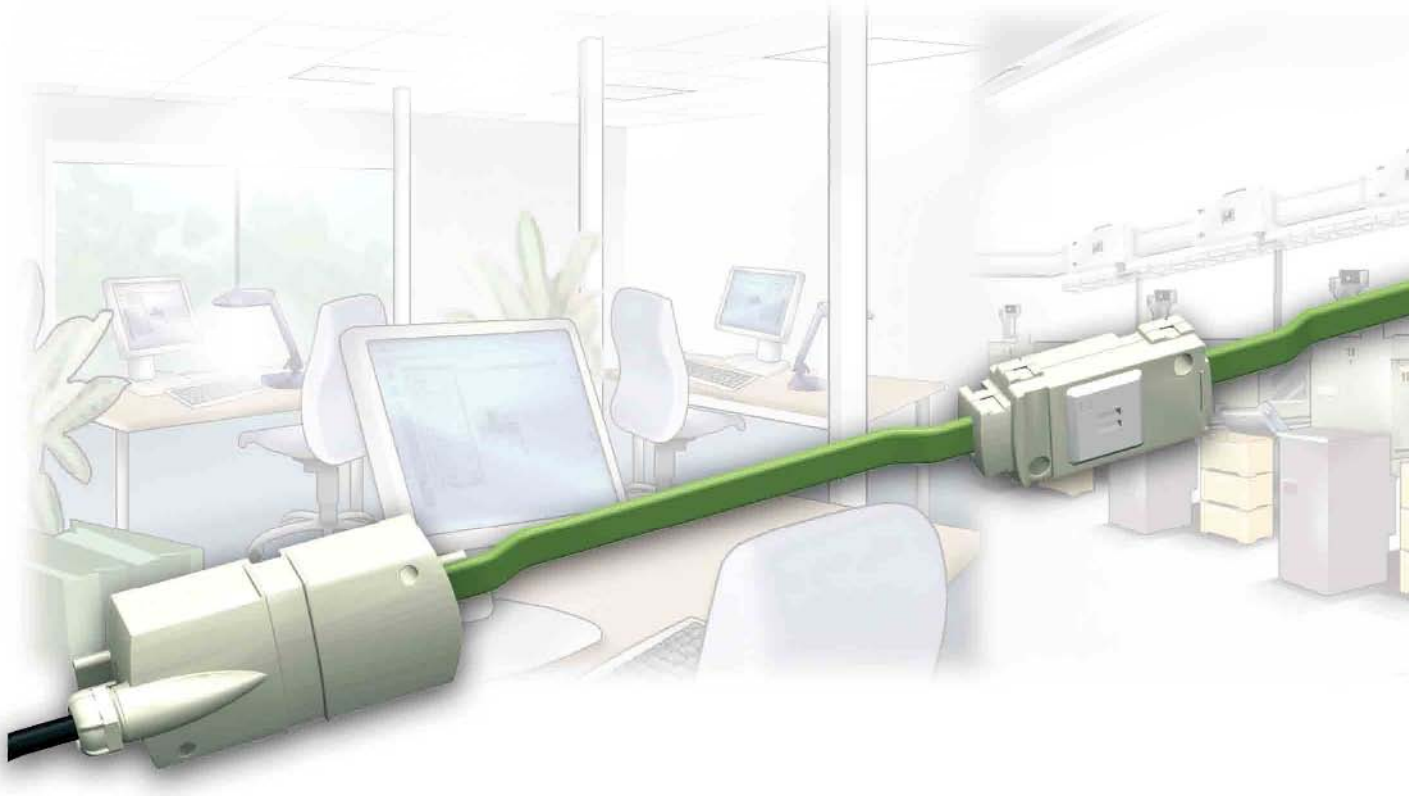
Canalis KDP
For lighting and power socket distribution

No toxic emission in case of fire

All components in the KDP range are **halogen free**.
In case of fire, Canalis KDP does not release smoke or toxic gases.

DD2022141

RD2021182



Remarkably compact

The compact design of Canalis KDP ensures easy mounting in false floors or ceilings.

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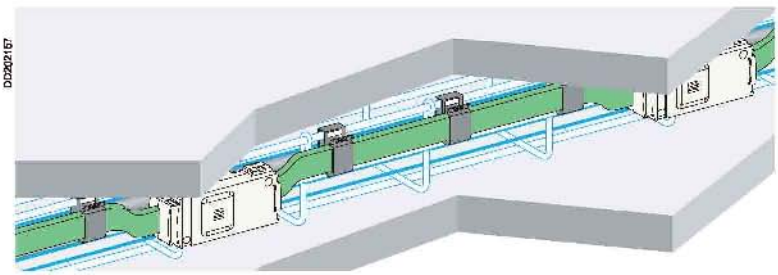
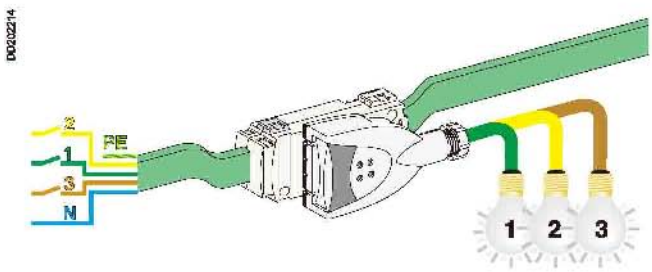
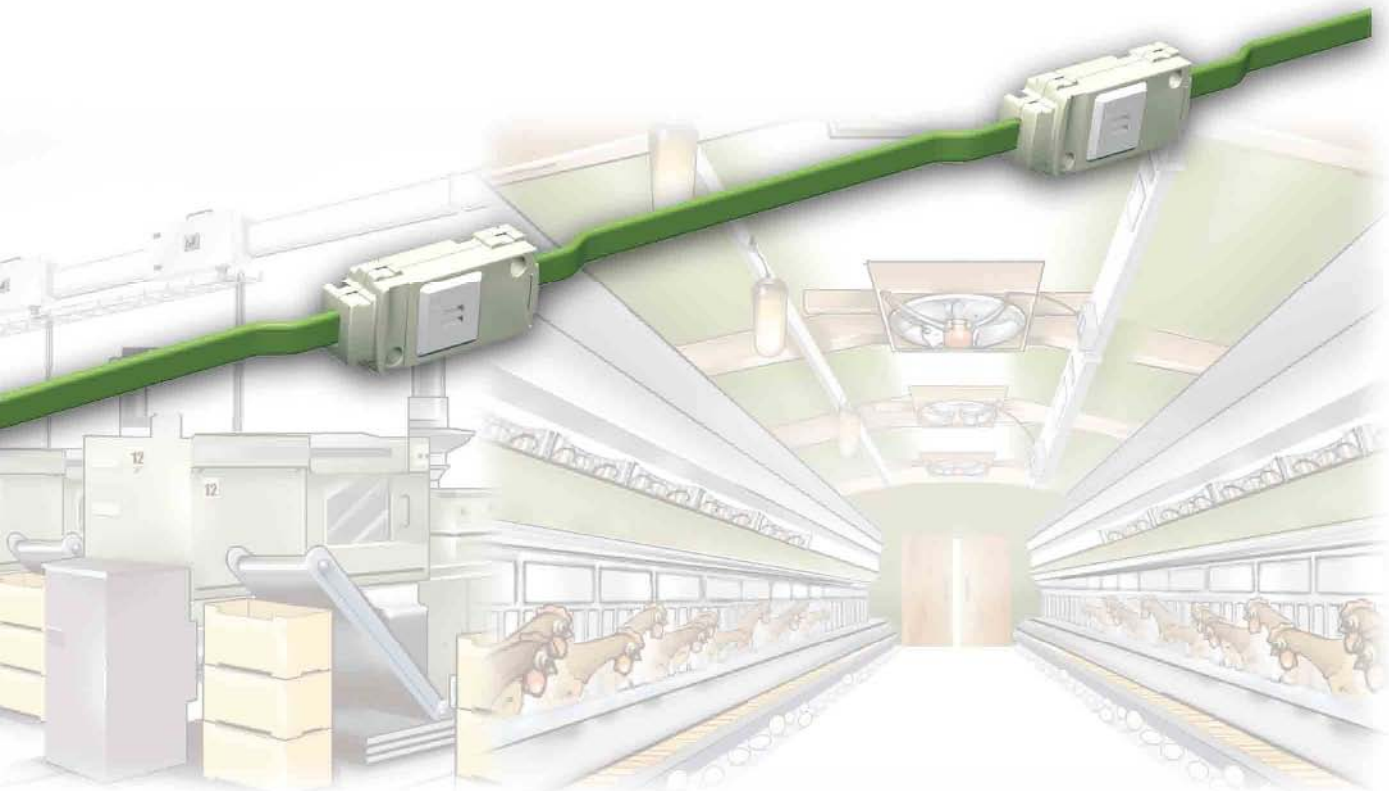


Canalis KDP
For lighting and power socket distribution

Three levels of illuminance

By using three-phase trunking, it is possible to create up to three levels of illuminance.



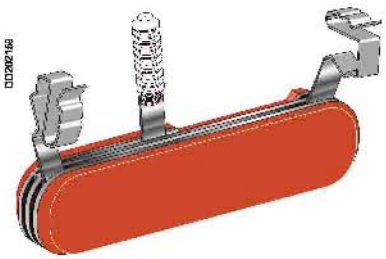


A high degree of protection

■ **IP55** guarantees trunking protection against splashes and dust.

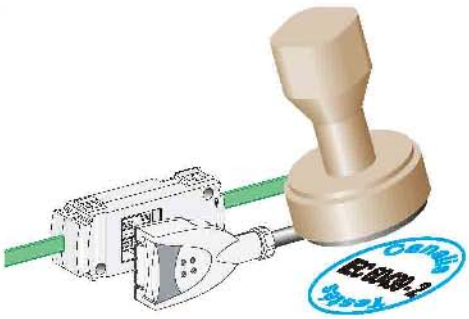
The right fixings

With fixings designed to suit the building structure, Canalis KDP is easy to install.



Canalis KDP, 20 A
Busbar trunking for lighting and power socket distribution

DD210080

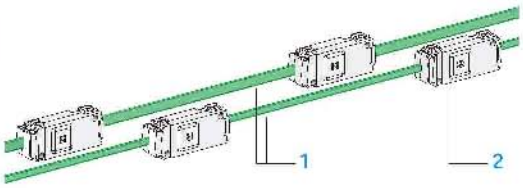


Canalis KDP is halogen free

In the event of a fire, cable and conductor insulation containing halogens (chlorine, bromine, etc.) releases dark, toxic and corrosive smoke. The latter can cause panic, difficulties for rescue teams, intoxication and severe damage to electronic and computer equipment.

KDP trunking, halogen free, avoids the above risks.

DD210155



Run components

Carry the current and supply lighting fixtures.
The run components consist of:

1 **A flat ribbon cable** conforming to standard IEC 60502-1 with 3 or 5 x 2.5 mm² conductors, including one protective conductor. The copper conductors are tin-plated to protect against corrosion. Canalis KDP is available in 24-metre, 183-metre (special for 1350 mm tap-off unit spacing) or 192-metre reels. The 192-metre reel contains eight spools, clipped together, each containing 24 metres of cable. For easy installation and use of the uncoiler kit (see above), it is recommended that KDP be ordered in multiples of 24 metres.
2 **Tap-off outlets**, factory fitted. These can receive all tap-off units in the KBA and KBB ranges and ensure electrical connection of the tap-off units.

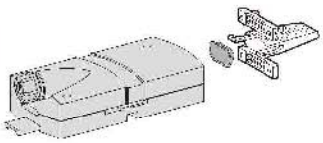
The degree of protection of the assembly is IP55.
Available distances between tap-off outlets: 1.5 m and 3 m.

All the insulating and plastic materials have increased fire-retardant capacity:
- Incandescent-wire test in compliance with IEC 60695-2:
- 960°C for components in contact with live parts,
- 650°C for other components.

KDP is certified to be non-flame-propagating in compliance with standard IEC 60332-3.

The system as a whole complies with standard IEC 60439-2.

DD210125

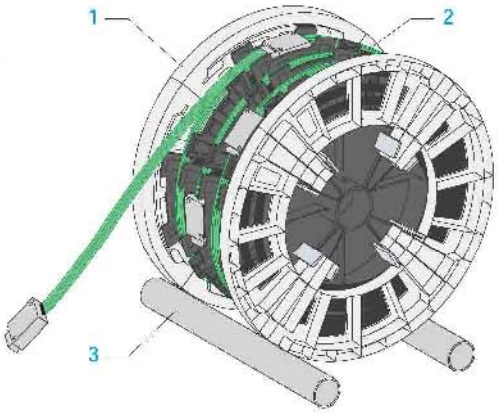


Feed units and end covers

After stripping the KDP cable, the connection is made by means of a screw terminal for copper cable with a maximum c.s.a. of 4 mm².
These components are fitted with a PG 16 cable gland. They are locked in the closed position by a screw.
They can be used to supply the run from either side and for connecting two KDP runs.
Each feed unit is supplied with an end cover for the opposite end of the run.

The system as a whole complies with standard IEC 60439-2.

DD210154



Uncoiler kit

Makes for easy installation of KDP trunking by allowing the cable to be rolled out from the reel.
It can be used with all standard roller-type uncoilers.
It clips onto the packing spools and can be removed for re-use.

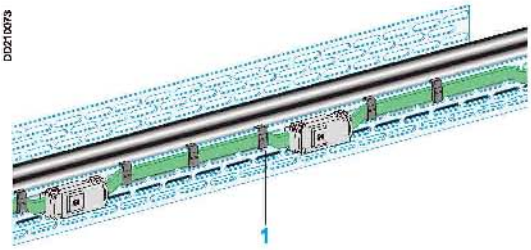
1 Uncoiler kit (8 parts)
2 Packing spools.
3 Cable uncoiler (not supplied).

Canalis KDP, 20 A
Busbar trunking for lighting and power socket distribution

Fixing systems

These systems are used to fix KDP in accordance with recommended installation methods.

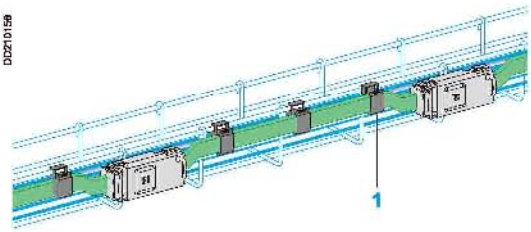
DD210973



Fixing to the edge of pre-slotted sheet-metal cable trays

1 **Fixing to edge of sheet metal: KDP ZF10.**
For the ribbon cable and the feed unit.

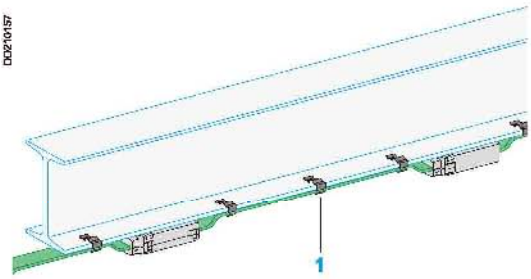
DD210159



Fixing to the edge of mesh trays

1 **Fixing for mesh trays: KDP ZF14.**
For fixing the ribbon cable and feed unit to wire diameters between 5 and 8 mm.

DD210157

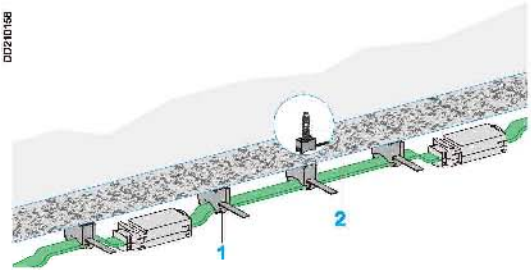


Fixing to metal structures

1 **Fixings for I-beams of the following thicknesses:**
- KDP ZF10: 1 to 8 mm,
- KDP ZF11: 8 to 13 mm,
- KDP ZF12: 13 to 17 mm,
- KDP ZF13: 17 to 22 mm.

For **h** ≥ 120 mm, the KDP may be fixed on top of the I-beam wing.

DD210158

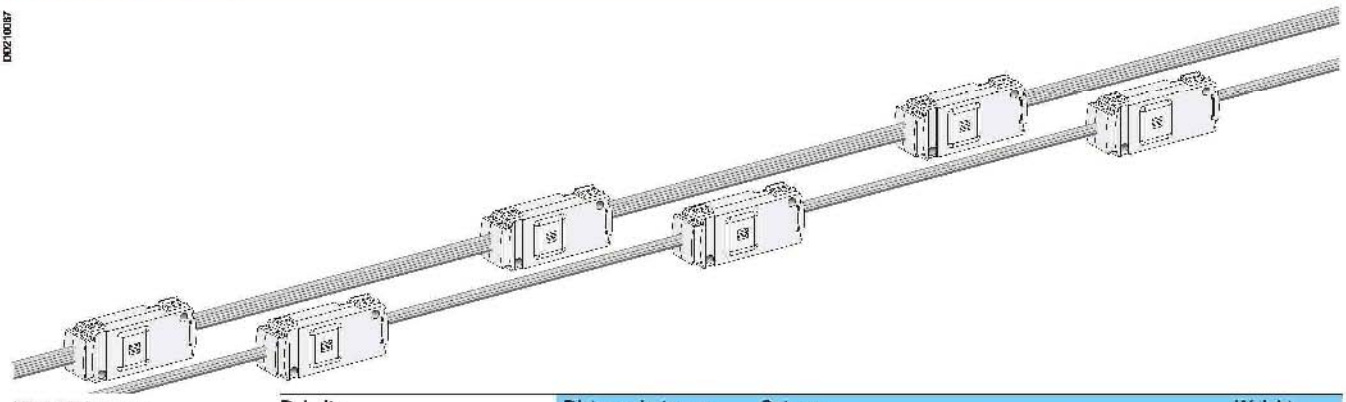


Fixing to concrete slabs or wooden structures

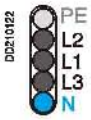
1 **Fixing with cable tie for concrete or wood.**
KDP ZF20: for the ribbon cable.
2 **Concrete fixing plug.**
KDP ZF21: for 8 mm diameter hole.

Canalis KDP, 20 A
Busbar trunking for lighting and power socket distribution

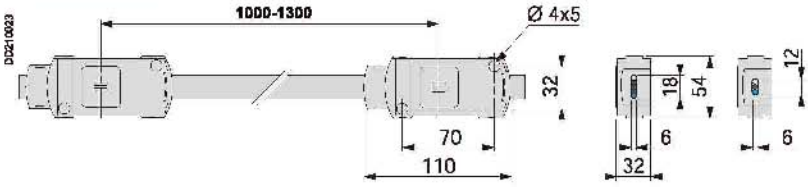
Run components



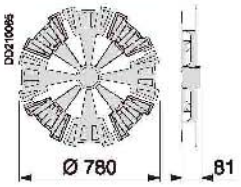
KDP 20E●●●●●

Polarity	Distance between tap-offs (mm)	Cat. no. 24 m spool	Cat. no. 192 m reel	Weight (kg/m)
L + N + PE	1500	**KDP 20ED224150**	**KDP 20ED2192150**	0.200
	3000	**KDP 20ED224300**	**KDP 20ED2192300**	0.200
3L + N + PE	1500	**KDP 20ED424150**	**KDP 20ED4192150**	0.320
	3000	**KDP 20ED424300**	**KDP 20ED4192300**	0.320

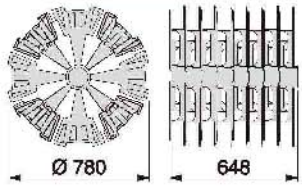
KDP 20E●●●●●



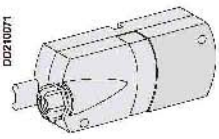
KDP20E●●024●



KDP20E●●192●



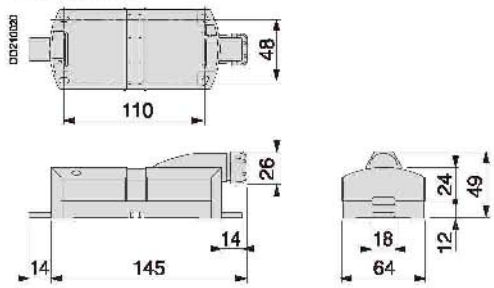
Feed units (supplied with end cover)



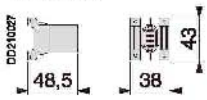
KDP 20ABG4

Designation	Mounting	Cable connection Terminals mm²	Cable connection Cable gland Ø max. (mm)	Cat. no.	Weight (kg)
Feed unit	Left or right	4	PG 16, Ø 15	**KDP 20ABG4**	0.120

KDP 20ABG4

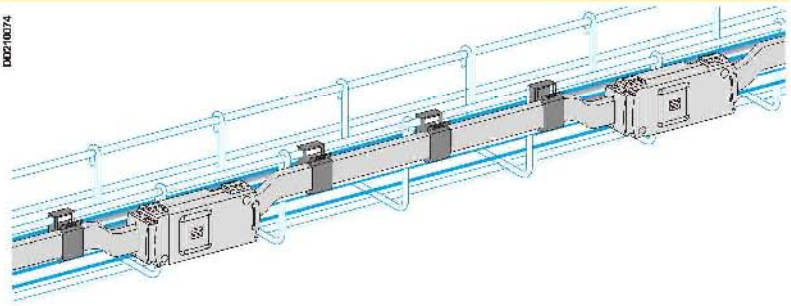


End cover

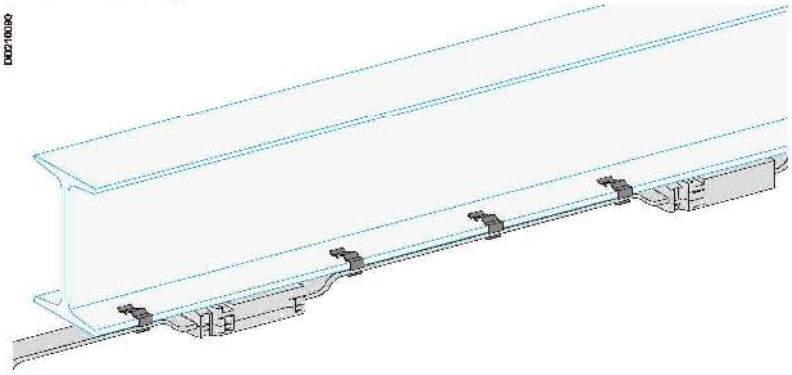


Canalis KDP, 20 A
Busbar trunking for lighting and power socket distribution

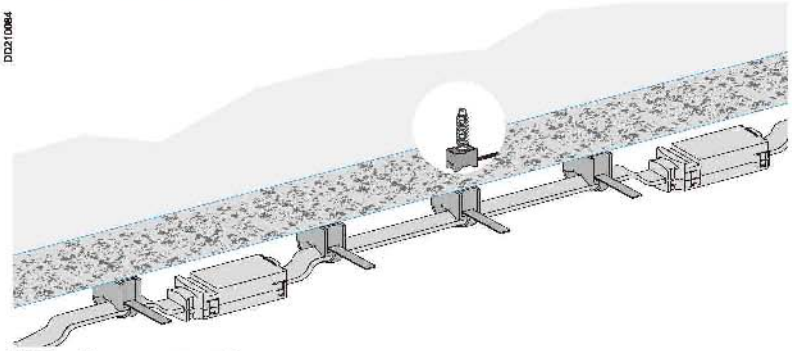
Fixing systems



KDP on a mesh tray

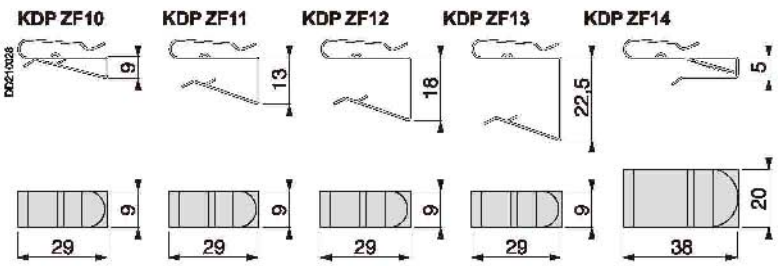


KDP on a metal structure



KDP under a concrete slab

Fixing on	Thickness (mm)	Order in muliples of	Cat. no.	Weight (kg)
Pre-slotted sheet-metal cable trays	-	100	**KDP ZF10**	0.006
Mesh trays	Ø 4...Ø 6	100	**KDP ZF14**	0.006
Metal structure	1...8	100	**KDP ZF10**	0.006
	8...13	100	**KDP ZF11**	0.006
	13...17	50	**KDP ZF12**	0.006
	17...22	50	**KDP ZF13**	0.006
Wood or concrete	Fixing with cable tie	100	**KDP ZF20**	0.006
	Concrete fixing plug for Ø 8 mm hole	100	**KDP ZF21**	0.006



Canalis KBA
For lighting and power socket distribution

1 - Run components

- Rating: 25 or 40 A
- 2 or 4 live conductors
- Basic lengths: 2 and 3 metres.

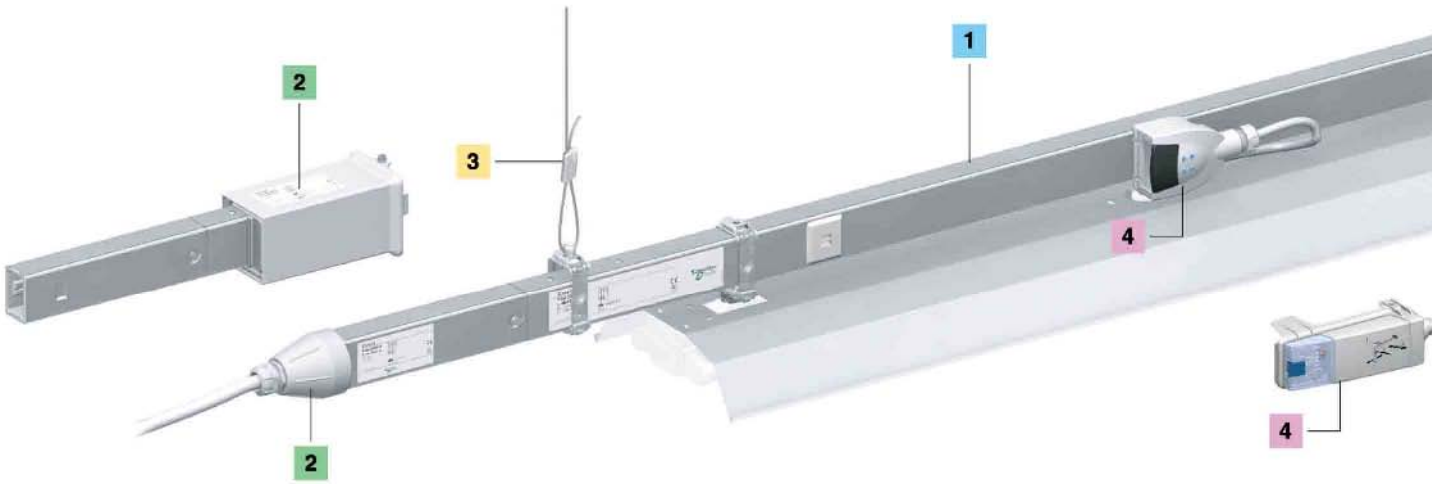
PD2202163

2 - Feed units and end covers

The feed units delivred with the end covery receive the cables supplying one end of Canalis KBA trunking.

PD2202164

PD2202166



Canalis KBA
For lighting and power socket distribution

3 - Fixing system and cable trays

■ The fixing system ensures that Canalis KBA is well secured, whatever the type of building structure. There are also fixings to secure the luminaires to Canalis KBA.

PB202166

4 - Tap-off units

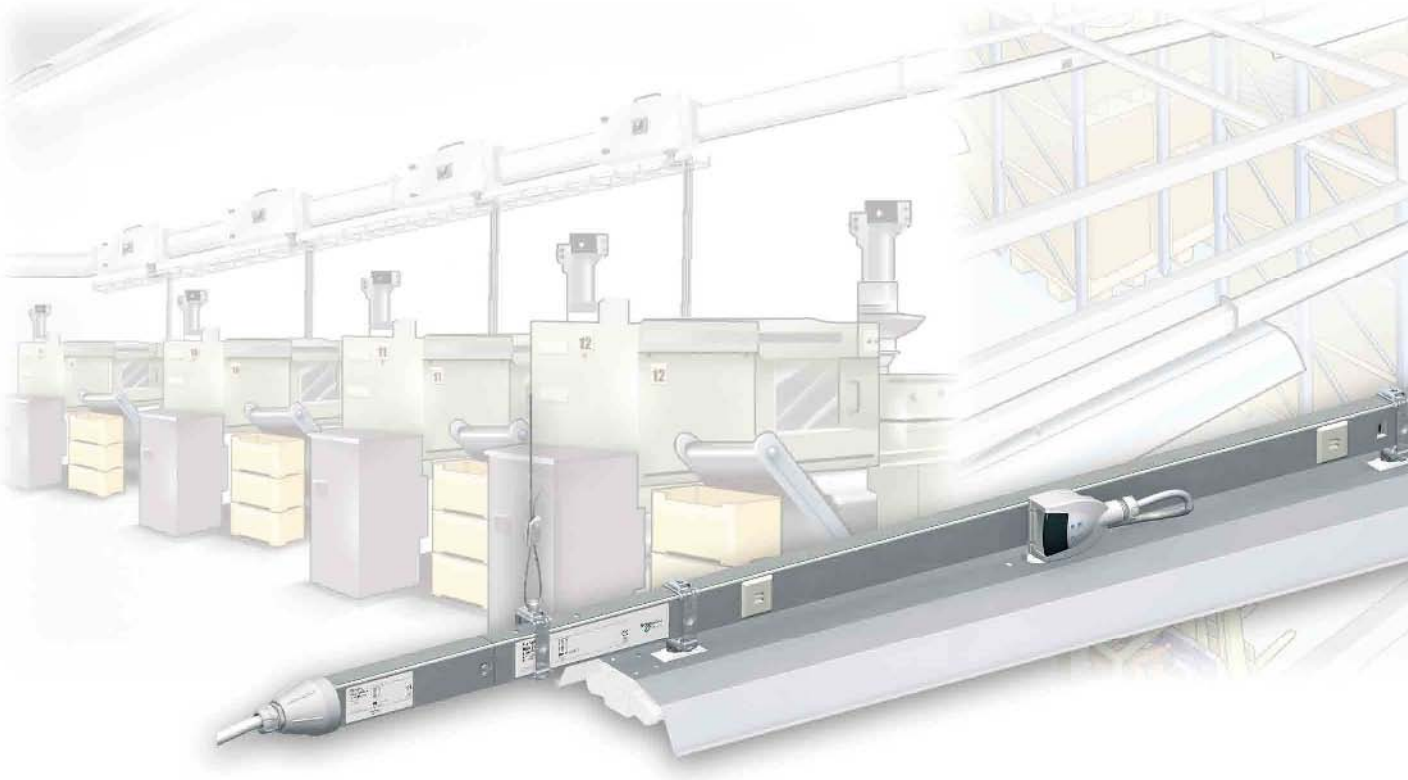
■ The 10 and 16 A tap-off units, pre-wired or not, single-phase with fixed polarity or multi-phase with phase selection, can be used on the entire lighting range.
■ Fitted with automatic interlocking devices
■ Selection is available via a transparent window
■ 16A tap-off unit with fuse holder can also be supplied

PB202196

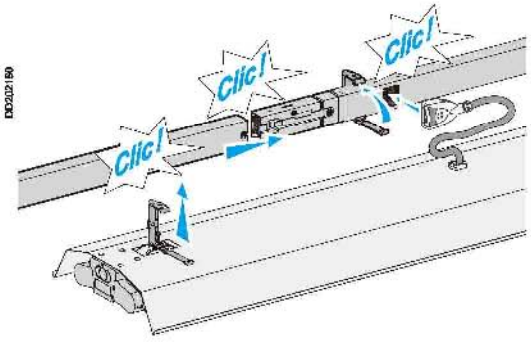
Canalis KBA
For lighting and power socket distribution

No toxic emission in case of fire
All components in the KBA range are **halogen free**.
In case of fire, Canalis KBA does not release smoke or toxic gases.

PD202166

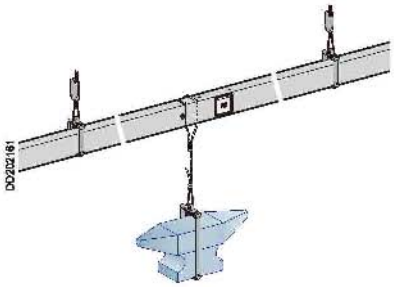


Fast and easy mounting
Canalis KBA components can be assembled in just a few clicks.

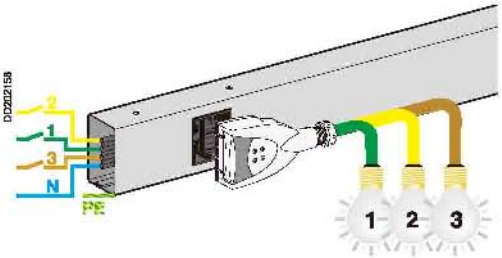


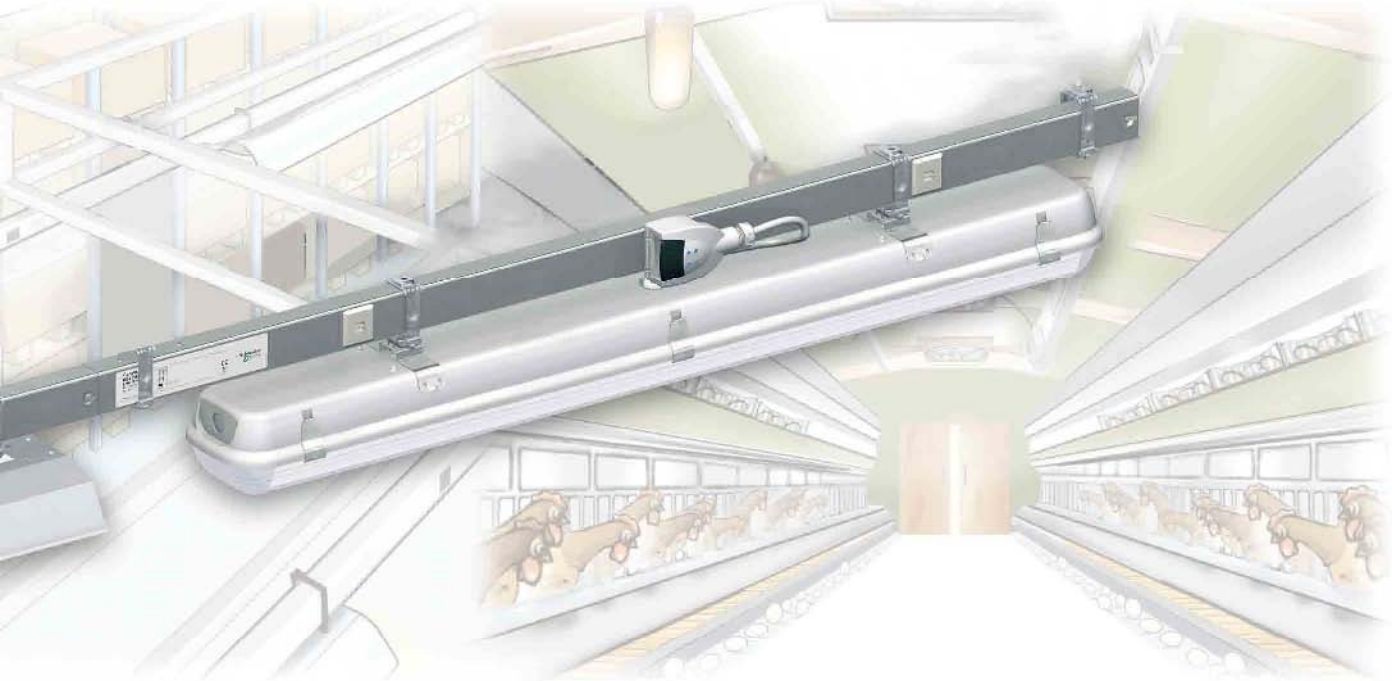
Canalis KBA
For lighting and power socket distribution

Very rigid
Canalis KBA trunking forms a rigid beam, even at the junction between two lengths.



Three levels of illumination
By using three-phase trunking, it is possible to create up to three levels of illumination.





A high degree of protection

- **IP55** guarantees trunking protection against splashes and dust.
- Canalis KBA complies with **sprinkler tests**, guaranteering operation under vertically and horizontally sprayed water for 50 minutes.

The high degree of protection for Canalis KBA means it can be installed in all types of buildings.

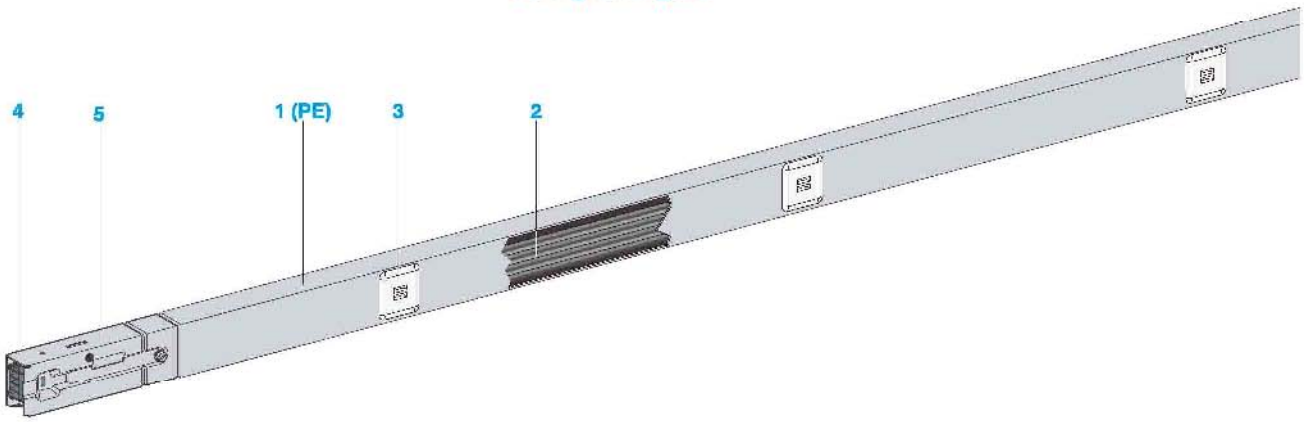
Canalis KBA, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Run components

Carry current, support and supply the luminaires.

Straight lengths

DD210476



Straight lengths constitute the basic structure of the line and are made up of:
1. an all-in-one carrier casing, crimp closed, forming a rigid beam made of sheet steel, hot galvanised on both sides. This casing also acts as the protective earth conductor (PE).
2. a ribbon cable with two or four copper conductors, protected against corrosion by tinning,
3. two, three or five tap-off outlets,
4. an electrical jointing unit ensuring automatic and simultaneous connection of all live conductors,
5. a mechanical joining device made of galvanised sheet steel that makes the connection of two lengths rigid and resistant to bending.

The degree of protection is IP55 (without accessories).

The busbar trunking is non-flame-propagating as per the recommendations of standard IEC 60332-3. All the insulating and plastic materials are **halogen-free** and have enhanced fire-withstand capabilities (incandescent wire test as per standard IEC 60695-2).
- 960°C for components in contact with live parts.
- 650°C for other components.

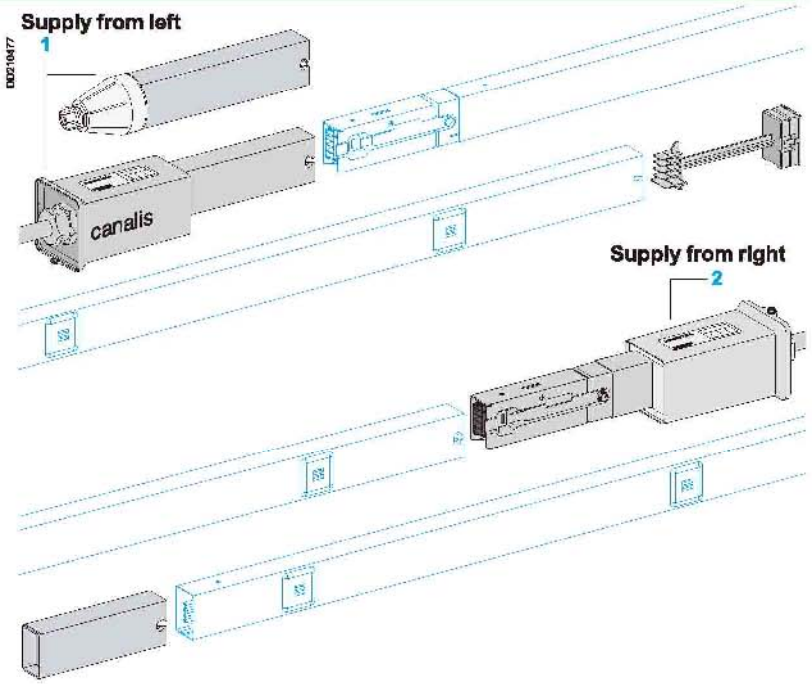
Feed units and end covers

Supply a Canalis KBA line.
They clip on (jointing unit) to the end of the line.

The end cover for the opposite end of the line is supplied with each feed unit.

1. Feed unit, 1 circuit (25 and 40 A ratings).
2. Line outlet box (for rating 40 A only).

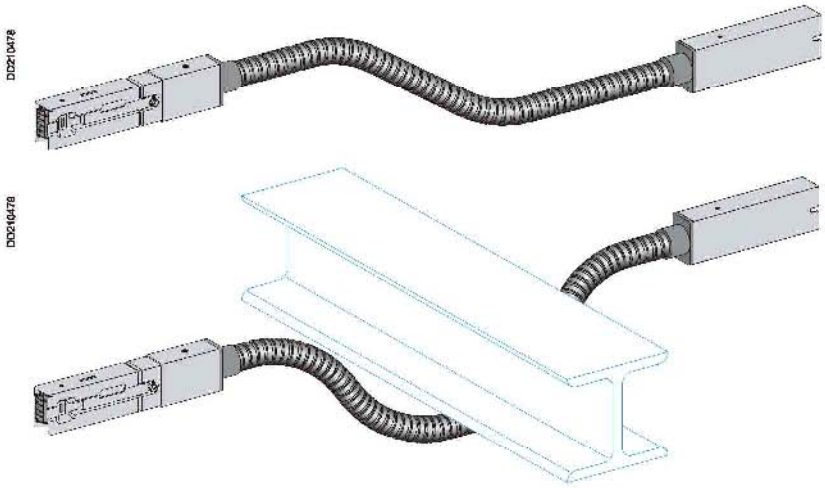
DD210477



Canalis KBA, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Flexible lengths

Flexible length
For changes in direction or levels and detours around obstacles.
It is mounted in the same way as a straight length.



Fixing systems

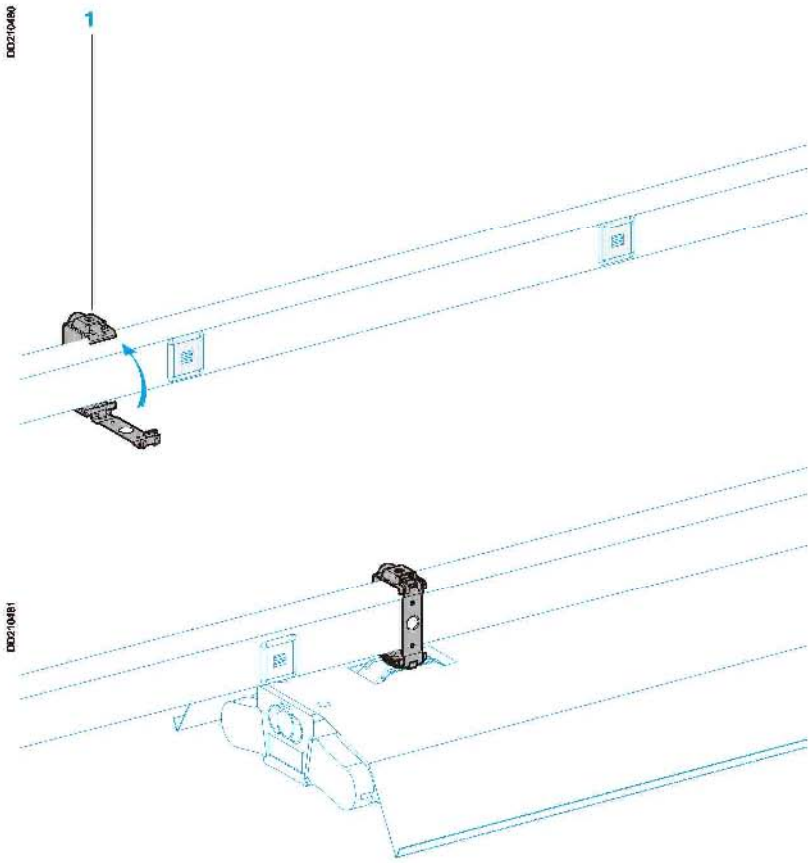
Busbar trunking

For attachment of the busbar trunking to the structure of the building, either directly or via a threaded rod, chain or steel cable.
- Designed to relieve the installer of the weight of the busbar trunking once placed in a bracket.
- Automatic locking of moving part on closing (unlocking requires a tool).
- The maximum recommended fixing distance is: 3 metres.

1 **Universal fixing bracket bracket**
For suspension on a threaded rod, diameter 6 mm. For horizontal mounting on a beam, pendant, wall, etc.

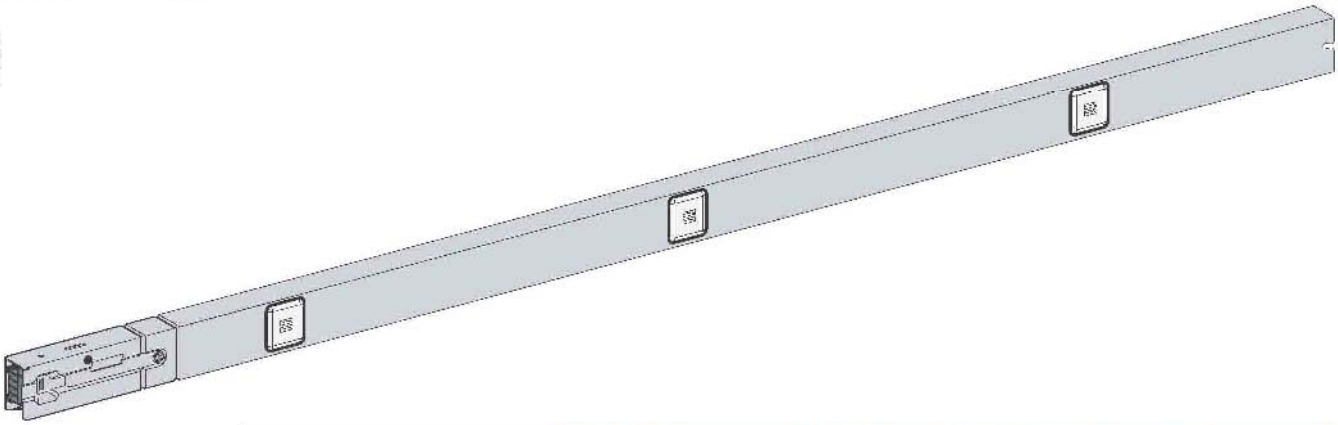
Luminaires

Attached to the luminaires before mounting, these fixings ensure fast and direct fixing to Canalis KBA.
- Same catalogue numbers as the busbar fixings.



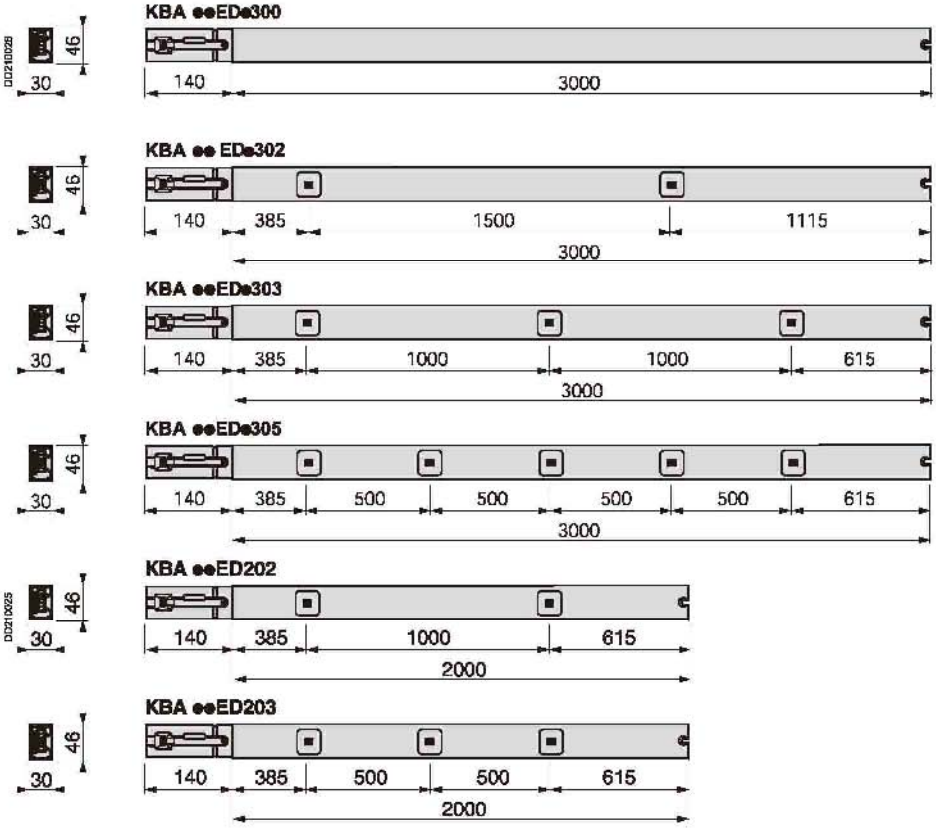
Canalis KBA, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Straight lengths



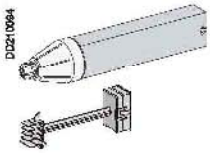
KBA ●●ED●●●

Type of component	Trunking polarity	Length (m)	Number of tap-offs	25 A rating Cat. no.	Weight (kg)	40 A rating Cat. no.	Weight (kg)
Straight length Standard Ph + N + PE		3	2	**KBA 25ED2302**	2.400	-	-
			3	**KBA 25ED2303**	2.400	**KBA 40ED2303**	2.700
			5	**KBA 25ED2305**	2.400	**KBA 40ED2305**	2.700
		2	3	**KBA 40ED2203**	1.700	**KBA 40ED2203**	1.700
Straight length Standard 3Ph + N + PE		3	2	**KBA 25ED4302**	2.400	-	-
			3	**KBA 25ED4303**	2.600	**KBA 40ED4303**	3.100
			5	**KBA 25ED4305**	2.600	**KBA 40ED4305**	3.100
		2	2	**KBA 25ED4202**	1.900	-	-
			3	**KBA 40ED4203**	1.900	**KBA 40ED4203**	1.900

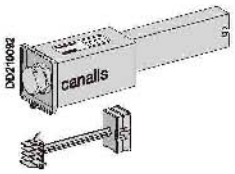


Canalis KBA, 25 and 40 A
Busbar trunking for lighting and power socket distribution

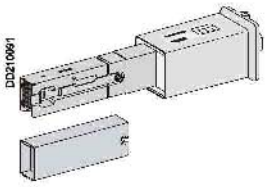
Feed units (supplied with end cover)



KBA 25ABG4



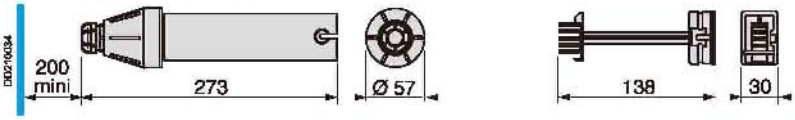
KBA 40ABG4



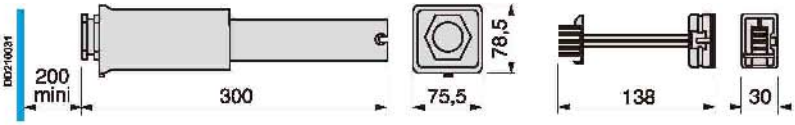
KBA 40ABD4

Designation	Rating (A)	Mounting	Cable connection		Cat. no.	Weight (kg)
			Terminals (mm^2)	Cable gland max. Ø (mm)		
Feed unit	25	Left	4	PG 16, Ø 15	**KBA 25ABG4**	0.200
	40	Left	10	PG 21, Ø 19	**KBA 40ABG4**	0.400
	25 or 40	Right	10	PG 21, Ø 19	**KBA 40ABD4**	0.500

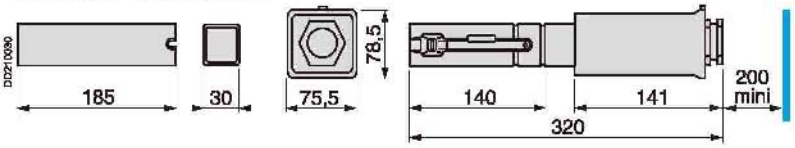
KBA 25ABG4 with end cover



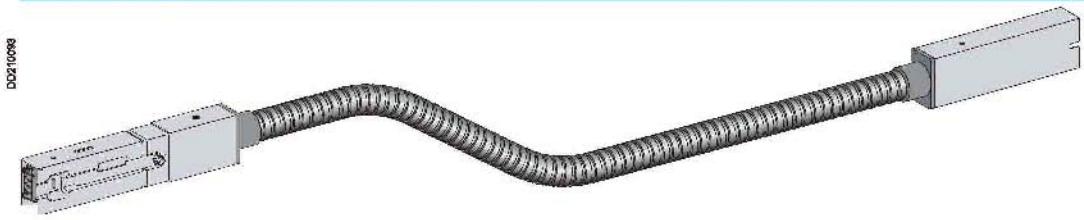
KBA 40ABG4 with end cover



KBA 40ABD4 with end cover



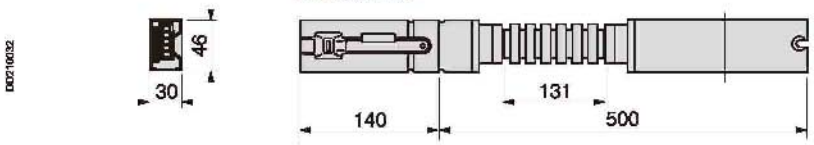
Flexible lengths



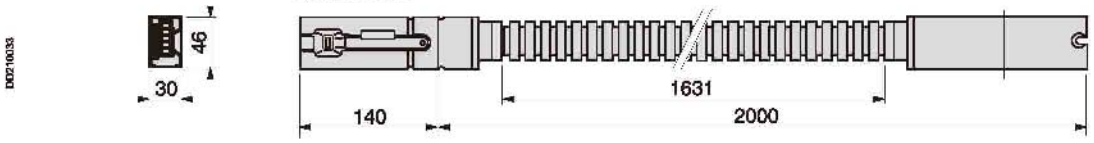
KBA 40DF4●●

Designation	Mounting	Length (m)	Cat. no.	Weight (kg)
Flexible length	For elbows, changing levels, detours around obstacles, etc.	0.5	**KBA 40DF405**	0.050
		2	**KBA 40DF420**	0.105

KBA 40DF405



KBA 40DF420



Fixing systems

Busbar trunking fixings

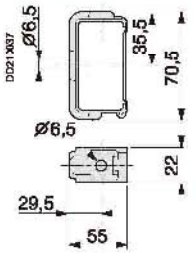
Designation	Mounting	Max. load (kg)	Cat. no.	Weight (kg)
Universal fixing bracket(1)	Suspended on threaded rod or lateral (except wall)	60	**KBA 40ZFU**	0.050

KBA 40ZFU

Luminaire fixings

Designation	Mounting	Max. load (kg)	Cat. no.	Weight (kg)
Universal fixing bracket	For direct suspension under trunking	60	**KBA 40ZFU**	0.050

KBA 40ZFU



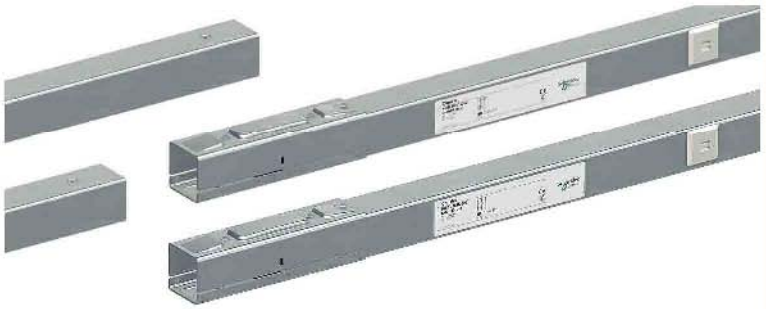
(1) Maximun recommended distance between fixings: 3 meters.

Canalis KBB
For lighting and power socket distribution

1 - Run components

- Rating: 25 or 40 A.
- 2 or 4 live conductors.
- Length:
- Basic lengths: 2 and 3 metres.

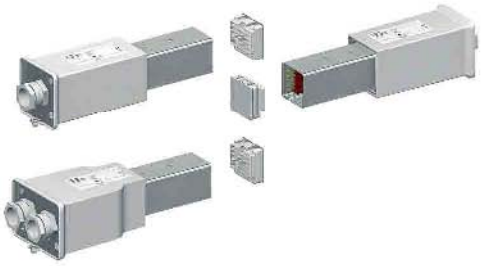
PD2202170



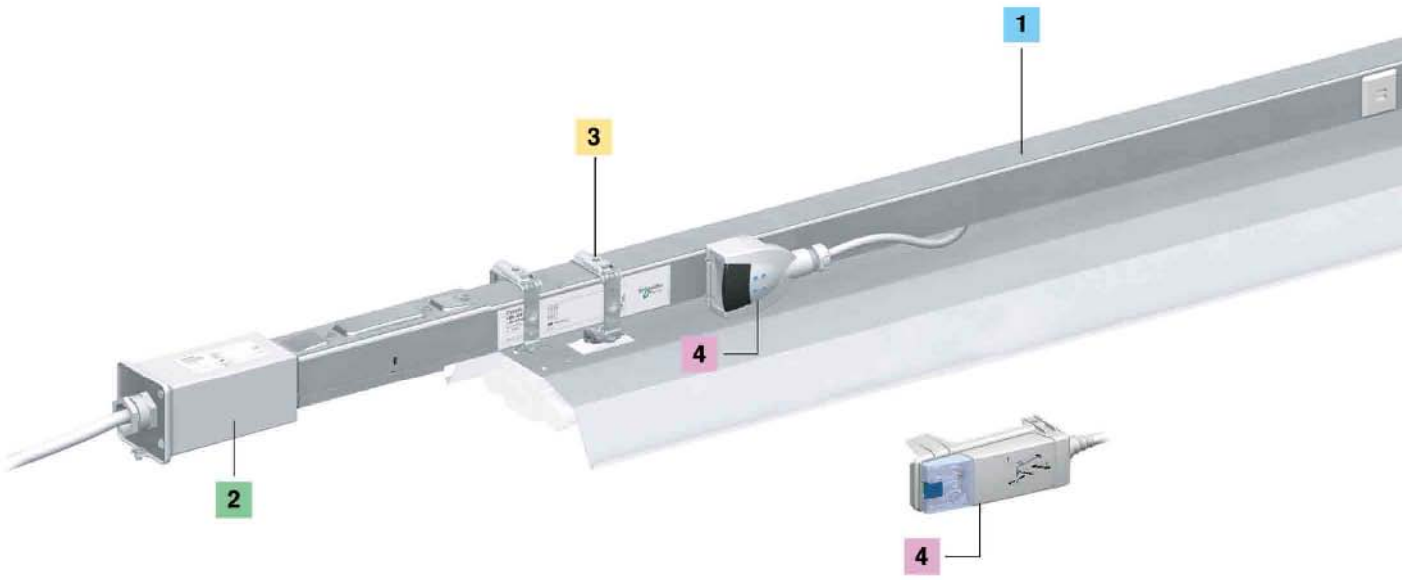
2 - Feed units and end covers

- The feed units delivered with end covers, receive the cables supplying one end of Canalis KBB trunking.
- The end covers supplied with the feed units terminate the signal lenght and insure the IP level.

PD2202171



PD2202173



Canalis KBB
For lighting and power socket distribution

3 - Fixing system and cable trays

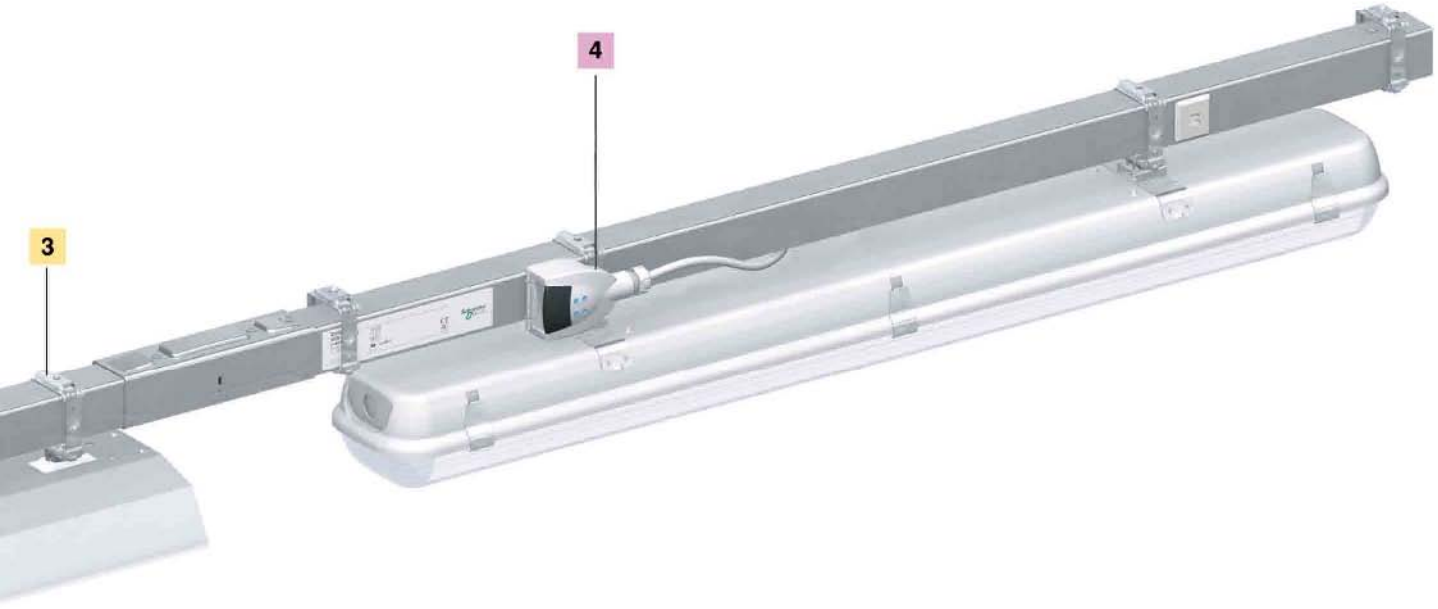
■ The fixing system ensures that Canalis KBB is well secured, whatever the type of building structure. There are also fixings to secure the luminaires to Canalis KBB.

PD202172

4 - Tap-off units

■ The 10 and 16 A tap-off units, pre-wired or not, single-phase with fixed polarity or multi-phase with phase selection, can be used on the entire lighting range.
■ Fitted with automatic interlocking devices
■ Selection is available via a transparent window
■ 16A tap-off unit with fuse holder can also be supplied

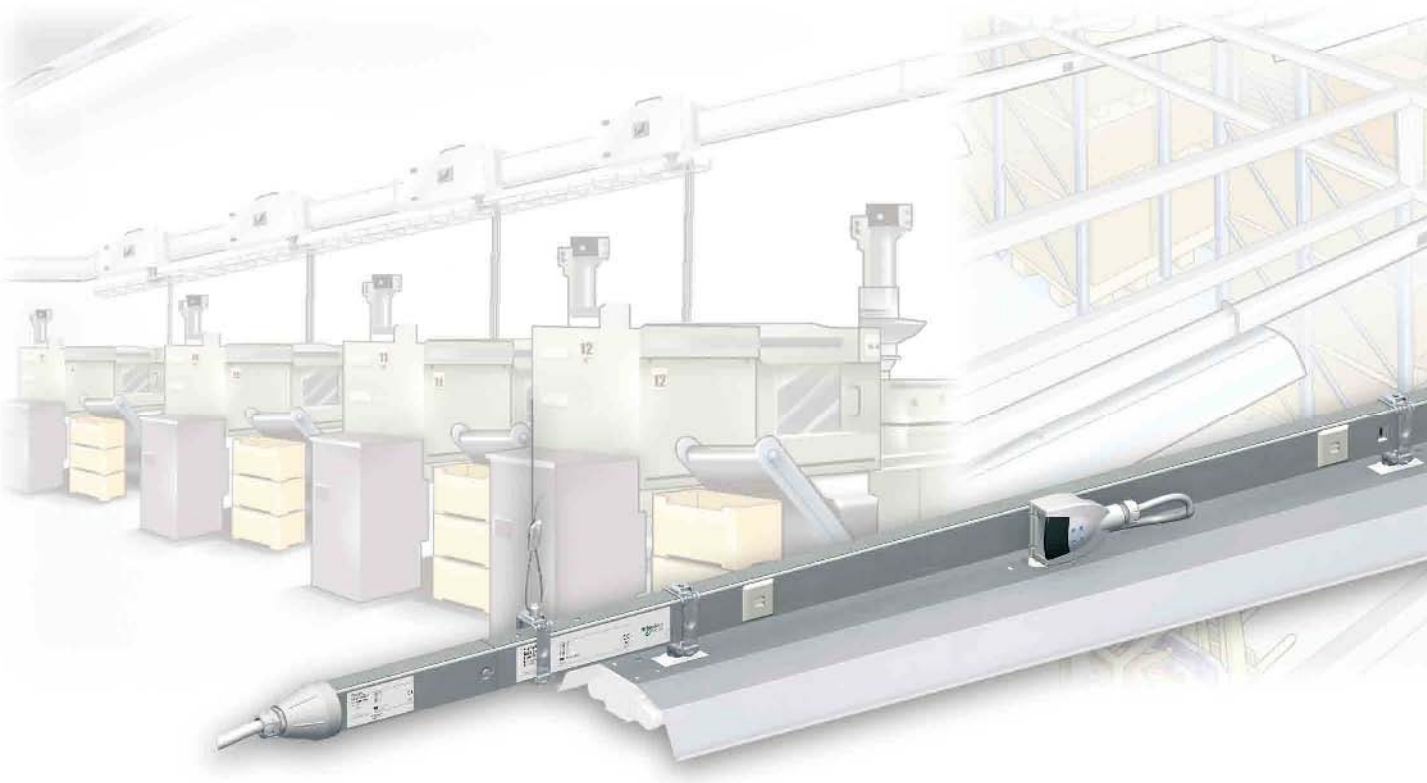
PD202439



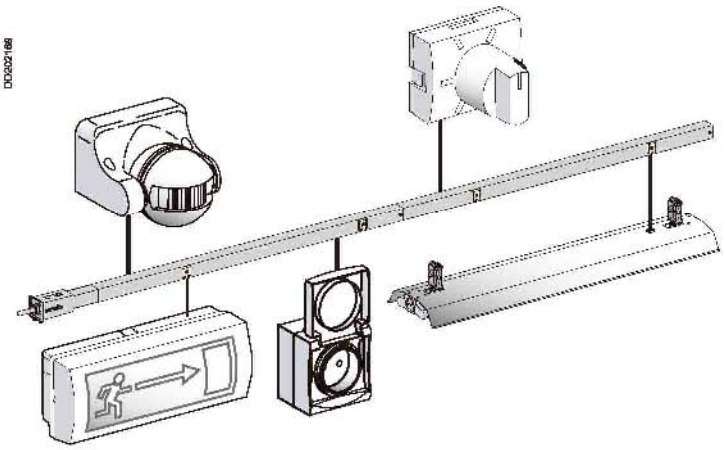
Canalis KBB
For lighting and power socket distribution

No toxic emission in case of fire
All components in the KBB range are **halogen free**.
In case of fire, Canalis KBB does not release smoke or toxic gases.

PD202174



DD202186



A large number of conductors
Canalis KBB offers up to 8 conductors for all applications:
- emergency lighting,
- dimmers,
- detection of presence,

lighting and power-socket circuits, etc.

Canalis KBB
For lighting and power socket distribution

A high degree of protection

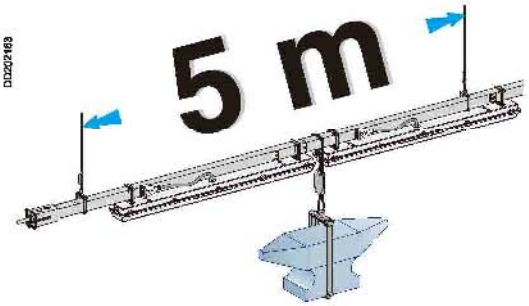
■ **IP55** guarantees trunking protection against splashes and dust.

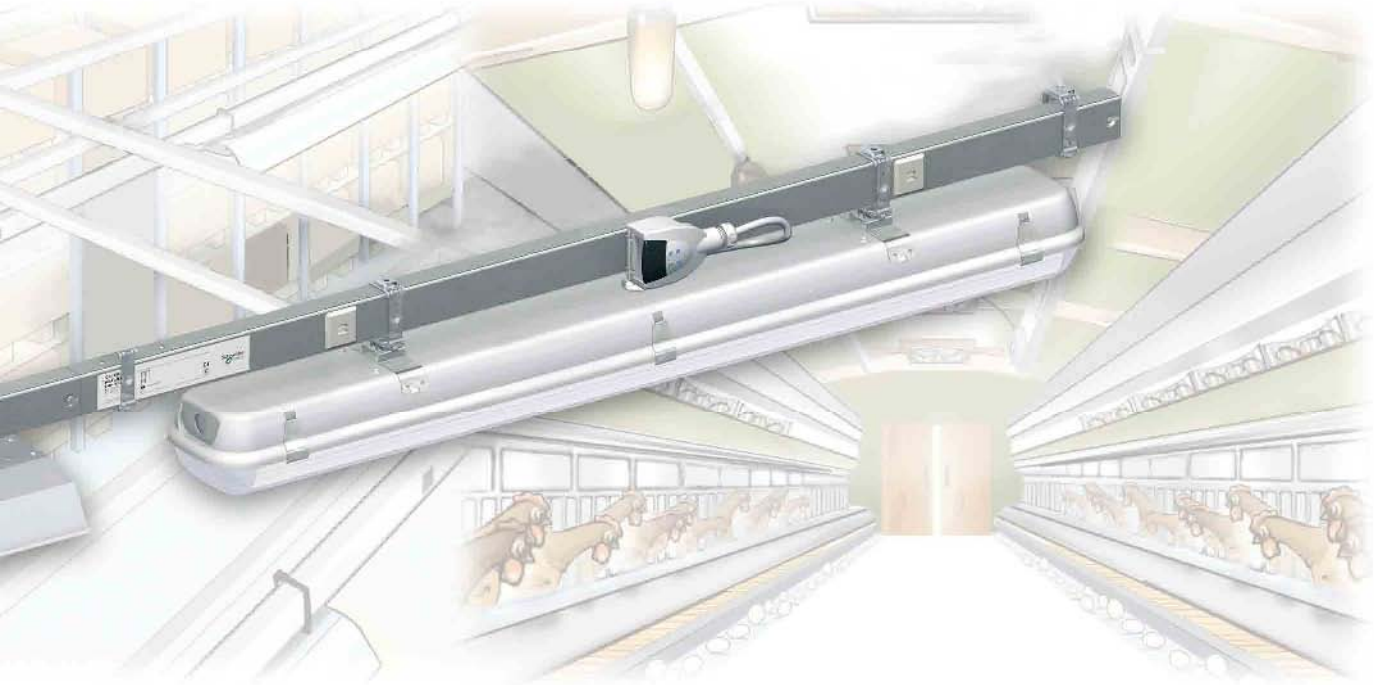
■ Canalis KBB complies with **sprinkler tests**, guaranteering operation under vertically and horizontally sprayed water for 50 minutes.

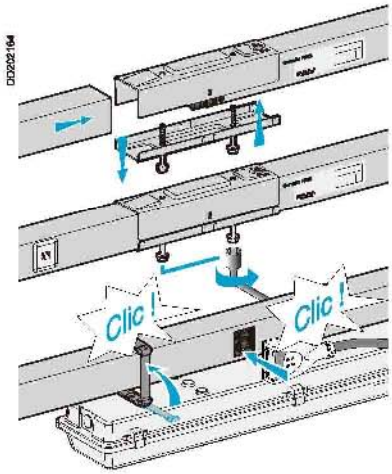
The high degree of protection for Canalis KBB means it can be installed in all types of buildings.

Very rigid

Canalis KBB offers fixing distances of up to 5 metres, including the jointing units.







Unmatched upgrading possibilities

It is particularly simple to add or modify a Canalis KBB installation since components can be easily mounted or dismantled.

All parts can be reused.

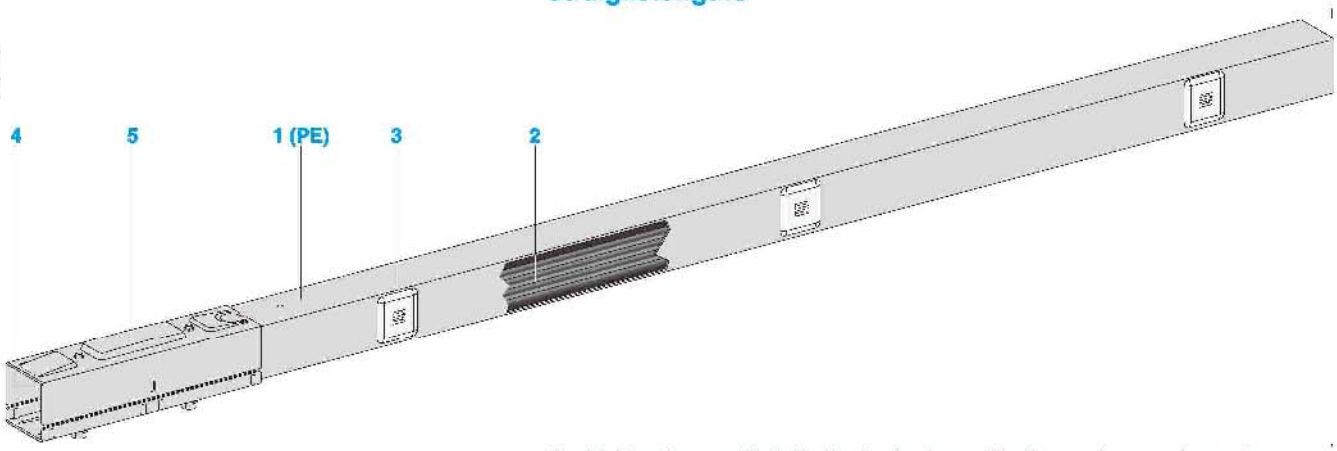
Canalis KBB, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Run components

Carry current, support and supply the luminaires.
Particularly strong, Canalis KBB is specially intended for installations with large fixing distances and/or heavy or numerous luminaires.

Straight lengths

DD210379



Straight lengths constitute the basic structure of the line and are made up of:
1 an all-in-one carrier casing, crimp closed, forming a rigid beam made of sheet steel, hot galvanised on both sides. This casing also acts as the protective earth conductor (PE).
2 one or two ribbon cable with two or four copper conductors, protected against corrosion by tinning, making up one or two independent circuits,
3 three tap-off outlets maxi spaced every metre on the main circuit (front), two tap-off outlets maxi on the adjacent circuit (rear),
4 an electrical joint unit ensuring automatic and simultaneous connection of all live conductors,
5 a mechanical joint device in two parts, made of stamped sheet steel, that makes the connection of two lengths rigid and resistant to bending.

The degree of protection is IP55 (without accessories).

The busbar trunking is non-flame-propagating as per the recommendations of standard IEC 60332-3. All the insulating and plastic materials are **halogen-free** and have enhanced fire-withstand capabilities (incandescent wire test as per standard IEC 60695-2).
- 960°C for components in contact with live parts.
- 650°C for other components.

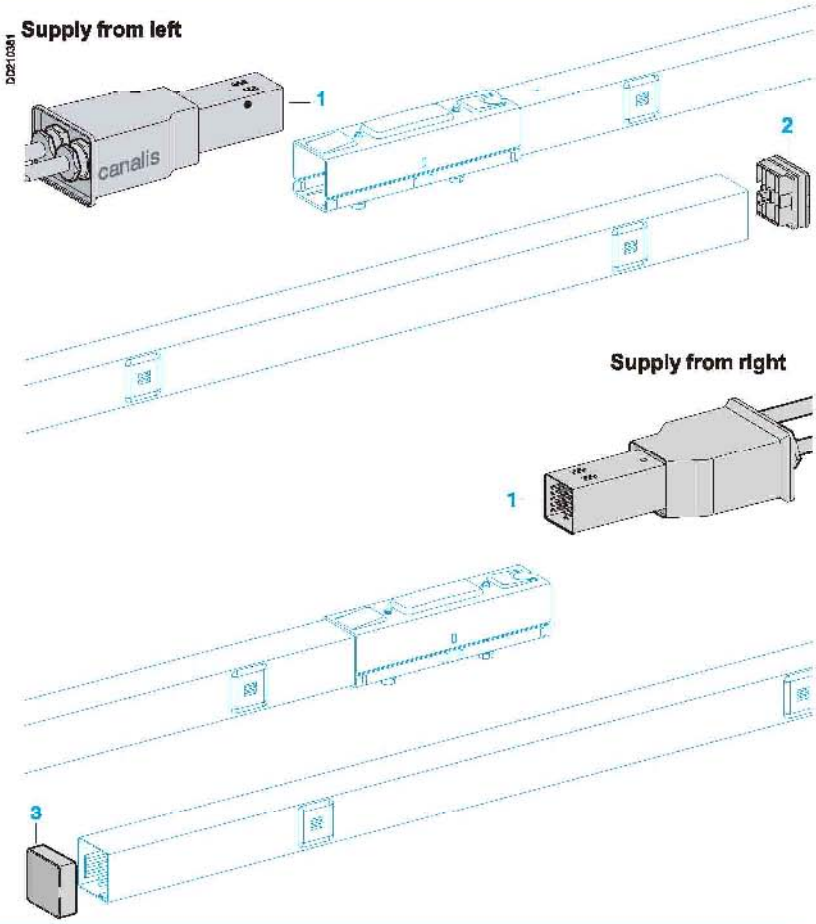
Canalis KBB, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Feed units and end covers

Supply a Canalis KBB line.
They clip on (jointing unit) to the end of the line.

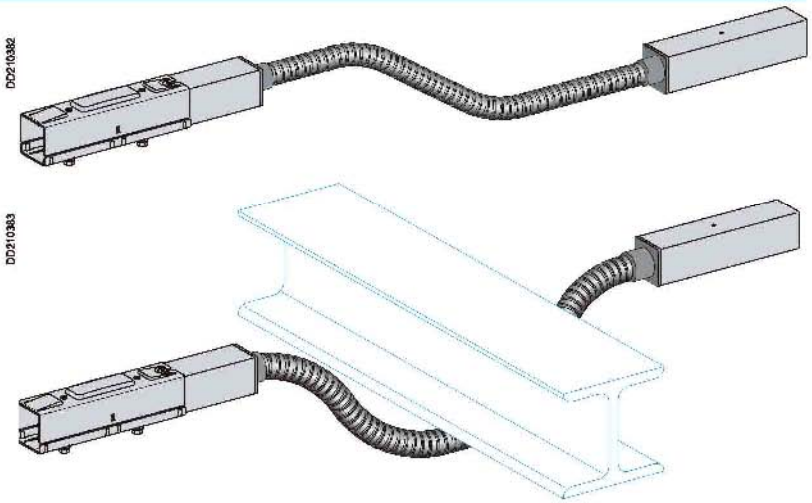
The end cover for the opposite end of the line is supplied with each feed unit.

1 Feed unit, two circuits
2 End cover.



Flexible lengths

Flexible length
For changes in direction or levels and detours around obstacles.
It is mounted in the same way as a straight length.



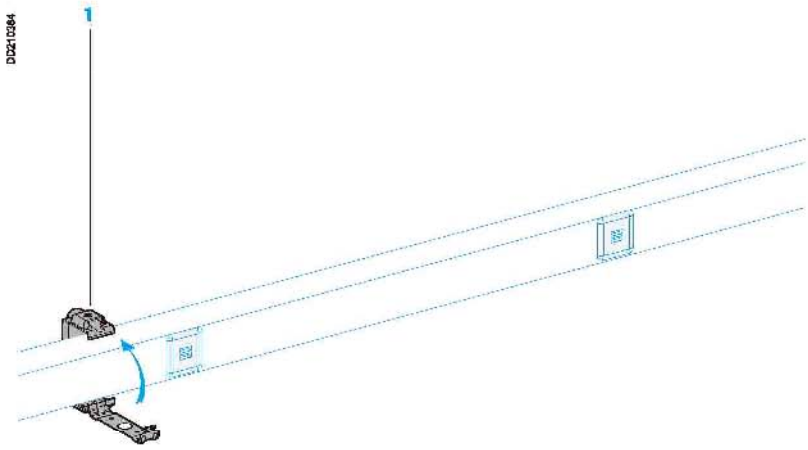
Canalis KBB, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Fixing systems

Busbar trunking

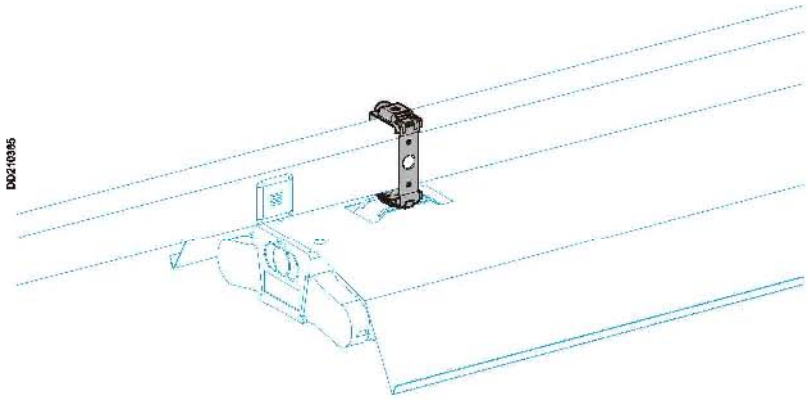
For attachment of the busbar trunking to the structure of the building, either directly or via a threaded rod, chain or steel cable.
- Designed to relieve the installer of the weight of the busbar trunking once placed in a bracket.
- The maximum recommended fixing distance is five metres.

1 Universal fixing bracket
For suspension on a threaded rod, diameter 6 mm. For horizontal mounting on a beam, pendant, wall, etc.



Luminaires

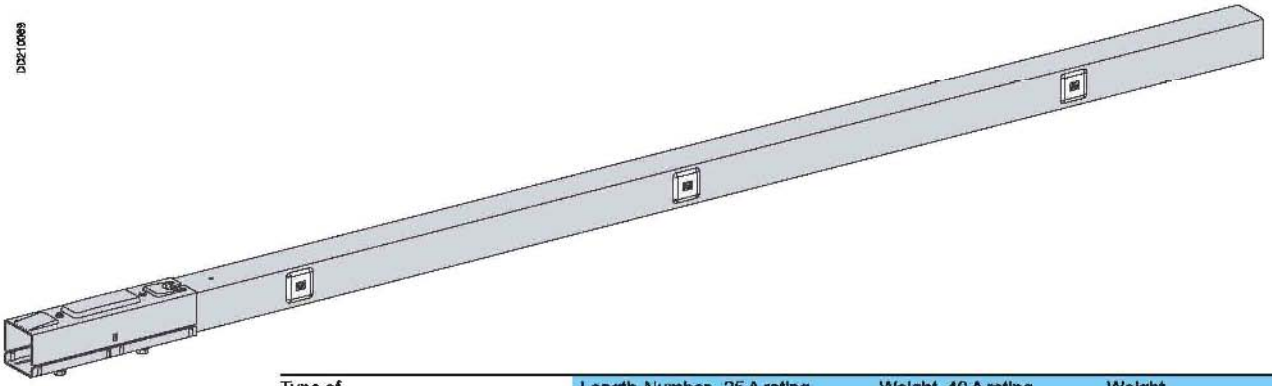
Attached to the luminaires before mounting, these fixings ensure fast and direct fixing to Canalis KBB.
- Fixing systems with automatic locking of moving part on closing.



Canalis KBB, 25 and 40 A

Busbar trunking for lighting and power socket distribution

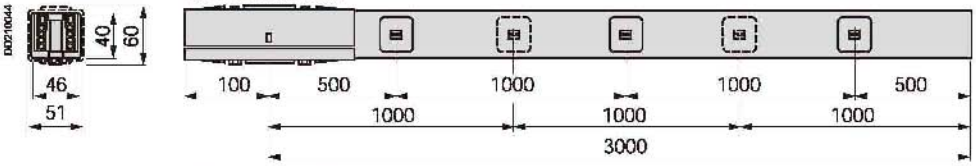
Straight lengths, two circuits



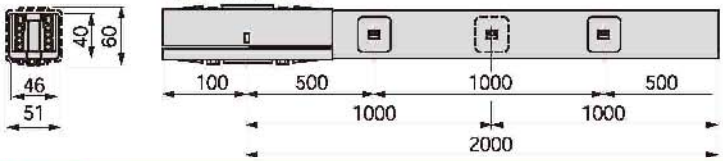
KBB ••ED•••••

Type of busbar trunking		Length (m)	Number of tap-offs	25 A rating Cat. no.	Weight (kg)	40 A rating Cat. no.	Weight (kg)
Standard straight length		3	3 + 2	**KBB 25ED22305**	4,600	**KBB 40ED22305**	5,200
		2	2 + 1	**KBB 40ED22203**	3,600	**KBB 40ED22203**	3,600
		3	3 + 2	**KBB 25ED42305**	4,700	**KBB 40ED42305**	5,700
		2	2 + 1	**KBB 40ED44203**	3,800	**KBB 40ED44203**	3,800
		3	3 + 2	**KBB 25ED44305**	4,800	**KBB 40ED44305**	6,100
		2	2 + 1	**KBB 40ED44203**	3,800	**KBB 40ED44203**	3,800

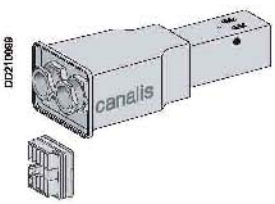
KBB ••ED••305



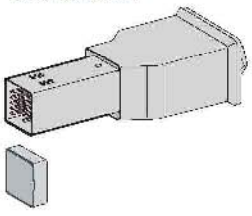
KBB 40ED••203



Feed units (supplied with end cover)



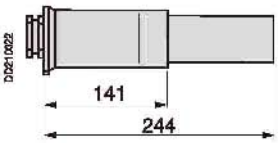
KBB 40ABG44



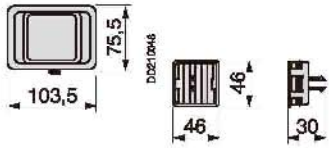
KBB 40ABD44•

Designation	Mounting	Cable connection: Terminals (mm²)	Cable connection: Cable gland Ø maxi (mm)	Options	Cat. no.	Weight (kg)
Feed unit	Left	6 to 10	PG 21, Ø 19	All	**KBB 40ABG44**	0.400
	Right	6 to 10	PG 21, Ø 19	None	**KBB 40ABG44**	0.400
				E	**KBB 40ABG44E**	0.500
				T	**KBB 40ABG44T**	0.500
Additional jointing unit					**KBB 40ZJ44**	0.640

KBB 40••• 44

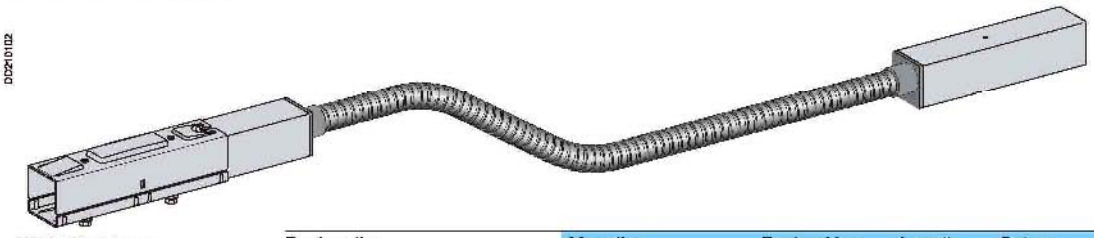


End cover

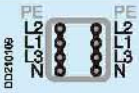


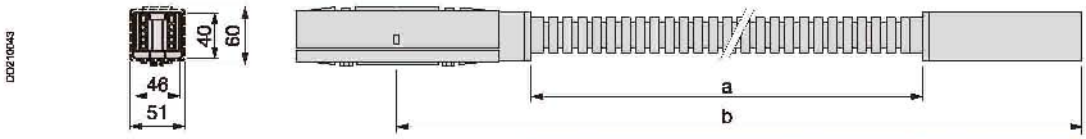
Canalis KBB, 25 and 40 A
Busbar trunking for lighting and power socket distribution

Flexible lengths



KBB 40DF4●●●

Designation	Mounting	For trunking	Length (m)	Cat. no.	Weight (kg)
Flexible lengths	For elbows, changing levels, detours around obstacles, etc.		0.5	**KBB 40DF4405**	0.800
			2	**KBB 40DF4420**	1.900



KBB 40DF4●●●

Length (mm)	KBB 40DF4●●5	KBB 40DF4●●0
a	153	1653
b	500	2000

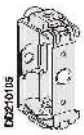
Fixing systems

Busbar trunking fixings

Designation	Mounting	Max. load (kg)	Cat. no.	Weight (kg)
Universal fixing bracket(1)	Suspended on threaded rod or lateral (except wall)	60	**KBB 40ZFU**	0.050

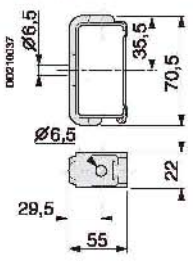
Luminaire fixings

Designation	Mounting	Max. load (kg)	Cat. no.	Weight (kg)
Universal fixing bracket	For direct suspension under trunking	60	**KBB 40ZFU**	0.050



KBB 40ZFU

KBB 40ZFU



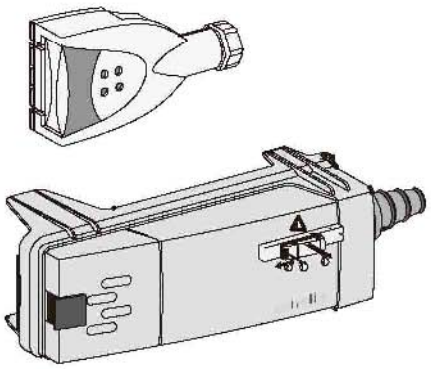
(1) Maximun recommended distance between fixings: 5 meters.

Canalis KDP, KBA and KBB

Busbar trunking for lighting and power socket distribution

Tap-off units

DD210668

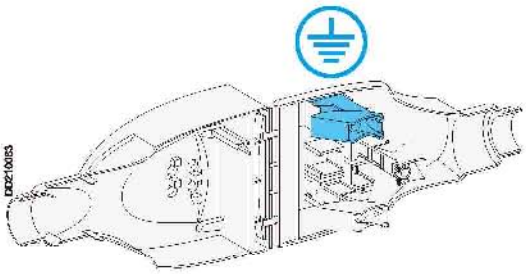


Tap-off units (general)

For instantaneous connection of luminaires to busbar trunking:
- they can be handled while energised and under live conditions,
- the contacts for live conductors are of the clamp type,
- PE connection occurs before that of the phases and neutral,
- phase-selection system (clip-in contact studs) for balancing of 3-phase distribution systems,
- selection is visible via a transparent window,
- a coloured lock holds them in the tap-off outlet,
- all the insulating and plastic materials have a high fire-retardant capacity:
  - incandescent-wire test in compliance with IEC 60695-2:
  - 960°C for components in contact with live parts,
  - 650°C for other components.

All the insulators and plastic components are **halogen free**.

DD210053



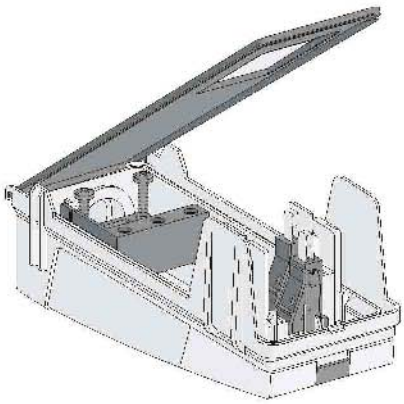
Two-pole 10 A tap-off unit with phase selection

- The two contact studs are movable and can be used to set up both L + N + PE and 2L + PE distribution.
- Supplied complete with a cable gland.

10 A KBC10DCB20 tap-off unit, 2-pole + PE, to be wired

- To be wired for connection of luminaires using a cable of specific type, size or length.
- Fast connection for 3 x 0.75 to 1.5 mm² cable. If prefabricated leads are used, the line must have 16 A protection (see possibilities of dispensing with protection in the simplified design guide for lighting distribution, in the section on protection against overloads).

DD210169



16 A KBC16DCB/DCF21 tap-off unit with phase selection

For connection of luminaires using a cable of specific type, size and length.

- Two-pole: L + N + PE (1 mobile stud, fixed neutral) or 2L + PE (2 mobile studs).
- Installation is facilitated by the side guides.
- Supplied with a cable bushing. Terminal connections for 0.75 to 1.5 mm² cable.

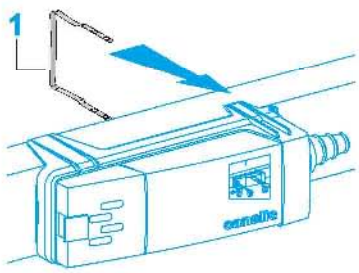
KBC16DCB tap-off unit with terminals, direct connection (no protection)

For direct connection (no protection) of luminaires using a specific cable.
Can be equipped with the accessory to tap-off the remote-control circuit to the luminaires.

KBC16DCF tap-off unit, with fuses

For protection of each luminaire.
Fuse carrier on the phase (1 or 2 carriers depending on the model).
For cylindrical fuse NF 8.5 x 31.5 (not supplied), 16 A gG maximum, breaking capacity 20 kA.

DD210191



Accessories

Specific to KBC 16DCF tap-off units

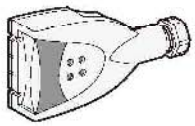
1 Rear support bracket
Additional fixing of KBC 16 tap-off units using the rear support bracket may be necessary, notably if there is a risk of accidental pulling on the cable or if the cable is very heavy (great length).

Canalis KDP, KBA and KBB tap-off units

For lighting and power socket distribution

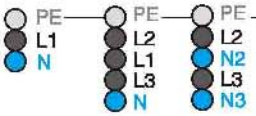
10 A tap-off unit, direct connection

10 A tap-off unit, L + L + PE or L + N + PE, with phase selection

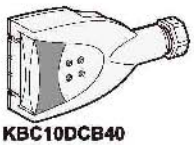


KBC10DCB20

Type of busbar trunking



Polarity	Order in multiples of	Cat. no.	Weight (kg)
L1 + N or L2 + N or L3 + N L1 + L2 or L1 + L3 or L2 + L3 L2 + N2 or L3 + N3	10	**KBC10DCB20**	0.065



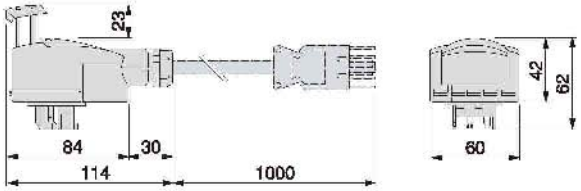
KBC10DCB40

Type of busbar trunking

10 A tap-off unit, 3L + N + PE

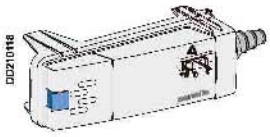
Polarity	Order in multiples of	Cat. no.	Weight (kg)
To be defined for each application (dimmer, emergency lighting, etc.)	10	**KBC10DCB40**	0.065

KBC 10DCB20, KBC 10DCC21• KBC 10DCB40



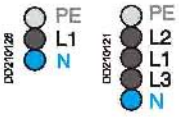
16 A single-phase tap-off unit, with or without fuses holder

16 A tap-off unit, L + N + PE, with phase selection



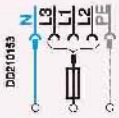
KBC16DC•21

Type of busbar trunking



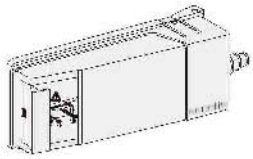
Single-circuit switching

Balancing on 3 phases or 3-circuit switching

Polarity	Protection	Scheme	Colour of lock	Order in multiples of	Cat. no.	Weight (kg)
L1 + N or L2 + N or L3 + N	None		Blue	10	**KBC16DCB21**	0.090
	Cylindrical fuse NF 8.5 x 31.5 16 A gG maximum (not supplied)		Blue	10	**KBC16DCF21**	0.090

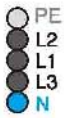
16 A three-phase tap-off unit, with or without fuses holder

16 A tap-off unit, 3L + N + PE



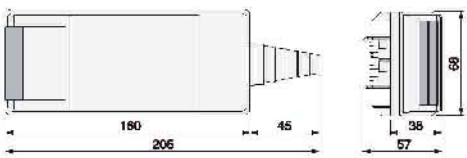
KBC16DC•40

Type of busbar trunking



All types possible

Polarity	Protection	Scheme	Cat. no.	Weight (kg)
3L + N	None		**KBC16DCB40**	0.090
	Cylindrical fuse NF 8.5 x 31.5 16 A gG maximum (not supplied)		**KBC16DCF40**	0.090



KBC 16DC•40

Canalis KBA and KBB lighting busway+ DALIcontrol system

One Integrated Lighting Solution

Power + Control Solution

One integrated lighting busway solution with both power and control, offered by Schneider Electric, delivered as part of an Integrated building management system, is a key tool in controlling energy use inside your buildings. And its partners meet the needs of building users and owners by: reducing installation and operating cost, providing greater flexibility in the use of building space, helping building owners meet legal and building performance regulations.
This is our commitment to help individuals and organizations 'Make the most of your energy™'

DALIcontrol™

Schneider Electric DALIcontrol is one recommended digital lighting system, which can be synergy with Canalis Lighting busway, creating an enhanced lighting solution.

- Acronym for "Digital Addressable Lighting Interface"
- International Standard (IEC 62386) digital lighting control system
- Governed by DALI Activity Group, DALI-AG

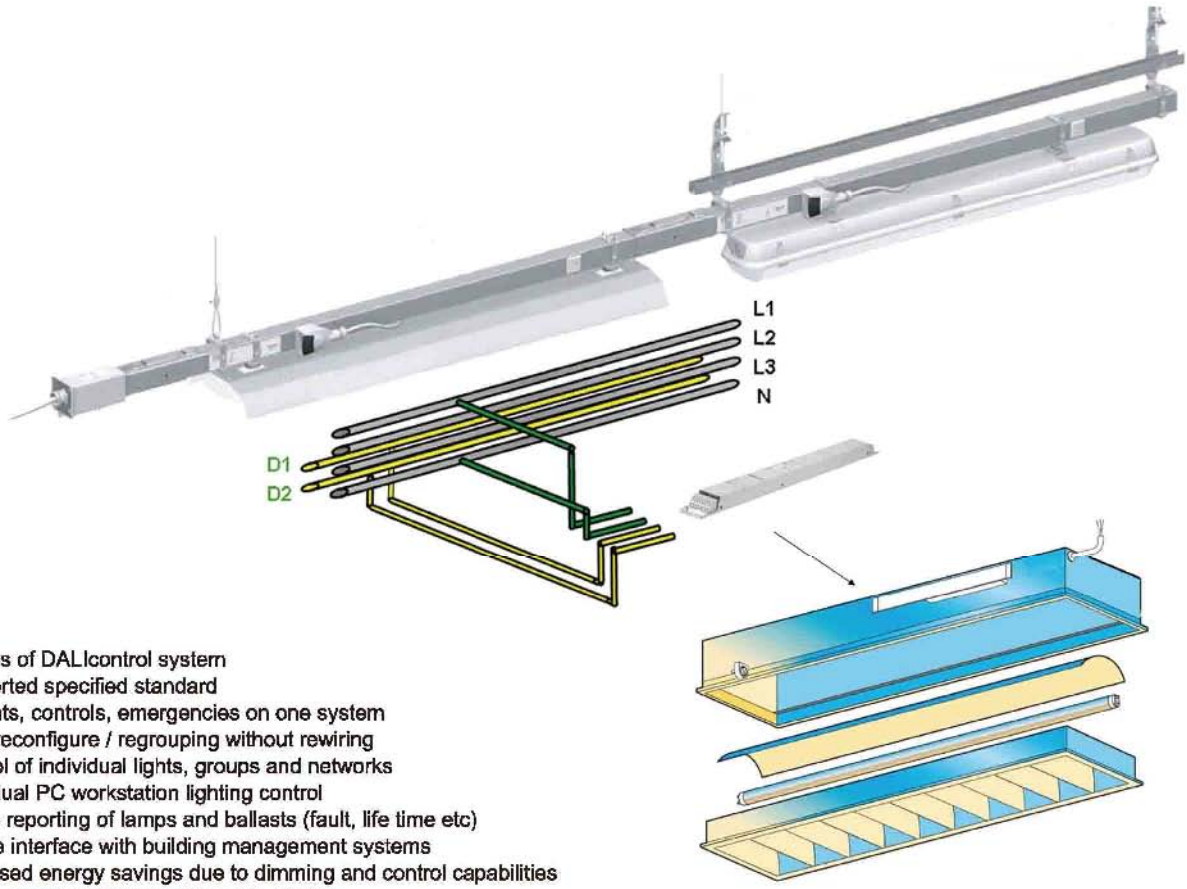
Canalis KBA and KBB lighting busway+ DALIcontrol system

One Integrated Lighting Solution

Schneider Busway remote-control offer

Factory mounted, a remote-control circuit is available for the loads supplied by the KBA trunking. The main applications are:

- Remote control (rest mode or testing) of self-contained emergency lighting units,
- Dimmer control,
- Recommendation: DALIcontrol,
- Transmission on a building automation bus.
- The system is built in compliance with CEI 60439-2 and the LV and EMC directives.
- The remote-control circuit is factory mounted in the trunking
- Electrical jointing unit equipped with control bus contacts. Installation of components requires no additional assembly operations.
- Each tap-off outlet is equipped with dual output contacts to tap-off the remote-control circuit to the receiver.

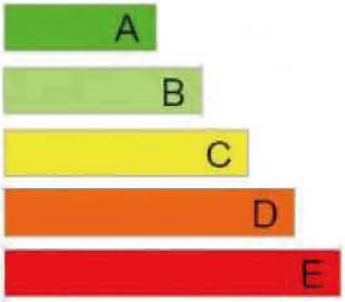


Features of DALIcontrol system

- Supported specified standard
- All lights, controls, emergencies on one system
- Easy reconfigure / regrouping without rewiring
- Control of individual lights, groups and networks
- Individual PC workstation lighting control
- Status reporting of lamps and ballasts (fault, life time etc)
- Simple interface with building management systems
- Increased energy savings due to dimming and control capabilities
- Digital accuracy dimming from 1% - 100%
- Logarithmic dimming - matching the eye's sensitivity
- Integration of emergency lighting

Environmental efficiency metrics

Application of building performance standards and energy certificates



System approach

New system (incl. Controls)

New luminaires

New lamps, new gear

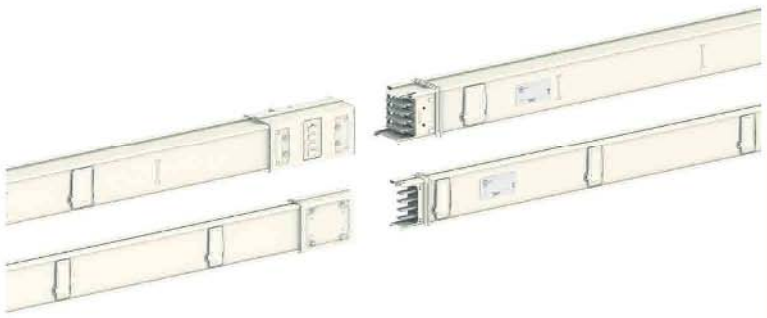
New lamps

Canalis KS
For medium-power distribution
from 100 to 800 A

1. Run components

- Rating: 100,160,250,400,500,630,800A.
- 4 live conductors.
  KSC:Copper conductor.
  KSA:Aluminum conductor with silver-plated copper contact.
- Length:
  - basic components: 1.5/2/3 metres.
  - special lengths: 0.375 to 2.30 metres.

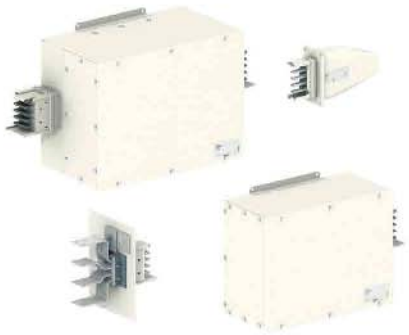
PD202204



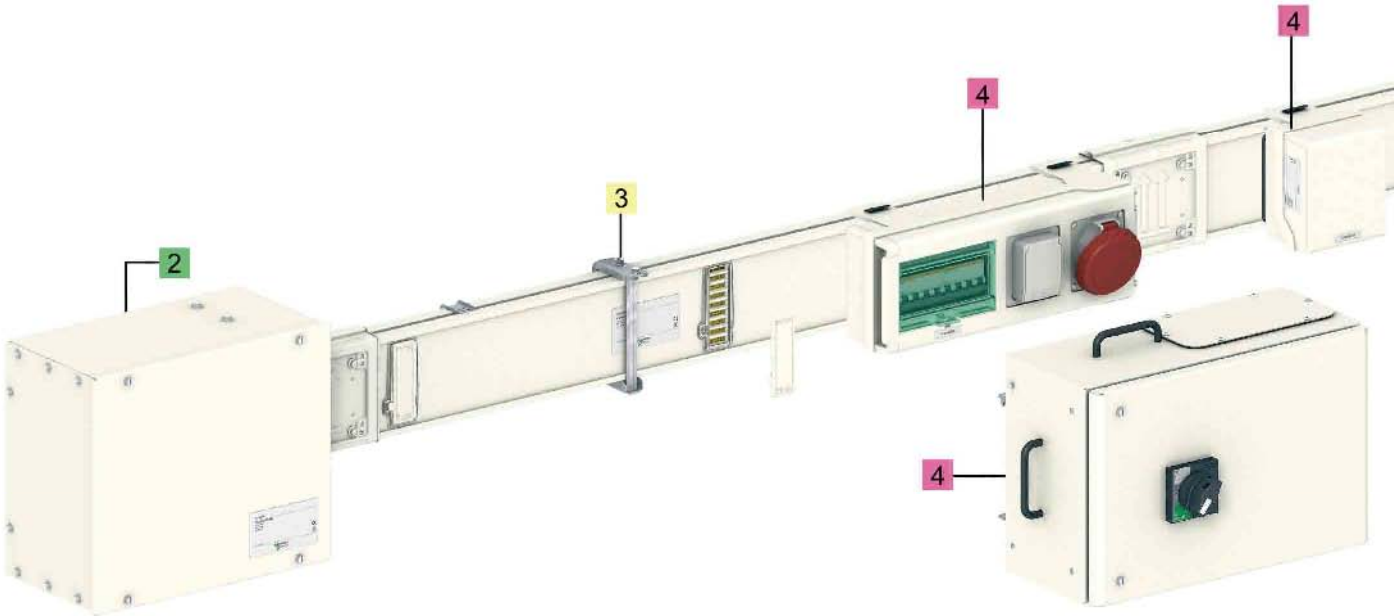
2. Feed units and end covers

- The feed units delivered with end covers, receive the cables supplying one end or any other point of Canalis KS trunking.

PD202205



PD202208



Canalis KS
For medium-power distribution
from 100 to 800 A

3. Fixing system

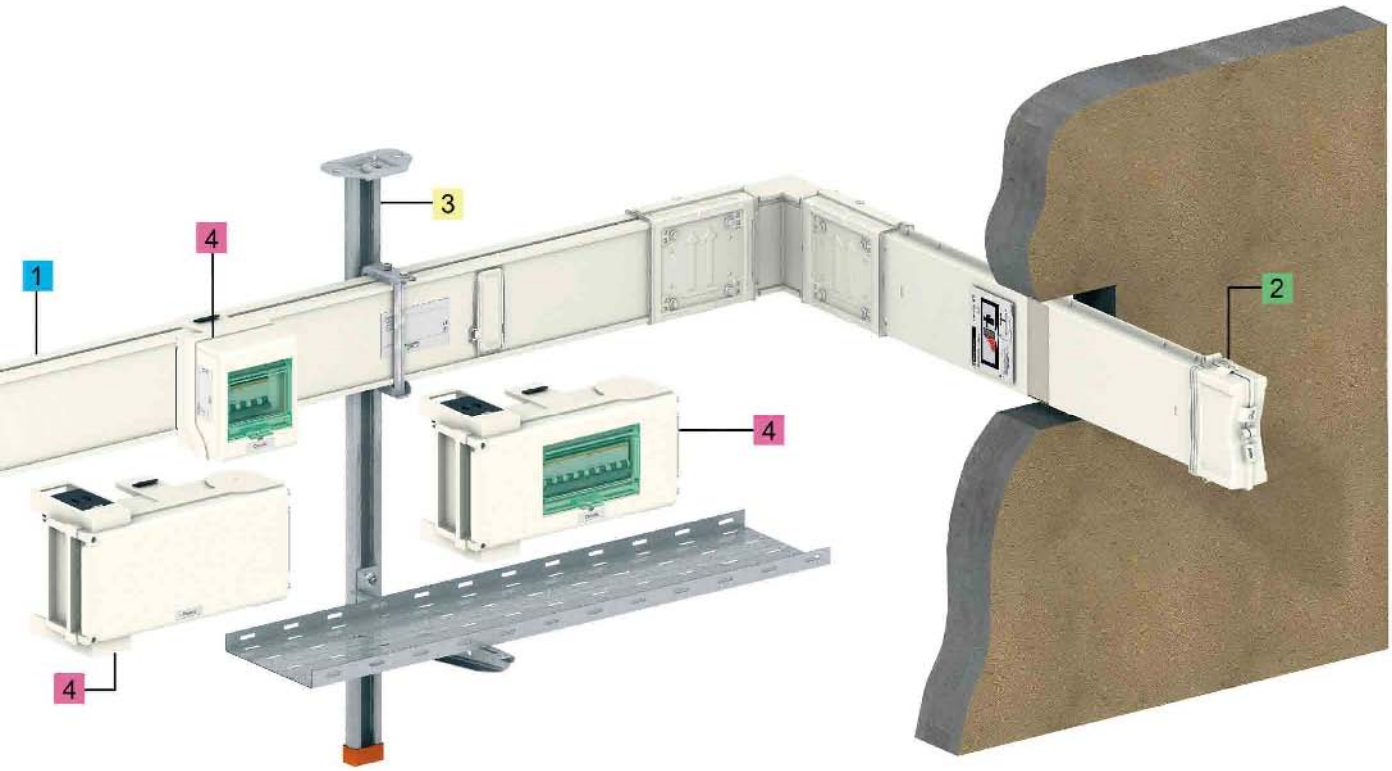
■ The fixing system ensures that Canalis KS is well secured, whatever the type of building structure.

PB202206

4. Tap-off units

■ The tap-off units (with and without isolators) have ratings of 25 to 400 A
■ Protection is ensured with modular or Compact NS circuit breakers or fuses.

PB202207



Canalis KS
For medium-power distribution from 100 to 800 A

No toxic emission in case of fire

All components in the KS range are **halogen free**.
In case of fire, Canalis KS does not release smoke or toxic gases.

DD202141

Excellent contact

Contacts in Joint-Pack are silver-plated and expension can be absorted automaticlly thanks to clip design.
The level of performance remains the same throughout the life of the product.

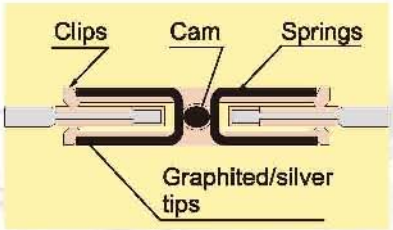
KSC range with copper conductor
KSA range with Aluminum conductor with silver-plated copper contact.
All the tap-off contact also silver-plated.

KSC copper

KSA aluminum

PD202209

Joint-Pack



DD202171

Canalis KS
For medium-power distribution from 100 to 800 A

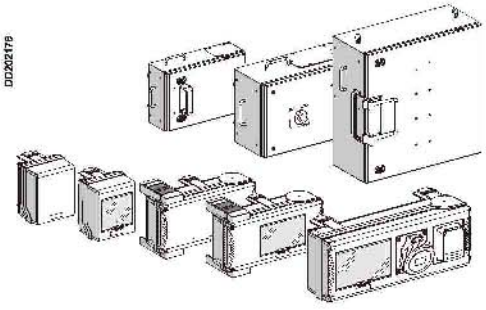
DD202142

A high degree of protection

The high degree of protection for Canalis KS means it can be installed in all types of buildings.
- **IP54** guarantees trunking protection against splashes, and dust.
- Canalis KS complies with **sprinkler tests**, guaranteering operation under vertically and horizontally sprayed water for 50 minutes.

IK08 guarantees trucking protection against splashes, and dust.

IPxxD ensures totally safe working conditions for maintenance personnel.



DD202179

A complete range of tap-off units

- The range covers all needs from 25 to 400 A.
- Protection is possible using circuit breakers or fuses.
- Also available are 32 A tap-off units equipped with household and industrial power sockets.

Intelligent tap-off units

- They monitor the installation to avoid overloads and ensure continuity of service.
- They can meter the energy consumed for precise management (cost allocation for each consumer).

Canalis KS, 100 to 800 A
Medium-power distribution

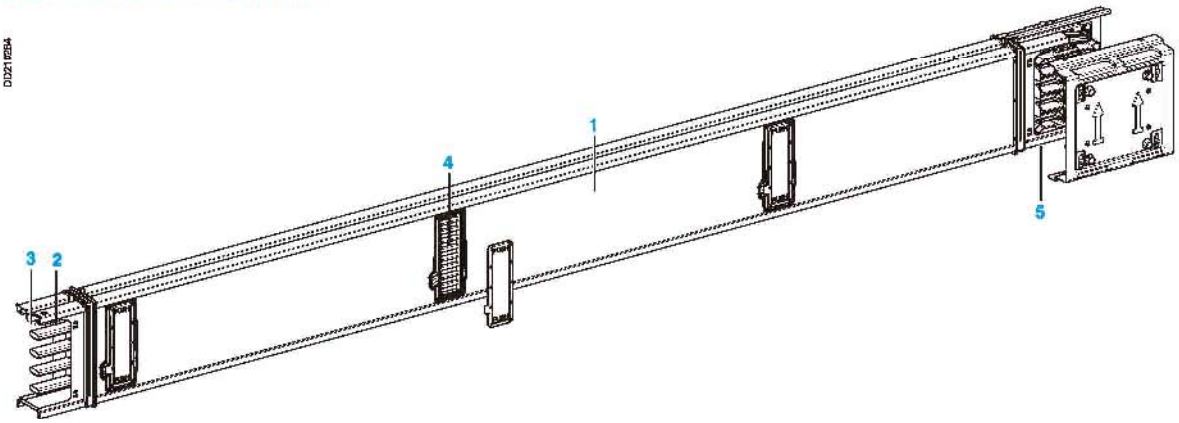
IP54
Ue = 230...690 V

Canalis KS is designed for medium-power distribution with high tap-off densities in industrial and commercial buildings (factories, exhibition halls, supermarkets, etc.).
The range is available in eight ratings: 100, 160, 250, 400, 500, 630, 800 A.
Canalis KS provides an IP54 degree of protection, whatever the installation method. Consequently it can be installed in virtually any type of building.
Tap-offs are implemented by tap-off units from 25 to 400 A that may be removed in complete safety under energised conditions, from 25 to 400 A.
Busbar trunking rated 100 to 250 A may be equipped with tap-off units up to 160 A.
Busbar trunking with higher ratings may be equipped with the entire range of tap-off units.
All the insulating and plastic materials are **halogen-free** and have enhanced fire-withstand capabilities
■ incandescent wire test as per standard IEC 60695-2 :
□ 960°C for components in contact with live parts,
□ 650°C for other components.

Straight lengths

Distribution components

DD221254



Straight lengths are designed to carry current and feed loads with low or medium power. the straight lengths form the structure of the run. They comprise:

1 A casing of galvanized sheet steel, which is crimped closed.
This casing, shaped and ribbed by rolling, provides excellent resistance to bending and twisting.
Three casing widths cover the whole range. Casings are available in two finishes:
-52.4 mm wide sheet steel with white finished for 100, 160 and 250A ratings
-73 mm wide sheet steel with white finished for 400 and 500 A ratings.
-109 mm wide sheet steel with white finished for 630 and 800 A ratings.

2 4 live conductors of the same cross-section:
-High purity electrical copper bar for KSC 100 to 800 ratings.
-High purtiy electrical aluminum bar for KSA 100 to 800 ratings with silver-plated copper contact.

3 Fibreglass reinforced polyester isolators, at 250 mm intervals.These hold the conductors securely within the casing.

4 A special protected earth (PE) conductor with a cross-section 1/2 of three phase cross-section. It is connected to the casing at each junction.

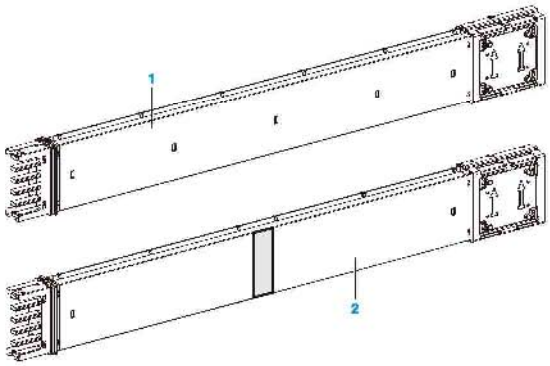
5 Tap-off outlets on both sides of the trucking, at 0.5 or 1 m intervals.
They have a shuttered outlet which is opened and closed automatically when connectors or tap-off units are plugged in or removed.

6 A mechanical and electrical jointing device.
Electrical connection is via a block with spring and silver graphite contacts. This block absorbs the differential conductor/casing expansion of each length equally.
For 100,160 and 250 A ratings, it automatically and simultaneously connects all the live conductors, ensures continuity of the protective earth conductor and its connection with the casing. For higher ratings(400 to 800A), the electrical connection is made by a 1/4 screw turn for each conductor.

Special components

1 **Custom-length run components**
Used to adjust the length of a line (e.g. between two changes in direction).
These components are made to order and do not have tap-off outlets.

DD210265



2 **Fire barrier**
This type of length is used to transit a fire-proof wall (e.g. between two rooms in a building).
It has been tested in a certified laboratory and complies with standard EN 1363-1.
The laboratory report lists the following results:
□ thermal insulation: ⩾120 minutes,
□ resistance to flames: ⩾120 minutes,
□ stability: ⩾120 minutes.

Canalis KS, 100 to 800 A
Medium-power distribution

Feed units and end covers

Used to feed a KS line by cables or directly from the busbars in a switchboard. They can be mounted at the end of a line (end feed, left or right) or in the middle (central feed).

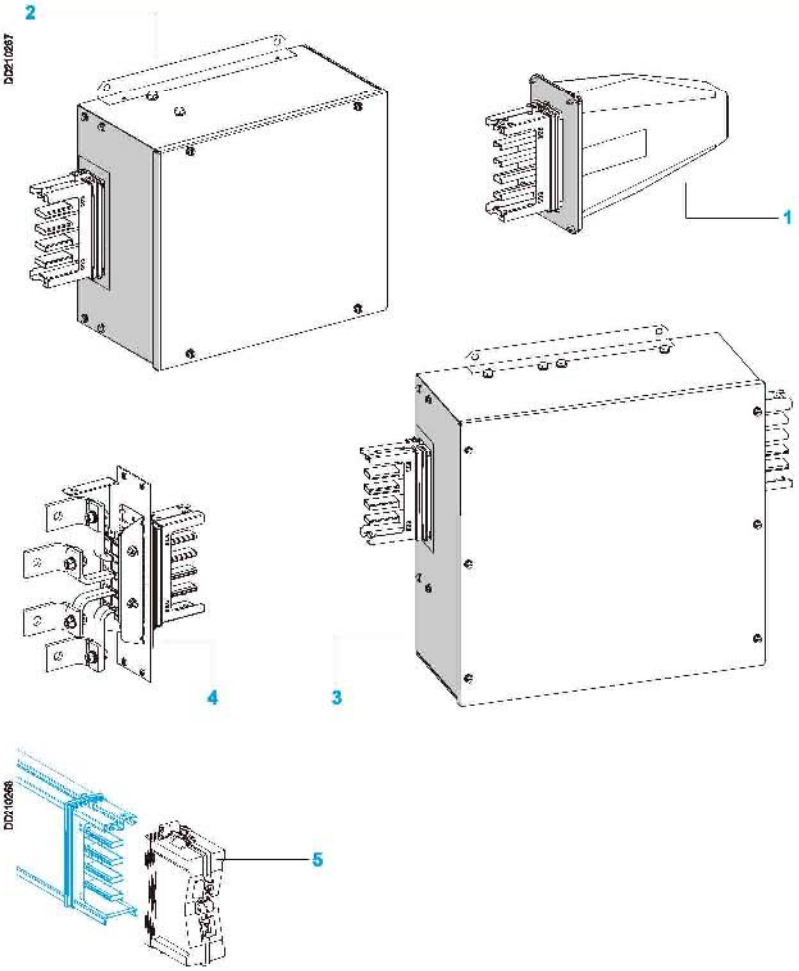
1 **End feed unit for KS 100 A trunking**
For KS 100 A trunking only. It can be mounted on either side of a straight length. It is equipped with a PG 29 cable gland and supplied with an end cover.

2 **End feed unit for trunking up to 800 A**
For 100 to 250 A ratings. It can be mounted on either end of a straight length by inverting the initial section of the trunking.and supplied with an end cover.
For 400 to 800 A ratings, there are right and left-hand versions.

3 **Centre feed unit**
Using a single cable, it is possible to feed both the right and left-hand sections. It is mounted between two straight lengths in the line and is supplied with two end covers.

4 **Flange feed unit**
Equipped with splayed bars and a mounting plate for direct connection to the busbars of a switchboard. It can be mounted on either end of a component and is supplied with an end cover.

5 **End cover**
The end cover protects and isolates the ends of the conductors. It is mounted on the last component. Supplied with end feet unit and feed unit.



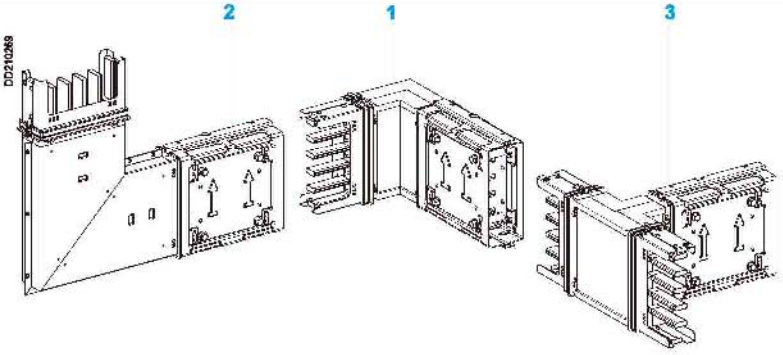
Components for changing direction

All components for changing direction are supplied with a junction block.

1 **Edgewise elbow**
One model for turning right or left.

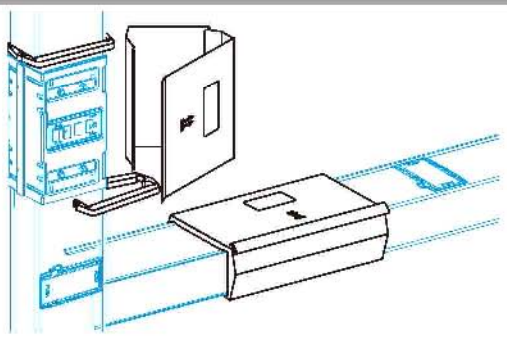
2 **Flat elbows**
Two models, one for turning up and the other for turning down.

3 **Edgewise tee**
To create branches perpendicular to the main line.



Sprinkler kit

To comply with the sprinkler tests (guaranteeing operation under vertically and horizontally sprayed water for 50 minutes), each electrical jointing system should be fitted with a reinforced protection kit (the jointing sleeve).

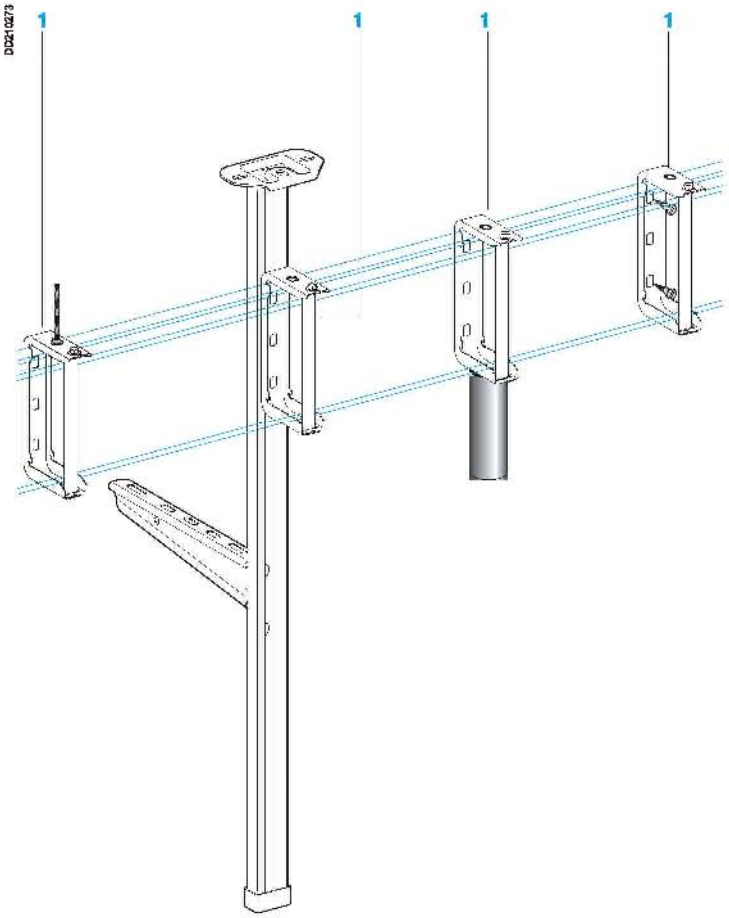


Fixing systems

The maximum recommended fixing distance is three metres.

1 Universal fixing bracket
For attachment of the busbar trunking to the structure of the building, either directly or via a threaded rod M8, brackets, etc.
Suspension using chains or steel cables is not advised.

2 Spring fixing bracket
These brackets are used to suspend the KS line on threaded rods M8 and do not require tools.The bracket is attached to the treaded rod by the spring mechanism,without nuts or bolts.Adjustment of the length of the threaded rod is simplified and the KS trunking can be installed three times faster.
They are suitable for ratings up to 800A.



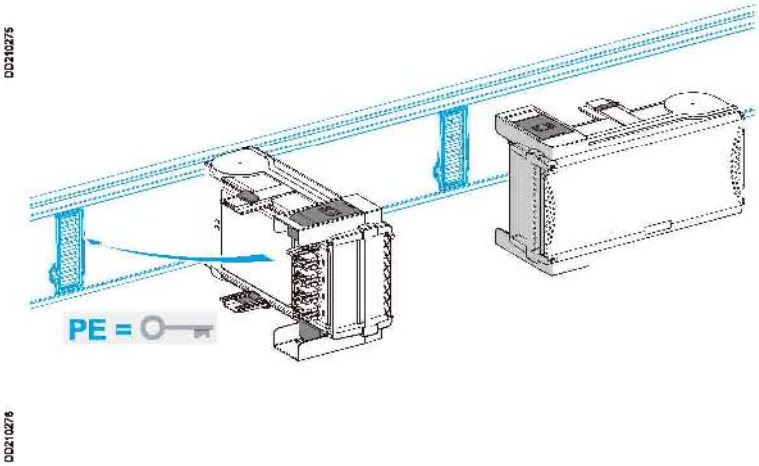
Tap-off units

For rapid connection of loads or secondary lines, in compliance with installation standards CEI 60364 and regulations, whatever the system earthing arrangement (TT, TNS, TNC or IT).

They can be handled and removed under off-load conditions with the trunking energised.

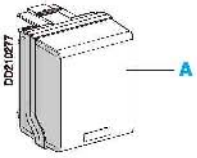
The tap-off outlets are automatically opened or closed when tap-off units are connected or removed.

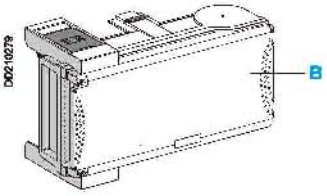
With the cover open, no live are accessible. Thedegree of protection is IPxxD (protected against access with a finger.)



Tap-off units (A) and tap-off units with isolators (B) up to 100 A are made of plastic:

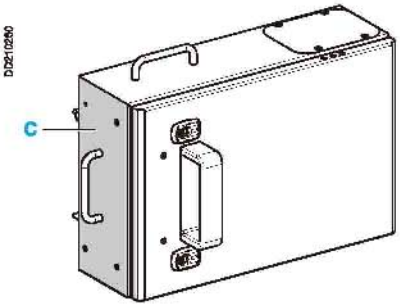
- Colour: RAL 9001 white for the casing and the grip zones and transparent green for the cover (design based on Kaedra enclosures),The fixing mechanisms are in RAL 7016
- Material: self-extinguishing, ***halogen free*** insulating plastic (fire resistant and very high temperature withstand).
- Other characteristics: cable gland drilling zone, stainless steel screws and the door can be lead sealed.
- IP rating for plastic tap-off unit is IP55 standard.





Tap-off units from 160 to 400 A are made of sheet steel (C):

- Colour: RAL 9001 white for the casing
- Other characteristics:
  - Removable cover with hinges enabling opening up to 120°, vertically bevelled cover with double bends for enhanced rigidity (design based on Sarel Spatial 3D enclosures), polyurethane gaskets.
  - Equipped with cable-gland plates marked every 25 mm and designed for maximum access.
- IP rating for metal tap-off unit is IP54 maximum.



Disconnection principle:

Disconnection by unplugging the tap-off unit.
The access to the electrical devices and the terminals is possible only when the tap-off unit is unplugged (i.e. not energised).
A safety device prevents connection to the trunking when the cover has been removed.

Disconnection of tap-off units with fuses and modular devices (category AC22 to AC20) is obtained by opening the tap-unit cover.

Tap-off unit disconnection by opening or closing the cover should be carried out only if the downstreamload is de-energised.

For tap-units with circuit breakers, a number of safety devices prevents from:

- Plugging and unplugging in the tap-off unit when the cover is closed
- Closing the cover before the tap-off unit is locked onto the trunking
- having access to the electrical equipment and the terminals when energised.
- opening the cover in the position "ON" (tap-off units equipped with a Compact NS or NG circuit breaker).

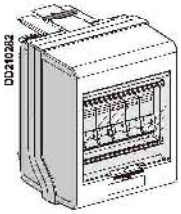
These tap-off units can be equipped with certain accessories such as circuit-opening contacts on the cover, lead seals, etc.

Tap-off units for circuit-breakers (not equipped)

Tap-off unit covers can be lead sealed to prevent circuit-breaker switching by unauthorised persons.

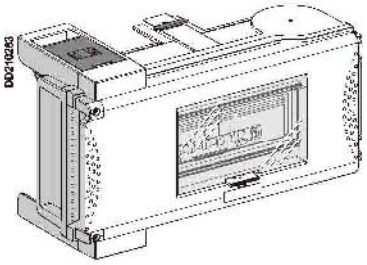
Tap-off unit for modular devices

This tap-off unit can be equipped with most modular devices (18 mm wide) of the Multi 9 type:
- rated current: 32 A,
- capacity: 5 modules,
- with a window in front for visual and physical access to the devices. A transparent cover seals the window.



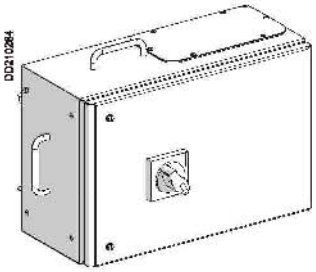
Tap-off units, with isolators, for modular devices

These tap-off units accept most modular devices of the Multi 9 type available in multiples of 18 mm wide modules. They have a window in front for visual and physical access to the devices. A transparent cover seals the window.
Two ratings are available:
- rated current 63 A for eight modules,
- rated current 100 A for twelve modules (can accept C120 circuit breakers).



Tap-off units for NG type modular devices

These tap-off units are equipped with a DIN rail and upstream connections to accept modular devices available in multiples of 18 mm wide modules.
The devices are operated by rotary handles that prevent door opening with the circuit breaker in "On" position.
- rated current: 160 A,
- capacity: 13 modules (accepts NG125 or NG160 devices equipped with Vigi modules).



Tap-off units, with isolators, for Compact NS circuit breaker

These tap-off units are equipped with mounting plates and upstream connections for Compact NS circuit breakers:
- rated current: 100 to 400 A, N, H or L versions,
- fixed, front connection, rotary handle,
- For Compact NS + Vigi module, use Tap-off units for measurements and metering (see below)

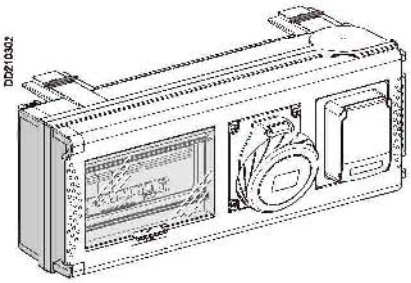
400 A tap-off units can be only installed on straight lengths > 400 A.

Note: *For options such as withdrawable circuit breakers, earth-leakage protection, etc, call your Schneider Electric contact.*

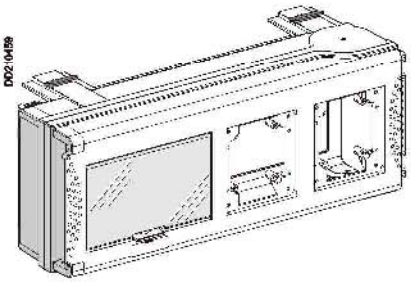
Tap-off units for power sockets (not equipped)

Tap-off unit covers can be lead sealed to prevent circuit-breaker switching by unauthorised persons.

Canalis 32 A tap-off unit for power sockets
For the supply of portable loads equipped with household or industrial plugs in a garage, maintenance workshop, laboratory, battery charging room, etc
For installation on trunking mounted on a wall for better access.
For easy access, install on trunking mounted at an appropriate height on the wall.
Flexibility, upgradeability: positioned as close as possible to the loads, extension leads are not required
Degree of protection: IP55, IK08.
Safety of persons: IPxxD, earth-leakage protection



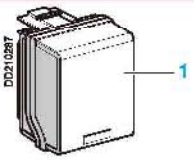
Rated current: 32 A
Capacity: 8 modules in multiples of 18 mm wide
Two versions are available:
- pre-equipped with 2 PK or PratiKa power sockets
- customisable:
  - two 90 x 100 mm openings for PK-type (screw connections) or PratiKa (fast and reliable connection without stripping) industrial or household sockets.
  - direct mounting for industrial IEC 16 A 5P or IEC 32 A 3, 4 or 5P sockets.
  - mounting on a 65 x 85 mm clip-on adapter plate for industrial IEC 16 A 3P or 5P and household 10/16 A 2P + PE sockets.



Tap-off units for fuses (not equipped)

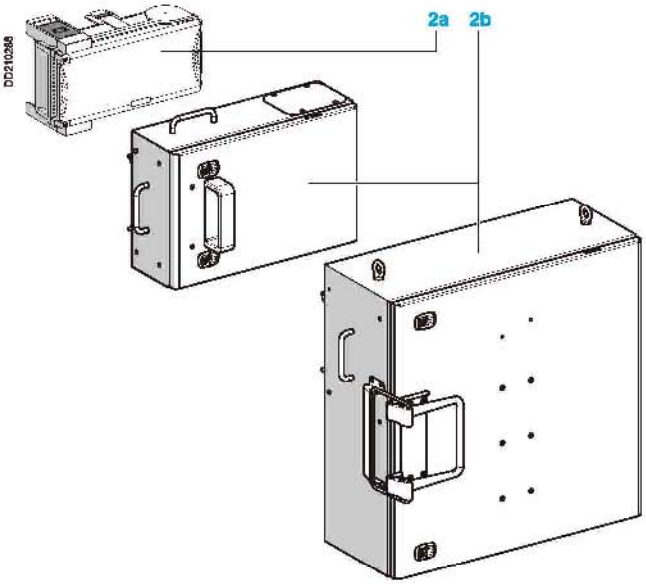
For protection of the tap-off by fuses (not supplied).

1 Tap-off unit with fuse holders
This tap-off unit exists in three versions:
- for NF 10 x 38 fuses,
- for BS type 88 A1 fuses,
- for DIN type Neozed E14 fuses



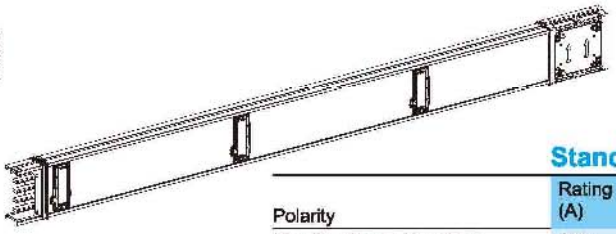
2a and 2b Tap-off units, with isolator, for fuses
There are two types of tap-off units:
Plastic tap-off units (2a) equipped with fuse holders for:
- NF 50 to 100 A cylindrical fuses
- BS 32 to 80 A screw fuses
- DIN 25 to 63 A screw fuses
- 100 A blade-type fuses.

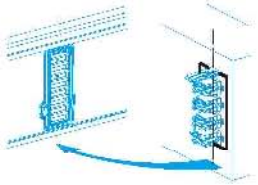
Sheet-metal tap-off units (2b) equipped with fuse holders for 160 to 400 A blade-type fuses.



Canalis KSA, 100 to 250 A
Busbar trunking for medium-power distribution

Straight lengths with tap-off outlets



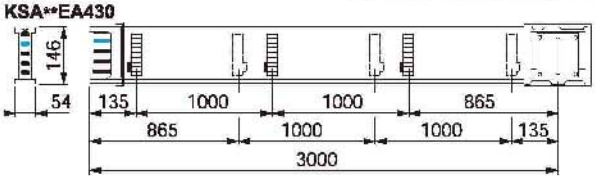


Standard lengths

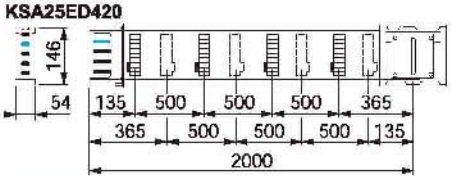
Polarity	Rating (A)	Length (mm)	Number of tap-off outlets	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3 L + PEN	100	3000	6	**KSA10EA430**	KSA10PG	11.90
		2000(1)	-	-	-	-
		1500(1)	-	-	-	-
	160	3000	6	**KSA16EA430**	KSA16PG	13.20
		2000(1)	-	-	-	-
		1500(1)	-	-	-	-
	250	3000	6	**KSA25EA430**	KSA25PG	15.50
		2000	8	**KSA25ED420**	KSA25PG	10.65
		1500	6	**KSA25ED415**	KSA25PG	8.35

(1) Recommended Straight Lengths: KSA25E•4••

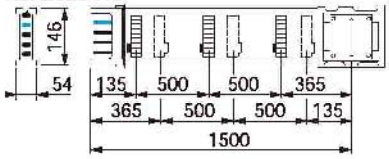
KSA••EA430



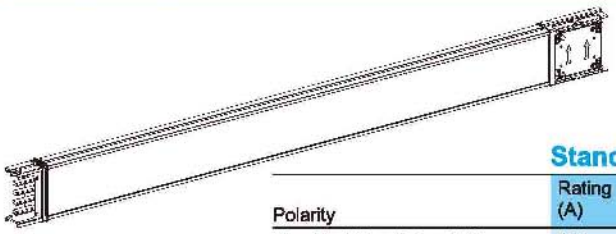
KSA25ED420



KSA25ED415



Straight lengths without tap-off outlets

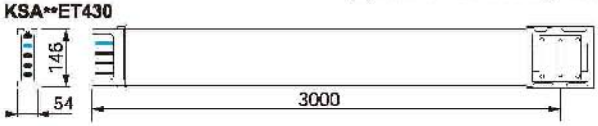


Standard lengths

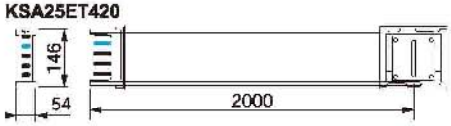
Polarity	Rating (A)	Length (mm)	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3 L + PEN	100	3000	**KSA10ET430**	KSA10FG	11.90
		2000(1)	-	-	-
		1500(1)	-	-	-
	160	3000	**KSA16ET430**	KSA16FG	13.20
		2000(1)	-	-	-
		1500(1)	-	-	-
	250	3000	**KSA25ET430**	KSA25FG	15.50
		2000	**KSA25ET420**	KSA25FG	10.65
		1500	**KSA25ET415**	KSA25FG	8.35

(1) Recommended Straight Lengths: KSA25E•4••

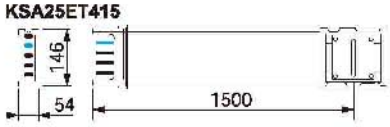
KSA••ET430



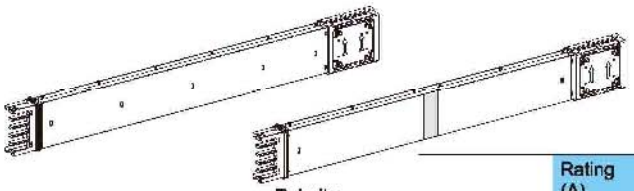
KSA25ET420



KSA25ET415

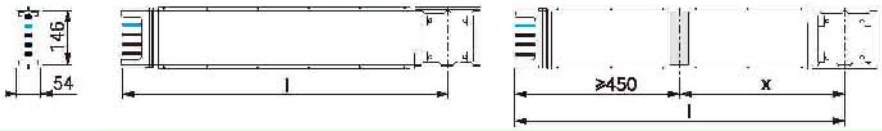


Special straight lengths without tap-off outlets

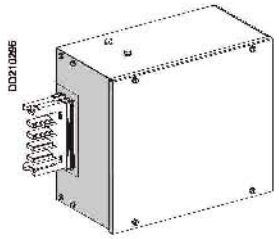


Polarity	Rating (A)	Length (mm)	Option	Cat. no.	Order Generic	Weight (kg/m)
3L + N + PE or 3L + PEN	100 to 250	375 to 1995	-	**KSA25ES4AG**	KSA25PG	8.00
		900 to 1995	With Smoke barrier	**KSA25EF4AG**	KSA25PG	8.40

The Example: KSA25EF4AL1800X0800, the length of straight is 1800mm, the distance from Smoke Barrier to joint end is 800mm.

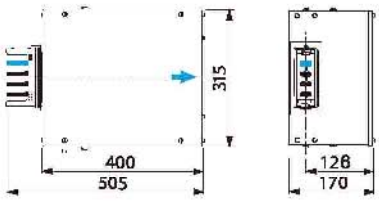


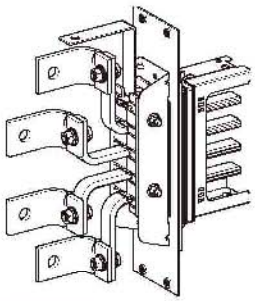
Feed units



KSA25AB42

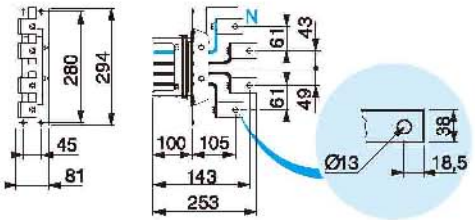
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
End feed unit	100 to 250	Right or left	6.35 X 38.1	**KSA25AB42**	KSA25PG+KSA25ETB	7.20





KSA25ER4

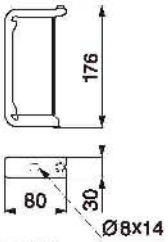
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
Flange feed unit	100 to 250	Right or left	6.35 X 38.1	**KSA25ER4**	KSA25PG+KSA25FE	1.70



KSB25FA3

	Rating (A)	Length (mm)	Cat. no.	Weight (kg)
	100 to 250	15	**KSB25FA3**	0.15

Fixing system



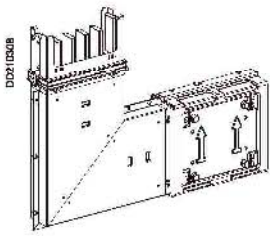
KSA25EZ1

Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Fixing bracket(1)	100 to 250	70	Wall or suspended on threaded rod	1	**KSA25EZ1**	0.3

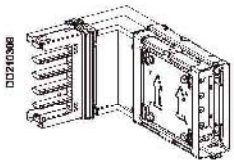
(1) Maximum recommended distance between fixings: 3 meters

Canalis KSA, 100 to 250 A
Busbar trunking for medium-power distribution

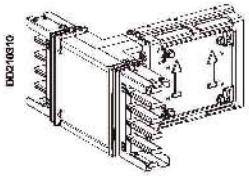
Elbow



KSA25LP4*



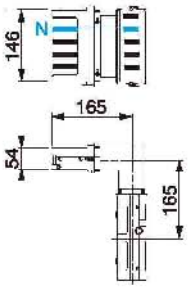
KSA25LC40



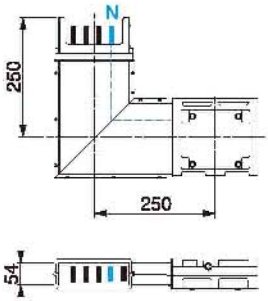
KSA25TC40

Designation	Rating (A)	Direction (edgewise)	Cat. no.	Order Generic	Weight (kg)
Elbow	100 to 250	Right or left	**KSA25LC40**	KSA25PG + KSA25EL	3.15
		Upward	**KSA25LP41**	KSA25PG + KSA25EL	5.00
		Downward	**KSA25LP42**	KSA25PG + KSA25EL	5.00
Tee	100 to 250	Perpendicular	**KSA25TC40**	KSA25PG + KSA25T	4.30

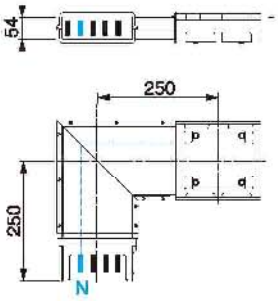
KSA25LC40



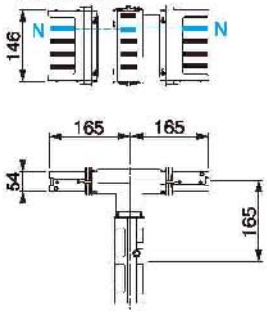
KSA25LP41



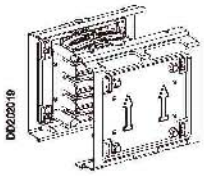
KSA25LP42



KSA25TC40

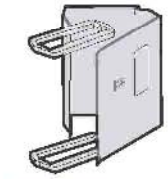


Accessories



KSB25YA4

KSE80YB2



KSE80YA2

Spare parts

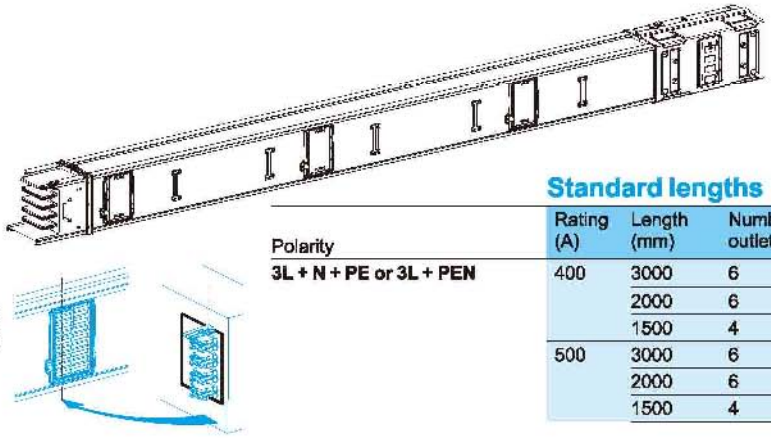
Designation	Rating (A)	For	Cat. no.	Weight (kg)
Joint Pack	100 to 250		**KSB25YA4**	1.41

IP54 accessory

Designation	Rating (A)	For	Cat. no.	Weight (kg)
PIO Cover	100 to 800		**KSE80YB2**	0.8
Joint Cover	100 to 250	straight length	**KSE25YA3**	1.28

Canalis KSA, 400 to 500 A
Busbar trunking for medium-power distribution

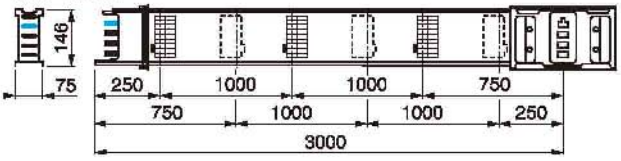
Straight lengths with tap-off outlets



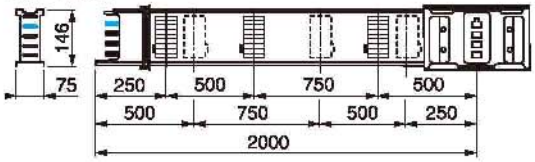
Standard lengths

Polarity	Rating (A)	Length (mm)	Number of tap-off outlets	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3L + PEN	400	3000	6	**KSA40ED430**	KSA40PG	25.00
		2000	6	**KSA40ED420**	KSA40PG	13.90
		1500	4	**KSA40ED415**	KSA40PG	10.85
	500	3000	6	**KSA50ED430**	KSA50PG	28.00
		2000	6	**KSA50ED420**	KSA50PG	20.00
		1500	4	**KSA50ED415**	KSA50PG	15.90

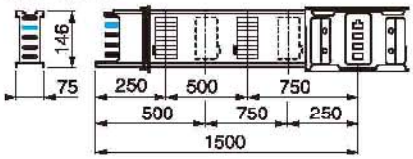
KSAED430**



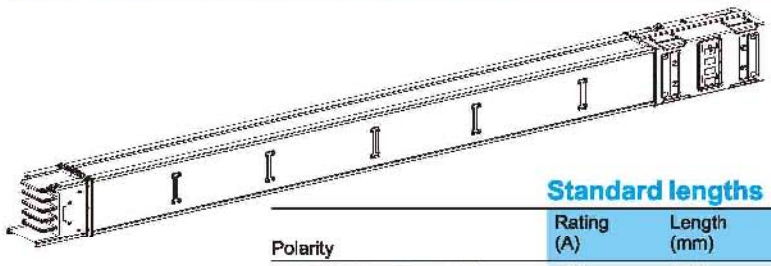
KSAED420**



KSAED415**



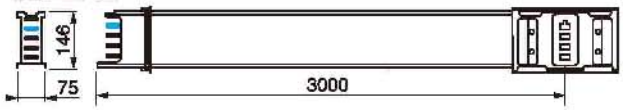
Straight lengths without tap-off outlets



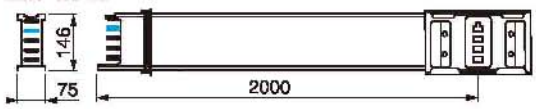
Standard lengths

Polarity	Rating (A)	Length (mm)	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3L + PEN	400	3000	**KSA40ET430**	KSA40FG	25.00
		2000	**KSA40ET420**	KSA40FG	13.90
		1500	**KSA40ET415**	KSA40FG	10.85
	500	3000	**KSA50ET430**	KSA50FG	28.00
		2000	**KSA50ET420**	KSA50FG	20.00
		1500	**KSA50ET415**	KSA50FG	15.90

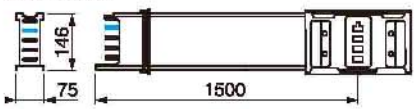
KSAET430**



KSAET420**

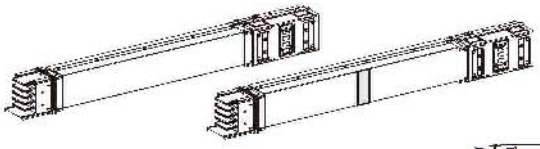


KSAET415**



Special straight lengths without tap-off outlets

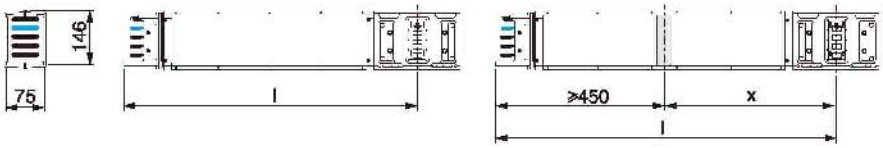
Polarity
3L + N + PE or 3L + PEN



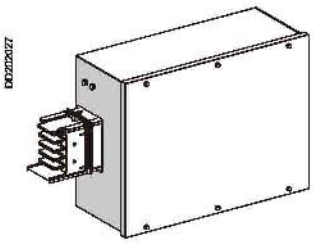
Special lengths

Rating (A)	Length (mm)	Option	Cat. no.	Order Generic	Weight (kg/m)
400	515 to 2300	-	**KSA40ES4AG**	KSA40PG	11.05
	900 to 2300	With Smoke barrier	**KSA40EF4AG**	KSA40PG	11.67
500	515 to 2300	-	**KSA50ES4AG**	KSA50PG	12.25
	900 to 2300	With Smoke barrier	**KSA50EF4AG**	KSA50PG	12.87

The Example: KSA40EF4AL1800X0800, the length of straight is 1800mm, the distance from Smoke Barrier to joint end is 800mm.



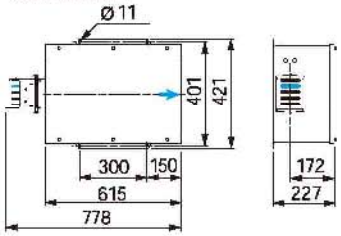
Feed units



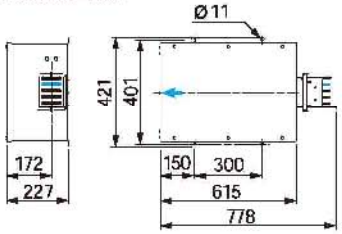
KSA50AB4•2

Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
End feed unit	400 to 500	Right	8.0 x 41	**KSA50AB452**	KSA50PG + KSA50ETB	22.00
		Left	8.0 x 41	**KSA50AB462**	KSA50PG + KSA50ETB	22.00

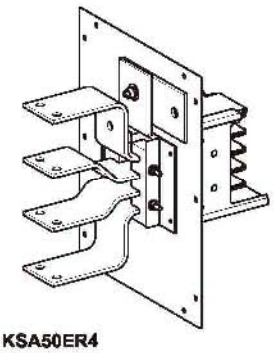
KSA50AB452



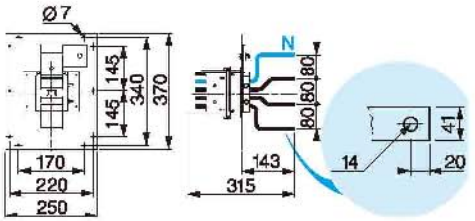
KSA50AB462



Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
Flange feed unit	400 to 500	Right or Left	8.0X41	**KSA50ER4**	KSA50PG KSA50FE	4.10



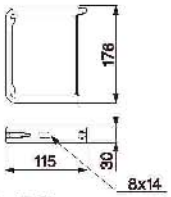
KSA50ER4



KSB50FA2

Rating (A)	Length (mm)	Cat. no.	Weight (kg)
400 to 500	20	**KSB50FA2**	0.44

Fixing system



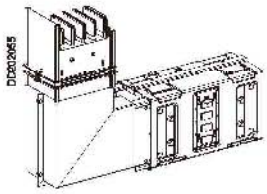
KSA50EZ3

Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Fixing bracket(1)	400 to 500	135	Wall or suspended on threaded rod	10	**KSA50EZ3**	0.4

(1) Maximum recommended distance between fixings: 3 meters.

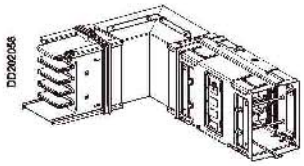
Canalis KSA, 400 to 500 A
Busbar trunking for medium-power distribution

Elbow

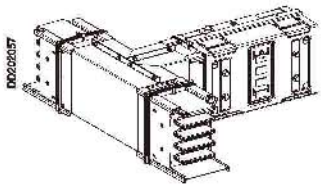


KSA50LP4*

Designation	Rating (A)	Direction (edgewise)	Cat. no.	Order Generic	Weight (kg)
Elbow	400 to 500	Right or left	**KSA50LC40**	KSA50PG + KSA50EL	9.86
		Upward	**KSA50LP41**	KSA50PG + KSA50EL	10.00
		Downward	**KSA50LP42**	KSA50PG + KSA50EL	10.00
Tee	400 to 500	Perpendicular	**KSA50TC40**	KSA50PG + KSA50T	15.00

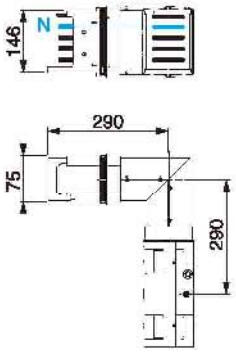


KSA50LC40

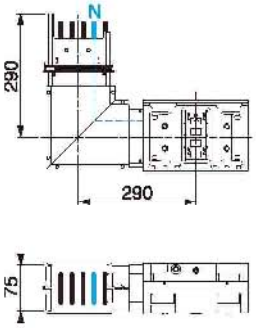


KSA50TC40

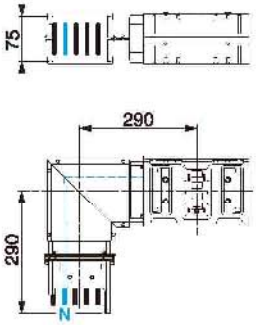
KSA50LC40



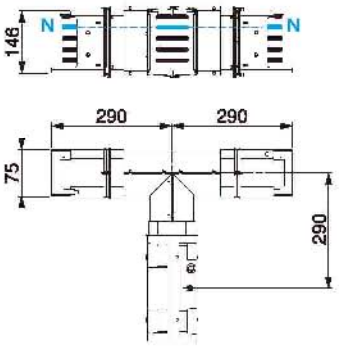
KSA50LP41



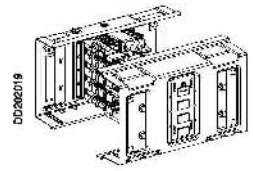
KSA50LP42



KSA50TC40



Accessories



KSB50YA4

Spare parts

Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
Electrical and mechanical jointing unit	400 to 500		1	**KSB50YA4**	3.26

KSE80YB2

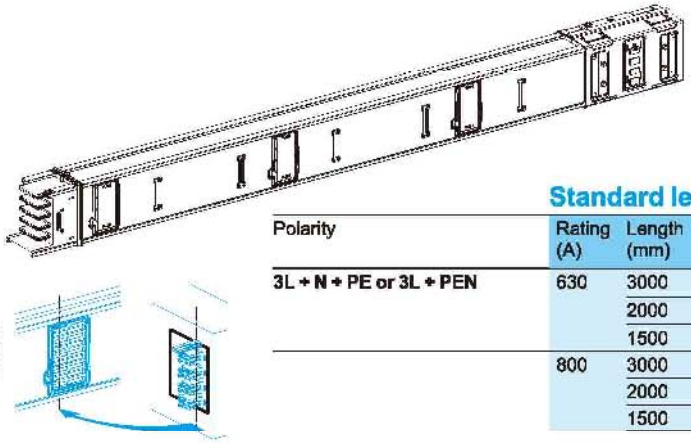
IP54 accessory

Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
IP54 blanking plate	100 to 800		1	**KSE80YB2**	0.8
IP54 joint sleeve	400 to 500		1	**KSE50YA2**	2.25

KSE50YA2

Canalis KSA, 630 to 800 A
Busbar trunking for medium-power distribution

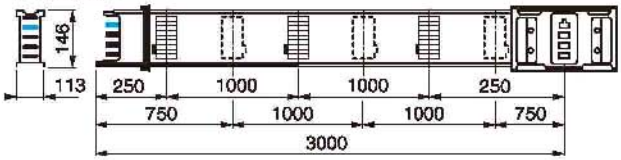
Straight lengths with tap-off outlets



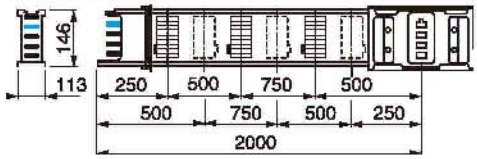
Standard lengths

Polarity	Rating (A)	Length (mm)	Number of tap-off outlets	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3L + PEN	630	3000	6	**KSA63ED430**	KSA63PG	36.20
		2000	6	**KSA63ED420**	KSA63PG	26.00
		1500	4	**KSA63ED415**	KSA63PG	20.50
	800	3000	6	**KSA80ED430**	KSA80PG	43.50
		2000	6	**KSA80ED420**	KSA80PG	30.60
		1500	4	**KSA80ED415**	KSA80PG	24.00

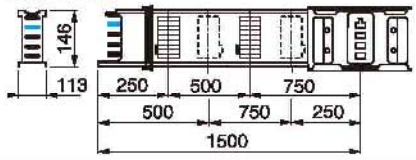
KSAED430**



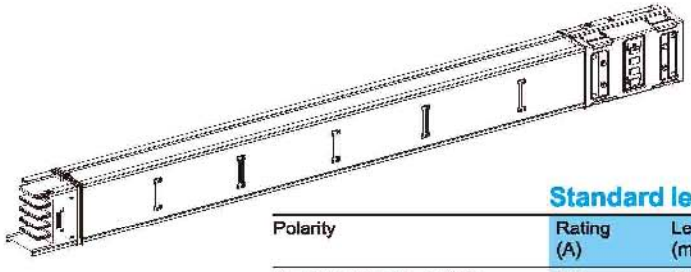
KSAED420**



KSAED415**



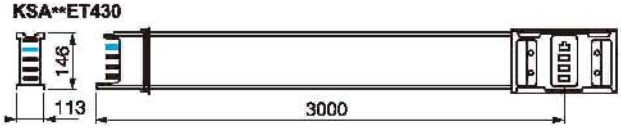
Straight lengths without tap-off outlets



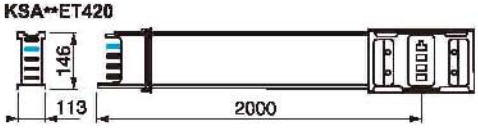
Standard lengths

Polarity	Rating (A)	Length (mm)	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3L + PEN	630	3000	**KSA63ET430**	KSA63FG	36.20
		2000	**KSA63ET420**	KSA63FG	26.00
		1500	**KSA63ET415**	KSA63FG	20.50
	800	3000	**KSA80ET430**	KSA80FG	43.50
		2000	**KSA80ET420**	KSA80FG	30.60
		1500	**KSA80ET415**	KSA80FG	24.00

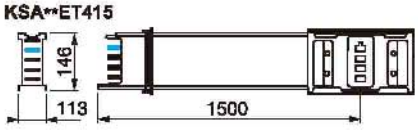
KSAET430**



KSAET420**



KSAET415**



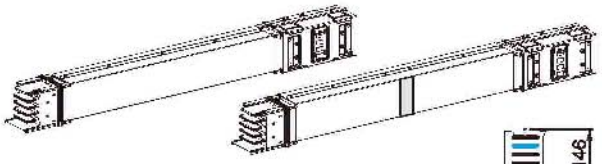
Canalis KSA, 630 to 800 A
Busbar trunking for medium-power distribution

Special straight lengths without tap-off outlets

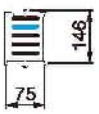
Special lengths

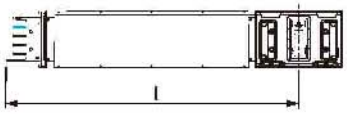
Polarity: **3L + N + PE or 3L + PEN**

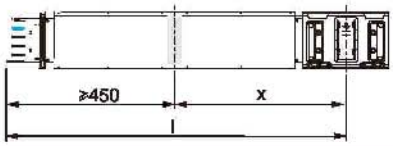
Rating (A)	Length (mm)	Option	Cat. no.	Order Generic	Weight (kg/m)
630	515 to 2300	-	**KSA63ES4AG**	KSA63PG	15.50
	900 to 2300	With Smoke barrier	**KSA63EF4AG**	KSA63PG	16.17
800	515 to 2300	-	**KSA80ES4AG**	KSA80PG	19.6
	900 to 2300	With Smoke barrier	**KSA80EF4AG**	KSA80PG	20.2



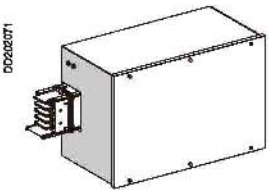
The Example: KSA63EF4AL1800X0800, the length of straight is 1800mm, the distance from Smoke Barrier to joint end is 800mm.







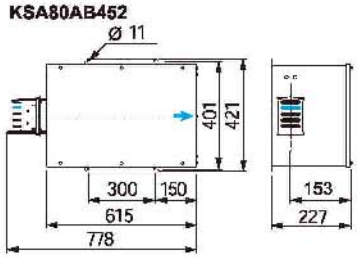
Feed units



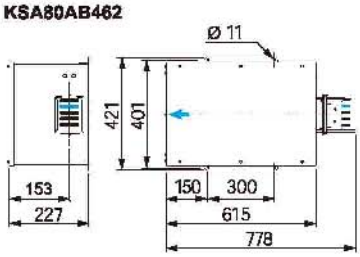
KSA80AB4•2

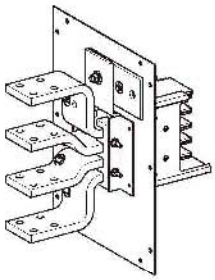
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic		Weight (kg)
End feed unit	630 to 800	Right	8.0 x 71	**KSA80AB452**	KSA80PG	KSA80ETB	36.20
		Left	8.0 x 71	**KSA80AB462**	KSA80PG	KSA80ETB	36.20

KSA80AB452



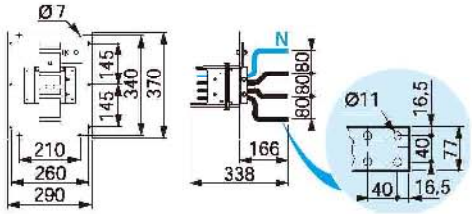
KSA80AB462





KSA80ER4

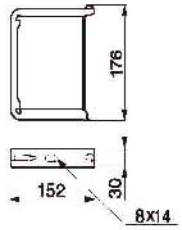
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic		Weight (kg)
Flange feed unit	630 to 800	Right or Left	8.0X71	**KSA80ER4**	KSA80PG	KSA80FE	6.15



KSB80FA2

	Rating (A)	Length (mm)	Cat. no.	Weight (kg)
	630 to 800	20	**KSB80FA2**	0.51

Fixing system



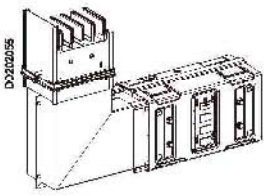
KSA80EZ3

Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Fixing bracket(1)	630 to 800	135	Wall or suspended on threaded rod	10	**KSA80EZ3**	0.4

(1) Maximum recommended distance between fixings: 3 meters.

Canalis KSA, 630 to 800 A
Busbar trunking for medium-power distribution

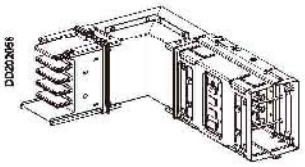
Elbow



KSA80LP4*

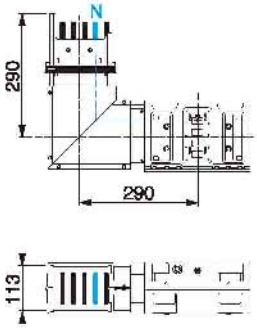
Designation	Rating (A)	Direction (edgewise)	Cat. no.	Order Generic	Weight (kg)
Elbow	630 to 800	Right or left	**KSA80LC40**	KSA80PG + KSA80EL	15.00
		Upward	**KSA80LP41**	KSA80PG + KSA80EL	13.70
		Downward	**KSA80LP42**	KSA80PG + KSA80EL	13.70
Tee	630 to 800	Perpendicular	**KSA80TC40**	KSA80PG + KSA80T	16.24

KSA80LC40

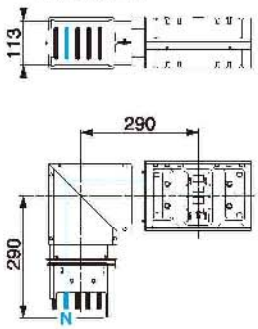


KSA80LC40

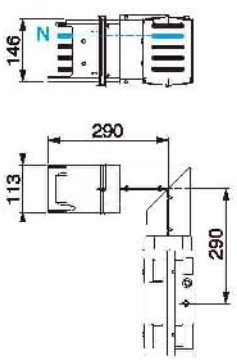
KSA80LP41



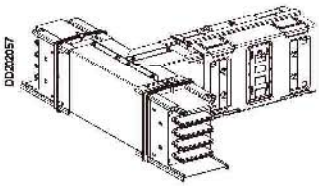
KSA80LP42



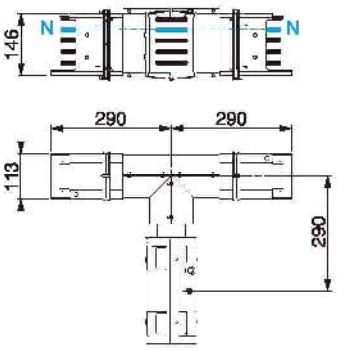
KSA80LC40



KSA80TC40



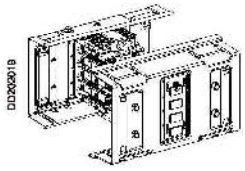
KSA80TC40



Accessories

Spare parts

Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
Joint Pack	630 to 800		1	**KSB80YA4**	4.523

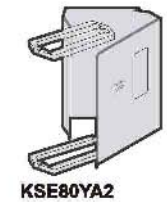


KSB80YA4

IP54 accessory

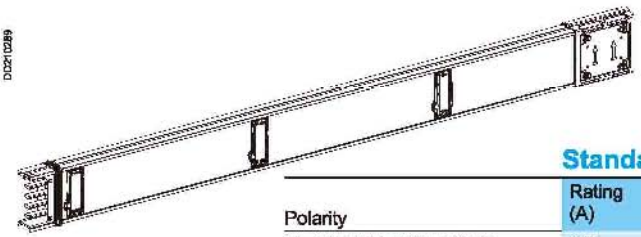
Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
PIO Cover	100 to 800		1	**KSE80YB2**	0.8
Joint Cover	630 to 800			**KSE80YA2**	2.60

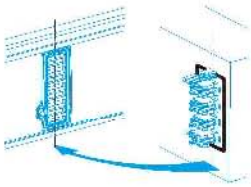
KSE80YB2



KSE80YA2

Straight lengths with tap-off outlets



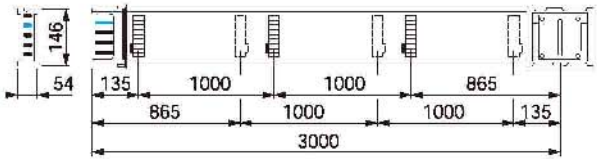


Standard lengths

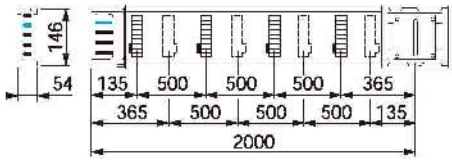
Polarity: **3L + N + PE or 3 L + PEN**

Rating (A)	Length (mm)	Number of tap-off outlets	Cat. no.	Order Generic	Weight (kg)
100	3000	6	**KSC10EA430**	KSC10PG	12.96
	2000			-	
	1500			-	
160	3000	6	**KSC16EA430**	KSC16PG	13.99
	2000			-	
	1500			-	
250	3000	6	**KSC25EA430**	KSC25PG	20.11
	2000	6	**KSC25ED420**	KSC25PG	13.50
	1500	6	**KSC25ED415**	KSC25PG	10.45

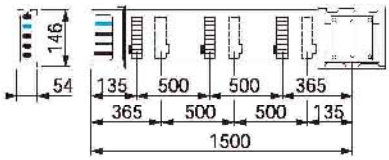
KSC••EA430



KSC25ED420

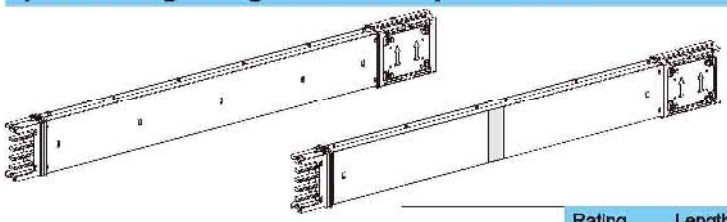


KSC25ED415



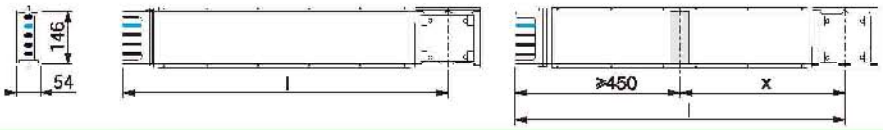
Canalis KSC, 100 to 250 A
Busbar trunking for medium-power distribution

Special straight lengths without tap-off outlets

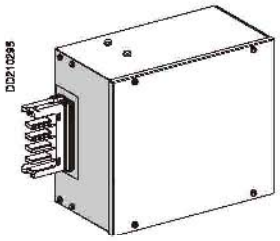


Polarity	Rating (A)	Length (mm)	Option	Cat. no.	Order Generic	Weight (kg/m)
3L + N + PE or 3L + PEN	100 to 250	375 to 1995	-	**KSC25ES4AG**	KSC25PG	8.18
		900 to 2190	With Smoke barrier	**KSC25EF41AG**	KSC25PG	8.58

The Example: KSA25EF41AL1800X0800, the length of straight is 1800mm, the distance from Smoke Barrier to joint end is 800mm.

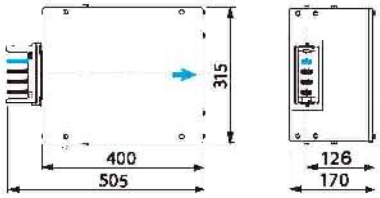


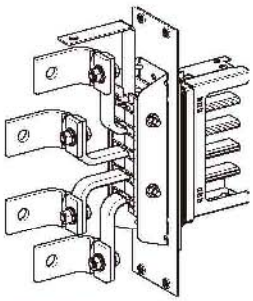
Feed units



KSC25AB42

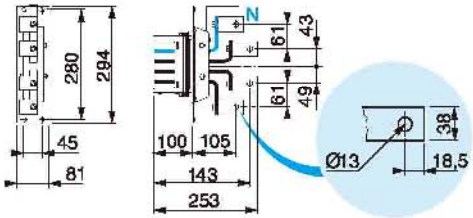
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic		Weight (kg)
End feed unit	100 to 250	Right or left	6.35 X 38.1	**KSC25AB42**	KSC25PG	KSC25ETB	8.83





KSC25ER4

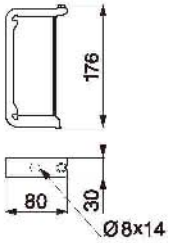
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic		Weight (kg)
Flange feed unit	100 to 250	Right or left	6.35 X 38.1	**KSC25ER4**	KSC25PG	KSC25FE	3.33



KSB25FA3

	Rating (A)	Length (mm)	Cat. no.	Weight (kg)
	100 to 250	15	**KSB25FA3**	0.15

Fixing system



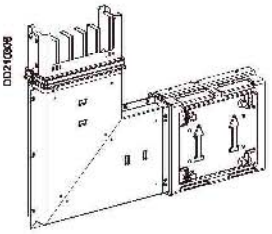
KSA25EZ1

Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Fixing bracket(1)	100 to 250	70	Wall or suspended on threaded rod	1	**KSA25EZ1**	0.3

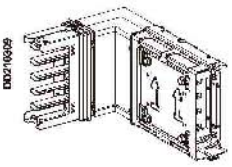
(1) Maximum recommended distance between fixings: 3 meters

Canalis KSC, 100 to 250 A
Busbar trunking for medium-power distribution

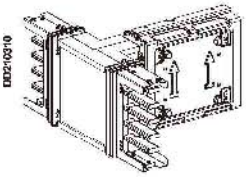
Elbow



KSC25LP4*



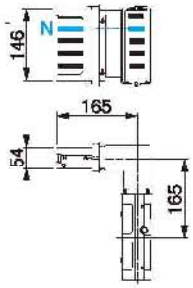
KSC25LC40



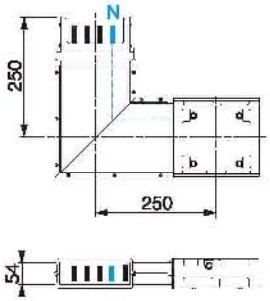
KSC25TC40

Designation	Rating (A)	Direction (edgewise)	Cat. no.	Order Generic	Weight (kg)
Elbow	100 to 250	Right or left	**KSC25LC40**	KSC25PG + KSC25EL	4.96
		Upward	**KSC25LP41**	KSC25PG + KSC25EL	7.60
		Downward	**KSC25LP42**	KSC25PG + KSC25EL	7.60
Tee	100 to 250	Perpendicular	**KSC25TC40**	KSC25PG + KSC25T	6.92

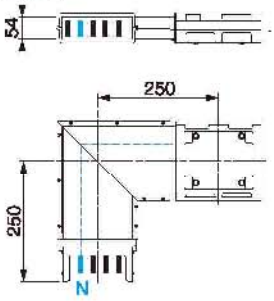
KSC25LC40



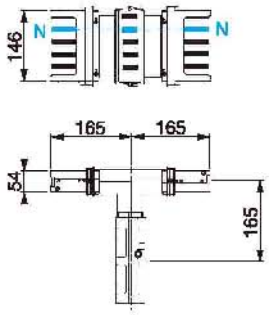
KSC25LP41



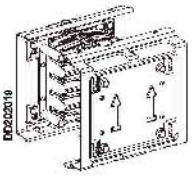
KSC25LP42



KSC25TC40

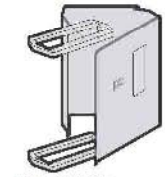


Accessories



KSB25YA4

KSE80YB2



KSE25YA3

Spare parts

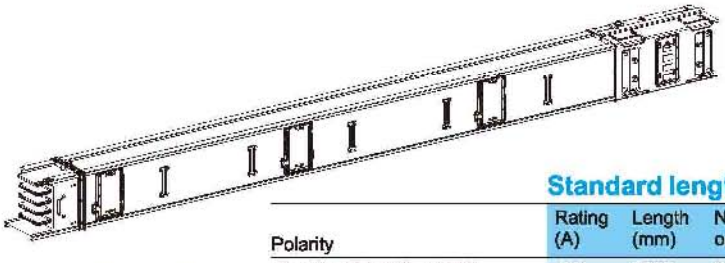
Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
Joint Pack	100 to 250		1	**KSB25YA4**	1.41

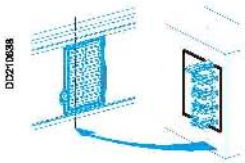
IP54 accessory

Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
PIO Cover	100 to 800		1	**KSE80YB2**	0.8
Joint Cover	100 to 250	standard length	1	**KSE25YA2**	1.28
		non-standard length		**KSE25YA3**	1.28

Canalis KSC, 400 to 500 A
Busbar trunking for medium-power distribution

Straight lengths with tap-off outlets

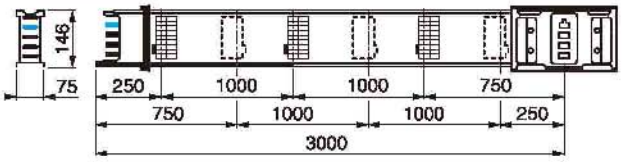




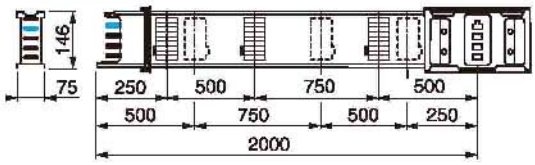
Standard lengths

Polarity	Rating (A)	Length (mm)	Number of tap-off outlets	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3L + PEN	400	3000	6	**KSC40ED430**	KSC40PG	33.86
		2000	6	**KSC40ED420**	KSC40PG	19.76
		1500	4	**KSC40ED415**	KSC40PG	15.21
	500	3000	6	**KSC50ED430**	KSC50PG	52.36
		2000	6	**KSC50ED420**	KSC50PG	36.11
		1500	4	**KSC50ED415**	KSC50PG	27.88

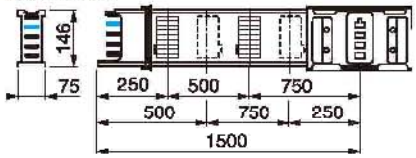
KSCED430**



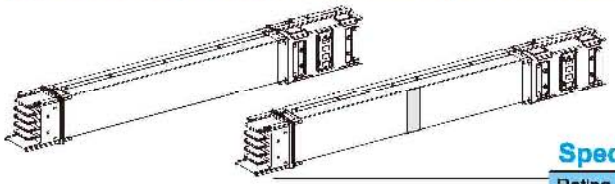
KSCED420**



KSCED415**



Special straight lengths without tap-off outlets

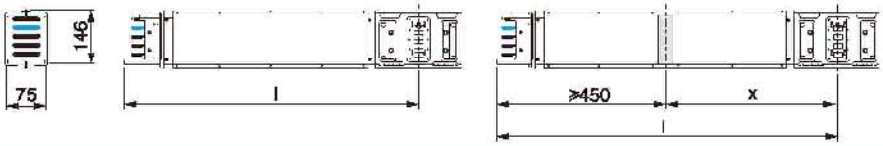


Polarity
3L + N + PE or 3L + PEN

Special lengths

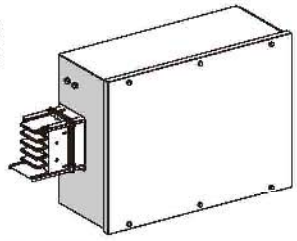
Rating (A)	Length (mm)	Option	Cat. no.	Order Generic	Weight (kg/m)
400	515 to 2300	-	**KSC40ES4AG**	KSC40PG	11.28
	900 to 2300	With Smoke barrier	**KSC40EF41AG**	KSC40PG	11.38
500	515 to 2300	-	**KSC50ES4AG**	KSC50PG	17.52
	900 to 2300	With Smoke barrier	**KSC50EF41AG**	KSC50PG	18.12

The Example: KSC40EF41AL1800X0800, the length of straight is 1800mm, the distance from Smoke Barrier to joint end is 800mm.



Feed units

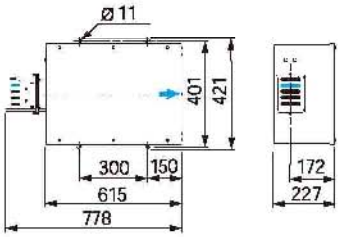
DD260227



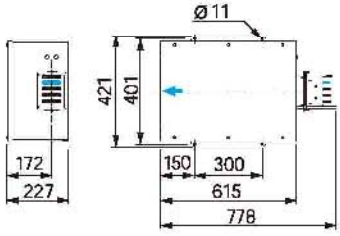
KSC50AB4•2

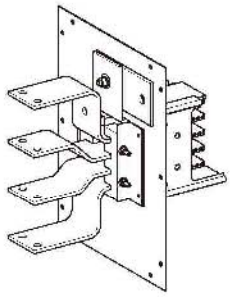
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
	400 to 500	Right	8.0 x 41	**KSC50AB452**	KSC50PG + KSC50ETB	29.91
End feed unit		Left	8.0 x 41	**KSC50AB462**	KSC50PG + KSC50ETB	29.91

KSC50AB452



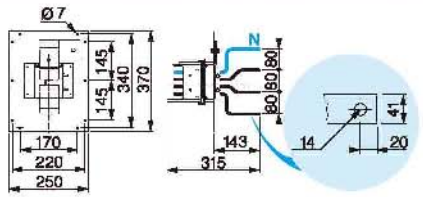
KSC50AB462





KSC50ER4

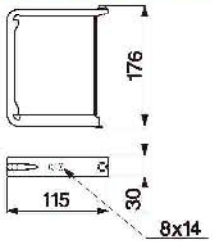
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
Flange feed unit	400 to 500	Right or Left	8.0X41	**KSC50ER4**	KSC50PG + KSC50FE	6.77



KSB50FA2

	Rating (A)	Length (mm)	Cat. no.	Weight (kg)
	400 to 500	20	**KSB50FA2**	0.44

Fixing system



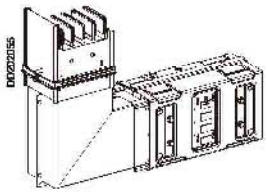
KSA50EZ3

Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Fixing bracket(1)	400 to 500	135	Wall or suspended on threaded rod	10	**KSA50EZ3**	0.4

(1) Maximum recommended distance between fixings: 3 meters.

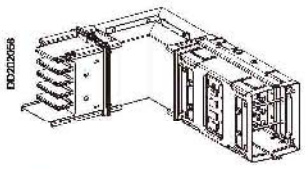
Canalis KSC, 400 to 500 A
Busbar trunking for medium-power distribution

Elbow

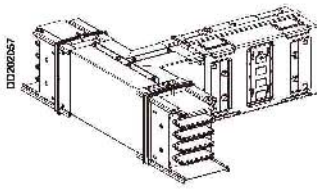


KSC50CP4*

Designation	Rating (A)	Direction (edgewise)	Cat. no.	Order Generic	Weight (kg)
Elbow	400 to 500	Right or left	**KSC50LC40**	KSC50PG + KSC50EL	14.31
		Upward	**KSC50LP41**	KSC50PG + KSC50EL	14.48
		Downward	**KSC50LP42**	KSC50PG + KSC50EL	14.25
Tee	400 to 500	Perpendicular	**KSC50TC40**	KSC50PG + KSC50T	21.39

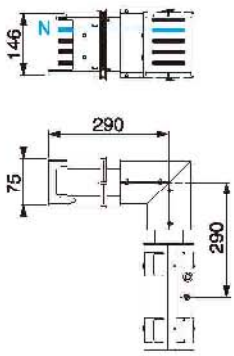


KSC50LC40

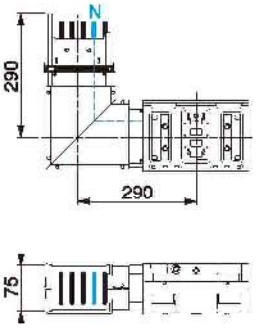


KSC50TC40

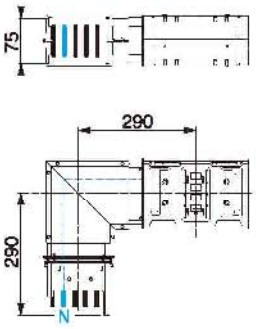
KSC50LC40



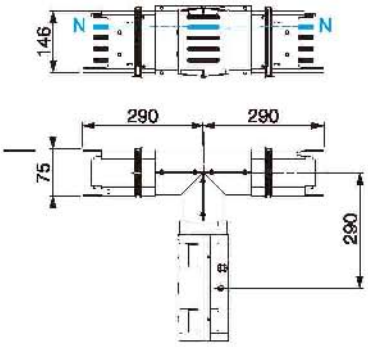
KSC50LP41



KSC50LP42



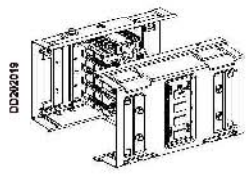
KSC50TC40



Accessories

Spare parts

Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
Electrical and mechanical jointing unit	400 to 500		1	**KSB50YA4**	3.26



KSB50YA4

IP54 accessory

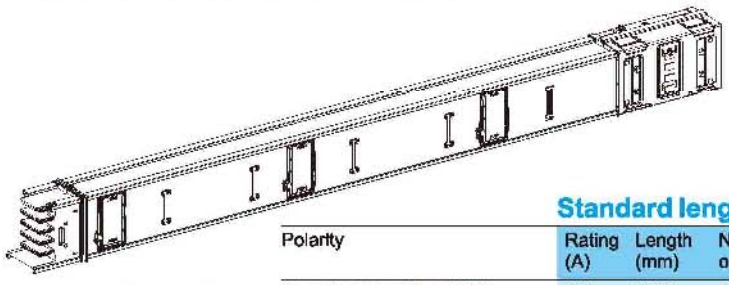
Designation	Rating (A)	For	Order in muitples of	Cat. no.	Weight (kg)
IP54 blanking plate	100 to 800		1	**KSE80YB2**	0.8
IP54 joint sleeve	400 to 500		1	**KSE50YA2**	2.25

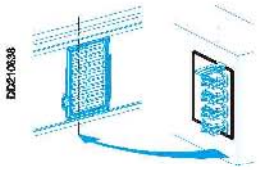
KSE80YB2

KSE50YA2

Canalis KSC, 630 to 800 A
Busbar trunking medium-power distribution

Straight lengths with tap-off outlets

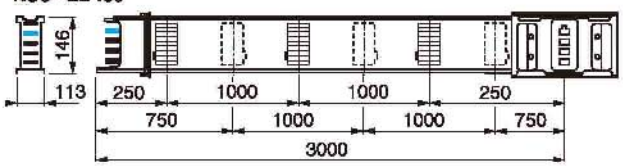




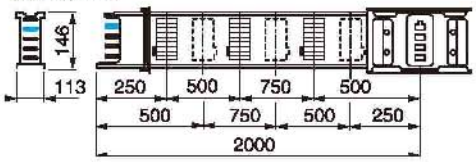
Standard lengths

Polarity	Rating (A)	Length (mm)	Number of tap-off outlets	Cat. no.	Order Generic	Weight (kg)
3L + N + PE or 3L + PEN	630	3000	6	**KSC63ED430**	KSC63PG	50.95
		2000	6	**KSC63ED420**	KSC63PG	35.76
		1500	4	**KSC63ED415**	KSC63PG	27.76
	800	3000	6	**KSC80ED430**	KSC80PG	88.28
		2000	6	**KSC80ED420**	KSC80PG	60.22
		1500	4	**KSC80ED415**	KSC80PG	46.02

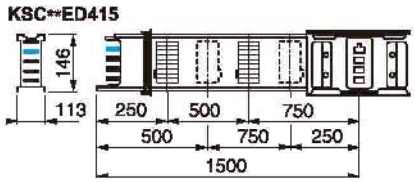
KSCED430**



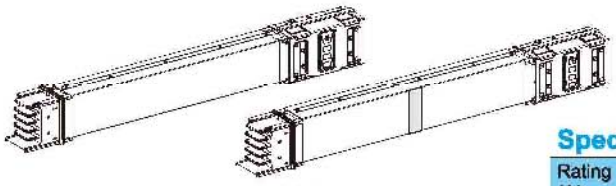
KSCED420**



KSCED415**



Special straight lengths without tap-off outlets

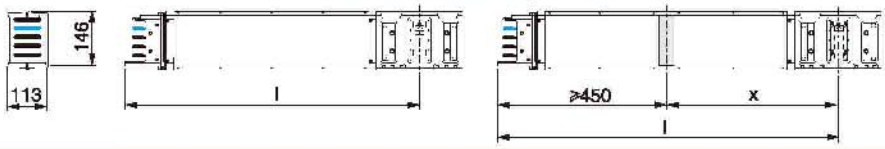


Polarity
3L + N + PE or 3L + PEN

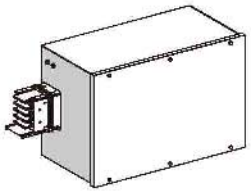
Special lengths

Rating (A)	Length (mm)	Option	Cat. no.	Order Generic	Weight (kg/m)
630	515 to 2300	-	**KSC63ES4AG**	KSC63PG	19.64
	900 to 2300	With Smoke barrier	**KSC63EF41AG**	KSC63PG	20.24
800	515 to 2300	-	**KSC80ES4AG**	KSC80PG	24.27
	900 to 2300	With Smoke barrier	**KSC80EF41AG**	KSC80PG	24.87

The Example: KSC63EF41AL1800X0800, the length of straight is 1800mm, the distance from Smoke Barrier to joint end is 800mm.



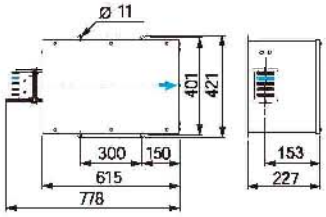
Feed units



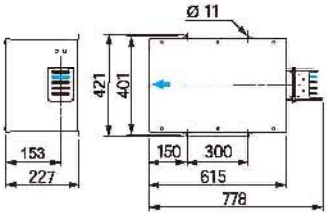
KSC80AB4•2

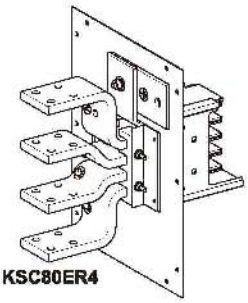
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Order Generic	Weight (kg)
End feed unit	630 to 800	Right	8.0 x 71	**KSC80AB452**	KSC80PG + KSC80ETB	47.91
		Left	8.0 x 71	**KSC80AB462**	KSC80PG + KSC80ETB	47.91

KSC80AB452



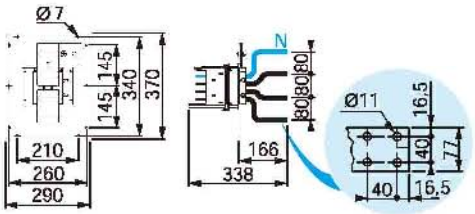
KSC80AB462





KSC80ER4

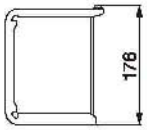
Designation	Rating (A)	Mounting	Max. size (mm²)	Cat. no.	Weight (kg)
Flange feed unit	630 to 800	Right or Left	8.0X71	**KSC80ER4**	11.40

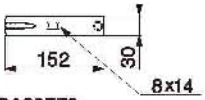


KSB80FA2

	Rating (A)	Length (mm)	Cat. no.	Weight (kg)
	630 to 800	20	**KSB80FA2**	0.51

Fixing system





KSA80EZ3

Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Fixing bracket(1)	630 to 800	135	Wall or suspended on threaded rod	10	**KSA80EZ3**	0.4

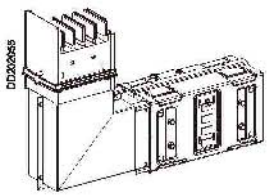
(1) Maximum recommended distance between fixings: 3 meters.

Canalis KSC, 630 to 800 A

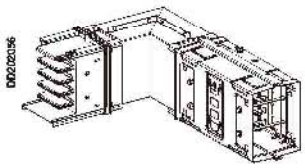
Busbar trunking medium-power distribution

Complementary products

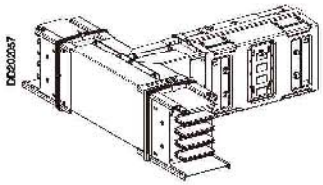
Elbow



KSC80LP4*



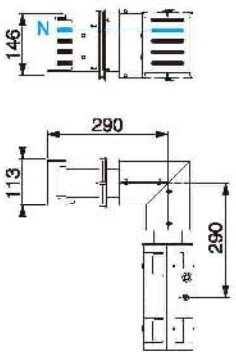
KSC80LC40



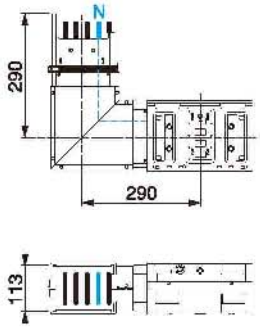
KSC80TC40

Designation	Rating (A)	Direction (edgewise)	Cat. no.	Order Generic	Weight (kg)
Elbow	630 to 800	Right or left	**KSC80LC40**	KSC80PG + KSC80EL	23.80
		Upward	**KSC80LP41**	KSC80PG + KSC80EL	21.95
		Downward	**KSC80LP42**	KSC80PG + KSC80EL	21.44
Tee	630 to 800	Perpendicular	**KSC80TC40**	KSC80PG + KSC80T	29.72

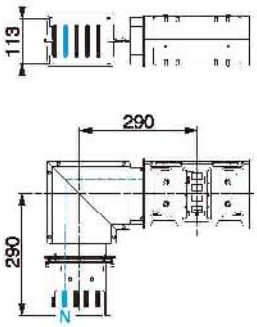
KSC80LC40



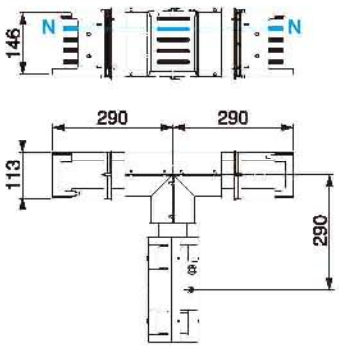
KSC80LP41



KSC80LP42

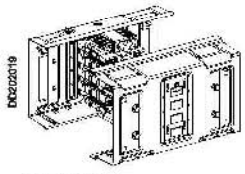


KSC80TC40



Accessories

Spare parts

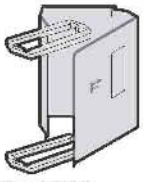


KSB80YA4

Designation	Rating (A)	For	Order in multiples of	Cat. no.	Weight (kg)
Joint Pack	630 to 800		1	**KSB80YA4**	4.523

IP54 accessory

KSE80YB2



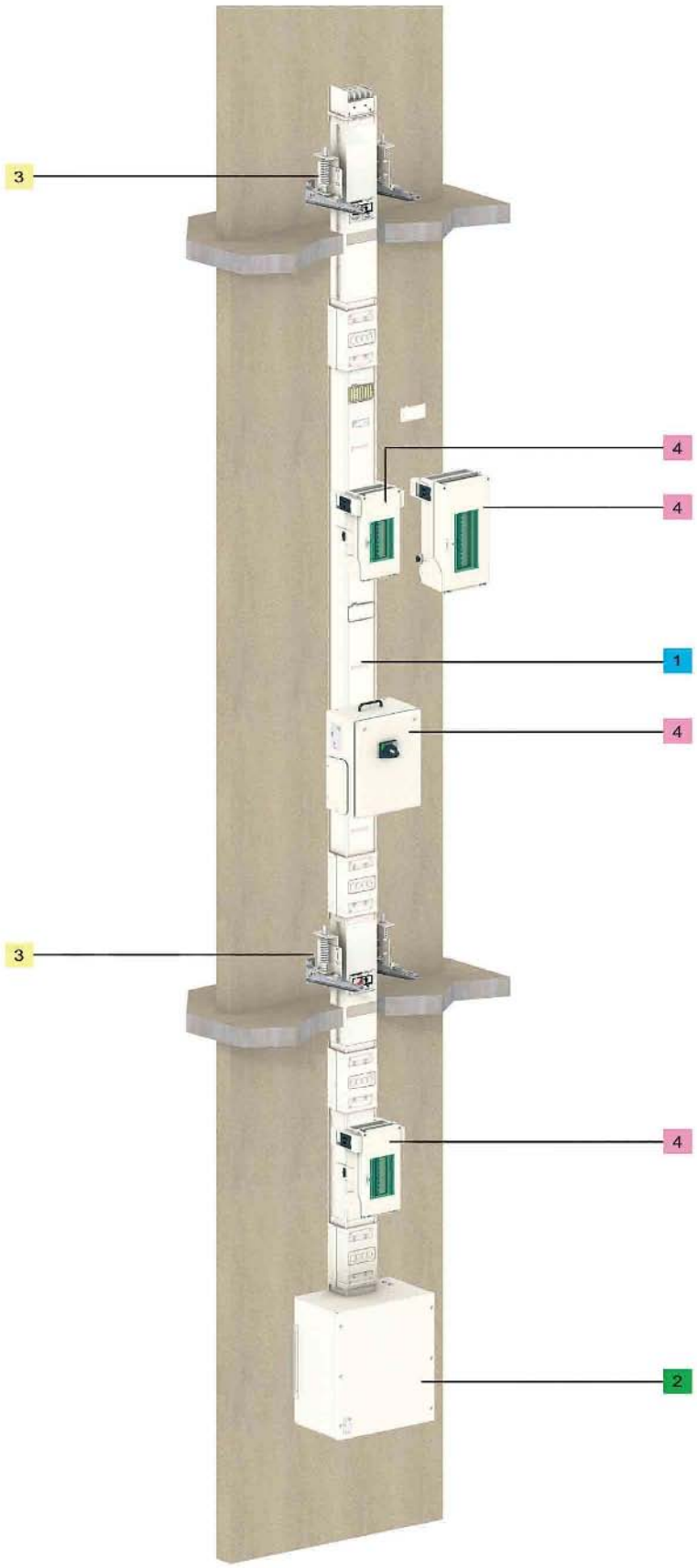
KSE80YA2

Designation	Rating (A)	For	Order in multiples of	Cat. no.	Weight (kg)
PIO Cover	100 to 800		1	**KSE80YB2**	0.8
Joint Cover	630 to 800		1	**KSE80YA2**	2.60

Canalis KS, 100 to 800 A

Medium-power busbar trunking for multi-storey building

Rising mains



Canalis KS, 100 to 800 A
Medium-power busbar trunking for multi-storey building
Rising mains

1. Run components

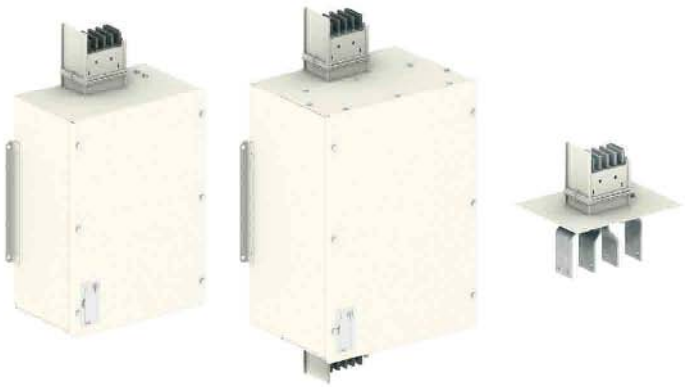
■Rating: 100, 250, 400, 500, 630, 800A.
■4 live conductors.
□KSC:Copper conductor.
□KSA:Aluminum conductor with silver-plated copper contact.
■2 types of riser components for:
□power-distribution between floors,
□horizontal sections.

PD280211

2. Feed units and end covers

■The feed units delivered with end covers, receive the cables supplying one end or any other point of Canalis KS trunking

PD280212



3. Fixing system

■The fixing system is made up of
□floor supports for the riser.

PD280213

4. Tap-off units

■The tap-off units (with and without isolators) are used to supply loads from 25 to 400 A.
■Protection using modular or Compact NS circuit breakers or fuses.

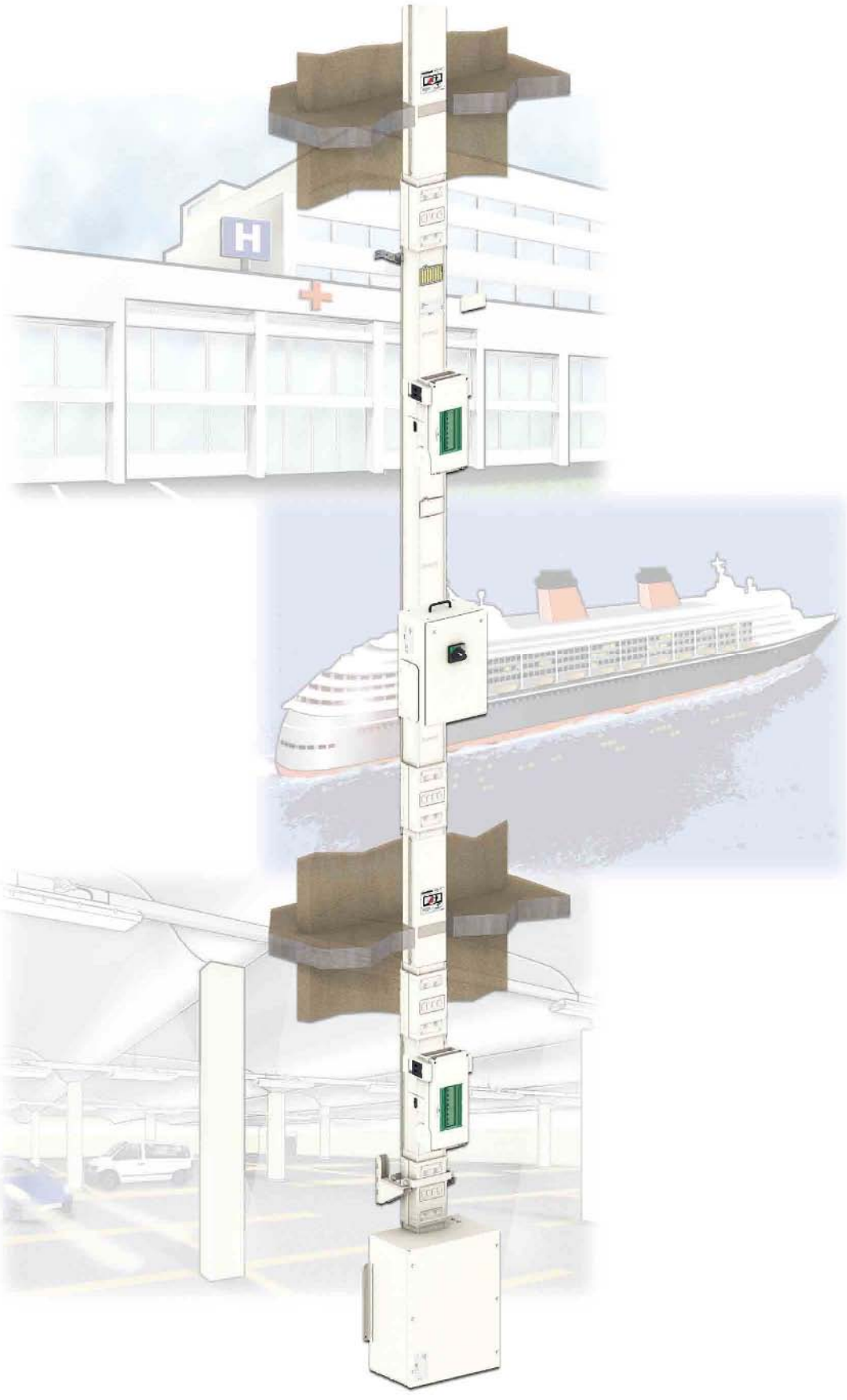
PD280214

Canalis KS, 100 to 800 A

Medium-power busbar trunking for multi-storey building

Rising mains

PD2022216



Canalis KS, 100 to 800 A
Medium-power busbar trunking for multi-storey building
Rising mains

Dependable and reliable
Canalis KS benefits from a number of marine certifications, including Bureau Veritas (BV), Lloyd's (GL) and Norske Veritas (DNV).

DD202210

No risk in case of fire
All components in the KS range are **halogen free** and contain no PVCs. In case of fire, Canalis KS releases very small quantities of smoke and no toxic gases.
Due to the two-hour fire barrier, **flames cannot spread**. The trunking thus contributes to containing the fire for two hours.

A high degree of protection
Canalis KS offers an IP54 degree of protection.
Thus, it can be installed in all types of buildings and in all positions.

PD202233

Unmatched upgrading possibilities
Canalis KS makes it fast and easy to upgrade the installation. The tap-off units can be removed and handled under energised conditions.
What is more, a line **does not require expansion joints** since the expansion of straight lengths is absorbed automatically by the electrical junctions. This technique ensures that the tap-off outlets on all floors remain available.

Easy handling and installation
Floor-distribution components are designed to facilitate:
- **access to the straight lengths on floors** given the narrowness of lift shafts and stairways,
- **installation of the straight lengths** given the height of doors and the size of shafts and technical ducts.

Because the available space in technical ducts is limited, Canalis KS gives the advantage to use **significantly less room** compared to a centralised distribution system using cables.

Installation is made easy due to the design of the **jointing units that facilitate alignment** of the straight lengths.

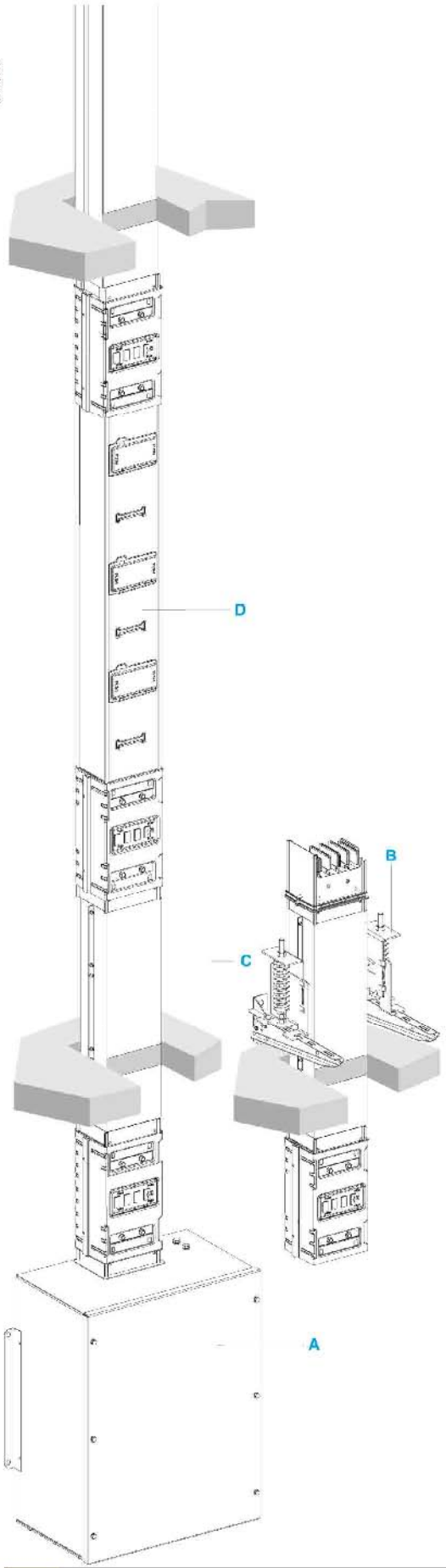
Very flexible
The floor-distribution components in the Canalis KS range offer **3 or 4 tap-off outlets per floor**, enough to have reserve outlets for future upgrades.

DD202146

Maintenance free
Canalis KS enhances the continuity of service because **no maintenance is required on the line**. All sliding jointing contacts are lubricated for the life of the product.

Canalis KS, 100 to 800 A
Medium-power busbar trunking for multi-storey building
Rising mains

DD210676



General

Canalis KS risers distribute power to each floor in multi-level buildings (office buildings, hotels, hospitals, car parks and ships).
In this application, Canalis KS offers its many advantages:
- equipped with bimetal aluminium/silver-plated copper contacts at junctions and tap-off points,
- a mechanical and electrical jointing system that ensures automatic and simultaneous jointing of all live conductors and the continuity of the protective earth conductor, as well as its connection with the casing. This jointing block also absorbs the difference in conductor and casing thermal expansion for each length,
- tap-off outlets with automatic shutters.

For more detailed description, see "Canalis 100 to 800 A for power distribution"

When installed vertically, the Canalis KS degree of protection is IP54 with accessory.

How to build rising mains

A Use an end feed unit, type **KS***AB452** in order the have to neutral on the right-hand side in the riser.

B Use floor supports . They are used to support the riser on each floor of the building, for enhanced flexibility in carrying out the various installation phases. With this support, riser sections can be installed even when the lower floors have not been completed.

Rating (A)	Max. recommended height	Max. recommended weight by support
100 and 250	40 m	680 kg
400	30 m	680 kg
500	70 m	1760 kg
630	50 m	1760 kg
800	50 m	1760 kg

Rating (A)	Max. recommended height	Recommended weight by support
All	150 m	440 kg

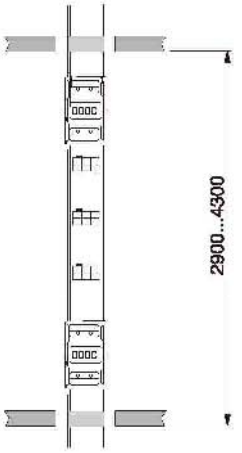
Above 100 m, avoid the use of fixed components (e.g. elbows) and supply power using cables wherever possible.

C Use custom-length fire barriers to block fire propagation between floors. They also provide the means to adjust to the distance between floors.

D Use standard straight lengths, 1.5 or 2.0 metres long. Lengths and fire barriers can be combined to provide:
Solution 1: for a distance of 2900 mm to 4300 mm between floors, with **KS***EV415** straight lengths,
Solution 2 : for a distance of 3400 mm to 4800 mm between floors, with **KS***EV420** straight lengths,

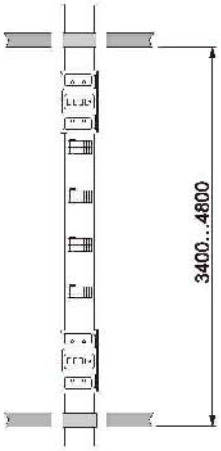
Solution 1:

DD210678



Solution 2:

DD210677

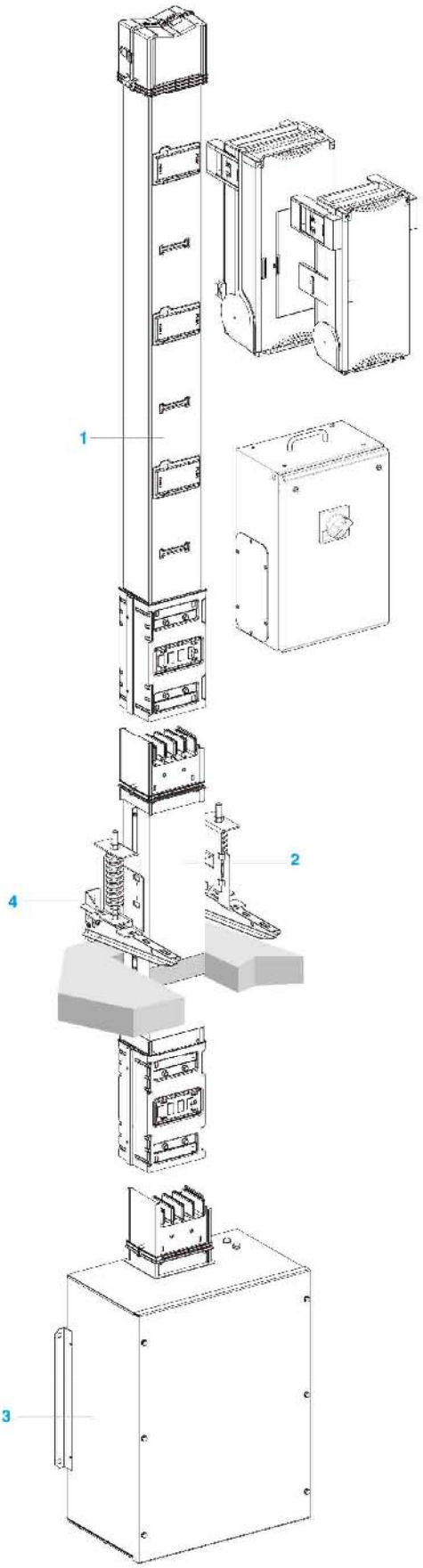


Canalis KS, 100 to 800 A

Medium-power busbar trunking for multi-storey building

Rising mains

DD210678



Riser components

1 Straight lengths for distribution

Specially designed for rising mains, they are available in two lengths (1.5 and 2.0 metres).

They have three or four tap-off outlets, all on the same side. The outlets are positioned to enable connection of up to three 160 A tap-off units for Compact NS circuit breakers on the 1.5 metre lengths and up to four on the 2.0 metre lengths.

2 Custom-length fire-barrier lengths

Installed at each floor level, these lengths eliminate any risk of fire propagation from one floor to another via the trunking. These fire barriers have been tested in a certified laboratory and comply with standard EN 1363-1. The laboratory report lists the following results:

- thermal insulation: ⩾ 120 minutes,
- resistance to flames: ⩾ 120 minutes,
- stability: ⩾ 120 minutes.

Provided in custom lengths, these barriers are used with the straight lengths to adjust to the exact height of each floor.

Feed units

Direct supply

The trunking connects directly to a switchboard via a spreader. In this configuration, the riser is supplied through a horizontal section made of lengths without tap-off outlets.

3 Supply via cables

Equipped with terminals made of tinned aluminium, this feed unit is designed for connection to copper or aluminium cables equipped with the necessary lugs. The feed unit is also equipped with an aluminium gland plate. The plate can be removed and is not pre-drilled.

Fixing systems

4 Floor supports

Secured to the floor or wall (via Canalis 200 mm cantilever arms), they attach to the sides of a special component (with or without fire barrier).

Tap-off units

Standard KS tap-off units are used

Accessories

Sprinkler kit

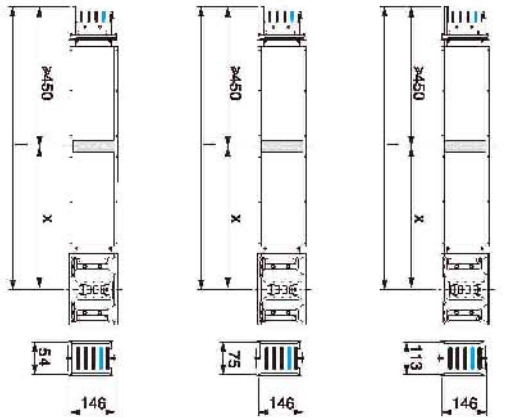
To comply with the sprinkler tests (guaranteeing operation under vertically and horizontally sprayed water for 50 minutes), each electrical jointing system should be fitted with a reinforced protection kit (the jointing sleeve).

Lead sealing kit

A number of devices can be used to seal the tap-off units or outlets on the KS riser.

Riser components - Distribution to floors

KSA25EF41AG KSA50EF41AG KSA80EF41AG



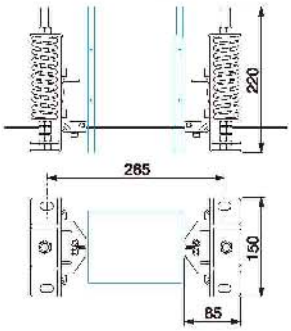
Smoke barriers

Without tap-off outlets

Rating (A)	Length Dim. l (mm)	Barrier position Dim. x (mm)	Cat. no.	Weight (kg/m)
250	900 to 2190	450 to 1750	**KSA25EF4AG**	8.40
500	900 to 2300	450 to 1750	**KSA50EF4AG**	18.00
800	900 to 2300	450 to 1750	**KSA80EF4AG**	24.20

Fixing system

KS01000ZV3

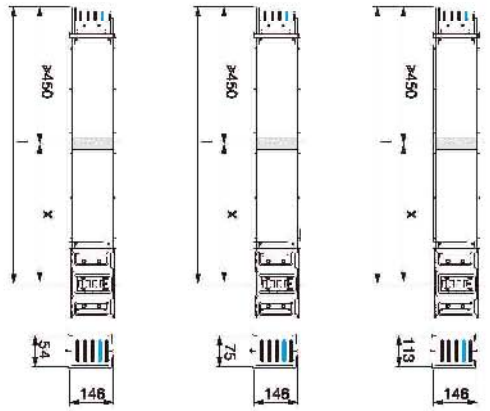


Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Spring hanger	100 to 800	400	Vertical application	1	**KS01000ZV3**	3.50

Canalis KSC, 100 to 800 A
Medium-power busbar trunking for multi-storey building
Rising mains

Riser components - Distribution to floors

KSC25EF41AG **KSC40/50EF41AG** **KSC63/80EF41AG**



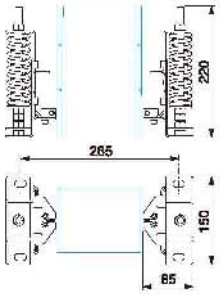
Smoke barriers

Without tap-off outlets

Rating (A)	Length Dim. l (mm)	Barrier position Dim. x (mm)	Cat. no.	Weight (kg/m)
250	900 to 2190	450 to 1750	**KSC25EF41AG**	9.3
400	900 to 2300	450 to 1750	**KSC40EF41AG**	8.59
500	900 to 2300	450 to 1750	**KSC50EF41AG**	15
630	900 to 2300	450 to 1750	**KSC63EF41AG**	24.2
800	900 to 2300	450 to 1750	**KSC80EF41AG**	26.7

Fixing system

KS01000ZV3



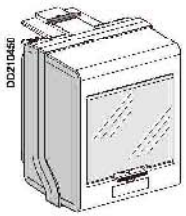
Designation	Rating (A)	Max. load (kg)	Mounting	Order in multiples of	Cat. no.	Weight (kg)
Spring hanger	100 to 800	400	Vertical application	1	**KS01000ZV3**	3.50

Canalis KS,32 to 100 A

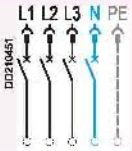
Tap-off units for modular devices

Tap-off units

Disconnection by unplugging the tap-off unit



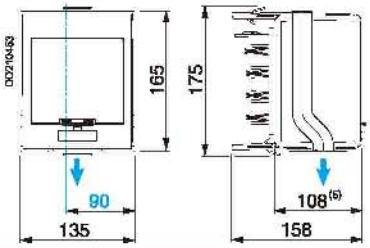
KSB 32CM55

Earthing system arrangement	Busbar trunking / Tap-off unit	TT-TNS-TNC-IT(1) / TT-TNS-TNS-IT(1)
Tap-off polarity		3L + N + PE(2)
Tap-off diagram (e.g. circuit-breaker protection)		

Rating (A)	Number of 18 mm modules(3)	Connection	Max. size (mm²) Flexible	Rigid	Cable gland(4) (not supplied)	Cat. no.	Weight (kg)
32	5	Pre wired	6	10	ISO 32 max.	**KSB 32CM55**	0.60

(1) The neutral must be protected or not distributed (3L+PE) for the IT system.
(2) Also suitable for tap-off unit 3L + PE (N not distributed, IT system also possible).
(3) Supplied with blanking plate (1x5 divisible).
(4) Maximum diameter for a multipolar cable.

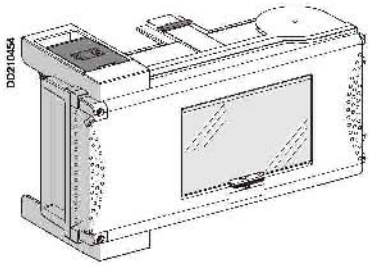
KSB 32CM55



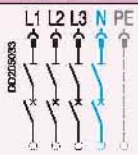
Cable exit
Centre line of tap-off outlets
(5) Protruding

Tap-off unit with isolator

Disconnection by opening the tap-off unit cover



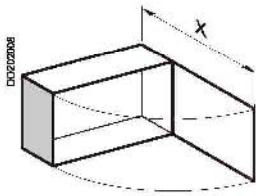
KSB 63SM*8, KSB 100SM*12

Earthing system arrangement	Busbar trunking / Tap-off unit	TT-TNS-TNC-IT(1) / TT-TNS-TNS-IT(1)	TNC / TNC
Tap-off polarity		3L + N + PE(2)	3L + N + PE(2)
Tap-off diagram (e.g. circuit-breaker protection)			

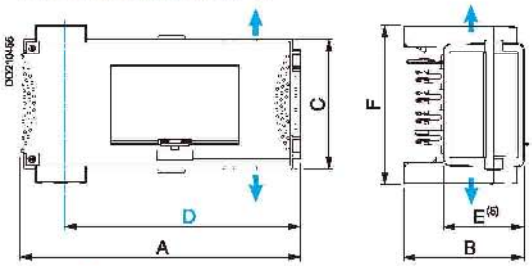
Rating (A)	Number of 18 mm modules(3)	Connection	Max. size (mm²) Flexible	Rigid	Cable gland(4) (not supplied)	Cat. no.	Cat. no.	Weight (kg)
63	8	Copper cable lugs	16	16	ISO 50 max.	**KSB 63SM48**	**KSB 63SM58**	2.40
100	12	Copper cable lugs	35	35	ISO 63 max.	**KSB 100SM412**	**KSB 100SM512**	5.00

(1) The neutral must be protected or not distributed (3L+PE) for the IT system.
(2) Also suitable for tap-off unit 3L + PE (N not distributed).
(3) Supplied with blanking plates:(1x5 divisible (8 modules) or 2x5 divisible (12 modules)).
(4) Maximum diameter for a multipolar cable.

KSB 63SM*8, KSB 100SM*12



X = 432.5 (**KSB 63SM*8**)
X = 545.5 (**KSB 100SM*12**)



Dim.	63A	100A
A	357	444
B	158	183
C	167	202
D	309	397
E	108	133
F	202	220

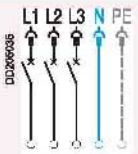
Cable exit
Centre line of tap-off outlets
(5) Protruding

Canalis KS,32 A

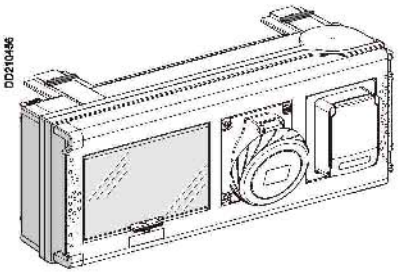
Tap-off unit with power sockets protected by modular devices

Tap-off units for power sockets

Disconnection by unplugging the tap-off unit

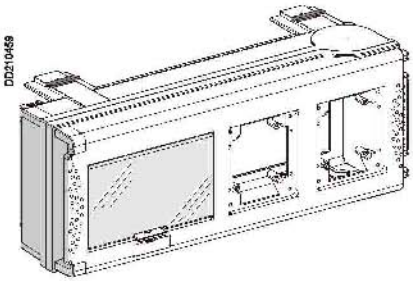
Earthing system arrangement	Busbar trunking	TT-TNS-TNC(1)
	Tap-off unit	TT-TNS-TNS(1)
Tap-off polarity		3L + N + PE
Tap-off diagram (e.g. circuit-breaker protection)	Tap-off unit wiring depends on the sockets used	

Designation	Rating (A)	Number of 18 mm modules(2)	Equipment Q.(3)	Type	Current (A)	Voltage (V)	Polarity	Cat. no.	Weight (kg)
Tap-off unit with flush-mounted power sockets	32	8	2	Household socket Schuko	10/16	230	2P + T	**KSB 32CP11D**	2.90
			2	Household socket NF	10/16	230	2P + T	**KSB 32CP11F**	2.90
			1	Household socket NF	10/16	230	2P + T	**KSB 32CP15F**	3.00
			1	Industrial socket	16	415	3P+N+T		
			1	Household socket Schuko	10/16	230	2P + T	**KSB 32CP15D**	3.00
			1	Industrial socket	16	415	3P+N+T		
			1	Industrial socket	16	230	2P + T	**KSB 32CP35**	3.10
			1	Industrial socket	16	415	3P+N+T		
Empty tap-off unit	32	8	To be equipped					**KSB 32CP**	2.70



DD210456

KSB 32CP

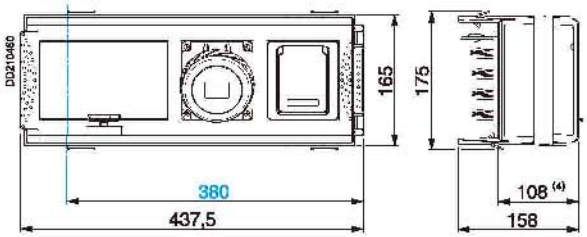


DD210459

KSB 32CP

(1) The neutral must be protected or not distributed (3L+PE) for the IT system.
(2) Supplied with blanking plate (1x5 divisible).
(3) Quantity

KSB 32CP***



Centre line of tap-off outlets

(4) Protruding

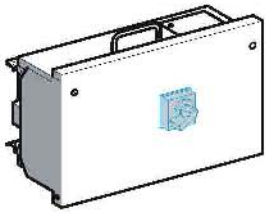
Power sockets

Designation	Rated current (A)	Rated voltage (V AC)	Number of poles	Dimensions (W x H in mm)	Cat. no.	Weight (kg)
Industrial sockets Pratika	16	200-250	2P + T	65 x 85	**PKF16F723**	-
			3P + N + T	90 x 100	**PKF16F725**	-
		380-415	2P + T	65 x 85	**PKF16F733**	-
			3P + N + T	90 x 100	**PKF16F735**	-
	32	200-250	2P + T	90 x 100	**PKF32F723**	-
			3P + N + T	90 x 100	**PKF32F725**	-
		380-415	2P + T	90 x 100	**PKF32F733**	-
			3P + N + T	90 x 100	**PKF32F735**	-
Household NF sockets	10 to 16	250	2P + T	65 x 85	**81140**	-
Household Schuko sockets	10 to 16	250	2P + T	65 x 85	**81141**	-
Screw-on plate	For blanking of unused openings				**13137**	0.10
	For adapting 65 x 85 mm power-socket bases				**13136**	0.09

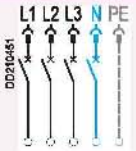
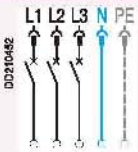
Canalis KS, 160 to 400 A

Tap-off units for Compact NS circuit breakers

Tap-off units for Compact NS, fixed, front-connected circuit breakers



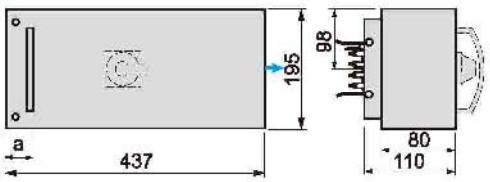
The cover of the tap-off unit may be opened only when the circuit breaker is in the Off position.

Earthing system arrangement	Busbar trunking / Tap-off unit	TT-TNS-TNC-IT(1) / TT-TNS-TNS-IT(1)	TNC / TNC
Tap-off polarity		3L + N + PE(2)	3L + N + PE
Tap-off diagram (e.g. circuit-breaker protection)			

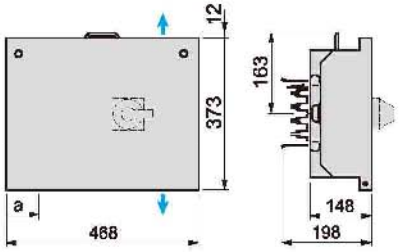
Rating (A)	Scheme	NS* breaker 3 Weight kg	NS* breaker 3 Icc(2) KA	NSXF breaker 3 Weight kg	NSXF breaker 3 Icc(2) KA	NSXF breaker 4 Weight kg	NSXF breaker 4 Icc(2) KA	NSXN breaker 3 Weight kg	NSXN breaker 3 Icc(2) KA	NSXN breaker 4P Weight kg	NSXN breaker 4P Icc(2) KA
25		KSA02NSD311 6.48	25	KSA02NSXF311 10.6	25	KSA02NSXF411 11.1	25				
40		KSA04NSD311 6.48	25	KSA04NSXF311 10.6	25	KSA04NSXF411 11.1	25				
50		KSA05NSD311 6.48	25	KSA05NSXF311 10.6	25	KSA05NSXF411 11.1	25				
63(1)		KSA06NSD311 6.48	25	KSA06NSXF311 10.6	25	KSA06NSXF411 11.1	25				
80		KSA08NSD311 6.48	25	KSA08NSXF311 10.6	25	KSA08NSXF411 11.1	25				
100		KSA10NSD31 6.48	25	KSA10NSXF311 10.6	25	KSA10NSXF41 11.1	25	KSA10NSXN31 10.6	45	KSA10NSXN411 11.1	45
160		KSA16NSEN311 10.6	35	KSA16NSXF311 10.6	36	KSA16NSXF411 11.1	36	KSA16NSXN311 10.6	45	KSA16NSXN411 11.1	45
250		KSA25NSEN311 15.1	35	KSA25NSXF311 15.4	36	KSA25NSXF411 15.8	36	KSA25NSXN311 15.4	45	KSA25NSXN411 15.8	45
400		KSA40NSEN311 19.5	35	KSA40NSXF311 19.5	36	KSA40NSXF411 21.3	36	KSA40NSXN311 19.5	50	KSA40NSXN411 21.3	50

*(1) For **KSA06NSD311** the rated current is 60A, for **KSA06NSN311** and **KSA06NSH311** the rated current are 63A.

*(2) Icc: Short Circuit Current of Tap-Off Unit.



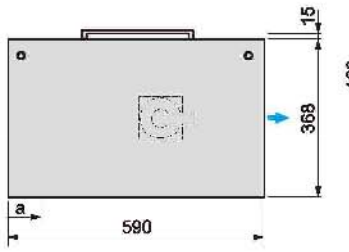
KSA10NSD311



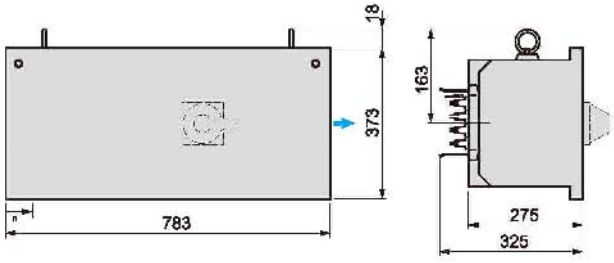
KSA16NS● ●311/411

From the center of plug-in outlet to the edge of box (mm)

Cat. no	a
KSA10NSD311	60
KSA16NS● ●311/411	70
KSA25NS● ●311/411	70
KSA40NS● ●311/411	70



KSA25NS● ●311/411



KSA40NS● ●311/411

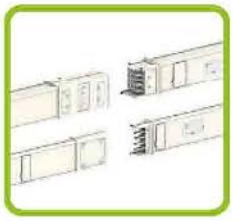
Schneider Electric

Canalis KS, 100 to 800 A
Busbar trunking for medium-power distribution
iBusway

More than Busway – Intelligent Busway

Schneider Electric iBusway is one solution based on a monitored busway system that combines high availability and energy efficiency.

With the 'best in class' Schneider Electric products, we offer
Power distribution to the power load
- Canalis KS (Length & feed unit)
- Canalis KS Plug In unit
- MCB M9, Vigi, Auxiliary
- MCCB Compact NSX
- Integration of emergency lighting










Measure to the rackPower distribution to the power load
- Energy meter (EN40, PM9-P)
- AS-interface device (4i Module, bus...)
- Twido PLC
- Micrologic (Compact NSX) & connection

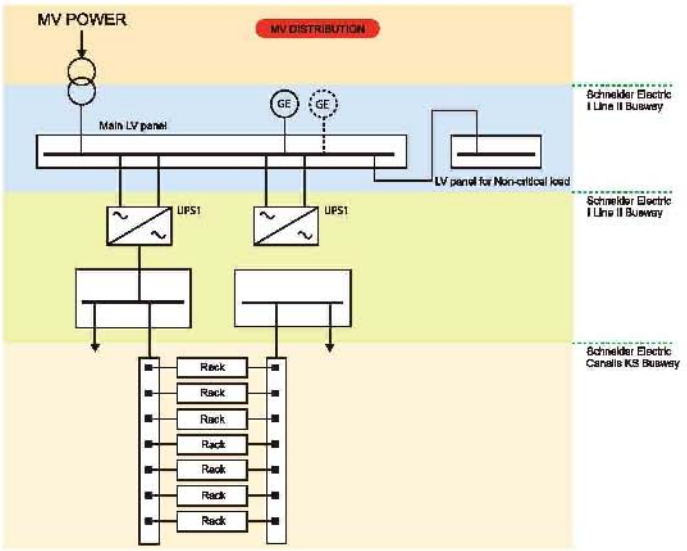
Room supervision
- M340 PLC
- HMI Magelis
- Monitoring application

Canalis KS, 100 to 800 A
Busbar trunking for medium-power distribution
iBusway for Data Center

Schneider Electric iBusway is the key component for high availability power distribution to server racks in data center. Thanks to prefabricated concept from Canalis KS busway, with tap-off units, monitoring devices and a professional specific control system, iBusway is a "plug & play" solution for quick installation or upgrading for an existing IT facility.

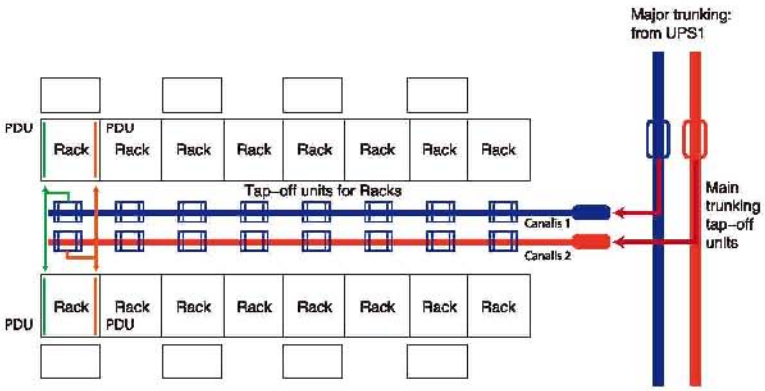
iBusway power distribution solution

1 Main distribution:Supplying IT room(critical load)and non-critcal load with high power busway
2 Major trunking distribution:Power distribution from UPS to secondary switchboard with high power busway
3 Terminal distribution:Power distribution from UPS/ Secondary switchboard to each rack with medium power busway



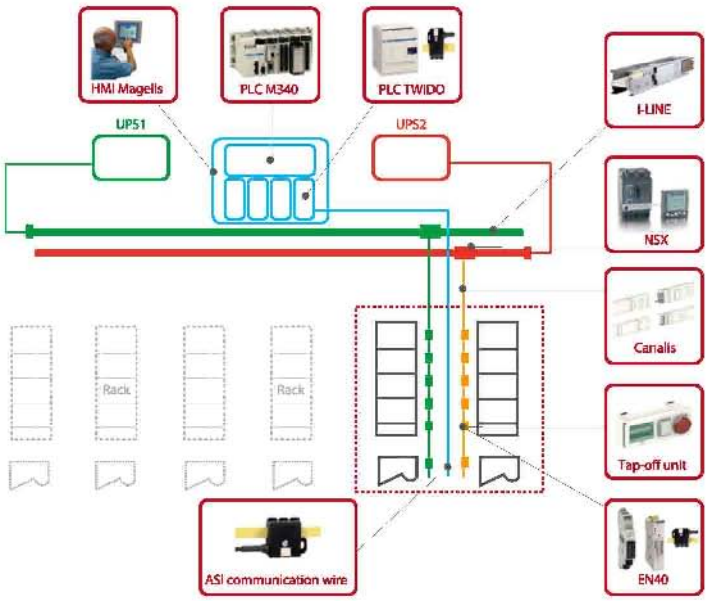
Advantages of power distribution

- NSX circuit-breaker provides full protection between I Line II and the Canalis KS
- Full redundancy solution with two separate Canalis KS
- Each rack is supplied by two tap-off units from different Canalis KS
- Measuring and monitoring functions are optional to be integrated with PMS



iBusway monitoring solution

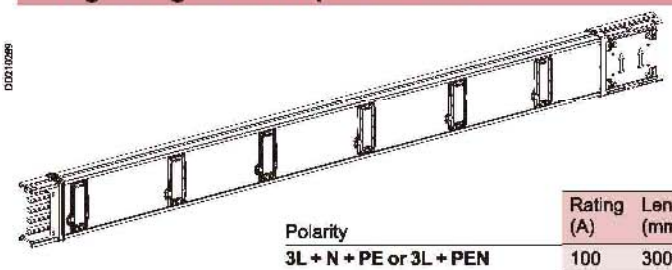
1 Terminal monitorng:tap-off units with EN40,PM9 and communication module
2 Major trunking monitoring:tap-off units with NSX circuit breaker
3 Human machine interfaces:system with TWIDO,M340 and HMI Magelis

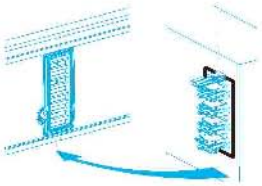


Advantage

- Real time energy monitoring
- Real time monitoring and failure warning for every rack
- Real time power quality monitoring:load factor,harmonic
- Real time power parameter communication
- Open bus system and protocol

Straight lengths with tap-off outlets

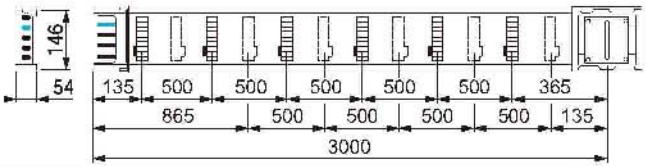




Polarity
3L + N + PE or 3L + PEN

Rating (A)	Length (mm)	Number of tap-off outlets	Cat.no	Order Generic	Weight (kg)
100	3000	12	KSC10ED430	KSC25PG + IPAK1	12.9
160	3000	12	KSC16ED430	KSC25PG + IPAK1	14.2
250	3000	12	KSC25ED430	KSC25PG + IPAK1	16.5
400	3000	10	KSC40EL430	KSC40PG + IPAK2	26.0
500	3000	10	KSC50EL430	KSC50PG + IPAK2	29.0
100	3000	12	KSA10ED430	KSA25PG + IPAK1	13.9
160	3000	12	KSA16ED430	KSA25PG + IPAK1	14.9
250	3000	12	KSA25ED430	KSA25PG + IPAK1	21.0
400	3000	10	KSA40EL430	KSA40PG + IPAK2	21.7
500	3000	10	KSA50EL430	KSA50PG + IPAK2	30.0

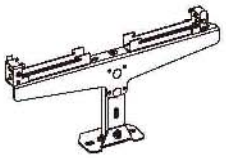
KSA**EA43012



Dimension:	100A–250A	400A–500A
A	54	75

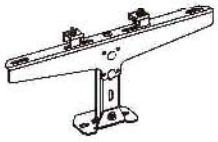
Raised floor

KS fastening kit

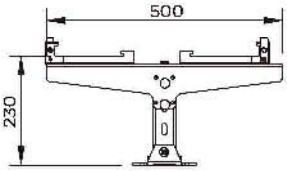


KSB80EZDC1

I Line fastening kit

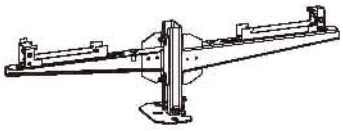


HFDC1



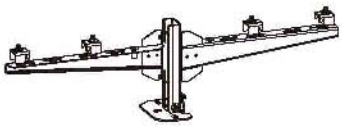
KSB80EZDC1

KS fastening kit for double line

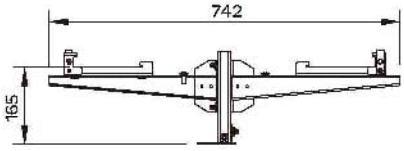


KSB80EZDC2

I Line fastening kit for double line



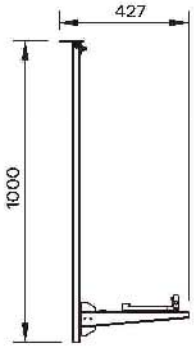
HFDC2



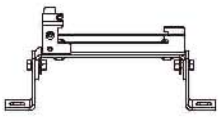
KSB80EZDC2

Under ceiling

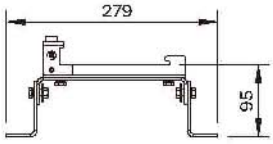
KSB80EZDC3

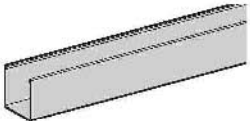


Other

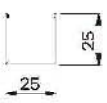


KSB1000ZV2





KFB25CD253

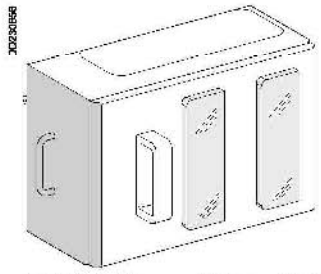


	Rating	Cat.no	Weight	Remark
	(A)		(kg)	
KS fastening kit	100~800	KSB80EZDC1	2.27	
KS fastening kit for double line	100~800	KSB80EZDC2	2.57	
L type fastening kit	100~800	KSB80EZDC3	2.96	
Clip fastening kit	100~800	KSB1000ZV2	0.70	
I Line fastening kit	630~1600	HFDC1	1.84	For I Line only
I Line fastening kit for double line	630~1600	HFDC2	2.29	For I Line only
Cable duct support + intermediate support	100~800	KFB25CD253	1.7	Mounted along fixing bracket

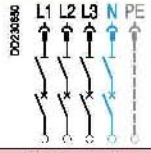
KSA25EZ1 and KSA50EZ3 can be used for iBusway mounting

Disconnector units

Disconnection by opening the tap-off unit door



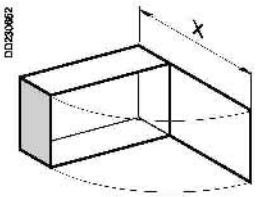
KSA16SM424

Earthing system	Busbar trunking	TT–TNS–TNC–IT (1)
	Tap–off	TT–TNS–TNS–IT (1)
Tap–off polarity		3L + N + PE (2)
Tap-off diagram (e.g. circuit-breaker protection)		

Rating (A)	Number of 9mm mod.	Numb 18m(3) mod.
160	48	24

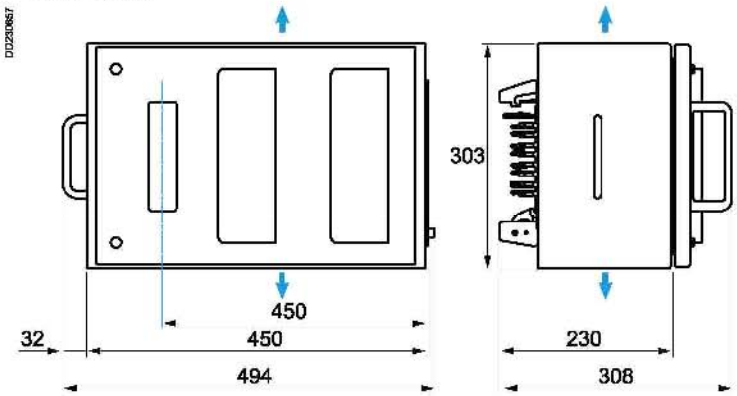
Connection	Max. cross-section (mm²)		Cable gland(4) (not supplied)	Part number	Weight (kg)
	Flexible	Rigid			
Lugs				KSA16SM424	10.6

(1) The neutral must be protected or not distributed (3L + PE) for the IT earthing system
(2) Also suitable for 3L + PE tap-off (N not distributed).
(3) Supplied with blanking plate 1x5 divisible (8 modules) or 2x5 divisible (12 modules)
(4) Max. diameter for a multipole cable.



X = 650

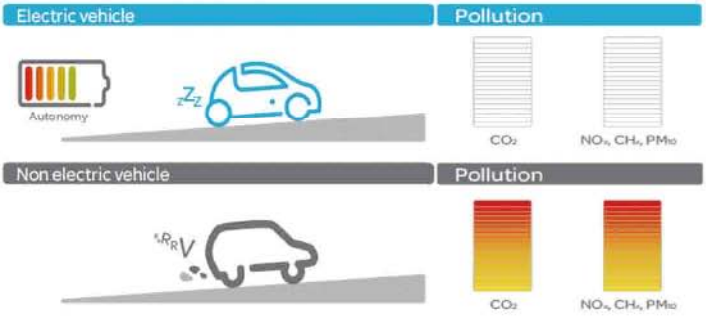
KSA16SM424



Cable outlet
Tap-off outlet axis

Canalis KS, 100 to 800 A

Busbar trunking for medium-power distribution
iBusway for EV link

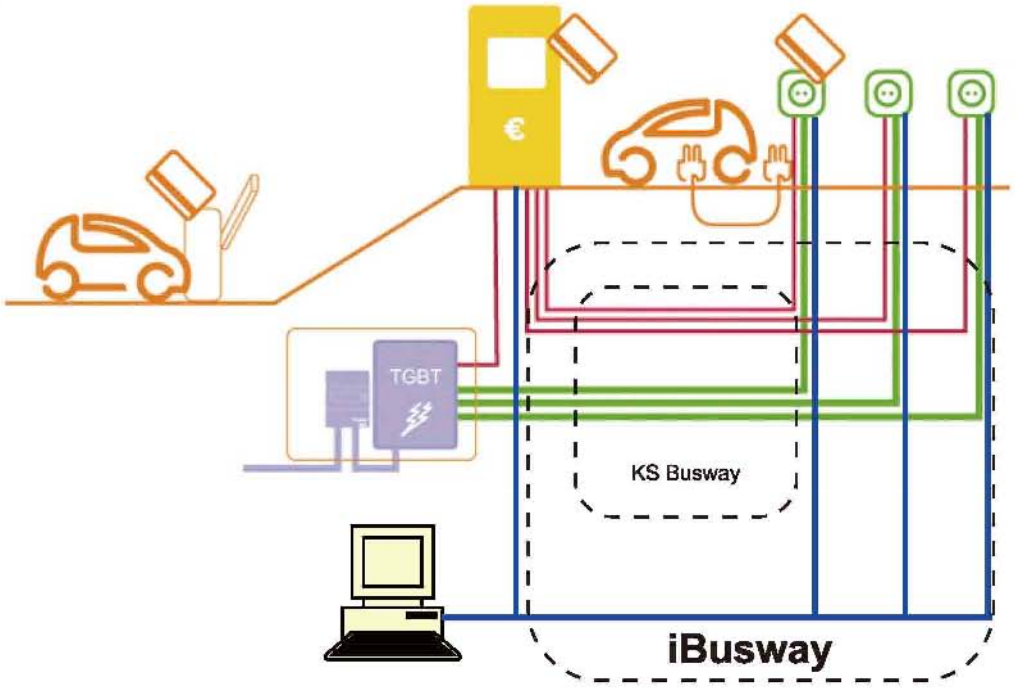


The electric vehicle is the automotive industry's answer to the issue of climate change and the shortage of fossil fuels.

Climatic issues pose a major dilemma:

How can we cope with an energy demand that will double by 2050 when we shall have to halve CO2 emissions by the same deadline?

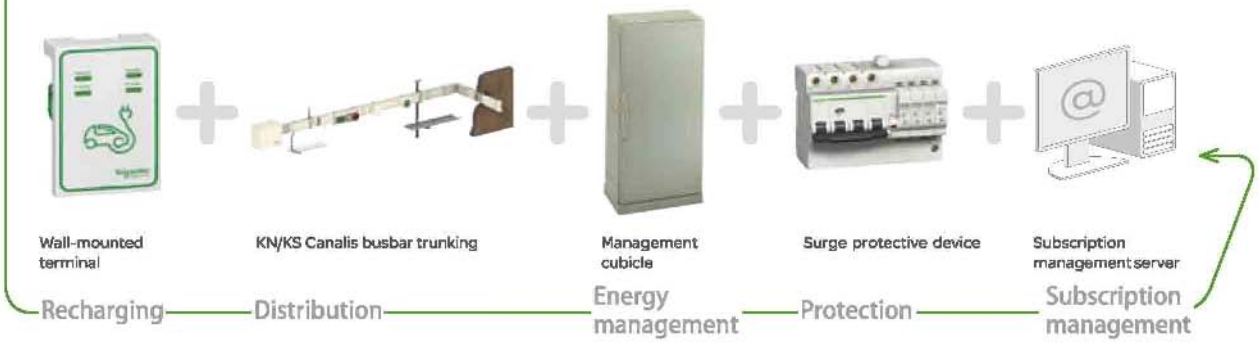
Schneider Electric Key success factor:
Energy management around the charging infrastructure of the electric vehicle



Canalis KS, 100 to 800 A

Busbar trunking for medium-power distribution
iBusway for EV link

Terminal solution for car park : underground car park



Protection cubicle

Intermediate protection cubicle for Canalis distribution

Power distribution to the terminals can be easily upgraded using Canalis prefabricated busbar trunking.
The ducting is generally routed overhead, so that branch connectors can be out of reach of humans.
On each branch cable, a small intermediate protection cubicle placed at a height accessible with a stepladder facilitates cutoff of the terminal for maintenance.

Distributed power distribution

Power, scalability and flexibility in complete safety

The gradual extension of the number of recharging terminals in a car park building requires a powerful, scalable and reliable power distribution system.

> Canalis KN, up to 160 A

> Canalis KS, from 100 to 800 A

- The most suitable solution is Canalis, our prefabricated electrical ducting offer. Apart from the inherent quality of the products, it allows fast initial installation offering maximum security and continuity of service even later, during installation of extensions.

- On-site mounting of branch circuits and connections offers very great reliability because it is performed using a system of prefabricated components pre-tested in factory.

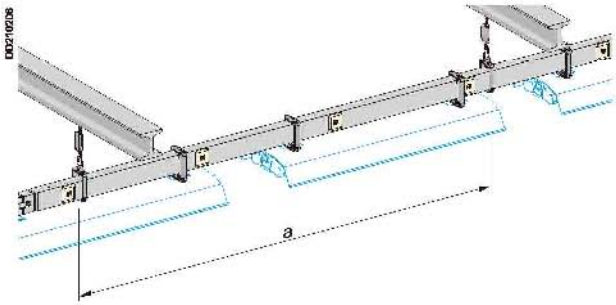
Each terminal is connected to the Canalis busbar trunking via a plug-in cubicle pre-equipped with circuit breakers. Terminals can be added later quickly and easily, without jeopardizing the existing installation and with costs reduced to a minimum.

Appendix

Simplified design guide for lighting distribution
Installation

Fixing distance

KBA and KBB busbar trunking



The fixing distance for KBA and KBB busbar trunking depends on the number and weight of the luminaires, as well as the building structure. The table below indicates the maximum permissible load (kg) between two fixing points for a deflection of 1/500. If the load is concentrated between two fixing points (mercury-vapour lamps), apply a coefficient of 0.6 to the values.

Maximum load (kg)									
Type of busbar trunking	tap-offs distance (m)	Fixing distance a (m)							
		2	2.5	3	3.5	4	4.5	5	5.5	6
KBA	1	34	22	15	no load					
	0.5	29	19	13	no load					
KBB	1 circuit	60	60	48	35	27	21	17	no load	
	2 circuits	60	51	41	30	23	18	15	no load	

The tables below indicate the possible fixing distances in metres for a deflection of 1/350, depending on the type of luminaire used and the installation method (trunking installed edgewise). .

Industrial reflector type fluorescent luminaires without protection grill
Industrial reflector type fluorescent luminaires with protection grill
Dust and damp-proof industrial reflector type fluorescent luminaires

Power (W)	Unit weight (kg)			Possible spacing (metre)					
	Without protection gril	With protection gril	Dust and damp-proof						
				KBA	KBB	KBA	KBB	KBA	KBB
1 x 36	4.20	5.20	3.30	3.00	5.00	3.00	5.00	4.00	6.00
1 x 58	5.30	6.50	4.20	3.00	5.00	3.00	5.00	4.00	6.00
2 x 36	4.90	5.90	5.20	3.00	5.00	3.00	5.00	4.00	6.00
2 x 58	6.30	7.50	5.39	3.00	5.00	3.00	5.00	4.00	6.00

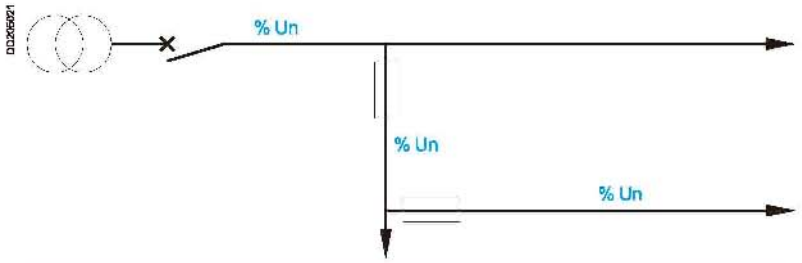
Mercury-vapour luminaires

Power (W)	Unit weight (kg)	Possible spacing (metre)			
		KBA	KBB	KBA	KBB
250	6.00	3.00	5.00	4.00	6.00
	8.50	3.00	5.00	4.00	6.00
	10.00	3.00	5.00	4.00	6.00
400	6.50	3.00	5.00	4.00	6.00
	9.00	3.00	5.00	4.00	6.00
	11.00	3.00	5.00	4.00	6.00

Simplified design guide for lighting distribution
Check on voltage drop

Recommended design procedure

■ Assign each circuit with a voltage-drop value expressed as a % of the rated voltage (Un), given that the voltage drop between the head of the circuit and any point must not exceed the values in the table below.



Type of installation	Voltage drop (for lighting)
Installations supplied directly from a public low-voltage distribution network	3 %
Installations supplied by a subscriber substation or a transformer substation from a high-voltage installation (1)	6 %

(1) Wherever possible, voltage drops in final lighting circuits must not exceed 3 %. When the main busbar trunking in the installation is longer than 100 metres, the permissible values may be increased 0.005 % per metre of trunking over 100 metres, on the condition that the total addition not exceed 0.5 %.

■ Convert into volts the % of the rated voltage (Un) assigned to each circuit.

■ Using the tables, check that the trunking and/or cables selected in the previous pages are compatible with the calculated voltage drops.
Otherwise, it is necessary to increase the size of the cables.

Remarks

■ In a mixed circuit, the most economical option is to increase the size of cables and avoid the use of prefabricated trunking with a higher rated current (Inc).

■ For certain loads, it may be necessary to take into account transient voltage drops.

Simplified design guide for lighting distribution
Check on voltage drop

Voltage drop in the Canalis busbar trunking

The table below indicates the single-phase voltage drop, in volts, in the Canalis busbar trunking (electrical power uniformly distributed).
The three-phase voltage drop is obtained by multiplying the single-phase voltage drop indicated below by 0.866.
If the exact operational current (Ib) and length are not available, select the next highest.

Type of Canalis	Operational current (A)	Length of line (m) 6	8	10	12	15	20	25	30	35	40	45	50	60	70	80	100
20 A KDP	10	0,3	0,5	0,6	0,7	0,9	1,2	1,5	1,7	2	2,3	2,6	2,9	3,5	4,1	4,6	5,8
cos 0.8	16	0,6	0,7	0,9	1,1	1,4	1,9	2,3	2,8	3,2	3,7	4,2	4,6	5,6	6,5	7,4	9,3
	20	0,7	0,9	1,2	1,4	1,7	2,3	2,9	3,5	4,1	4,6	5,2	5,8	7	8,1	9,3	11,6
20 A KDP	10	0,4	0,5	0,7	0,8	1	1,3	1,6	2	2,3	2,6	2,9	3,3	3,9	4,6	5,2	6,5
cos 0.9	16	0,6	0,8	1	1,2	1,6	2,1	2,6	3,1	3,6	4,2	4,7	5,2	6,2	7,3	8,3	10,4
	20	0,8	1	1,3	1,6	2	2,6	3,3	3,9	4,6	5,2	5,9	6,5	7,8	9,1	10,4	13
20 A KDP	10	0,4	0,6	0,7	0,9	1,1	1,4	1,8	2,2	2,5	2,9	3,2	3,6	4,3	5	5,8	7,2
cos 1	16	0,7	0,9	1,2	1,4	1,7	2,3	2,9	3,5	4	4,6	5,2	5,8	6,9	8,1	9,2	11,5
	20	0,9	1,2	1,4	1,7	2,2	2,9	3,6	4,3	5	5,8	6,5	7,2	8,6	10,1	11,5	14,4
25 A KBA	10	0,4	0,5	0,6	0,7	0,9	1,2	1,5	1,8	2,1	2,4	2,8	3,1	3,7	4,3	4,9	6,1
25 A KBB	16	0,6	0,8	1	1,2	1,5	2	2,4	2,9	3,4	3,9	4,4	4,9	5,9	6,8	7,8	9,8
cos 0.8	20	0,7	1	1,3	1,5	1,8	2,4	3,1	3,7	4,3	4,9	5,5	6,1	7,3	8,6	9,8	12,2
	25	0,9	1,2	1,5	1,8	2,3	3,1	3,8	4,6	5,3	6,1	6,9	7,6	9,2	10,7	12,2	15,3
25 A KBA	10	0,4	0,5	0,7	0,8	1	1,3	1,7	2	2,3	2,7	3	3,4	4	4,7	5,4	6,7
25 A KBB	16	0,6	0,9	1,1	1,3	1,6	2,1	2,7	3,2	3,8	4,3	4,8	5,4	6,4	7,5	8,6	10,7
cos 0.9	20	0,8	1,1	1,3	1,6	2	2,7	3,4	4	4,7	5,4	6	6,7	8	9,4	10,7	13,4
	25	1	1,3	1,7	2	2,5	3,4	4,2	5	5,9	6,7	7,5	8,4	10,1	11,7	13,4	16,8
25 A KBA	10	0,4	0,6	0,7	0,9	1,1	1,4	1,8	2,2	2,5	2,9	3,2	3,6	4,3	5	5,8	7,2
25 A KBB	16	0,7	0,9	1,2	1,4	1,7	2,3	2,9	3,5	4	4,6	5,2	5,8	6,9	8,1	9,2	11,5
cos 1	20	0,9	1,2	1,4	1,7	2,2	2,9	3,6	4,3	5	5,8	6,5	7,2	8,6	10,1	11,5	14,4
	25	1,1	1,4	1,8	2,2	2,7	3,6	5,4	5,4	6,3	7,2	8,1	9	41,8	12,6	14,4	18
40 A KBA	16	0,2	0,3	0,4	0,5	0,6	0,8	1	1,2	1,4	1,6	1,8	2	2,4	2,8	3,2	4
40 A KBB	20	0,3	0,4	0,5	0,6	0,7	1	1,2	1,5	1,7	2	2,2	2,5	3	3,5	4	5
cos 0.8	25	0,4	0,5	0,6	0,7	0,9	1,2	1,6	1,9	2,2	2,5	2,8	3,1	3,7	4,4	5	6,2
	32	0,5	0,6	0,8	1	1,2	1,6	2	2,4	2,8	3,2	3,6	4	4,8	5,6	6,4	8
	40	0,6	0,8	1	1,2	1,5	2	2,5	3	3,5	4	4,5	5	6	7	8	10
40 A KBA	16	0,3	0,4	0,4	0,5	0,7	0,9	1,1	1,3	1,6	1,8	2	2,2	2,7	3,1	3,6	4,5
40 A KBB	20	0,3	0,4	0,6	0,7	0,8	1,1	1,4	1,7	2	2,2	2,5	2,8	3,4	3,9	4,5	5,6
cos 0.9	25	0,4	0,6	0,7	0,8	1,1	1,4	1,8	2,1	2,5	2,8	3,2	3,5	4,2	4,9	5,6	7
	32	0,5	0,7	0,9	1,1	1,3	1,8	2,2	2,7	3,1	3,6	4	4,5	5,4	6,3	7,2	9
	40	0,7	0,9	1,1	1,3	1,7	2,2	2,8	3,4	3,9	4,5	5	5,6	6,7	7,8	9	11,2
40 A KBA	16	0,3	0,4	0,5	0,6	0,7	1	1,2	1,4	1,7	1,9	2,2	2,4	2,9	3,4	3,8	4,8
40 A KBB	20	0,4	0,5	0,6	0,7	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3	3,6	4,2	4,8	6
cos 1	25	0,5	0,6	0,8	0,9	1,1	1,5	1,9	2,3	2,6	3	3,4	3,8	4,5	5,3	6	7,5
	32	0,6	0,8	1	1,2	1,4	1,9	2,4	2,9	3,4	3,8	4,3	3,8	5,8	6,7	7,7	9,6
	40	0,7	1	1,2	1,4	1,8	2,4	3	3,6	4,2	4,8	5,4	6	7,2	8,4	9,6	12
25 A KBX	10	0,4	0,5	0,6	0,8	0,9	1,3	1,6	1,9	2,2	2,5	2,8	3,2	3,8	4,4	5	6,3
cos 0.8	16	0,6	0,8	1	1,2	1,5	2	2,5	3	3,5	4	4,5	5	6	7,1	8,1	10,1
	20	0,8	1	1,3	1,5	1,9	2,5	3,2	3,8	4,4	5	5,7	6,3	7,6	8,8	10,1	12,6
	25	0,9	1,3	1,6	1,9	2,4	3,2	3,9	4,7	5,5	6,3	7,1	7,9	9,5	11	12,6	15,8
25 A KBX	10	0,4	0,6	0,7	0,8	1,1	1,4	1,8	2,1	2,5	2,8	3,2	3,5	4,2	4,9	5,6	7
cos 0.9	16	0,7	0,9	1,1	1,3	1,7	2,2	2,8	3,4	3,9	4,5	5	5,6	6,7	7,8	9	11,2
	20	0,8	1,1	1,4	1,7	2,1	2,8	3,5	4,2	4,9	5,6	6,3	7	8,4	9,8	11,2	14
	25	1,1	1,4	1,8	2,1	2,6	3,5	4,4	5,3	6,1	7	7,9	8,8	10,5	12,3	14	17,5
25 A KBX	10	0,5	0,6	0,8	0,9	1,1	1,5	1,9	2,3	2,6	3	3,4	3,8	4,5	5,3	6	7,5
cos 1	16	0,7	1	1,2	1,4	1,8	2,4	3	3,6	4,2	4,8	5,4	6	7,2	8,4	9,6	12
	20	0,9	1,2	1,5	1,8	2,3	3	3,8	4,5	5,3	6	6,8	7,5	9	10,5	12	15
	25	1,1	1,5	1,9	2,3	2,8	3,8	4,7	5,6	6,6	7,5	8,4	9,4	11,3	13,1	15	18,8

Voltage-drop conversion

Operational voltage (V)	Voltage drop in volts for a given % 0.3	0.5	1	1.5	2	2.5	3	3.5	4	4.5	5	6	7	8	9	10
230	0.7	1.2	2.3	3.5	4.6	5.8	6.9	8.1	9.2	10	12	14	16	18	21	23
400	1.2	2	4	6	8	10	12	14	16	18	20	24	28	32	36	40

Simplified design guide
Determining the degree of protection

Degree of protection IP

Standard IEC 60529 (February 2001) indicates the degree of protection provided by electrical equipment enclosures against accidental direct contact with live parts and against the ingress of solid foreign objects or water.

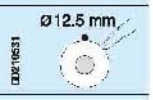
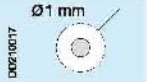
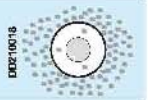
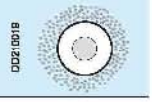
This standard does not apply to protection against the risk of explosion or conditions such as humidity, corrosive gases, fungi or vermin.

The IP code comprises 2 characteristic numerals and may include an additional letter when the actual protection of persons against direct contact with live parts is better than that indicated by the first numeral.

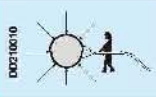
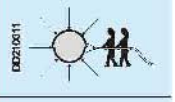
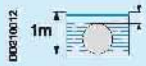
The first numeral characterises the protection of the equipment against penetration of solid objects and the protection of people.
The second numeral characterises the protection of the equipment against penetration of water with harmful effects.

Meaning of the numerals and letters representing the degree of protection IP.

1st characteristic numeral: corresponds to protection of equipment against penetration of solid objects and protection of persons against direct contact with live parts.

Protection of equipment	Protection of persons		
Non-protected	Non-protected	0	
Protected against the penetration of solid objects having a diameter greater than or equal to 50 mm.	Protected against direct contact with the back of the hand (accidental contact).	1	
Protected against the penetration of solid objects having a diameter greater than or equal to 12.5 mm.	Protected against direct finger contact.	2	
Protected against the penetration of solid objects having a diameter greater than or equal to 2.5 mm.	Protected against direct contact with a 2.5 mm diameter tool.	3	
Protected against the penetration of solid objects having a diameter greater than 1 mm.	Protected against direct contact with a 1 mm diameter wire.	4	
Dust protected (no harmful deposits).	Protected against direct contact with a 1 mm diameter wire.	5	
Dust tight.	Protected against direct contact with a 1 mm diameter wire.	6	

2nd characteristic numeral: corresponds to protection of equipment against penetration of water with harmful effects.

Protection of equipment		
Non-protected	0	
Protected against vertical dripping water (condensation).	1	
Protected against dripping water at an angle of up to 15°.	2	
Protected against rain at an angle of up to 60°.	3	
Protected against splashing water in all directions.	4	
Protected against water jets in all directions.	5	
Protected against powerful jets of water and waves.	6	
Protected against the effects of temporary immersion.	7	
Protected against the effects of prolonged immersion under specified conditions.	8	

How Canalis compensate for thermal expansion

Foreword

Prefabricated electrical trunking components expand and contract due to:
- changes in ambient temperature (e.g. summer and winter)
- current flowing in the conductors (e.g. 0 to In).

For example, consider a 30 metre long 800 A Canalis KS line equipped with ten 160 A tap-off units and installed under the roof of a building where the ambient temperature varies by more than 30 °C between summer and winter:
- just the change in the ambient temperature results in an expansion of 20 mm for the conductors and the 10 mm for the casing
- at a constant ambient temperature, the temperature rise in the conductors every morning when the installation is started (increase in current from 0 to In = 800 A) results in an expansion of 55 mm for the conductors and 7 mm for the casing.

The lengths of the sheet steel (1) and the aluminium conductors (2) therefore vary as a function of the changes in temperature and their specific thermal expansion coefficients.

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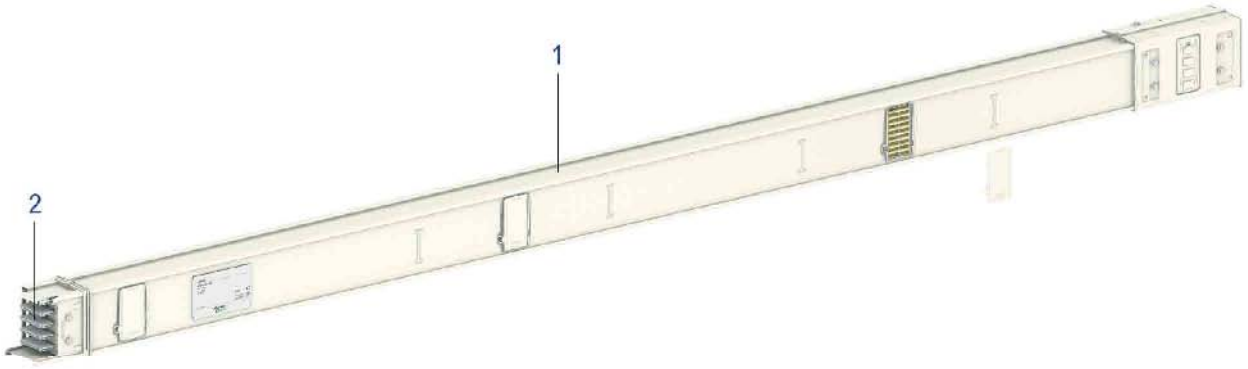

For this reason, Canalis components are designed so that these phenomena do not affect their installation or operation.

How Canalis trunking components effectively compensate for the effects of conductor thermal expansion.

Inside a trunking section, the conductors are fixed (1) at a single point in the casing and, due to the change in temperature, expand on either side of that point. The zones affected by expansion and considered critical from the electrical standpoint are the jointing system (2) and tap-off outlets (3).

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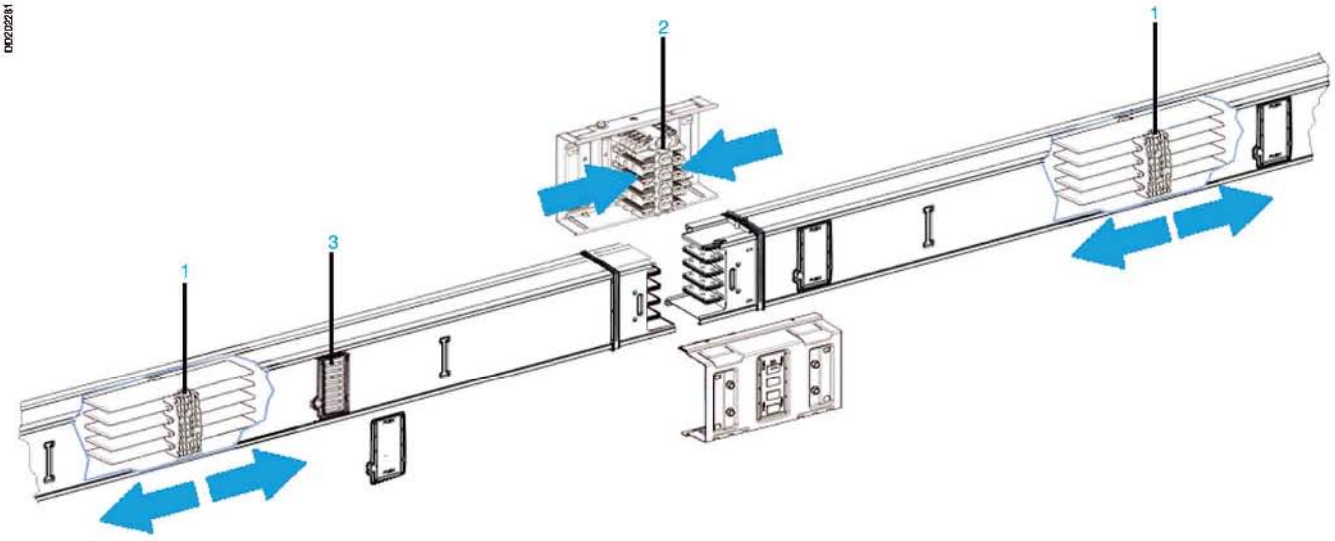
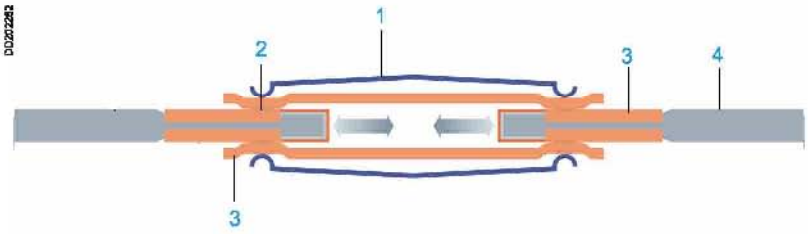


How Canalis compensate for thermal expansion

How Canalis trunking components effectively compensate for the effects of conductor thermal expansion.

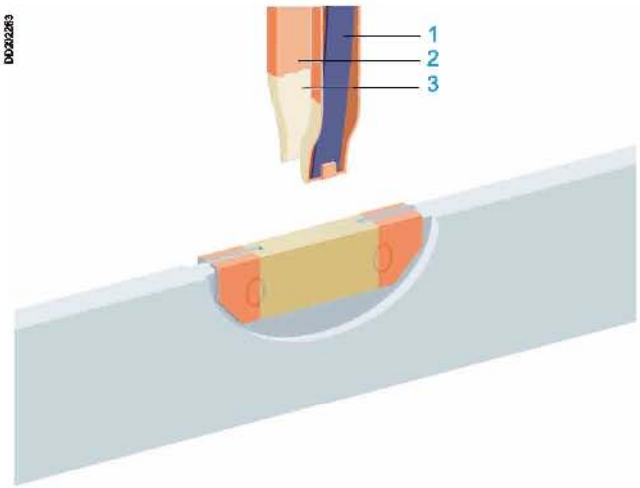
■ the Canalis jointing system mechanically and electrically connects components
(e.g. two straight lengths), but allows for the expansion and contraction of the conductors .

The system is made up of springs (1) and an area of sliding contacts (2) that allow conductor movement (⟹) while maintaining outstanding electrical contact.
Contact quality is ensured by two parts made of silver-plated copper (3). Sufficient pressure between the two parts for good contact is maintained by the springs.
This system is used at each end of the straight lengths, every three metres.



■ at the tap-offs, conductor expansion is compensated for by a contact zone (4) made of silver-plated copper on which the clamps of the tap-off unit can slide.

1 Spring of clamps.
2 Copper area.
3 Silver plated copper.

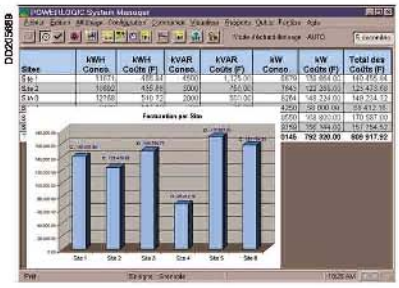


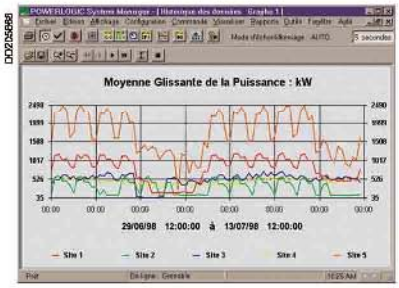
Conclusion: at both the jointing system and the tap-off outlets, sliding contacts can handle the expansion of the conductors.
These maintenance-free silver-plated contacts are guaranteed for life.

Only the expansion of the sheet steel must be taken into account for Canalis installation, however the problem is minor because both trials and calculations show that expansion is only approximately 1 mm for every three-metre length under extreme operating conditions.

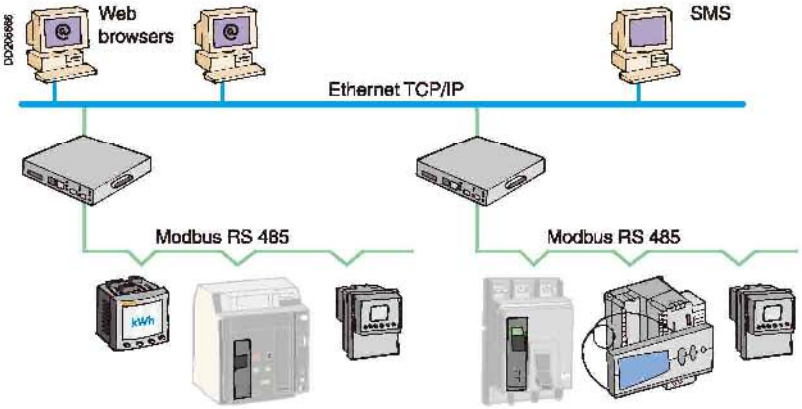
Measurements and metering
Transparent Ready units

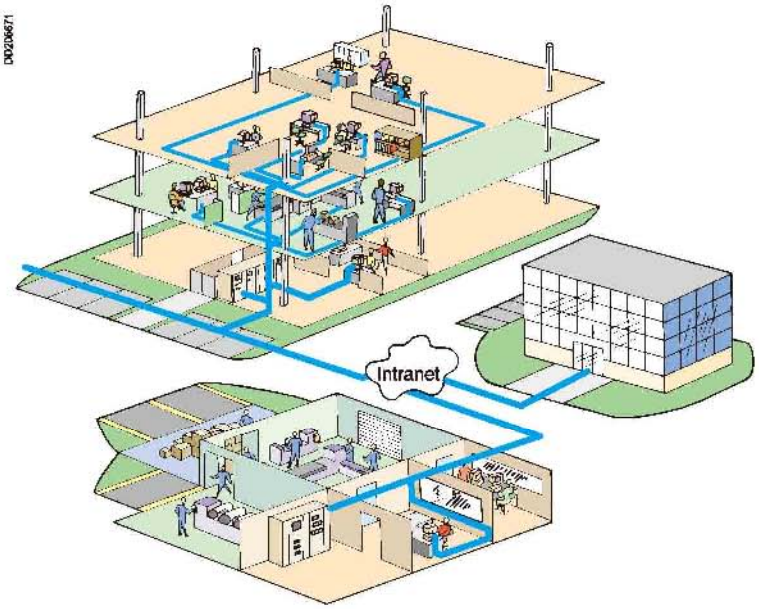
The Transparent Ready concept





Transparent Ready is a simple solution to access information (status, measurements, etc.) available from your electrical distribution equipment (transformers, switchboards, busway).
This information can be accessed from any PC connected to your Ethernet network via a simple Web browser (e.g. Internet Explorer). No other software is required.
Transparent Ready can make your company more competitive by:
- reducing operating costs
- optimising equipment performance
- improving the reliability of the electrical power supply.





Customer needs for measurements and metering

In all non-residential buildings, the need for sub-metering exists and is growing under the combined effects of:
- national and supra-national energy regulations
- the need to reduce overheads and production costs
- the allocation of energy expenditures to cost centres
- the outsourcing of operations tasks to specialists.

Operators must therefore have access to reliable pre-processed information in order to:
- identify areas for potential savings
- model building energy flows and anticipate evolving needs
optimise energy supply and consumption.

Canalis and Transparent Ready

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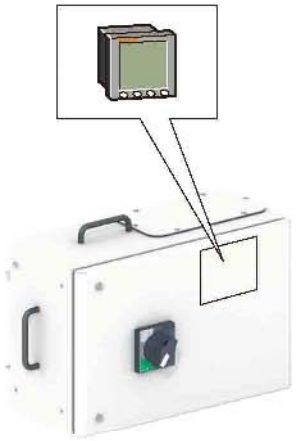

Canalis offers measurement and metering units that can be mounted on both KS busway ranges, available in two ratings (250 A and 400 A).
PowerLogic PM810 Power Meter, a Compact NS circuit breaker and the associated current transformers, must be installed in the tap-off unit equipped with a mounting plate and a DIN rail .

These units are connected to Transparent Ready solutions using a Modbus communication network. An automatic PowerLogic gateway (EGX400) provides the link between Modbus and Ethernet TCP/IP networks.

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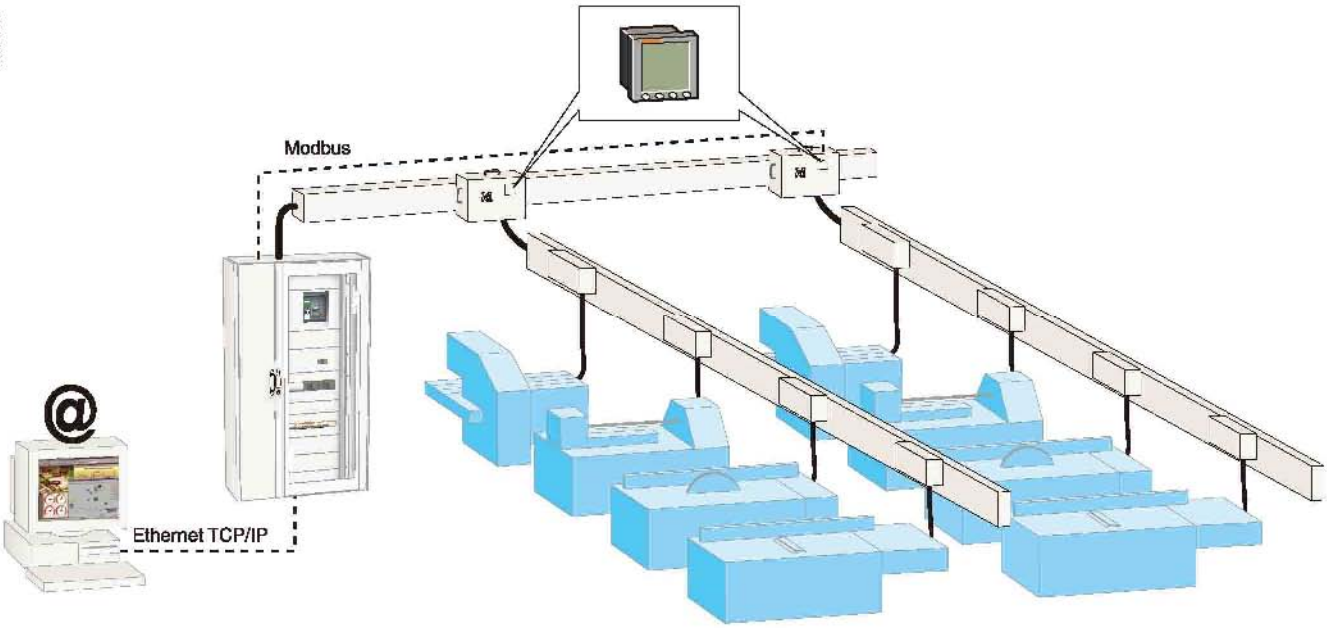

Data acquisition in distributed architectures

When busway is located upstream of a secondary trunking line, the measurement devices should be installed in the tap-off units.

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