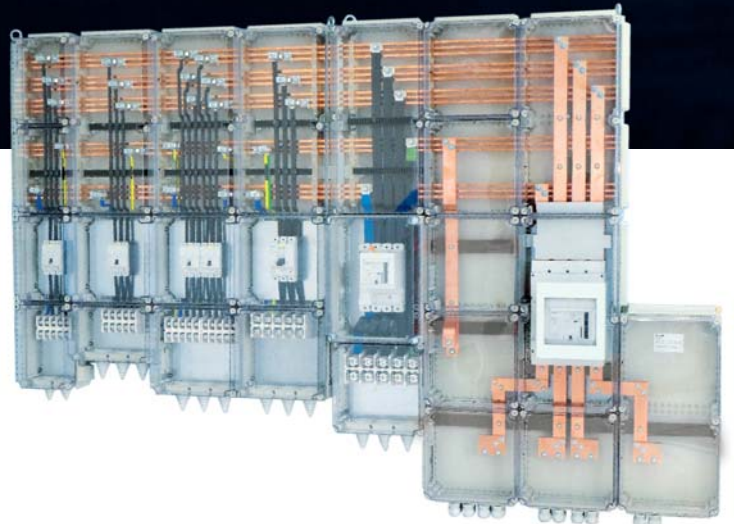


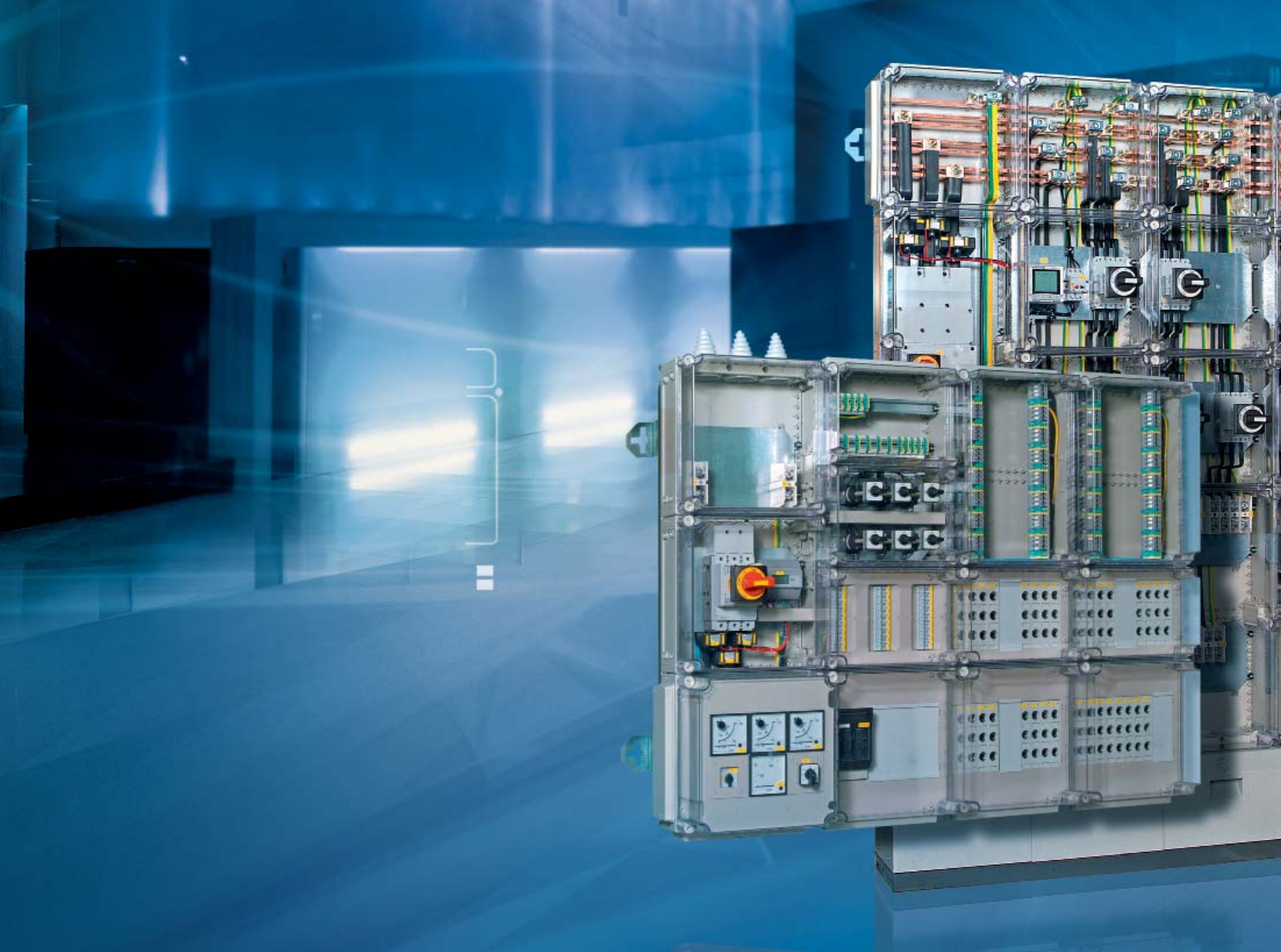
Eaton – Safe power distribution able to meet the most stringent requirements.



Robust and multi-talented –
the all-insulated Ci distribution enclosure:
The consistent power distribution system
for up to 1600 A.



EATON
Powering Business Worldwide



The all-insulated Ci distribution enclosure.

Requirements regarding electrical power distribution are constantly increasing. Eaton's products are not only the answer to these requirements, they also offer top reliability and flexibility for the customer.

A consistent system for up to 1600 A

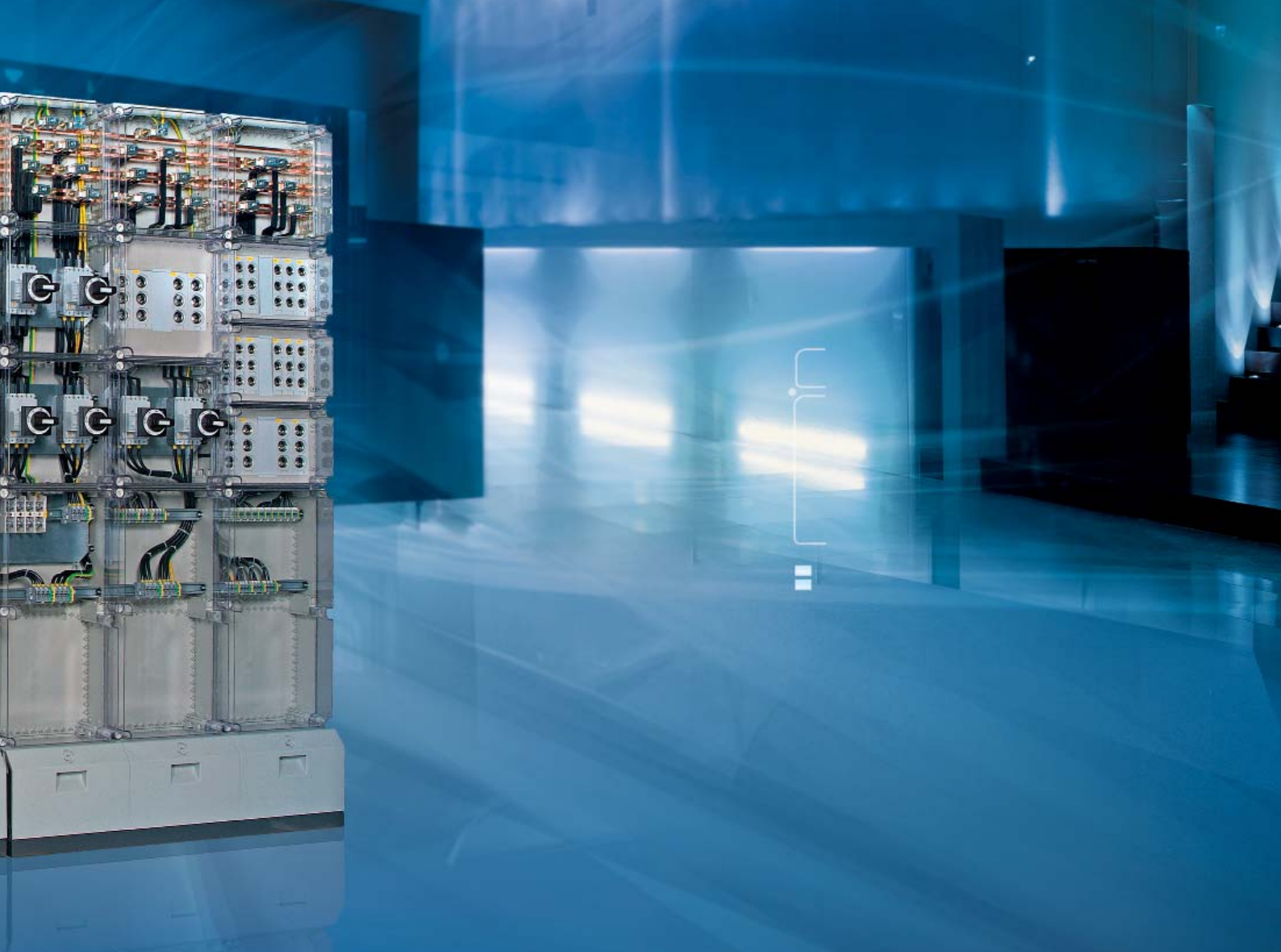
Eaton's all-insulated Ci power distribution enclosures have been designed to meet the most stringent requirements and offer a consistent system for up to 1600 A. These all-insulated distribution enclosures provide an IP65 degree of protection and are insensitive to almost any environmental impact such as dust, moisture and water.

Timeless optimized protection

This type of enclosures made of high-quality polycarbonate offers additional protection against mechanical impacts and caustic substances. Thanks to their total insulation, Ci distribution enclosures provide for a timeless and optimized protection.

Cover equipped with 4 spring-loaded fittings

Thanks to a cover equipped with 4 spring-loaded fittings, the Ci system provides special protection against extreme short-circuits and arc faults. Where necessary, it ensures pressure-relief by allowing the pressure to escape by lifting the cover a few millimetres and closing it again immediately.



An easy system

All three types of enclosures are based on the same system components: This reduces the storage place required for the system and makes their handling significantly easier.

Safety comes first

Total insulation is the safety measure that outperforms all other safety precautions by far because there is no touch voltage possible. Carrying voltage over to other parts of the system is therefore impossible.

High system availability

Reliable system availability is increased because short-circuits between live parts and protective conductors or mounting plates due to the slipping of a tool, for example, can be excluded.

Economic efficiency for all parties involved

For the system planner:
Any of the common applications can be covered through as few as five enclosure sizes and four different depth levels.

For the panel builder:
Sophisticated connecting technology allows grouping and arranging the enclosures in every direction without using any special tools. Four installation technologies are available to complete the system:
Mounting plates, module rails, carrier rails and bus-bars.

For the system integrator:
Supply lines can be inserted from any side, and cables can be interconnected in the socket.

A tough system

For all seasons

Eaton has a global reputation as a specialist in high-quality switchgear systems and is technology leader in the field of power distribution. As a successful supplier of complete systems, Eaton not only offers distribution systems for universal use, but also solutions developed to meet the requirements in harshest conditions and stands out through tested safety, reliability and optimal protection against extreme impacts. Eaton's CI insulated enclosures have become the globally leading and established standard in particularly challenging environments.



In extremely polluted and harsh environments such as:

- Steel works
- Foundries
- Mining
- Woodworking industry
- Metalworking industry
- etc.

Advantages

- 1 system for up to 1600 A
- Switchgear and enclosures are designed to provide perfect compatibility
- Lifting of the cover in case of a short-circuit without losing the protective function



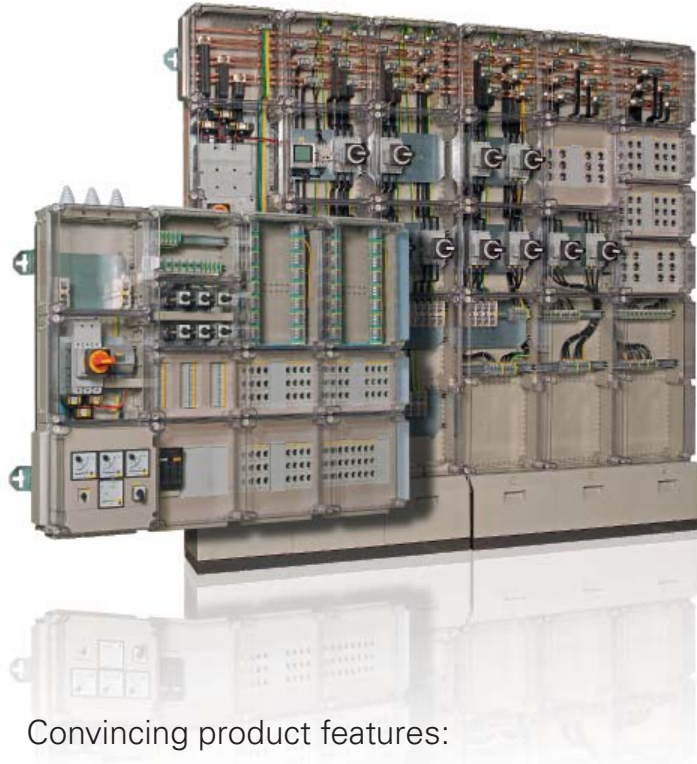
In places requiring a system insensitive to moisture and caustic substances:

- Food industry
- Automated washing lines
- Refineries
- Sewage plants
- Water works
- Chemical industry
- etc.



In places where safety requirements tolerate no compromise:

- Tradeshows and exhibition halls
- Hospitals
- Railway stations
- Airports
- etc.



Convincing product features:

-
- High IP65 degree of protection
 - Total insulation
 - Polycarbonate
 - Distribution system based on a 25 mm grid
 - Modular system
 - Cover resting on 4 spring-loaded fittings
 - Stable carrier-frame profiles
 - Captive, foamed sealings
 - Wedge-type connectors made of insulating material to interconnect the enclosures
 - Transparent covers
 - Consistent system for up to 1600 A
-

Advantages to get excited about:

-
- A distribution system for universal use
 - Highest standard in terms of safety for people and operation
 - Many combination options based on a reduced number of modules
 - Easy to expand when necessary
 - Degree of protection is guaranteed regardless of an operator's level of care and attention
 - Entirely encapsulating insulation-material for high protection against corrosion
 - No special tools required
 - No carrying over of voltage to adjacent enclosures
 - Easier maintenance and system control
 - Complete solution for low-voltage distribution from a single supplier
-

Tried and tested in the most extreme environments.

Enclosure made of high-quality polycarbonate – IP65 degree of protection

High-quality polycarbonate makes CI insulated enclosures especially shock-proof and resistant to acrid smoke.

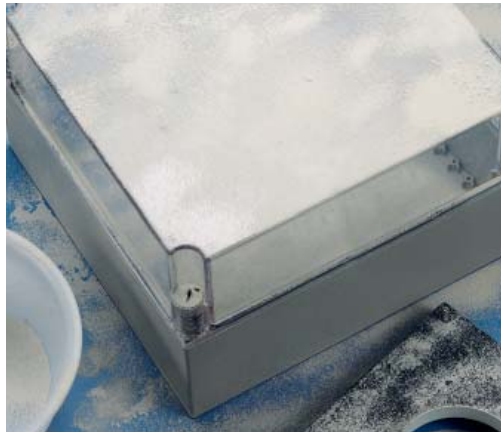
Total insulation offers a maximum of safety as it is a protective feature that is always "active" and does not wear out.

Top operational safety

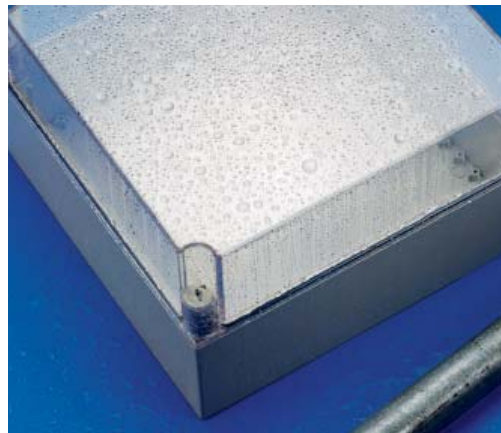
Thanks to transparent covers a short glance will do to check the correct operating status of the incorporated switchgear. Of course there are non-transparent covers available as well, or even covers with an integrated cylinder lock.

Protection against 6 detrimental factors or hazards

- Dust
- Moisture
- Water
- Caustic substances
- Mechanical impacts
- Extreme short-circuits



Suitable for environments particularly exposed to dust and pollution



High level of protection against moisture and water jets



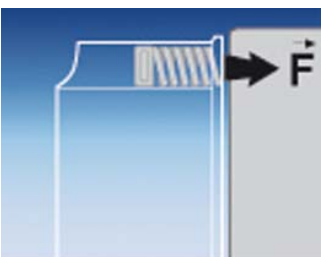
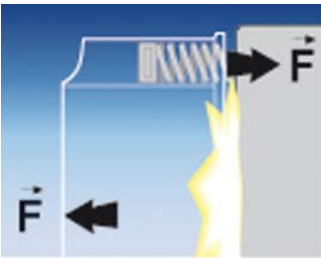
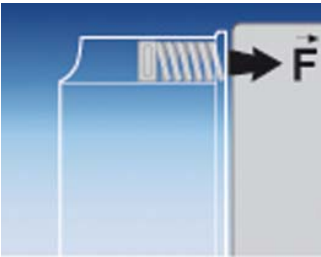
Particularly shock-proof and resistant to mechanical impacts



Resistant to acrid smoke and caustic substances

Maximum safety thanks to pressure relief

The cover resting on 4 spring-loaded fittings ensures pressure relief in case of any short-circuit.

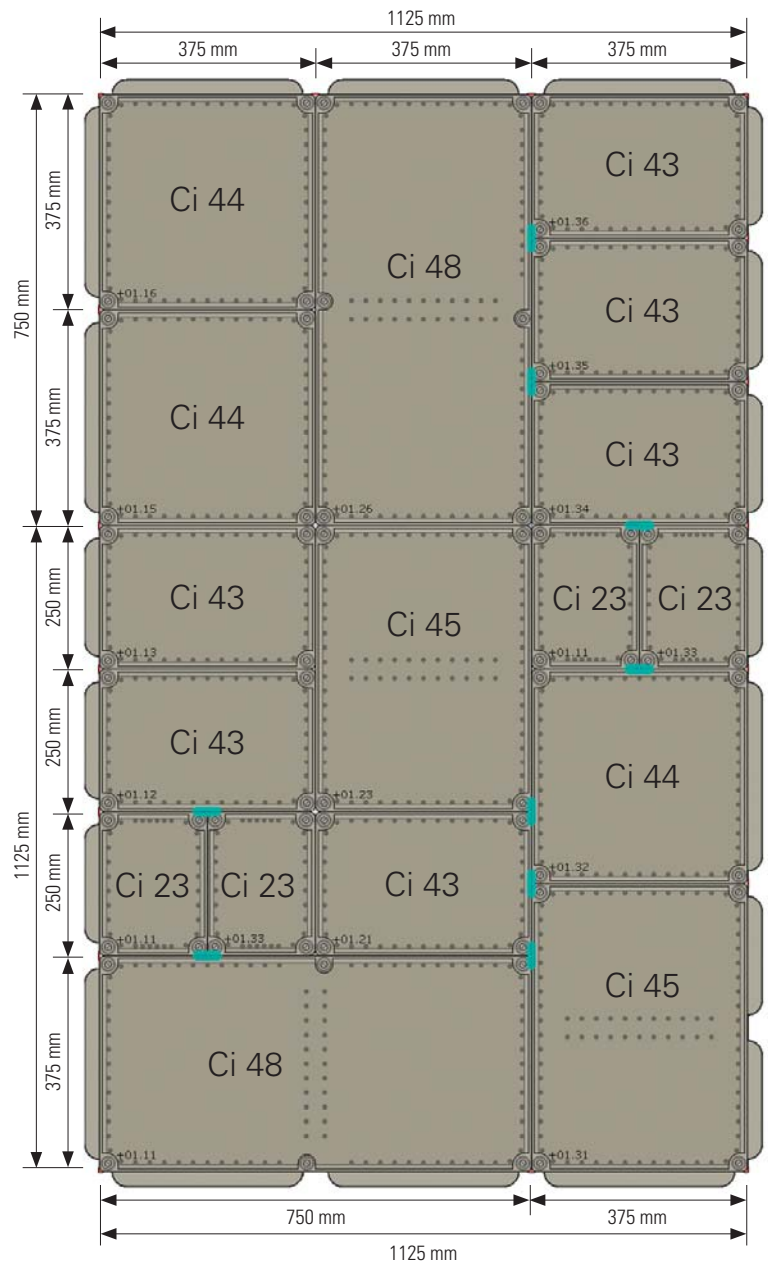


Modular distribution system

Thanks to the uncomplicated possibilities of combining 5 different enclosure sizes, the modular design of the Ci insulated enclosure series offers a maximum of flexibility to optimally use the space available. A unique component is the flange spreader. It serves as an adapter and allows adding

smaller enclosures to larger ones without any problem.

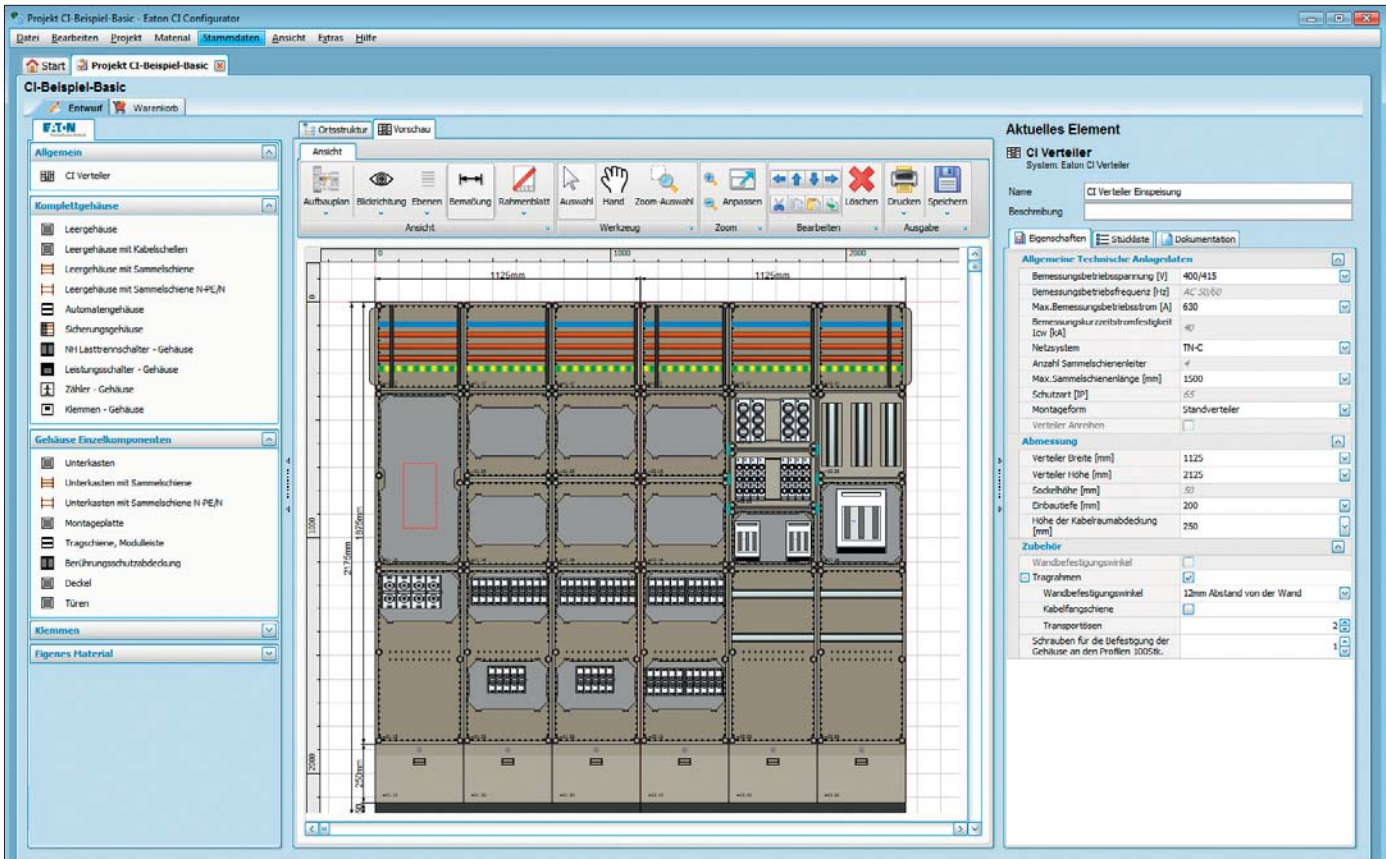
The Eaton Ci Configurator makes it incredibly easy to configure a system because it automatically adds the correct number of flange spreaders to your project.



Advantages

- Symmetrical and asymmetrical flanging of enclosures is possible either one next to the other or one below the other
- This makes sure the space available in each individual project can be optimally used

Easy configuration.



With the Eaton Ci Configurator especially designed for the Ci distribution system you can successfully plan your system with just a few mouse clicks – it's quick and easy, correct and it won't forget any details. The Ci Configurator is based on the know-how of experts and makes the configuration of your system as user-friendly as possible.

Basic Ci Configurator

The Basic Configurator is free for Eaton customers and is useful for a quick selection and arrangement of the different Ci distribution system components.

Easy to use:

On the right side you can select the required distributor objects, the respective templates will offer you the correct Ci distributor articles which you can then correctly combine with the preselected distributor frame in the graphic window at the centre thanks to a Drag & Drop function.

This programme is based on our system know-how and continuously checks the plausibility of your planning steps as you proceed.






- Identification of the equipment
- Local Explorer with easy navigation and modification of equipment
- Clear overview of costs: The required components will be displayed in the basket
- The Configurator will show you the weights, metal surcharges, prices, minimum quantities to be ordered
- The Configurator enables you to provide informative details: Export of parts lists including the system-related accessories, set-up pictures in different views for offers to your customers, CAE systems or workshop assembly. The Single Line output supports easy documentation tasks

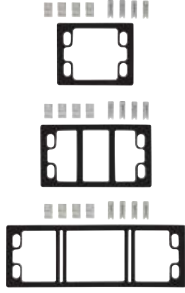






Everything is displayed on the monitor

- Interfaces to Microsoft TM Excel,
- Project management
- DXF vector graphics for importing data into CAE systems
- Version check and update via Internet
- Import of specific prices and discounts is possible
- Export of parts lists and set-up pictures
- Cross-project copying functions
- Calculation of metal surcharges

Safety made to measure.

Distribution enclosure

Size	Ci23	Ci43	Ci44	Ci45	Ci48
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 500	375 x 750
Distribution enclosure					
Installation depth [mm]	125/150	125/150/200	125/150/200/250	200	200/250
	Ci23-125 098208	Ci43-125 017527	Ci44-125 012452	Ci45-200 001896	Ci48-200 078896
	Ci23-150 012781	Ci43-150 022273	Ci44-150 017198		Ci48-250 083642
		Ci43-200 027019	Ci44-200 021944		
			Ci44-250 026690		


Size	Ci23	Ci43	Ci44	Ci48	Connection sets for add-on assembly
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 750	
Distribution enclosure with cable fitting					
Installation depth [mm]	125/150	125/150/200	125/150/200/250	200/250	
	KST32-125 069774	KST34-125 076893	KST44-125 088758	KST48-200 098250	BS2-Ci 090750
	KST32-150 072147	KST34-150 074520	KST44-150 091131	KST48-250 010450	BS3-Ci 097869
		KST34-200 079266	KST44-200 093504		BS4-Ci 014815
		KST43-125 081639	KST44-250 095877	Cross-strut kits	Flange spreader
		KST43-150 084012			
		KST43-200 086385		STB3-Ci 219217	FT-Ci 02319
				STB4-Ci 034223	

The complete range of almost 700 well co-ordinated products for the CI programme is available in our Eaton online catalogue.

Stand-alone enclosures

Size	Ci23	Ci43	Ci44	Ci45
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 500


Stand-alone enclosures E



Installation depth [mm]	Ci23	Ci43	Ci44	Ci45
	125/150	125/150/200	125/150/200/250	200
	Ci23E-125 019570	Ci43E-125 093133	Ci44E-125 031436	Ci45E-200 001891
	Ci23E-150 021943	Ci43E-150 095506	Ci44E-150 033809	
		Ci43E-200 097879	Ci44E-200 036182	
			Ci44E-250 038555	

Size	Ci23	Ci43	Ci44	Ci45
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 500

**Stand-alone enclosures E
Covers RAL**



Installation depth [mm]	Ci23	Ci43	Ci44	Ci45
	125/150	125/150/200	125/150/200	200
	Ci23E-125-RAL7032 090152	Ci43E-125-RAL7032 090154	Ci44E-125-RAL7032 090157	Ci45E-200-RAL7032 090160
	Ci23E-150-RAL7032 090153	Ci43E-150-RAL7032 090155	Ci44E-150-RAL7032 090158	
		Ci43E-200-RAL7032 090156	Ci44E-200-RAL7032 090159	














Size	Ci23	Ci43	Ci44	Ci45
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 500

Stand-alone enclosures X













Installation depth [mm]	Ci23	Ci43	Ci44	Ci45
	125/150	125/150/200	125/150/200/250	200
	Ci23X-125 010408	Ci43X-125 019900	Ci44X-125 031765	Ci45X-200 098469
	Ci23X-150 015154	Ci43X-150 024646	Ci44X-150 034138	
		Ci43X-200 029392	Ci44X-200 036511	
			Ci44X-250 038884	










Base parts

Size	Ci23	Ci43	Ci44	Ci45	Ci48
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 500	375 x 750
Base parts					
					
					
Depth [mm]	120	120	120	120	120
	U-Ci23 060282	U-Ci43 065028	U-Ci44 067269	U-Ci45 001894	U-Ci48 083880
	U-Ci23E 038793	U-Ci43E 064896	U-Ci44E 069642	U-Ci45E 001893	
	U-Ci23X 057909	U-Ci43X 062655	U-Ci44X 067401	U-Ci45X 098470	




Covers

Size	Ci23	Ci43	Ci44	Ci45	Ci48
Dimensions [mm]	187,5 x 250	375 x 250	375 x 375	375 x 500	375 x 750
Covers Transparent and RAL					
					
for installation depths [mm]	125/150	125/150/200	125/150/200/250	200	200/250
	D125-Ci23 014830	D125-Ci43 017203	D125-Ci44 019576	D200-Ci45 001895	D200-Ci48 078901
	D150-Ci23 024322	D150-Ci43 038560	D150-Ci44 040933	D200-Ci45- RAL7032 098476	D250-Ci48 083647
	D125-Ci23- RAL7032 098471	D200-Ci43 074155	D200-Ci44 076528		D200-Ci48- RAL7032 098477
	D150-Ci23- RAL7032 098472	D125-Ci43- RAL7032 002843	D250-Ci44 081274		D250-Ci48- RAL7032 098478
		D150-Ci43- RAL7032 098473	D125-Ci44- RAL7032 007589		
		D200-Ci43- RAL7032 005216	D150-Ci44- RAL7032 098474		
			D200-Ci44- RAL7032 009962		
			D250-Ci44- RAL7032 098475		





Mounting plates

for size	Ci23	Ci43	Ci44	Ci45	Ci48
Mounting plates					
					
Material thickness [mm]	3 or 4	3 or 4	3 or 4	3 or 4	3 or 4
	M3-Ci23 019709	M3-Ci43 029201	M3-Ci44 031574	M3-Ci45 003036	M3-Ci48 036320
	IM4-Ci23 086081	IM4-Ci43 088454	IM4-Ci44 090827		IM4-Ci48 093200





Accessory carrier rails

for enclosure dimension [mm]	187,5	250	375	Spacers	
DIN carrier rails					
Height [mm]	7,5 or 15	7,5 or 15	7,5 or 15	25 or 50	10 or 15
	CL2 029064	CL3 033810	CL4 038556	HS25-CI 002291	ADT200-190 002289
	CL2-15 031437	CL3-15 036183	CL4-15 040929	HS50-CI 002292	ADT125-110 002290

Flange plates

for enclosure dimension [mm]	187,5	250	375	125
Flange plates				
	FL2-X 086052	FL3-X 093171	FL4-X 024355	FL1-X 078933
	FL2-2 017898	FL3-1 088425	FL4-2 014863	
	FL2-3 020271	FL3-2 090798	FL4-3 017236	
		FL3-3 022644	FL4-4 019609	
			FL4-5 021982	

Accessories for external add-on

Spacers	Hinges for covers	Profiles for wall-fixing	Bracket for wall-fixing
			
ZRF3 067734	DSCH-Ci 034224	W16/32 090146	BL-Ci 036168
ZRF4 070107			BL-Ci-VA 038541

Perfection in every detail.



1. Total insulation

The benchmark for ultimate safety: Total insulation is not subject to wear and tear and is therefore absolutely maintenance-free. Also, insulating is safer than grounding.



2. Closure bolt of the cover

The closure bolt of the cover features an "Open/Closed" display and can generally be lead-sealed. An incorporated spring provides for venting the cover following short-circuit disconnections of circuit-breakers: The cover rises, allows the pressure to escape and closes again. So, this ensures maximum safety for both operators and systems.



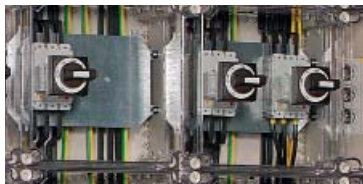
3. Divisible cable clamps

Cables are inserted from the front. The advantages for assembly are evident, especially with cross-sections > 50 mm².



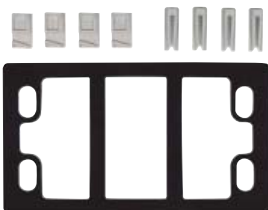
4. Main busbars for up to 1600 A

For gaining a maximum of space: Busbar carriers can be fixed at the side panel of the enclosure. Even 3, 4 and 5-pole systems featuring the full cross-section of the protective conductor can be installed.



5. Depth-adjustable mounting plates

Well-structured arrangement of flat conductors or cables behind the mounting plates – thanks to additional space gained by bringing the module carriers forward by either 10, 15, 25 or 50 mm.



6. Wedge-type connectors

All enclosures are quick and easy to combine using wedge-type connectors so as to form larger distributor units. The sealing is accurately made to size and provides long-lasting tightness.



7. Stable profiles of the carrier frame

CC-profiles in a stable and corrosion-resistant finish always ensure a safe fit of the system, whether it is a wall-mounted distribution enclosure, a floor-based or a floor-standing enclosure with a cable area casing and a base plinth.



8. Cross-strut kits

Barrier-free access makes it easy to arrange rigid copper bars or cables of large diameters in the distribution enclosure.

The right enclosure for your specific application.



Ci insulated distribution enclosures

When time is what matters most.

The bottom of the enclosures is open on two sides to allow for vertical cable insertion. This helps to save mounting time. For horizontal cable insertion the vertical side panels can be knocked out. Cable insertion into the distribution enclosure is done through flanges with metrical pre-punched openings or through cable fittings varying in number and size.



Stand-alone enclosures Ci, E

When flexibility is what matters most.

Metrical pre-punched openings to be knocked out of the enclosure bottom provide for an integrated cable insertion option from all sides. In addition, there are extensive areas allowing to be knocked out on all side panels. This is how a stand-alone enclosure can be transformed into a distribution enclosure, which helps to reduce stock requirements.



Stand-alone enclosures Ci, X

When smart appearance is what matters most.

The smooth and even side areas of the enclosure bottom prevent the development of filthy corners. Examples of application for this type of enclosure are the operators' level in the (serial) machine building industry, small-size control systems and photovoltaics.

An example of application.



CI enclosures as a ready-to-connect network and system protection

When safety is what matters most.

To guarantee the stability of public networks, the VDE-AR-N 4105 standard includes a set of rules for decentralized power supply out of renewable energy sources - which is no problem for Eaton's ready-to-connect CI enclosures.

NAS160-Ci-1-K95
Art. Nr. 168111

Reference examples of IP65 environments.



Modular design

Power distribution for the staff canteen at an aircraft factory: From cooling systems and various large-size cookers to food elevators and heat-retaining buffets in the serving area. Fed by two 800 A supply sources, this distribution system supplies the power necessary to provide meals for some 10,000 staff members every day on a high quality level. In addition, the system is used to run the light regulation, its back-up power supply and the instrumentation and control system of the building which is able to link both supply sources when necessary. The reason to opt for CI was its modular design which allows the installation of the required electrical power equipment in a minimum of space.



High degree of protection

This low-voltage main distribution system is used to supply energy for frequency-regulated nitrogen pumps operating the currently biggest autoclave worldwide (a gas-tight lockable pressure vessel). Curing aircraft components made of carbon-fibre reinforced plastic (CFRP) requires a high level of nitrogen pressure. The autoclave is 35m long and has a diameter of around seven meters. This is where aircraft parts need to be „baked“ under high pressure at 180°C for 12 hours. In this case, the atmospheric moisture is the decisive criterion for the CI enclosure.



Robustness

To control shipping traffic in one of Germany's biggest ports, marine pilots of the port authorities switch the light signals at the water gates via remote control. The signal position is reported back to the marine pilot via RF. A similar task is the one of navigational light controls used for marine navigation in narrow waterways. In this region where the air is highly charged with water of the North Sea, the control system needs to be resistant to corrosive environmental influences. This is why Eaton's robust CI enclosure was chosen.

We would like to take the opportunity and thank the Elektro Bellut GmbH company in Neu Wulmsdorf for this excerpt of their reference list of customers using a CI distribution system.



All components from a single source

Ventilation control: Floor-standing CI distribution enclosure with a cable-area casing and a 1000 A main busbar, supply line protected by an Eaton NZM4 main switch.
Planned and implemented by Wagner & Müller GmbH & Co. KG, Aachen

Overview of busbar systems for up to 1600 A

Rated operating current I_e	Cross-section of bars		Centre-to-centre distance of bars	
	A	L1, L2, L3 mm	PE, N, PEN mm	mm
160		12 x 5	12 x 5	40
250		20 x 5	20 x 5	50
400		20 x 10	20 x 5	50
630		20 x 15	20 x 10	50
1000		2 x 30 x 10	30 x 10	-
1600		3 x 40 x 10	2 x 20 x 15	-

Electrical characteristics

Busbar system								
Rated operating voltage	U_e	V AC	690	690	690	690	690	690
Rated insulation voltage								
AC	U_i	V AC	690	690	690	690	690	690
DC	U_i	V DC	800	800	800	800	800	800
Rated operating current	I_e	A	160	250	400	630	1000	1600
Rated short-time withstand current								
$t = 0,1 \text{ s } \cos \varphi = 0,2$	I_{cw}	kA	20	25	35	40	80	80
Rated short-time withstand current $t = 1 \text{ s}$	I_{cw}	kA	4	7	14	28	50	66
Rated peak withstand current	I_{pk}	kA	40	52,5	73,5	84	176	176
Clearance between busbar supports		mm	≤ 375	≤ 375	≤ 375	≤ 375	≤ 375	≤ 375

IEC
61439

To be able to guarantee the safety of low-voltage switchgear assemblies, the most varied properties of the individual components need to be compatible and are defined in a universally valid standard.

It is the IEC/EN 60439 series of standards which, at the end of 2014, will be replaced by the revised version known as **IEC/EN 61439**. Eaton builds its switch-

gear according to these rules and regulations applicable to low-voltage switchgear assemblies and makes the job of panel builders significantly easier. As the Ci insulated distribution system is composed of a large number of individual, but standardized and tested modules, systems composed of such modules can be built in a cost-effective way, in top quality and in compliance with the standard.

Quite often there are additional tests carried out in independent test laboratories which go beyond the requirements of the standard. This enables us to also provide solutions for very special, customer-specific product applications.

For many of the most common applications, the Ci programme offers fully pre-equipped enclosures available as complete functional units.

Eaton is dedicated to ensuring that reliable, efficient and safe power is available when it's needed most. With unparalleled knowledge of electrical power management across industries, experts at Eaton deliver customized, integrated solutions to solve our customers' most critical challenges.

Our focus is on delivering the right solution for the application. But, decision makers demand more than just innovative products. They turn to Eaton for an unwavering commitment to personal support that makes customer success a top priority.

For more information, visit www.eaton.eu/electrical



Eaton Industries (Austria) GmbH
Scheydgasse 42
1215 Wien
Austria

Eaton Industries Manufacturing GmbH
EMEA Headquarters
Route de la Longeraie
1110 Morges
Switzerland

© 2013 Eaton Industries (Austria) GmbH
Subject to technical modifications. No
responsibility is taken for misprints or errata.
Printed in Austria (01/13)
Publication number BR014001EN
Broschüre Ci
Grafik: SRA
DigiPics, Lithos: THEREDBOX www.theredbox.at
Druck: Rabl, Schrems