



Easy potential distribution

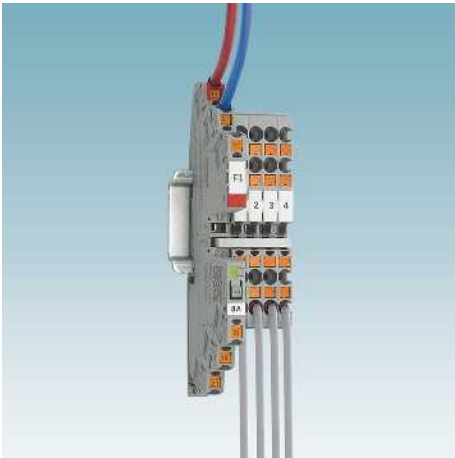
Single-channel electronic circuit breakers can be individually adapted to the required number of channels. The PTCB circuit breakers offer fixed nominal current values as well as versions that can be adjusted on site from 1 to 8 A. The CB E1 circuit breakers can be pre-wired with a base element and can be fitted with fixed nominal current plugs on site.

Modular extension

It couldn't be easier. A system can be extended with additional device circuit breakers in no time at all. You can bridge the power distribution, remote signaling or even the auxiliary voltage for electronic circuit breakers without this involving significant wiring effort. The uniform housing concept as well as the bridgeability of the base elements simplify installation.

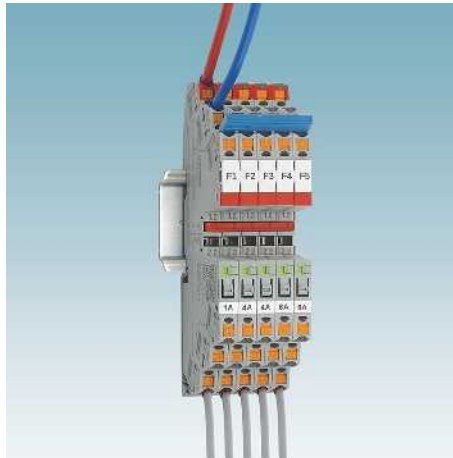
Individual adaptation

Systems and control cabinets can be pre-wired with base elements and individually fitted with corresponding protective plugs on site. Should the demands on a consumer change in the meantime, you can simply replace the relevant protective plug. Various nominal currents are available depending on the application.



Simple application setup

The PTCB device circuit breaker can be bridged to the CLIPLINE complete terminal block range. With standard terminal blocks and accessories from the CLIPLINE complete system, new materials do not have to be qualified. This enables you to quickly and easily extend existing applications.



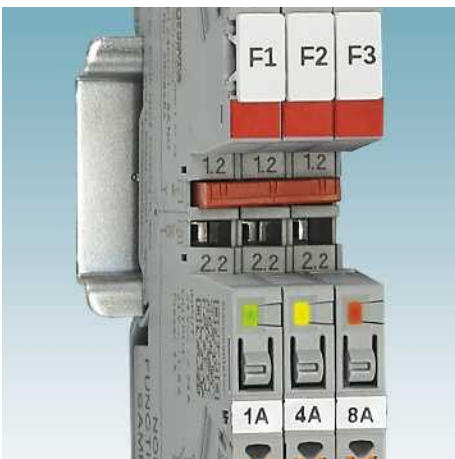
Individual setup

Everything is possible: the device circuit breakers with individual setup offer unlimited possibilities. No matter how many channels need to be protected. Save on unnecessary channels and reduce the costs of your system – with the flexible PTCB device circuit breaker for a wide variety of applications.



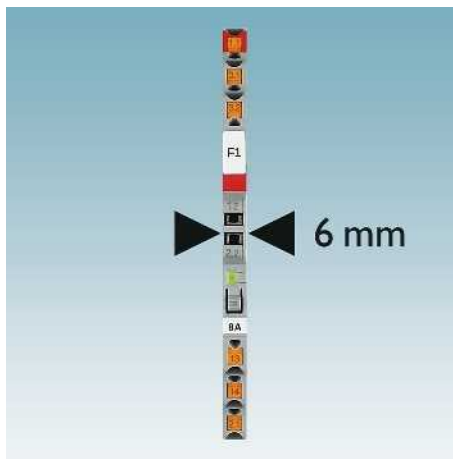
Flexible use

With adjustable current values on each device, the PTCB circuit breakers cover a wide range of applications. You can even make modifications during startup. This means you can respond to changes in the application at any time. As a result, warehousing and logistics costs are significantly reduced.



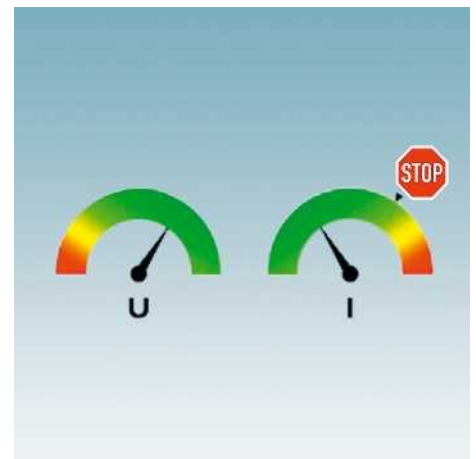
Transparent operating state

The LED indicates the operating state of the product and the connected devices. The state is visualized via traffic light colors. This clear indication allows you to intuitively understand the operating state, which you can see at a glance. Thanks to the remote signaling function, you can forward the status to a remote control room.



More space in the control cabinet

Space-saving potential distribution can be implemented quickly and easily with the PTCB. It is individually adjustable from 1 to 8 amps, and provides reliable protection against overload and short-circuit currents. You benefit from reliable protection which takes up very little space.



Active current limitation

The active current limitation of electronic circuit breakers restricts short-circuit and overload currents to a value that is 1.25 to 2 times the nominal current. This protects the power supply against excessively high currents and prevents the output voltage dipping at the switched-mode power supply unit. In addition, longer cable paths between the power supply and consumer are possible without negatively impacting the shutdown behavior.

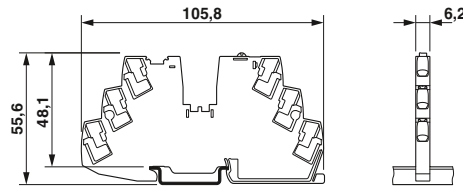
Device circuit breakers

Electronic circuit breakers

PTCB electronic circuit breakers

new

- For protection against voltage dips caused by overload and short circuit
- Fixed nominal current values
- Narrow design, just 6 mm wide
- Suitable for NEC Class 2 applications
- Can be bridged to the CLIPLINE complete terminal block range



NEC Class 2
acc. to UL 1310



DIN-rail-mountable, 1-channel, fixed



Electrical data

Rated voltage
Rated current I_N
Rated current I_N

Switch-on delay
Max. capacitive load

Internal output fuse

Load circuit

Shutdown time

General data

Dimensions W/H/D
Ambient temperature (operation)
Standards/regulations

Remote indication contact

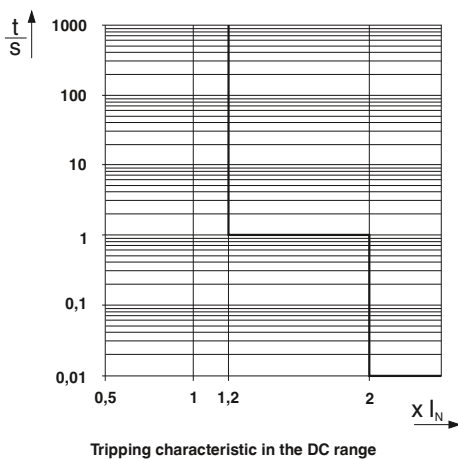
DC operating voltage
DC operating current

Technical data

...1A...	...2A...
24 V DC	
24 A DC (Total current input)	
1 A DC (Rated current output)	2 A DC (Rated current output)
-	
15000 μ F (depending on the available short-circuit current)	20000 μ F (depending on the available short-circuit current)
4 A DC	
≤ 10 ms (for short circuit $> 2.0 \times I_N$) / 1 s (1.2 ... $2.0 \times I_N$)	
6.2 mm / 105.8 mm / 55.6 mm	
-25°C ... 60°C	
EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178/ EN 60068-2-6/EN 60068-2-27/UL 508/UL 2367/ UL 1310	
0 V DC ... 30 V DC	
100 mA DC	

Ordering data

Description	Nominal current	Type	Order No.	Pcs./Pkt.
Circuit breaker, single-channel	1 A	PTCB E1 24DC/1A NO	2909902	1
	2 A	PTCB E1 24DC/2A NO	2909903	1
	3 A			
	4 A			
	6 A			
	8 A			



new

new

NEC Class 2
acc. to UL 1310



DIN-rail-mountable, 1-channel,
fixed



DIN-rail-mountable, 1-channel,
fixed



Technical data	
...3A...	...4A...
24 V DC	
24 A DC (Total current input)	
3 A DC (Rated current output)	4 A DC (Rated current output)
20000 µF (depending on the available short-circuit current)	20000 µF (depending on the available short-circuit current)
4 A DC	
≤ 10 ms (for short circuit > 2.0 x I _N) / 1 s (1.2 ... 2.0 x I _N)	
6.2 mm / 105.8 mm / 55.6 mm	
-25°C ... 60°C	
EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178/ EN 60068-2-6/EN 60068-2-27/UL 508/UL 2367/ UL 1310	
0 V DC ... 30 V DC	
100 mA DC	

Technical data	
...6A...	...8A...
24 V DC	
24 A DC (Total current input)	
6 A DC (Rated current output)	8 A DC (Rated current output)
30000 µF (depending on the available short-circuit current)	35000 µF (depending on the available short-circuit current)
15 A DC	
≤ 10 ms (for short circuit > 2.0 x I _N) / 1 s (1.2 ... 2.0 x I _N)	
6.2 mm / 105.8 mm / 55.6 mm	
-25°C ... 60°C	
EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178/ EN 60068-2-6/EN 60068-2-27/UL 508/UL 2367	
0 V DC ... 30 V DC	
100 mA DC	

Ordering data		
Type	Order No.	Pcs./Pkt.
PTCB E1 24DC/3A NO	2909904	1
PTCB E1 24DC/4A NO	2909906	1

Ordering data		
Type	Order No.	Pcs./Pkt.
PTCB E1 24DC/6A NO	2909908	1
PTCB E1 24DC/8A NO	2909910	1

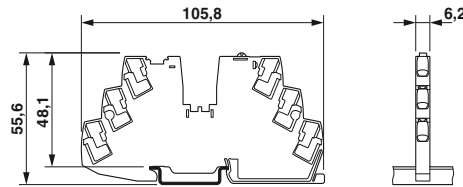
Device circuit breakers

Electronic circuit breakers

PTCB electronic circuit breakers, adjustable

new

- For protection against voltage dips caused by overload and short circuit
- Adjustable in 1 A increments up to max. 8 A
- Narrow design, just 6 mm wide
- Suitable for NEC Class 2 applications
- Can be bridged to the CLIPLINE complete terminal block range



NEC Class 2
acc. to UL 1310



DIN-rail-mountable, 1-channel,
adjustable up to max. 3 A



Technical data

Electrical data

Rated voltage
Rated current I_N
Rated current I_N

Switch-on delay
Max. capacitive load

Internal output fuse
Active current limitation

Load circuit

Shutdown time

General data

Dimensions W/H/D
Ambient temperature (operation)
Standards/regulations

Remote indication contact

DC operating voltage
DC operating current

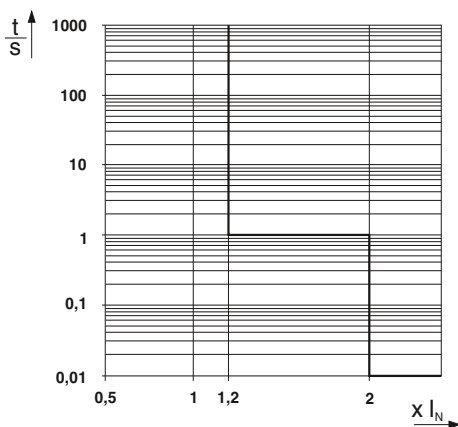
24 V DC
24 A DC (Total current input)
1 / 2 / 3 A DC (adjustable)
-
20000 μ F (depending on the current setting and the short-circuit current available)
4 A DC
-
 ≤ 10 ms (for short circuit $> 2.0 \times I_N$) /
1 s ($1.2 \dots 2.0 \times I_N$)
6.2 mm / 105.8 mm / 55.6 mm
-25°C ... 60°C
EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178/
EN 60068-2-6/EN 60068-2-27/UL 508/UL 2367/
UL 1310

Ordering data

Description

Circuit breaker, single-channel

Type	Order No.	Pcs./Pkt.
PTCB E1 24DC/1-3A NO	2909909	1



Tripping characteristic in the DC range

new

new



DIN-rail-mountable, 1-channel,
adjustable up to max. 4 A



DIN-rail-mountable, 1-channel,
adjustable up to max. 8 A



Technical data

Technical data

24 V DC
 24 A DC (Total current input)
 1 / 2 / 3 / 4 A DC (adjustable)
 -
 20000 µF (depending on the current setting and the short-circuit current available)
 4 A DC
 -
 ≤ 10 ms (for short circuit > 2.0 x I_N) /
 1 s (1.2 ... 2.0 x I_N)
 6.2 mm / 105.8 mm / 55.6 mm
 -25°C ... 60°C
 EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178/
 EN 60068-2-6/EN 60068-2-27/UL 508/UL 2367
 0 V DC ... 30 V DC
 100 mA DC

24 V DC
 24 A DC (Total current input)
 1 / 2 / 3 / 4 / 5 / 6 / 7 / 8 A DC (adjustable)
 -
 35000 µF (depending on the current setting and the short-circuit current available)
 15 A DC
 -
 ≤ 10 ms (for short circuit > 2.0 x I_N) /
 1 s (1.2 ... 2.0 x I_N)
 6.2 mm / 105.8 mm / 55.6 mm
 -25°C ... 60°C
 EN 61000-6-2/EN 61000-6-3/EN 60068-2-78/EN 50178/
 EN 60068-2-6/EN 60068-2-27/UL 508/UL 2367
 0 V DC ... 30 V DC
 100 mA DC

Ordering data

Ordering data

Type	Order No.	Pcs./Pkt.
PTCB E1 24DC/1-4A NO	2908261	1

Type	Order No.	Pcs./Pkt.
PTCB E1 24DC/1-8A NO	2908262	1

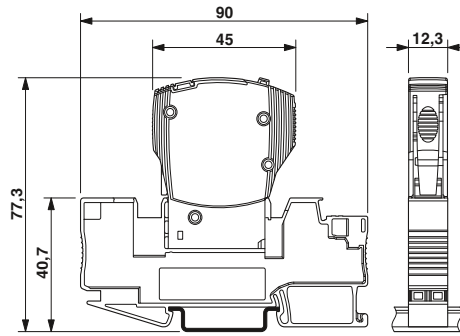
Device circuit breakers

Electronic circuit breakers

Pluggable electronic circuit breakers

- Device circuit breakers for protecting against voltage dips caused by overloads and short circuits
- Integrated active current limitation
- Remote control possible
- Maximum ease of maintenance, thanks to the two-piece design
- Snap-in function for secure hold and easy removal
- Plug coding possible
- Slim design

Notes:
 When used in combination with the base elements (Order No. 2800929 or 2801305), the products also satisfy UL 508.
 For additional technical data, drawings, and accessories, please visit phoenixcontact.net/products.



The figure shows the complete module consisting of a base element and plug



1 N/O contact

CE, ENEC, UL
 Total width 12.3 mm

Technical data

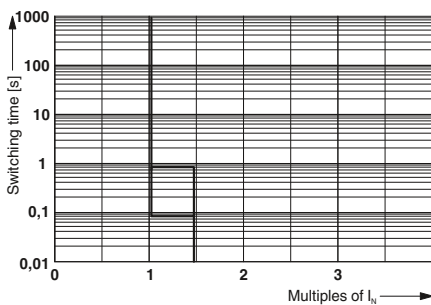
24 V DC
 Depends on the product variant selected
 See tripping characteristic
 typ. 1.25 x I_N
 -25°C ... 50°C (non-condensing)
 IP30 (Actuation area)
 UL 2367/UL 508/EN 61000-6-3/EN 61000-6-2

Ordering data

Description	Nominal current	Type	Order No.	Pcs./Pkt.	
Electronic circuit breaker, 1-pos.	1 A	CB E1 24DC/1A NO P	2800901	1	
	2 A	CB E1 24DC/2A NO P	2800902	1	
	3 A	CB E1 24DC/3A NO P	2800903	1	
	4 A	CB E1 24DC/4A NO P	2800904	1	
	6 A	CB E1 24DC/6A NO P	2800905	1	
	8 A	CB E1 24DC/8A NO P	2800906	1	
	10 A	CB E1 24DC/10A NO P	2800907	1	
	Bridge plug, 0 volt distribution				
	Base element				
	With Push-in connection technology				
With screw connection technology					
For the PCB					

Accessories

Bridge plug, 0 volt distribution				
Base element				
With Push-in connection technology				
With screw connection technology				
For the PCB				
Plug-in bridge, for cross connections in the bridge shaft				
For FBS ..., see page 396				



Tripping characteristic



1 N/C contact



1 x Status OUT + 1 x Reset IN



1 x Status OUT + 1 x Control IN

Total width 12.3 mm

Total width 12.3 mm

Total width 12.3 mm

Technical data	
24 V DC	
Depends on the product variant selected	
See tripping characteristic typ. 1.25 x I _N	
-25°C ... 50°C (non-condensing)	
IP30 (Actuation area)	
UL 2367/UL 508/EN 61000-6-3/EN 61000-6-2	

Technical data	
24 V DC	
Depends on the product variant selected	
See tripping characteristic typ. 1.25 x I _N	
-25°C ... 50°C (non-condensing)	
IP30 (Actuation area)	
UL 2367/UL 508/EN 61000-6-3/EN 61000-6-2	

Technical data	
24 V DC	
Depends on the product variant selected	
See tripping characteristic typ. 1.25 x I _N	
-25°C ... 50°C (non-condensing)	
IP30 (Actuation area)	
UL 2367/UL 508/EN 61000-6-3/EN 61000-6-2	

Ordering data		
Type	Order No.	Pcs./Pkt.
CB E1 24DC/1A NC P	2800915	1
CB E1 24DC/2A NC P	2800916	1
CB E1 24DC/3A NC P	2800917	1
CB E1 24DC/4A NC P	2800918	1
CB E1 24DC/6A NC P	2800919	1

Ordering data		
Type	Order No.	Pcs./Pkt.
CB E1 24DC/1A S-R P	2800908	1
CB E1 24DC/2A S-R P	2800909	1
CB E1 24DC/3A S-R P	2800910	1
CB E1 24DC/4A S-R P	2800911	1
CB E1 24DC/6A S-R P	2800912	1
CB E1 24DC/8A S-R P	2800913	1
CB E1 24DC/10A S-R P	2800914	1

Ordering data		
Type	Order No.	Pcs./Pkt.
CB E1 24DC/1A S-C P	2800922	1
CB E1 24DC/2A S-C P	2800923	1
CB E1 24DC/3A S-C P	2800924	1
CB E1 24DC/4A S-C P	2800925	1
CB E1 24DC/6A S-C P	2800926	1
CB E1 24DC/8A S-C P	2800927	1
CB E1 24DC/10A S-C P	2800928	1

Accessories		
Type	Order No.	Pcs./Pkt.
CB PT BRIDGE	2801014	1
CB 1/6-2/4 PT-BE	2800929	10
CB 1/10-1/10 UT-BE	2801305	10
CB S-BE	2905067	30

Accessories		
Type	Order No.	Pcs./Pkt.
CB PT BRIDGE	2801014	1
CB 1/6-2/4 PT-BE	2800929	10
CB 1/10-1/10 UT-BE	2801305	10
CB S-BE	2905067	30

Accessories		
Type	Order No.	Pcs./Pkt.
CB PT BRIDGE	2801014	1
CB 1/6-2/4 PT-BE	2800929	10
CB 1/10-1/10 UT-BE	2801305	10
CB S-BE	2905067	30

For FBS ..., see page 396

For FBS ..., see page 396

For FBS ..., see page 396

Device circuit breakers

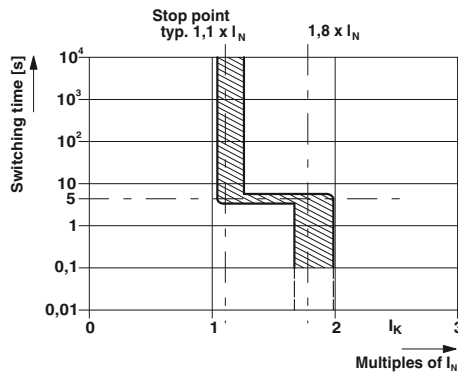
Electronic circuit breakers

Pluggable electronic circuit breakers

- Device circuit breakers for protecting against voltage dips caused by overloads and short circuits
- Integrated active current limitation
- Remote control possible
- Maximum ease of maintenance, thanks to the two-piece design
- Snap-in function for secure hold and easy removal
- Plug coding possible
- Slim design

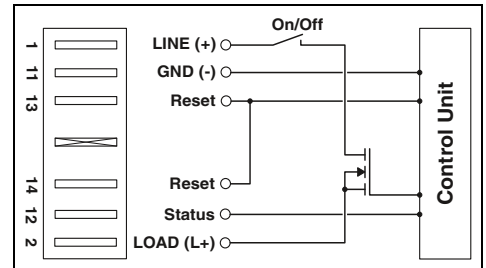
Notes:

For further technical data, drawings, and accessories, and a complete data sheet, please visit phoenixcontact.net/products.



With reset input and status output

ERC
E:
Total width 12.5 mm



Electrical data	
Operating voltage	24 V DC
Nominal current I_N	Depends on the product variant selected
Disconnection	
Switch-off time	See tripping characteristic
Switch off	Typ. $1.8 \times I_N$
Active current limitation	active
General data	
Ambient temperature (operation)	$0^\circ\text{C} \dots 50^\circ\text{C}$ (non-condensing)
Degree of protection	IP30 (Actuation area)
Standards/regulations	UL 2367/UL 508/CSA 22.2

Technical data		
Operating voltage	24 V DC	
Nominal current I_N	Depends on the product variant selected	
Disconnection		
Switch-off time	See tripping characteristic	
Switch off	Typ. $1.8 \times I_N$	
Active current limitation	active	
General data		
Ambient temperature (operation)	$0^\circ\text{C} \dots 50^\circ\text{C}$ (non-condensing)	
Degree of protection	IP30 (Actuation area)	
Standards/regulations	UL 2367/UL 508/CSA 22.2	

Description	Nominal current
Electronic circuit breaker , can be plugged into TMCP base, signaling via LED	
	1 A
	2 A
	3 A
	4 A
	6 A
	8 A
	10 A
	12 A

Ordering data		
Type	Order No.	Pcs./Pkt.
ECP-E 1A	0900113	5
ECP-E 2A	0900210	5
ECP-E 3A	0900317	5
ECP-E 4A	0900414	5
ECP-E 6A	0900618	5
ECP-E 8A	0900812	5
ECP-E 10A	0901002	5
ECP-E-12A	0900126	5

Spring lock , for mechanical locking in the case of overhead mounting, 1-pos.
Modular socket , 2-position, for holding two circuit breakers, each with a single position
Socket termination elements , can be plugged in both left and right, contain the connections for the reset inputs/group request
Signal bridge , pluggable, for bridging group signaling when there is a free slot on the TMCP SOCKET M socket

Accessories		
Accessories	Order No.	Pcs./Pkt.
SPRING-LOCK	0713009	10
TMCP SOCKET M	0916589	10
TMCP CONNECT LR	0916592	3
TMCP SB	0916602	6

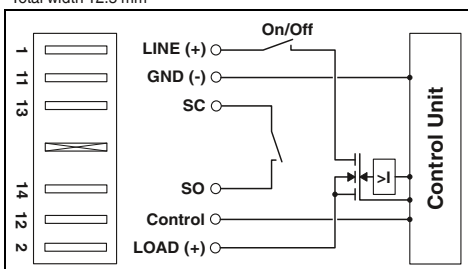


With control input and group request

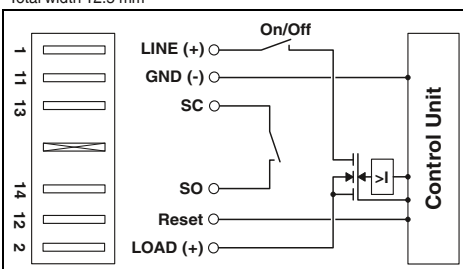


With reset input and group request

Ex: Total width 12.5 mm



Ex: Total width 12.5 mm



Technical data

24 V DC
Depends on the product variant selected

See tripping characteristic
Typ. $1.8 \times I_N$
active

0°C ... 50°C (non-condensing)
IP30 (Actuation area)
UL 2367/UL 508/CSA 22.2

Ordering data

Type	Order No.	Pcs./Pkt.
ECP-E2-1A	0900139	5
ECP-E2-2A	0900236	5
ECP-E2-3A	0900333	5
ECP-E2-4A	0900430	5
ECP-E2-6A	0900634	5
ECP-E2-8A	0900838	5
ECP-E2-10A	0900100	5
ECP-E2-12A	0900207	5

Accessories

SPRING-LOCK	0713009	10
TMCP SOCKET M	0916589	10
TMCP CONNECT LR	0916592	3
TMCP SB	0916602	6

Technical data

24 V DC
Depends on the product variant selected

See tripping characteristic
Typ. $1.8 \times I_N$
active

0°C ... 50°C (non-condensing)
IP30 (Actuation area)
UL 2367/UL 508/CSA 22.2

Ordering data

Type	Order No.	Pcs./Pkt.
ECP-E3 1A	0912041	5
ECP-E3 2A	0912042	5
ECP-E3 3A	0912043	5
ECP-E3 4A	0912044	5
ECP-E3 6A	0912046	5
ECP-E3 8A	0912048	5
ECP-E3 10A	0912050	5
ECP-E3 12A	0912052	5

Accessories

SPRING-LOCK	0713009	10
TMCP SOCKET M	0916589	10
TMCP CONNECT LR	0916592	3
TMCP SB	0916602	6

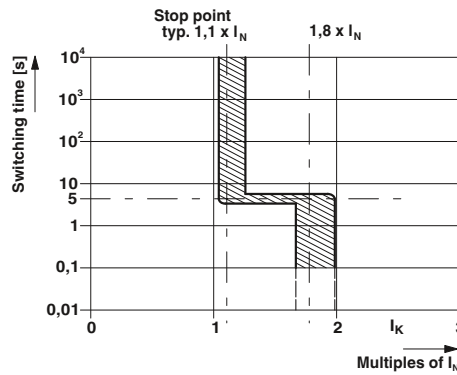
Device circuit breakers

Electronic circuit breakers

EC-E1 and EC-E4 electronic circuit breakers

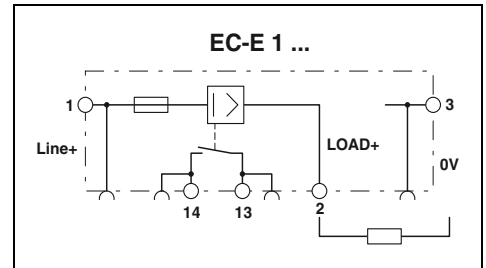
- Selective protection of all load circuits at switched-mode power supply units
- A combination of active electronic current limitation in the event of short circuit and overload shutdown ensures that the circuit breaker can respond to overloads faster than the switched-mode power supply unit
- The residual current is always limited to 1.3 - 1.8 times the nominal current

Notes:
For further technical data, drawings, and accessories, and a complete data sheet, please visit phoenixcontact.net/products.



With signal contact as N/C contact or N/O contact

Ex: Total width 12.5 mm



Electrical data	
Operating voltage	24 V DC
Nominal current I_N	Depends on the product variant selected
Disconnection	
Switch-off time	See tripping characteristic
Fuse type	electronic
General data	
Dimensions W/H/D	12.5 mm / 83 mm / 80 mm
Connection method	Screw connection
Connection data rigid / flexible / AWG	0.5 ... 16 mm ² / 0.5 ... 16 mm ² / 20 - 6
Flexible conductor cross section with ferrule	0.5 ... 10 mm ²
Ambient temperature (operation)	0°C ... 50°C (non-condensing)
Degree of protection	IP20 (Housing)
Flammability rating in accordance with UL 94	V0

Technical data		
Operating voltage	24 V DC	
Nominal current I_N	Depends on the product variant selected	
Disconnection		
Switch-off time	See tripping characteristic	
Fuse type	electronic	
General data		
Dimensions W/H/D	12.5 mm / 83 mm / 80 mm	
Connection method	Screw connection	
Connection data rigid / flexible / AWG	0.5 ... 16 mm ² / 0.5 ... 16 mm ² / 20 - 6	
Flexible conductor cross section with ferrule	0.5 ... 10 mm ²	
Ambient temperature (operation)	0°C ... 50°C (non-condensing)	
Degree of protection	IP20 (Housing)	
Flammability rating in accordance with UL 94	V0	

Description	Nominal current
Electronic circuit breaker, signal contact: 1 N/O contact	
	0.5 A
	1 A
	2 A
	3 A
	4 A
	6 A
	8 A
	10 A
	12 A
Electronic circuit breaker, signal contact: 1 N/C contact	
	0.5 A
	1 A
	2 A
	3 A
	4 A
	6 A
	8 A
	10 A
	12 A

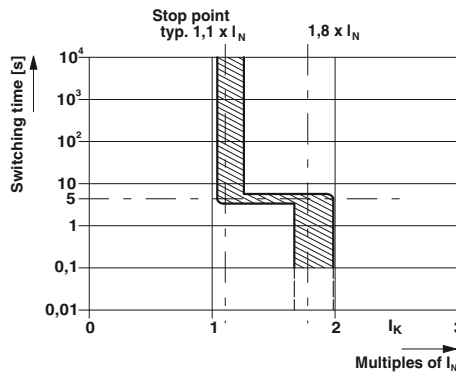
Ordering data		
Type	Order No.	Pcs./Pkt.
EC-E1 0,5A	0903022	6
EC-E1 1A	0903023	6
EC-E1 2A	0903024	6
EC-E1 3A	0903025	6
EC-E1 4A	0903026	6
EC-E1 6A	0903028	6
EC-E1 8A	0903029	6
EC-E1 10A	0903030	6
EC-E1 12A	0903031	6
Electronic circuit breaker, signal contact: 1 N/C contact		
EC-E4 0,5A	0903040	6
EC-E4 1A	0903032	6
EC-E4 2A	0903033	6
EC-E4 3A	0903034	6
EC-E4 4A	0903035	6
EC-E4 6A	0903036	6
EC-E4 8A	0903037	6
EC-E4 10A	0903038	6
EC-E4 12A	0903039	6

Accessories	
Continuous plug-in bridge, 500 mm long, isolated, can be cut to length, for potential distribution	
Nominal current: 32 A	
Screwdriver	

FBST 500-PLC BU	2966692	20
FBST 500-PLC RD	2966786	20
FBST 500 TMC-N GY	0901028	10
SZS 0,6X3,5	1205053	10

EC-E electronic circuit breakers

- Selective protection of all 24 V DC load circuits at switched-mode power supply units
- A combination of active electronic current limitation in the event of short circuit and overload shutdown ensures that the circuit breaker can respond to overloads faster than the switched-mode power supply unit
- The residual current is always limited to 1.3 - 1.8 times the nominal current

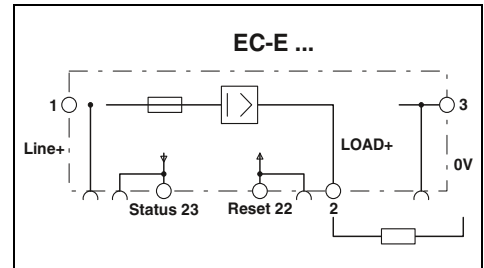


With reset input and status output

Notes:

For further technical data, drawings, and accessories, and a complete data sheet, please visit phoenixcontact.net/products.

Ex: Total width 12.5 mm



Electrical data	
Operating voltage	24 V DC
Nominal current I_N	Depends on the product variant selected
Disconnection	
Switch-off time	See tripping characteristic
Fuse type	electronic
General data	
Dimensions W/H/D	12.5 mm / 83 mm / 80 mm
Connection method	Screw connection
Connection data rigid / flexible / AWG	0.5 ... 16 mm ² / 0.5 ... 16 mm ² / 26 - 6
Flexible conductor cross section with ferrule	0.5 ... 10 mm ²
Ambient temperature (operation)	0°C ... 50°C (non-condensing)
Degree of protection	IP20 (Housing)
Flammability rating in accordance with UL 94	V0

Technical data

24 V DC
 Depends on the product variant selected
 See tripping characteristic
 electronic
 12.5 mm / 83 mm / 80 mm
 Screw connection
 0.5 ... 16 mm² / 0.5 ... 16 mm² / 26 - 6
 0.5 ... 10 mm²
 0°C ... 50°C (non-condensing)
 IP20 (Housing)
 V0

Description	Nominal current
Electronic circuit breaker, with reset input	
	0.5 A
	1 A
	2 A
	3 A
	4 A
	6 A
	8 A
	10 A
	12 A

Ordering data

Type	Order No.	Pcs./Pkt.
EC-E 0,5A DC24V	0903041	6
EC-E 1A DC24V	0903042	6
EC-E 2A DC24V	0903043	6
EC-E 3A DC24V	0903044	6
EC-E 4A DC24V	0903045	6
EC-E 6A DC24V	0903046	6
EC-E 8A DC24V	0903047	6
EC-E 10A DC24V	0903048	6
EC-E 12A DC24V	0903049	6

Continuous plug-in bridge, 500 mm long, isolated, can be cut to length, for potential distribution
Nominal current: 32 A

Accessories

Accessories	Order No.	Pcs./Pkt.
FBST 500-PLC BU	2966692	20
FBST 500-PLC RD	2966786	20
FBST 500 TMC-N GY	0901028	10