

Power & Signal Quality TRABTECH

Device circuit breakers

**Selective power distribution:
branch out, individual
adaptation, modular extension**

Interference-free mains supply and signal transmission

A constant power supply and secure data links are especially important for the operational reliability of electrical systems, installations, and devices.

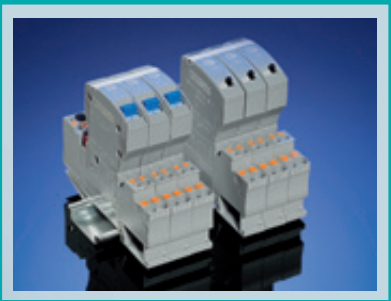
Phoenix Contact meets these requirements with the TRABTECH product group. Coordinated solutions consisting of surge protection, monitoring, device circuit breakers and EMC products ensure a consistently high power and signal quality for maximum availability.



Surge protection



Monitoring



Device circuit breakers

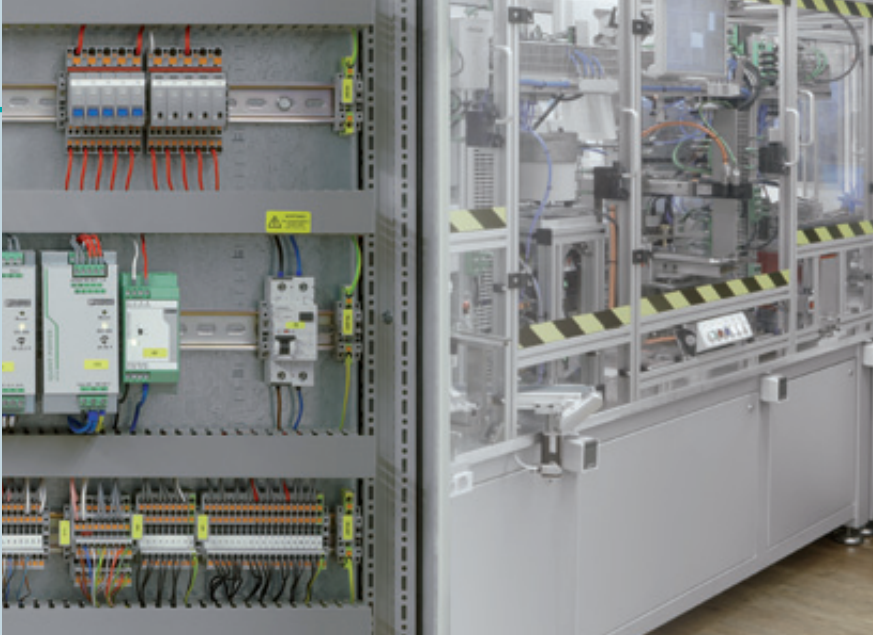


EMC solutions



Services

Selective circuit protection



Reliable protection against damaging overload and short-circuit currents

System breakdowns can be caused by various factors. A permanent overload, for example, can damage the load and lead to the downtime of the system or a system part.

Protect the circuits in your systems selectively to increase system availability.

Valves	0.5 to 4 A
Motors	1 to 12 A
Relays	0.5 to 5 A
Programmable controllers	1 to 8 A
Sensors/actuators	0.5 to 2 A

Typical nominal currents of electrical loads

The different nominal currents of the various loads reveal the desirability of selective protection for the individual circuits. And you will find the perfect device circuit breaker for almost any nominal current.

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guarantee the safety of your systems
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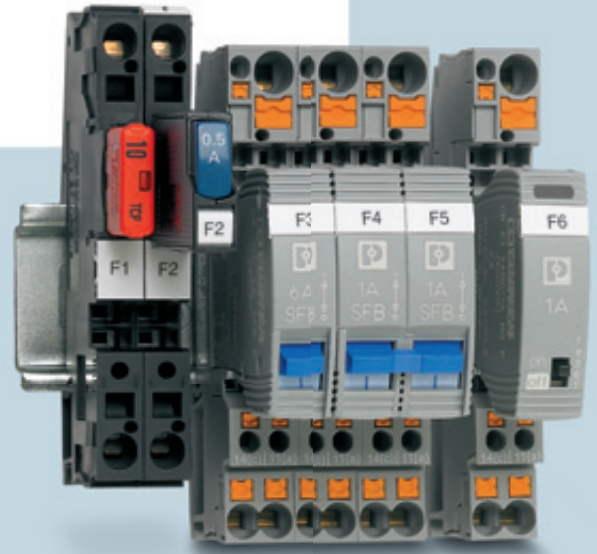
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for maximum system availability
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High-grade device circuit breakers guarantee the safety of your systems

Device circuit breakers are a key factor in high system availability. In the event of overloads and short circuits, they selectively shut down the faulty circuit. All other system parts remain in operation.

- Thermal circuit breakers
- Thermomagnetic circuit breakers
- Electronic circuit breakers



Individual adaptation - device circuit breakers with various trigger mechanisms
 We offer the right solution for every application.
 Select the right circuit breaker.

Shutdown behavior of device circuit breakers

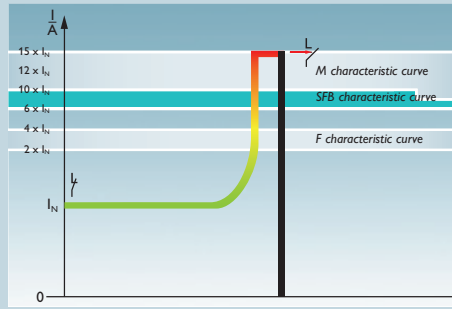
	Release time in the event of an overload	Release time in the event of a short circuit	Your application is ideally protected in the event of
Thermal circuit breakers			<ul style="list-style-type: none"> • Overload
Thermomagnetic circuit breakers			<ul style="list-style-type: none"> • Overload • Short circuit • Long cable paths (SFB trigger characteristic)
Electronic circuit breakers			<ul style="list-style-type: none"> • Overload • Short circuit • Long cable paths (active current limitation)

Shutdown behavior: ■ Unsuitable ■ Sufficient ■ Ideal



Modular extension

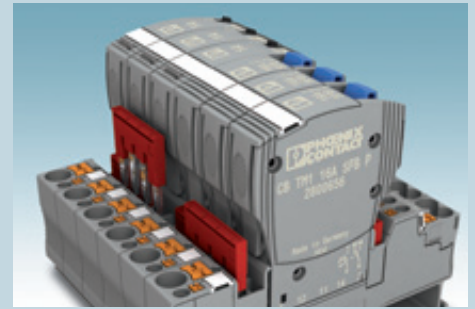
It could not be simpler. Enhance your system with additional device circuit breakers in no time at all. It is even possible to pre-wire your system on-site with a customized plug selection. The uniform, plug-in housing concept as well as the bridgeability of the base elements simplify installation.



Branch out

Thermomagnetic device circuit breakers with the SFB trigger characteristic* provide maximum overcurrent protection - even in large systems with long cable paths. The characteristic curve

- prevents the device from being shut down unnecessarily early in the event of brief current increases (i.e. starting currents) during operation
- also prevents undesirable, long overload currents, sometimes connected to a dangerous heat development in the operating equipment



All-round bridging

With the unique bridge system from the range of CLIPLINE complete accessories, the device circuit breakers can be combined easily and individually. Potentials of the same type can be connected quickly and safely.

You can extend the power distribution, modify the signal string or bridge the auxiliary voltage for the electronic device circuit breakers without this resulting in significant wiring costs.

QUINT POWER: Efficiently selective protection with SFB technology

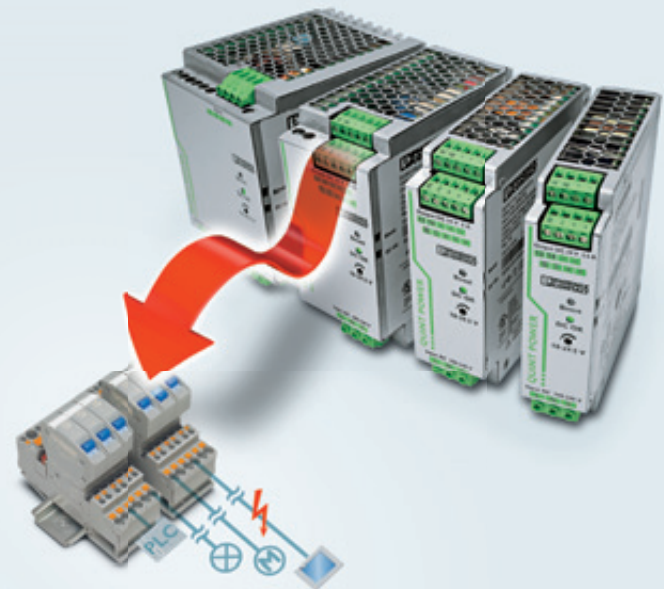
In order to be able to trigger device circuit breakers magnetically and therefore quickly, power supply units must be able to supply many times the nominal current for a short period. With SFB technology* and up to six times the nominal current for 12 ms, this current reserve is now available for the first time with QUINT POWER.

Example:

Frayed display cable: The fuse triggers, the lower-level display is dark. The controller, sensors, and actuators continue to operate without interruption. Production continues.

Combine the CB device circuit breakers with QUINT POWER power supply units. The SFB technology* guarantees maximum protection for your cables and devices.

*SFB = Selective Fuse Breaking
Selective shutdown



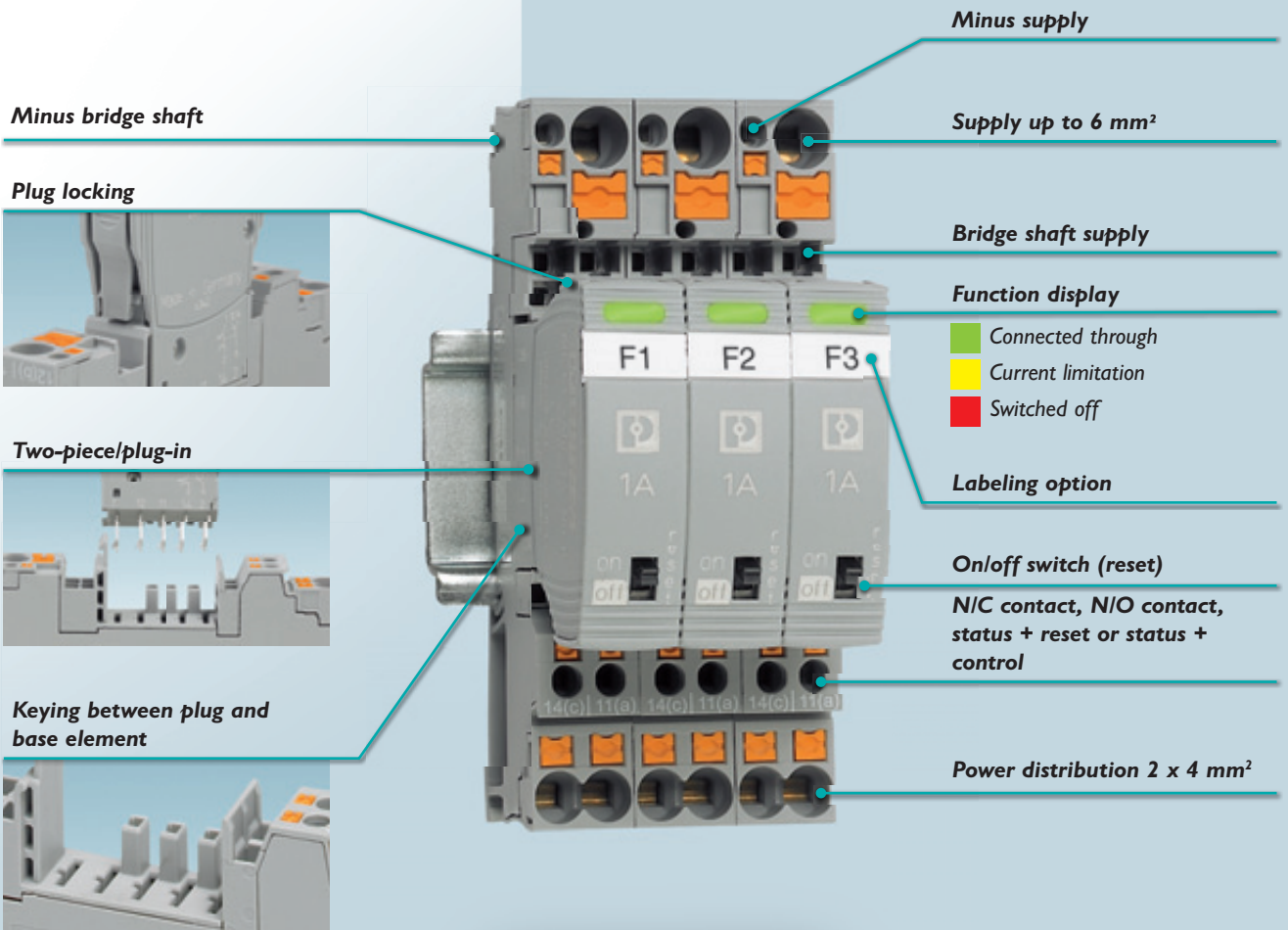
→ Further information about QUINT POWER on Page 16

Electronic device circuit breakers

Electronic device circuit breakers are often used in automation and communication technology.

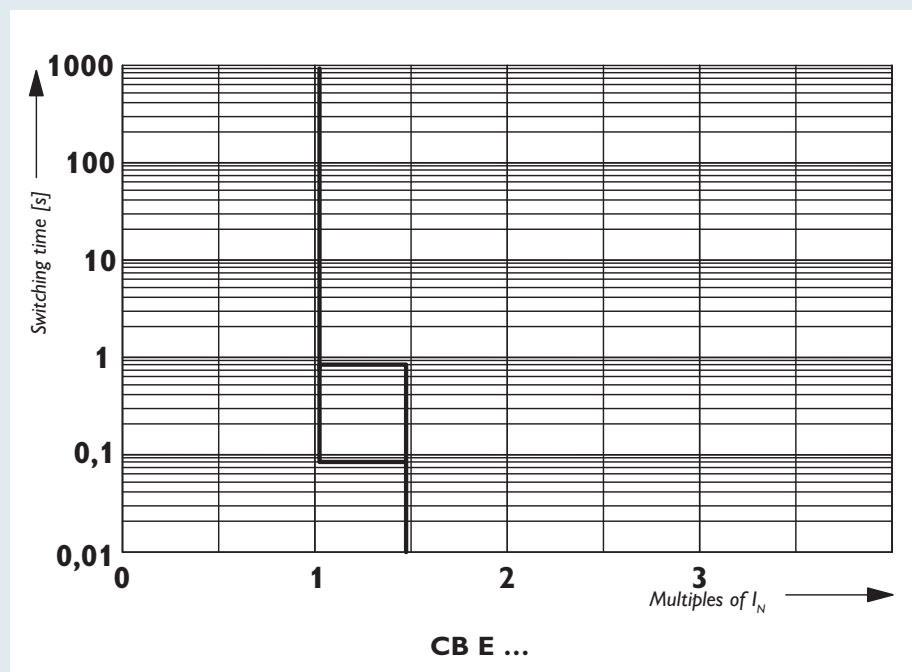
The active current limitation prevents the output voltage from interrupting the switched-mode power supply unit in the event of a fault. All other circuits thereby remain unaffected.

- Compact design with precise nominal current levels
- Modular expansion possible thanks to the uniform, plug-in housing concept
- Sophisticated remote signaling concept enables monitoring from any location
- Reset or control input can be switched by means of remote control
- Active current limitation, even when switching capacitive loads
- Supply/remote signaling can be bridged with the CLIPLINE complete accessories



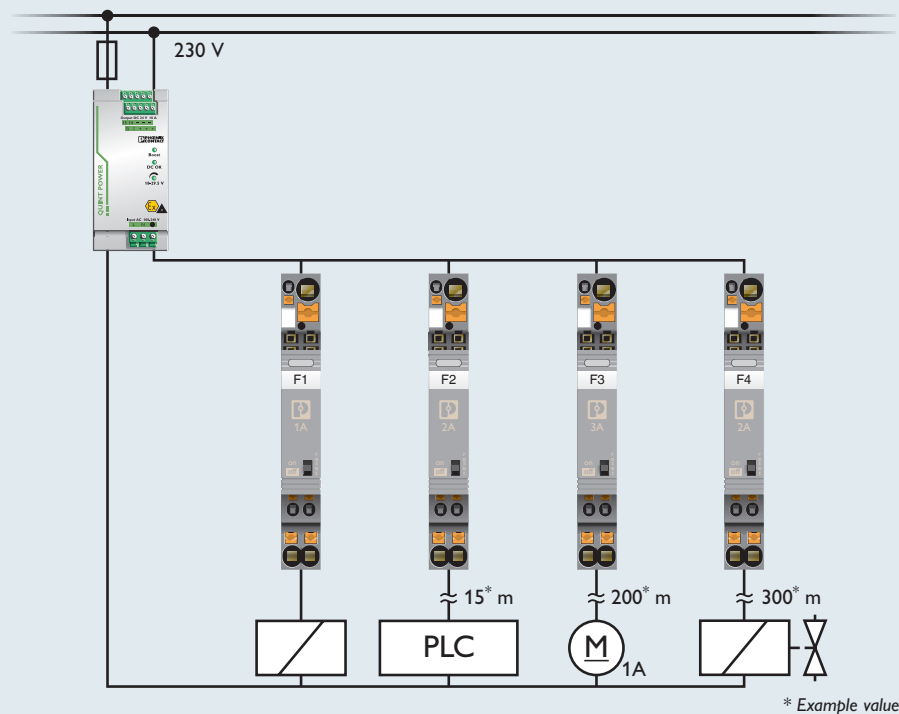
Trigger characteristics

In the event of a short circuit, electronic device circuit breakers trip within a few milliseconds. Here the existing current is limited to a maximum of 1.25 times the nominal current. Even with a high cable resistance, the circuit breakers disconnect the circuit within the shortest possible time.



Application layout

Electronic device circuit breakers are ideal for protecting relays, programmable controllers, motors, sensors/actuators, and valves.



Thermomagnetic device circuit breakers

Thermomagnetic device circuit breakers are used in information and communication technology as well as process control. Thanks to the various trigger characteristics, the circuit breakers can be used in a wide range of applications. The reactivation and immediate remote signaling of the operating state ensure availability.

- Compact design with precise nominal current levels
- Modular expansion possible thanks to the uniform, plug-in housing concept
- Sophisticated remote signaling concept enables monitoring from any location
- Maximum overcurrent protection across long cable paths via SFB trigger characteristic
- Supply/remote signaling can be bridged with the CLIPLINE complete accessories
- Protect 230/240 V AC power supply systems with the M1 characteristic curve (based on the C characteristic)

Plug locking



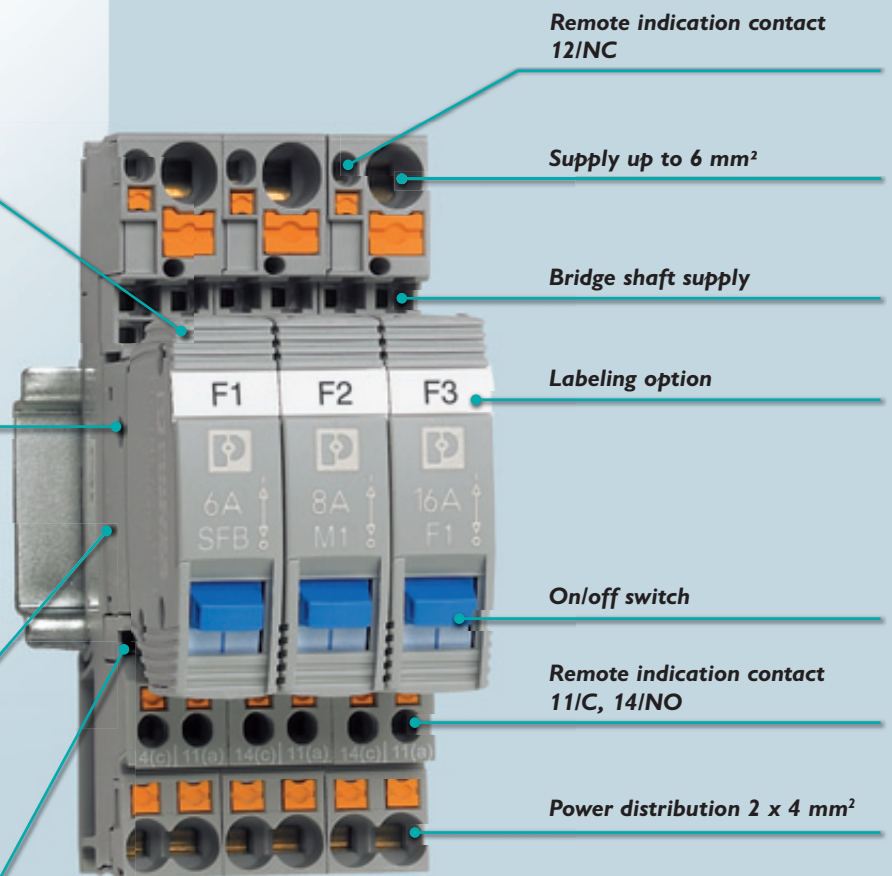
Two-piece/plug-in



Keying between plug and base element



Bridge shaft remote signaling

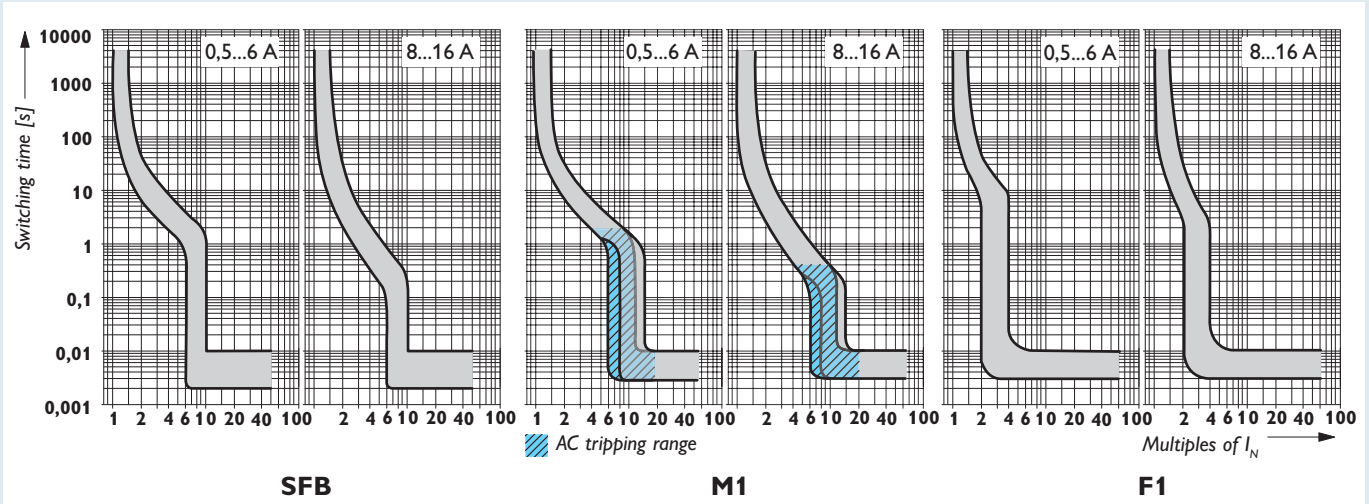


Trigger characteristics

With thermomagnetic device circuit breakers, the tripping time depends on the type of overload. In the event of an overload, the load is disconnected from the mains by

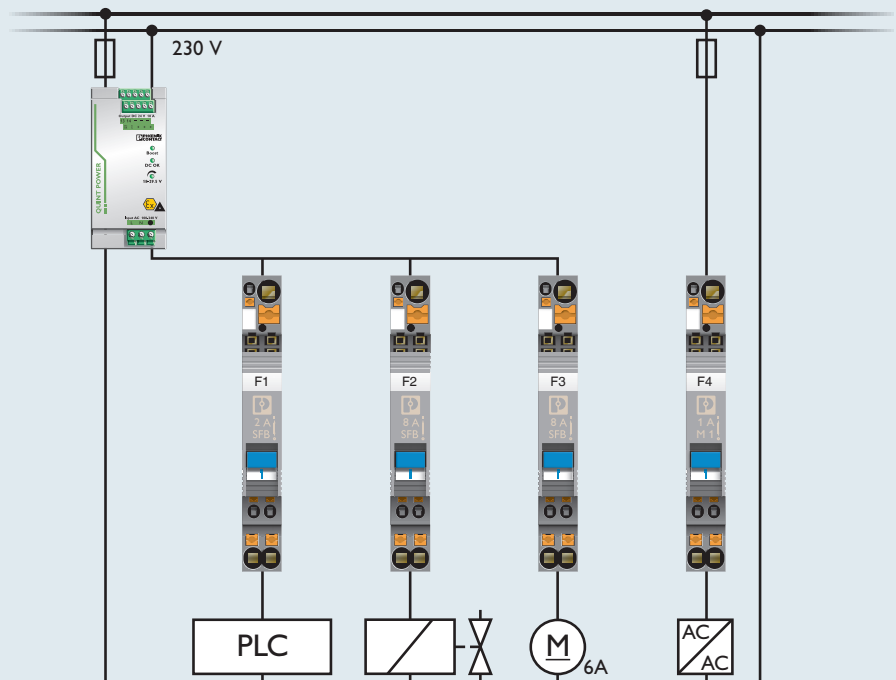
thermal tripping in a time-delayed fashion. If there is a high overload current or even a short circuit, the magnetic tripping interrupts the circuit in a matter of milliseconds. Protective

devices should be selected with the most suitable characteristic curve in relation to the area of application and the protection requirements.



Application layout

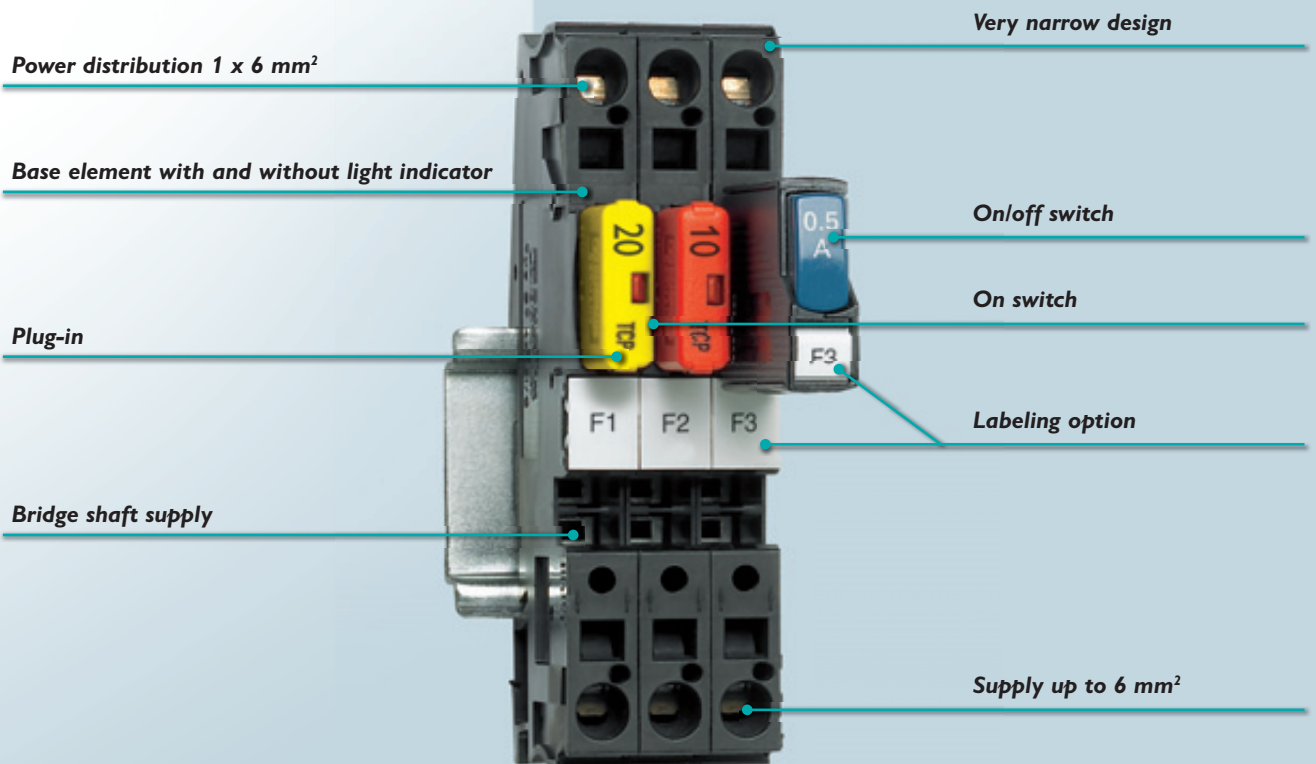
Thermomagnetic device circuit breakers are ideal for protecting programmable controllers, valves, motors, and frequency inverters.



Thermal device circuit breakers

Thermal device circuit breakers provide optimum protection for inductive loads against overload in current distribution systems in control cabinet and system engineering. The integrated switching function allows the device to be switched on again immediately and therefore ensures the availability of the system.

- Compact design with precise nominal current levels
- Fits into all fuse holders designed for flat-type fuse inserts according to ISO 8820-3 (DIN 72581-3)
- Can be used to protect integrated circuits in all battery and on-board systems in the DC voltage range
- Convenient potential distribution possible via a bridge system

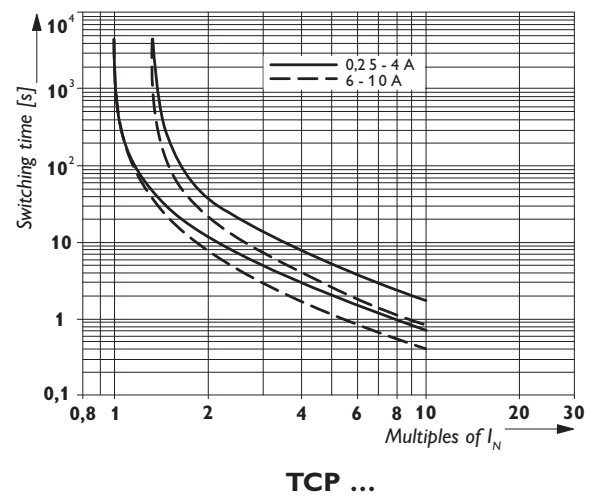
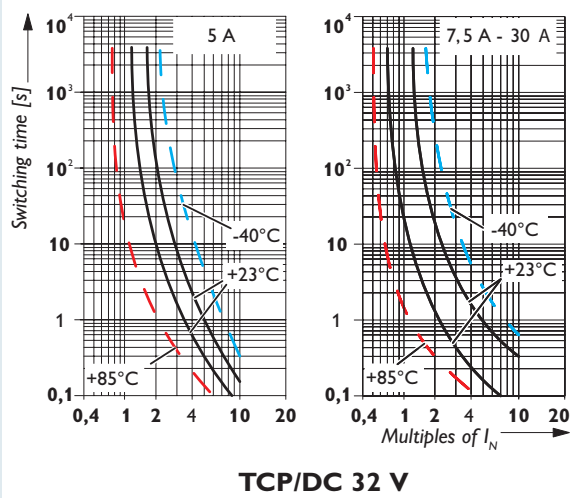


Trigger characteristics

The tripping time of the thermal device circuit breakers varies with the pending overload current. As can be seen in the characteristic curves, the higher the overload,

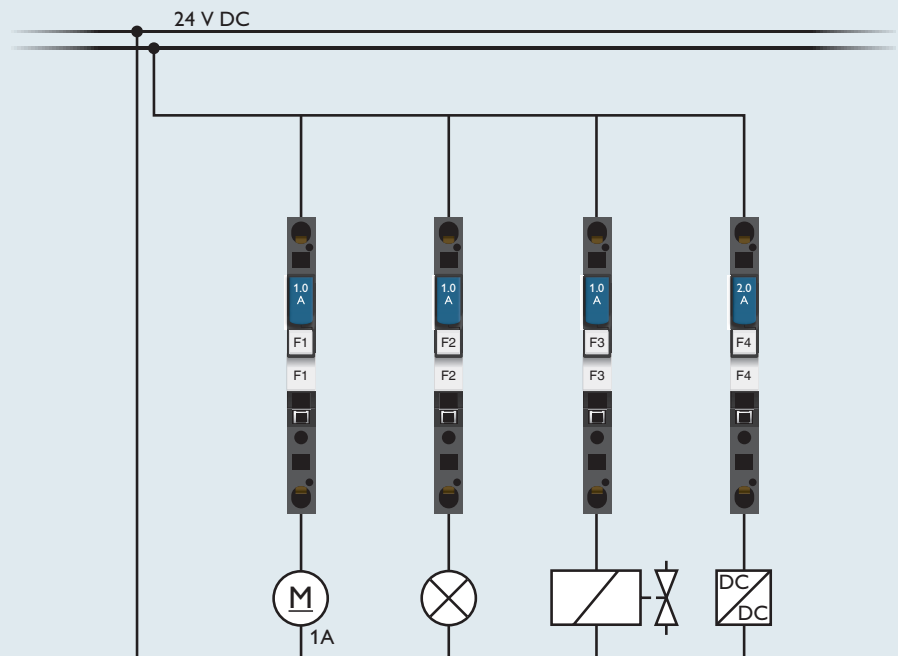
the more quickly the circuit breaker trips. The protective function provided by a bimetal reacts at a defined trip temperature. With a relatively low overload current, therefore, it takes

longer for the connected load to be disconnected from the mains.




Application layout

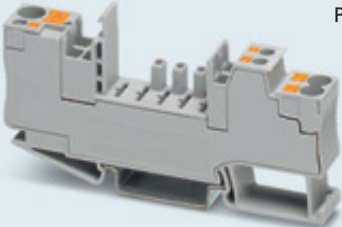
Thermal device circuit breakers are ideal for protecting motors, lighting appliances, solenoid valves, transformers, and on-board networks.



Product overview


Electronic device circuit breakers

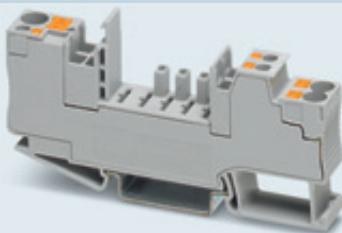
	Product designation	CB device circuit breaker			
	Fuse type	E electronic			
	Number of positions	1			
	Nominal voltage	24 DC			
	Version	NC N/C contact	NO N/O contact	S-C status output & control input	S-R status output & reset input
Nominal current	1 A	CB E1 24DC/1A NC P Order No. 2800915	CB E1 24DC/1A NO P Order No. 2800901	CB E1 24DC/1A S-C P Order No. 2800922	CB E1 24DC/1A S-R P Order No. 2800908
	2 A	CB E1 24DC/2A NC P Order No. 2800916	CB E1 24DC/2A NO P Order No. 2800902	CB E1 24DC/2A S-C P Order No. 2800923	CB E1 24DC/2A S-R P Order No. 2800909
	3 A	CB E1 24DC/3A NC P Order No. 2800917	CB E1 24DC/3A NO P Order No. 2800903	CB E1 24DC/3A S-C P Order No. 2800924	CB E1 24DC/3A S-R P Order No. 2800910
	4 A	CB E1 24DC/4A NC P Order No. 2800918	CB E1 24DC/4A NO P Order No. 2800904	CB E1 24DC/4A S-C P Order No. 2800925	CB E1 24DC/4A S-R P Order No. 2800911
	6 A	CB E1 24DC/6A NC P Order No. 2800919	CB E1 24DC/6A NO P Order No. 2800905	CB E1 24DC/6A S-C P Order No. 2800926	CB E1 24DC/6A S-R P Order No. 2800912


	Product designation	Base element
		CB 1/6-2/4 PT-BE Order No. 2800929

	Product designation	CB accessories: Bridge plugs for the base element
		CB PT bridge Order No. 2801014

Thermomagnetic device circuit breakers, 1-pos.


Product designation	CB device circuit breaker			
	TM thermomagnetic			
Fuse type	1 PDT			
Function	1			
Number of positions	1			
Characteristic curve	SFB	M1	F1	
	0.5 A	CB TM1 0.5A SFB P Order No. 2800835	CB TM1 0.5A M1 P Order No. 2800846	CB TM1 0.5A F1 P Order No. 2800857
	1 A	CB TM1 1A SFB P Order No. 2800836	CB TM1 1A M1 P Order No. 2800847	CB TM1 1A F1 P Order No. 2800858
	2 A	CB TM1 2A SFB P Order No. 2800837	CB TM1 2A M1 P Order No. 2800848	CB TM1 2A F1 P Order No. 2800859
	3 A	CB TM1 3A SFB P Order No. 2800838	CB TM1 3A M1 P Order No. 2800849	CB TM1 3A F1 P Order No. 2800860
	4 A	CB TM1 4A SFB P Order No. 2800839	CB TM1 4A M1 P Order No. 2800850	CB TM1 4A F1 P Order No. 2800861
	5 A	CB TM1 5A SFB P Order No. 2800840	CB TM1 5A M1 P Order No. 2800851	CB TM1 5A F1 P Order No. 2800862
	6 A	CB TM1 6A SFB P Order No. 2800841	CB TM1 6A M1 P Order No. 2800852	CB TM1 6A F1 P Order No. 2800863
	8 A	CB TM1 8A SFB P Order No. 2800842	CB TM1 8A M1 P Order No. 2800853	CB TM1 8A F1 P Order No. 2800864
	10 A	CB TM1 10A SFB P Order No. 2800843	CB TM1 10A M1 P Order No. 2800854	CB TM1 10A F1 P Order No. 2800865
	12 A	CB TM1 12A SFB P Order No. 2800844	CB TM1 12A M1 P Order No. 2800855	CB TM1 12A F1 P Order No. 2800866
	16 A	CB TM1 16A SFB P Order No. 2800845	CB TM1 16A M1 P Order No. 2800856	CB TM1 16A F1 P Order No. 2800867

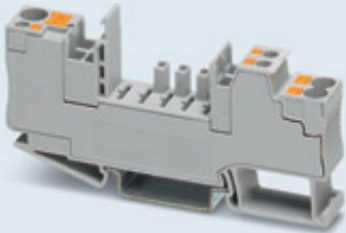
	Product designation	Base element
		CB 1/6-2/4 PT-BE Order No. 2800929

	Product designation	CB accessories: Plug-in bridges for the base element		
	Number of positions	2	FBS 2-6	Order No. 3030336
		3	FBS 3-6	Order No. 3030242
		4	FBS 4-6	Order No. 3030255
		5	FBS 5-6	Order No. 3030349
		10	FBS 10-6	Order No. 3030271
		20	FBS 20-6	Order No. 3030365
		50	FBS 50-6	Order No. 3032224

→ For more bridges and labeling material, refer to the main catalog or visit www.phoenixcontact.net/catalog


Thermomagnetic device circuit breakers, 2-pos.


	Product designation	CB device circuit breaker		
	Fuse type	TM thermomagnetic		
	Function	2 PDT		
	Number of positions	2		
	Characteristic curve	SFB	M1	F1
Nominal current	0.5 A	CB TM2 0.5A SFB P Order No. 2800868	CB TM2 0.5A M1 P Order No. 2800879	CB TM2 0.5A F1 P Order No. 2800890
	1 A	CB TM2 1A SFB P Order No. 2800869	CB TM2 1A M1 P Order No. 2800880	CB TM2 1A F1 P Order No. 2800891
	2 A	CB TM2 2A SFB P Order No. 2800870	CB TM2 2A M1 P Order No. 2800881	CB TM2 2A F1 P Order No. 2800892
	3 A	CB TM2 3A SFB P Order No. 2800871	CB TM2 3A M1 P Order No. 2800882	CB TM2 3A F1 P Order No. 2800893
	4 A	CB TM2 4A SFB P Order No. 2800872	CB TM2 4A M1 P Order No. 2800883	CB TM2 4A F1 P Order No. 2800894
	5 A	CB TM2 5A SFB P Order No. 2800873	CB TM2 5A M1 P Order No. 2800884	CB TM2 5A F1 P Order No. 2800895
	6 A	CB TM2 6A SFB P Order No. 2800874	CB TM2 6A M1 P Order No. 2800885	CB TM2 6A F1 P Order No. 2800896
	8 A	CB TM2 8A SFB P Order No. 2800875	CB TM2 8A M1 P Order No. 2800886	CB TM2 8A F1 P Order No. 2800897
	10 A	CB TM2 10A SFB P Order No. 2800876	CB TM2 10A M1 P Order No. 2800887	CB TM2 10A F1 P Order No. 2800898
	12 A	CB TM2 12A SFB P Order No. 2800877	CB TM2 12A M1 P Order No. 2800888	CB TM2 12A F1 P Order No. 2800899
16 A	CB TM2 16A SFB P Order No. 2800878	CB TM2 16A M1 P Order No. 2800889	CB TM2 16A F1 P Order No. 2800900	


	Product designation	Base element CB 1/6-2/4 PT-BE Order No. 2800929
	<i>Note: Two base elements are required for each CB TM2... plug.</i>	


	Product designation	Plug-in bridge accessories: Front cutting tool CUTFOX-FBS Order No. 1212124

Thermal circuit breakers

	Product designation	Thermal circuit breakers			
	Number of positions	1			
	Characteristic curve	T1			
	Function	Can be switched on and off			
	Nominal current	0.1 A	TCP 0,1A	Order No. 0712107	
		0.25 A	TCP 0,25A	Order No. 0712123	
		0.5 A	TCP 0,5A	Order No. 0712152	
		1 A	TCP 1A	Order No. 0712194	
		2 A	TCP 2A	Order No. 0712217	
		3 A	TCP 3A	Order No. 0712233	
4 A		TCP 4A	Order No. 0712259		
6 A		TCP 6A	Order No. 0712275		
8 A		TCP 8A	Order No. 0712291		
10 A	TCP 10A	Order No. 0712314			

	Product designation	Thermal circuit breakers			
	Number of positions	1			
	Characteristic curve	T1			
	Function	Reclosable			
	Nominal current	5 A	TCP 5/DC32V	Order No. 0700005	
		7.5 A	TCP 7,5/DC32V	Order No. 0700007	
		10 A	TCP 10/DC32V	Order No. 0700010	
		15 A	TCP 15/DC32V	Order No. 0700015	
		20 A	TCP 20/DC32V	Order No. 0700020	
		25 A	TCP 25/DC32V	Order No. 0700025	
30 A		TCP 30/DC32V	Order No. 0700030		
40 A		TCP 40/DC32V	Order No. 0700040		

	Product designation	Flat-type fuse terminal block		
	Function	Without light indicator	With light indicator LED 12 V	With light indicator LED 24 V
		ST 4-FSI/C Order No. 3036372	ST 4-FSI/C-LED 12 Order No. 3036495	ST 4-FSI/C-LED 24 Order No. 3036505

	Product designation	Fuse terminal block		
	Function	Without light indicator	With light indicator LED 12 V	With light indicator LED 24 V
		UK 6-FSI/C Order No. 3118203	UK 6-FSI/C-LED12 Order No. 3001925	UK 6-FSI/C-LED12 Order No. 3001938

QUINT POWER – power supply units for maximum system availability

Make use of the functional advantages of the QUINT POWER power supply units. The unique SFB technology and preventive function monitoring increase the availability of your application.



All features at a glance

Quick tripping of device circuit breakers

Dynamic SFB technology power reserve with up to six times the nominal current for 12 ms

Reliable starting of heavy loads

POWER BOOST static power reserve with up to 1.5 times the continuous nominal current

Preventive function monitoring

Warns of critical operating states before faults occur with permanent monitoring of the output voltage and current and remote monitoring using an active switching output and floating relay contact

Can be used worldwide

Thanks to the wide range input and international approval package

High operational reliability

Due to high MTBF > 500 000 h, long mains buffering times > 20 ms, high dielectric strength of single-phase devices of up to 300 V AC

Can be connected in parallel

For increased efficiency and redundancy

Three-phase devices

Error-free operation, even in the event of a permanent phase failure, high surge resistance of up to 6 kV thanks to the integrated gas-filled surge arrester

Compensation of voltage drops

Output voltage can be set on the front side. A voltage range of 5 to 56 V DC is covered with three power supply units with output voltages of 12, 24, and 48 V DC

Service-friendly connection technology

Coded COMBICON plug-in connectors (up to and including 240 A)

Rugged design

Metal housing and wide temperature range of -25°C to +70°C

Minimize installation costs

Third negative terminal as grounding terminal block

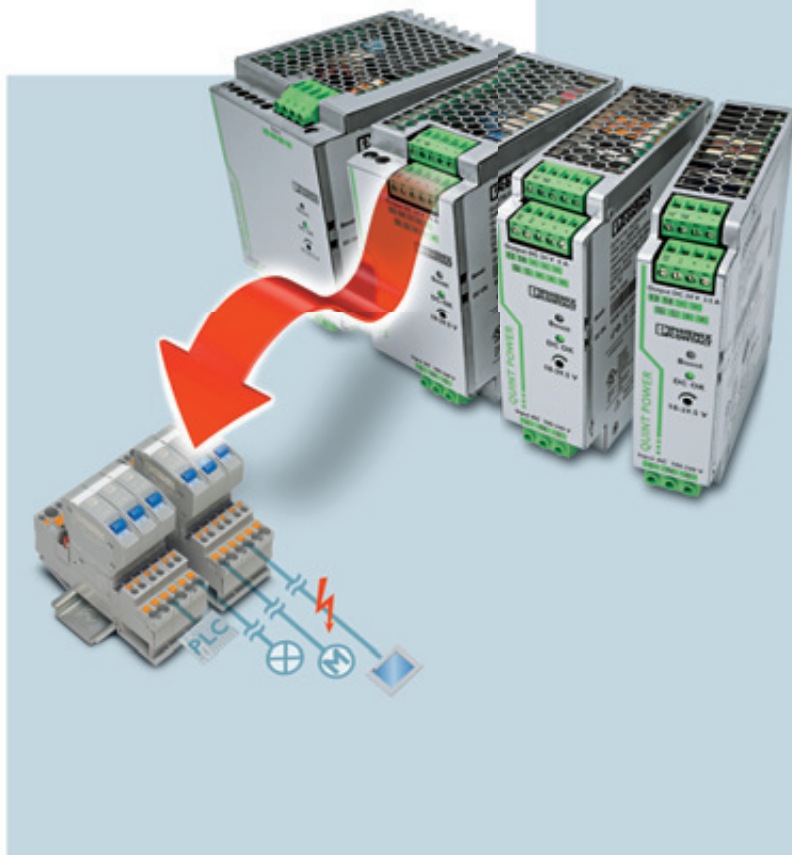
	Input voltage range	Output current/ POWER BOOST/SFB	Magnetic fuse release up to	Setting range of the output voltage	Dimensions W x H x D
QUINT POWER 1~					
QUINT-PS/1AC/24DC/3.5 Order No. 2866747	85 V AC ... 264 V AC 90 V DC ... 350 V DC	3.5 A/4 A/15 A	-	18 V DC ... 29.5 V DC	32 x 130 x 125
QUINT-PS/1AC/24DC/5 Order No. 2866750	85 V AC ... 264 V AC 90 V DC ... 350 V DC	5 A/7.5 A/30 A	C2	18 V DC ... 29.5 V DC	40 x 130 x 125
QUINT-PS/1AC/24DC/10 Order No. 2866763	85 V AC ... 264 V AC 90 V DC ... 350 V DC	10 A/15 A/60 A	B6, C4	18 V DC ... 29.5 V DC	60 x 130 x 125
QUINT-PS/1AC/24DC/20 Order No. 2866776	85 V AC ... 264 V AC 90 V DC ... 350 V DC	20 A/26 A/120 A	B16, C6	18 V DC ... 29.5 V DC	90 x 130 x 125
QUINT-PS/1AC/24DC/40 Order No. 2866789	85 V AC ... 264 V AC 90 V DC ... 350 V DC	40 A/45 A/215 A	B25, C13	18 V DC ... 29.5 V DC	180 x 130 x 125
QUINT-PS/1AC/12DC/15 Order No. 2866718	85 V AC ... 264 V AC 90 V DC ... 350 V DC	15 A/16 A/60 A	-	5 V DC ... 18 V DC	60 x 130 x 125
QUINT-PS/1AC/12DC/20 Order No. 2866721	85 V AC ... 264 V AC 90 V DC ... 350 V DC	20 A/26 A/120 A	-	5 V DC ... 18 V DC	90 x 130 x 125
QUINT-PS/1AC/48DC/5 Order No. 2866679	85 V AC ... 264 V AC 90 V DC ... 350 V DC	5 A/7.5 A/30 A	C2	30 V DC ... 56 V DC	60 x 130 x 125
QUINT-PS/1AC/48DC/10 Order No. 2866682	85 V AC ... 264 V AC 90 V DC ... 350 V DC	10 A/13 A/60 A	B6, C4	30 V DC ... 56 V DC	90 x 130 x 125
QUINT-PS/1AC/48DC/20 Order No. 2866695	85 V AC ... 264 V AC 90 V DC ... 350 V DC	20 A/22.5 A/100 A	B10, C6	30 V DC ... 56 V DC	180 x 130 x 125
QUINT POWER 3~					
QUINT-PS/3AC/24DC/5 Order No. 2866734	320 V AC ... 575 V AC 450 V DC ... 800 V DC	5 A/7.5 A/30 A	C2	18 V DC ... 29.5 V DC	40 x 130 x 125
QUINT-PS/3AC/24DC/10 Order No. 2866705	320 V AC ... 575 V AC 450 V DC ... 800 V DC	10 A/15 A/60 A	B6, C4	18 V DC ... 29.5 V DC	60 x 130 x 125
QUINT-PS/3AC/24DC/20 Order No. 2866792	320 V AC ... 575 V AC 450 V DC ... 800 V DC	20 A/26 A/120 A	B16, C6	18 V DC ... 29.5 V DC	69 x 130 x 125
QUINT-PS/3AC/24DC/40 Order No. 2866802	320 V AC ... 575 V AC 450 V DC ... 800 V DC	40 A/45 A/215 A	B25, C13	18 V DC ... 29.5 V DC	96 x 130 x 176
QUINT-PS/3AC/48DC/20 Order No. 2320827	320 V AC ... 575 V AC 450 V DC ... 800 V DC	20 A/22.5 A/100 A	B10, C6	30 V DC ... 56 V DC	96 x 130 x 176
QUINT POWER CO, dip-coated for 100% humidity					
QUINT-PS/1AC/24DC/5/CO Order No. 2320908	85 V AC ... 264 V AC 90 V DC ... 350 V DC	5 A/7.5 A/30 A	C2	18 V DC ... 29.5 V DC	40 x 130 x 125
QUINT-PS/1AC/24DC/10/CO Order No. 2320911	85 V AC ... 264 V AC 90 V DC ... 350 V DC	10 A/15 A/60 A	B6, C4	18 V DC ... 29.5 V DC	60 x 130 x 125
QUINT-PS/1AC/24DC/20/CO Order No. 2320898	85 V AC ... 264 V AC 90 V DC ... 350 V DC	20 A/26 A/120 A	B16, C6	18 V DC ... 29.5 V DC	90 x 130 x 125
QUINT-PS/3AC/24DC/20/CO Order No. 2320924	320 V AC ... 575 V AC 450 V DC ... 800 V DC	20 A/26 A/120 A	B16, C6	18 V DC ... 29.5 V DC	69 x 130 x 125
DC/DC converter					
QUINT-PS/24DC/24DC/5 Order No. 2320034	18 V DC ... 32 V DC	5 A/6.25 A/30 A	C2	18 V DC ... 29.5 V DC	32 x 130 x 125
QUINT-PS/24DC/24DC/10 Order No. 2320092	18 V DC ... 32 V DC	10 A/12.5 A/60 A	B6, C4	18 V DC ... 29.5 V DC	48 x 130 x 125
QUINT-PS 24DC/24DC/20 Order No. 2320102	18 V DC ... 32 V DC	20 A/25 A/120 A	B16, C6	18 V DC ... 29.5 V DC	82 x 130 x 125
QUINT-PS/24DC/12DC/8 Order No. 2320115	18 V DC ... 32 V DC	8 A/10 A/48 A	-	5 V DC ... 18 V DC	32 x 130 x 125
QUINT-PS/24DC/48DC/5 Order No. 2320128	18 V DC ... 32 V DC	5 A/6.25 A/30 A	C2	30 V DC ... 56 V DC	48 x 130 x 125
QUINT-PS/12DC/24DC/5 Order No. 2320131	9 V DC ... 18 V DC	5 A/6.25 A/30 A	C2	18 V DC ... 29.5 V DC	32 x 130 x 125
QUINT-PS/48DC/24DC/5 Order No. 2320144	30 V DC ... 60 V DC	5 A/6.25 A/30 A	C2	18 V DC ... 29.5 V DC	32 x 130 x 125

Configuration matrix

CB device circuit breakers

The configuration matrix can help with the secondary side planning of your power supply unit. It describes the maximum cable lengths depending on:

- The device circuit breaker
- The conductor cross section
- The performance class of the devices



Cable lengths

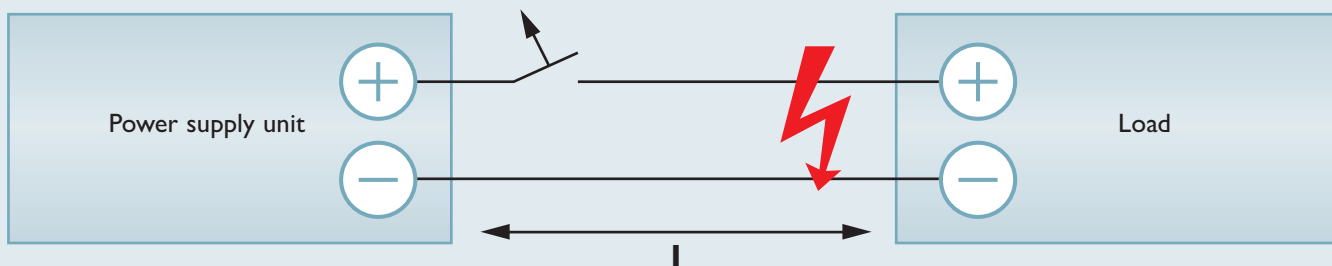
The values specified relate to the distance (l) from the power supply unit to the load.

Boundary parameters for the calculation:

- Device circuit breaker CB TM1 xA SFB P
- Electromagnetic tripping at the latest at:
 - 10 times the rated current
 - Ambient temperature: +20°C

The internal resistances of the device circuit breakers are taken into account.

In addition to the short-circuit current, the respective power supply unit also supplies half the nominal current for paths connected in parallel.



[Conductor cross section] mm ²	0.75	1	1.5	2.5	4
	Distance in m				
24 V/5 A					
CB TM1 1A SFB P	27	36	54	91	
CB TM1 2A SFB P	10	13	20	34	
24 V/10 A					
CB TM1 1A SFB P	27	36	54	91	
CB TM1 2A SFB P	18	25	37	63	
CB TM1 3A SFB P	11	15	22	38	
CB TM1 4A SFB P	6	8	13	22	
CB TM1 5A SFB P	4	5	8	14	
24 V/20 A					
CB TM1 1A SFB P	27	36	54	91	130
CB TM1 2A SFB P	18	25	37	63	100
CB TM1 3A SFB P	13	18	27	46	73
CB TM1 4A SFB P	10	14	21	35	57
CB TM1 5A SFB P	8	11	17	29	46
CB TM1 6A SFB P	6	8	12	20	32
CB TM1 8A SFB P		5	7	12	20
CB TM1 10A SFB P		3	4	8	13
24 V/40 A					
CB TM1 1A SFB P	27	36	54	91	130
CB TM1 2A SFB P	18	25	37	63	100
CB TM1 3A SFB P	13	18	27	46	73
CB TM1 4A SFB P	10	14	21	35	57
CB TM1 5A SFB P	8	11	17	29	46
CB TM1 6A SFB P	7	9	14	24	39
CB TM1 8A SFB P		7	11	19	31
CB TM1 10A SFB P		5	7	12	20
CB TM1 12A SFB P			5	9	14
CB TM1 16A SFB P			3	5	8
48 V/5 A					
CB TM1 1A SFB P	77	100	140	220	
CB TM1 2A SFB P	27	36	54	91	
48 V/10 A					
CB TM1 1A SFB P	77	100	140	250	380
CB TM1 2A SFB P	44	58	88	140	200
CB TM1 3A SFB P	25	34	51	86	110
CB TM1 4A SFB P	14	19	29	49	79
CB TM1 5A SFB P	9	12	19	32	51

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