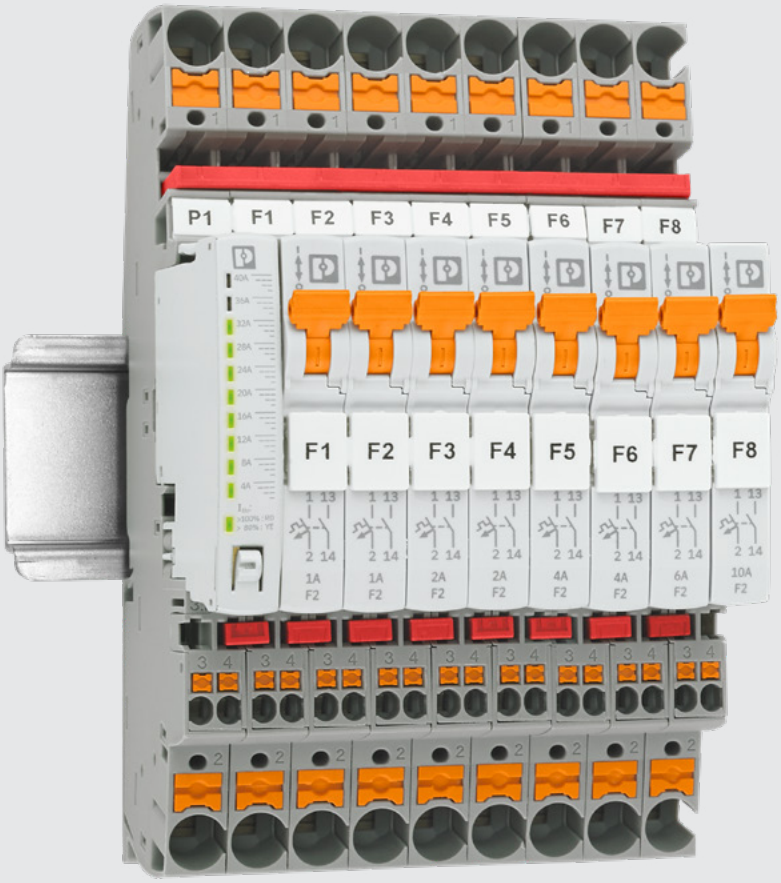
Power Reliability



PTCB TM thermal-magnetic circuit breakers

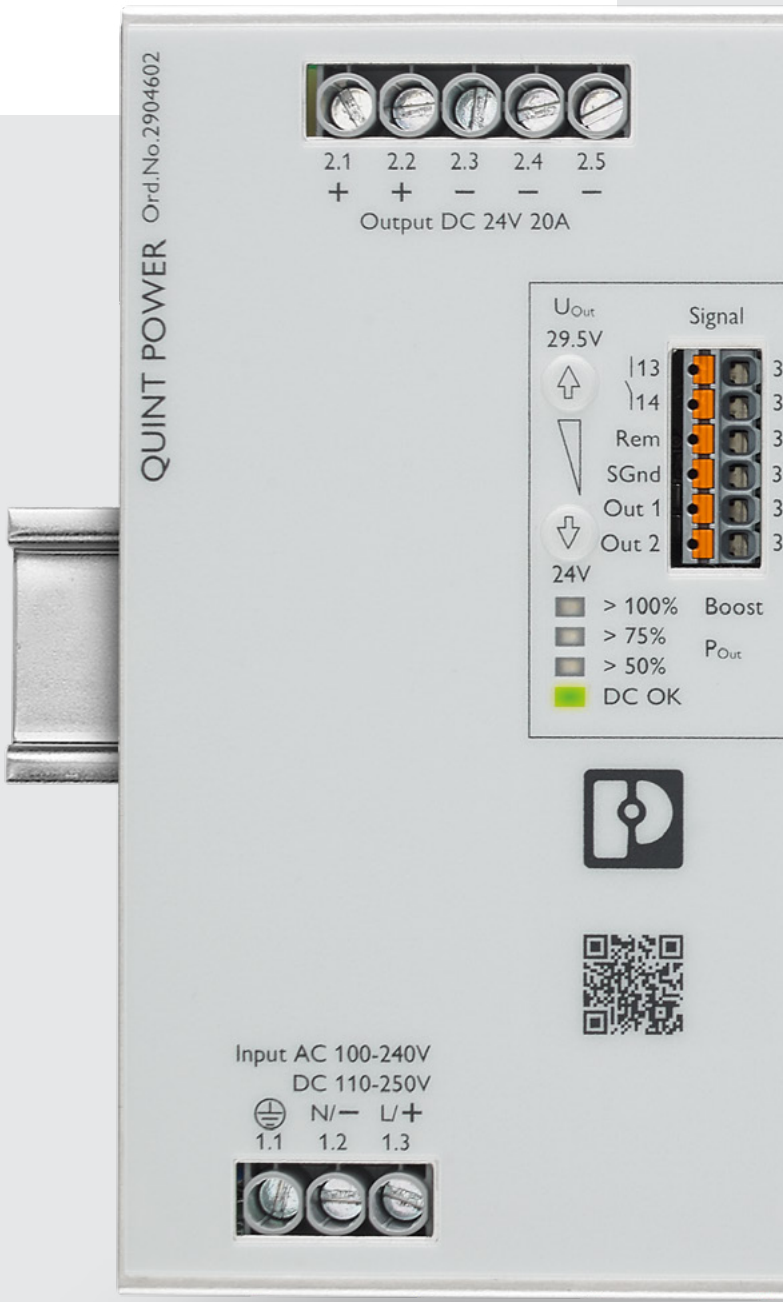
A modular approach to overcurrent protection

PHOENIX CONTACT

PTCB TM circuit breakers

Reliable protection, easy handling

With an overall width of 8 mm, the new PTCB TM product family facilitates more space in the control cabinet. The breakers can handle higher currents and can be bridged to the CLIPLINE family of terminal blocks. Through electrical isolation and easy current monitoring, the PTCB TM devices provide reliable system protection.

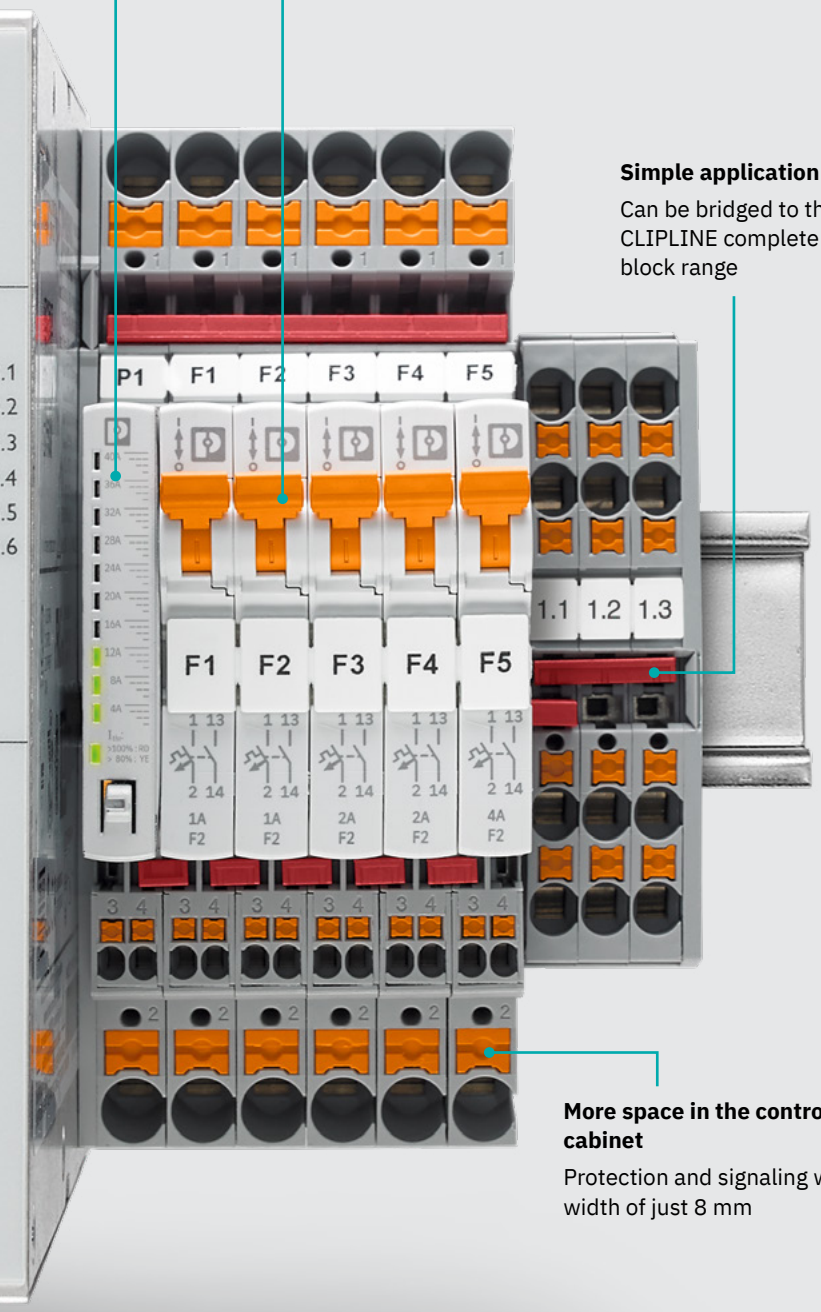


Transparency regarding utilization and status

Practical current monitoring including remote signaling

Easy handling from commissioning to maintenance

Clear switching state at all times



Simple application setup

Can be bridged to the CLIPLINE complete terminal block range

More space in the control cabinet

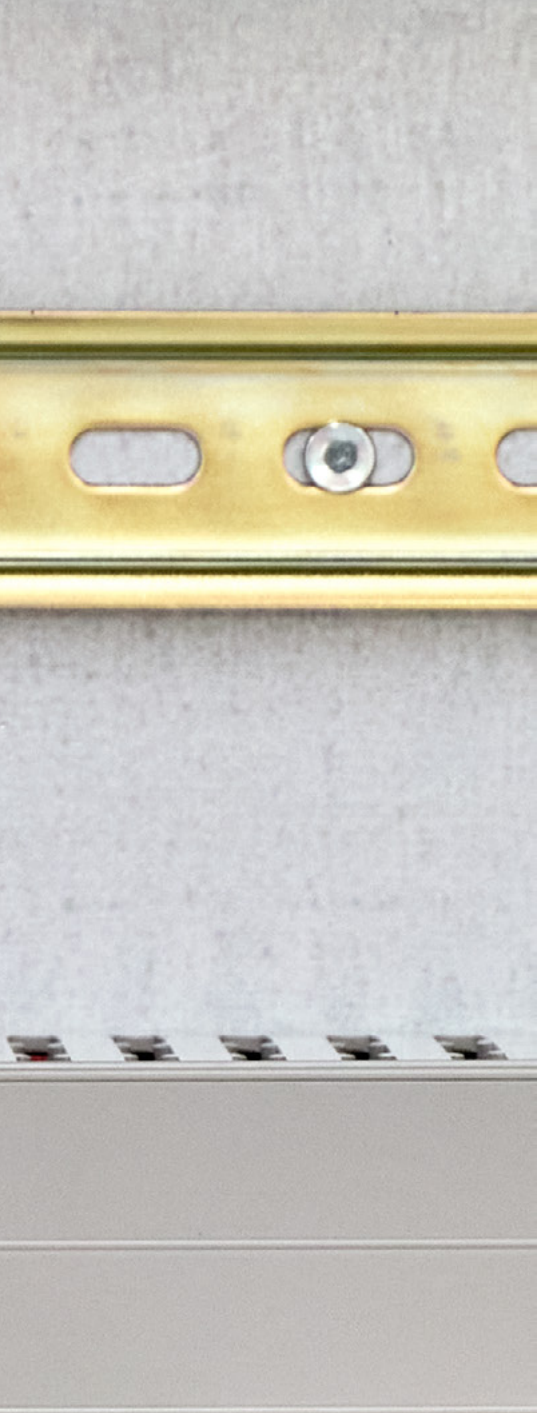
Protection and signaling with a width of just 8 mm

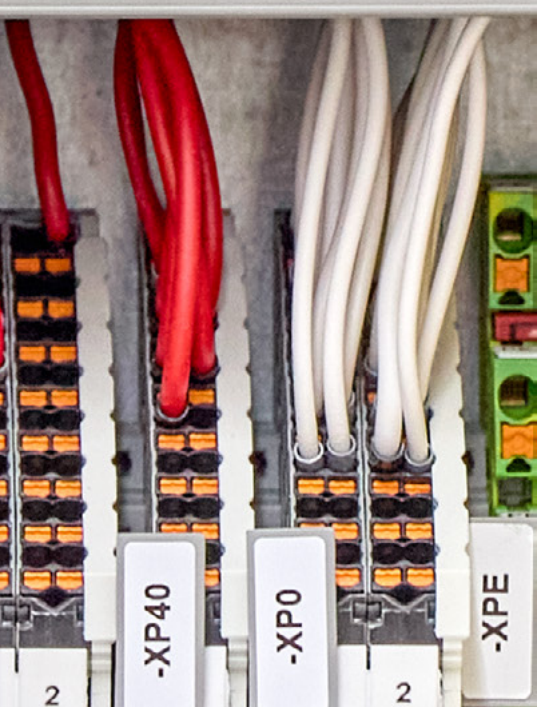
Contents

The modular approach to overcurrent protection

Reliable connection between the power supply and potential distribution

Achieve a supply solution that leaves nothing to be desired with QUINT Power power supplies and plug-in PTCB TM thermal-magnetic device circuit breakers. At just 8 mm wide, the devices are characterized by reliable protection and a clear switching status. Featuring simple integration into the CLIPLINE complete terminal blocks, the circuit breakers enable maximum flexibility and reliable protection in the control cabinet.

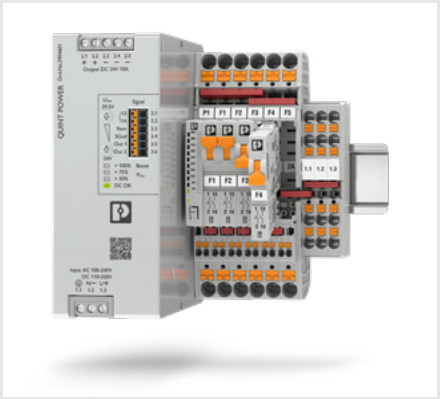




Strong partners for demanding loads

The thermal-magnetic tripping characteristic of the PTCB TM is ideal for high startup currents. In combination with QUINT power supplies, the device circuit breakers ensure high system availability.

With SFB technology and static and dynamic boosts, the power supply can deliver up to six times the nominal current for short periods. This ensures that loads are reliably started and secured at the same time.



The optimum combination for supply and protection

Side by side for transparency and protection

The plug-in thermal-magnetic circuit breakers indicate the current switching state at all times directly on the device or via remote signaling as an individual or group signal.

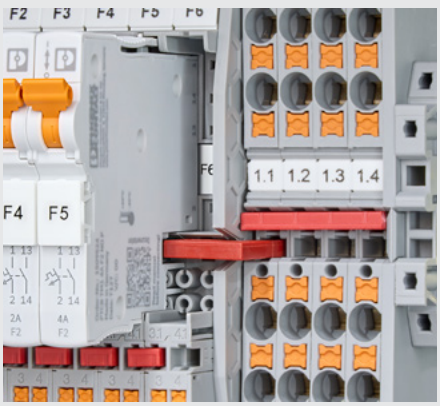
The additionally alignable current monitoring informs you about the current load status – including the adjustable signaling threshold.

Transparency regarding system utilization

Seamlessly connected protection and distribution

The PTCB TM device circuit breakers can be bridged to the CLIPLINE complete terminal blocks, enabling intuitive and systematic integration.

The PTCB TM enables potential distribution and device protection to be combined in a fast, space-saving manner. This significantly simplifies application setup, saves time, and also reduces wiring effort.

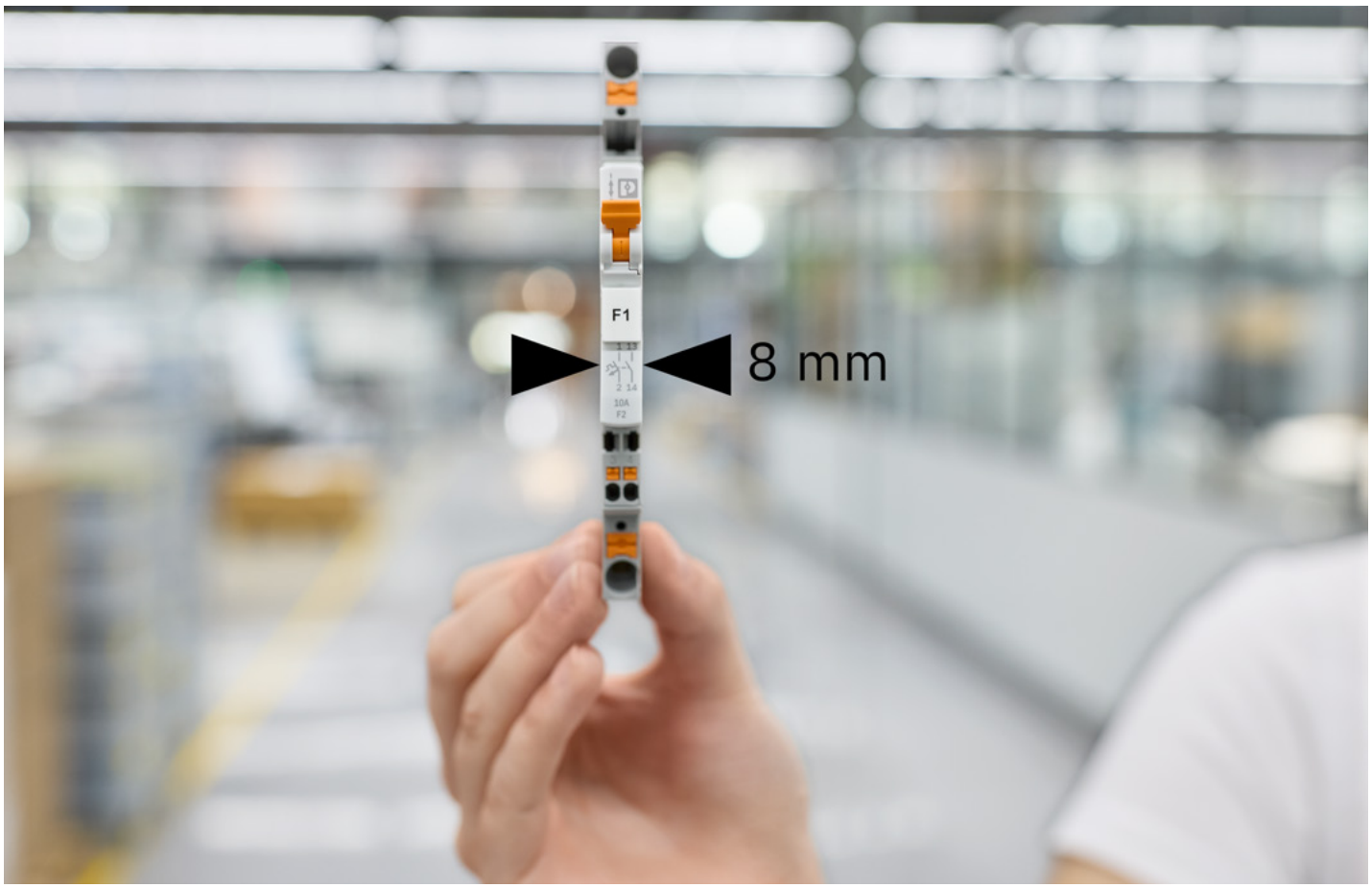


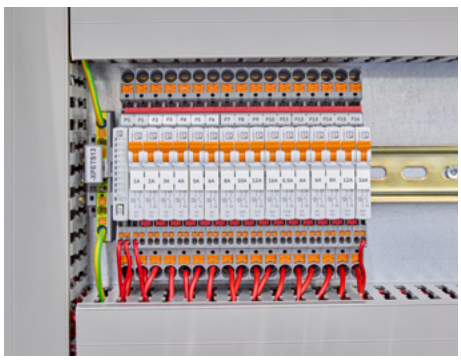
Simple application setup

Your advantages

Space-saving design, maximum performance

With a narrow overall width of just 8 mm, the PTCB TM device circuit breakers save up to 65% of space in the control cabinet, compared to conventional MCBs. Despite their compact size, they still ensure comprehensive protection and integrated signaling. This makes them one of the narrowest devices on the market with this function.



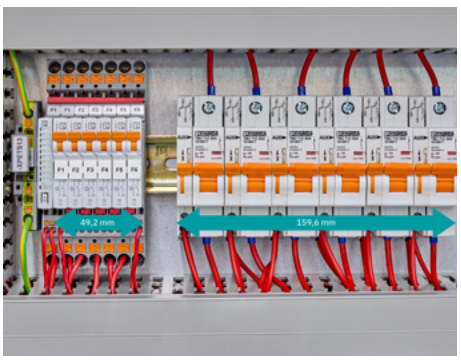


Comprehensive product variety

The circuit breakers are available with characteristic curves F2 and M1 with nominal currents from 0.5 to 16 A.

Marking options

Marking areas and coding options prevent accidental circuit breaker mix-ups.



Space-saving

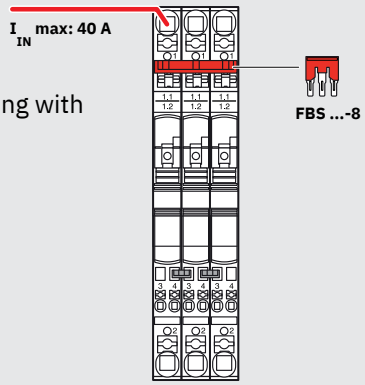
Protection and signaling with a width of just 8 mm. Auxiliary switches, as with conventional MCBs, are already integrated.

Simplified setup

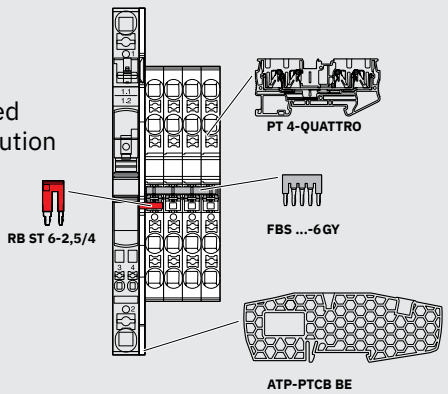
The PTCB TM device circuit breakers can be bridged to the CLIPLINE complete terminal block family, enabling intuitive and systematic integration. The PTCB TM enables potential distribution and device protection combined in a fast, space-saving manner.

This significantly simplifies application setup, saves time, and also reduces wiring effort.

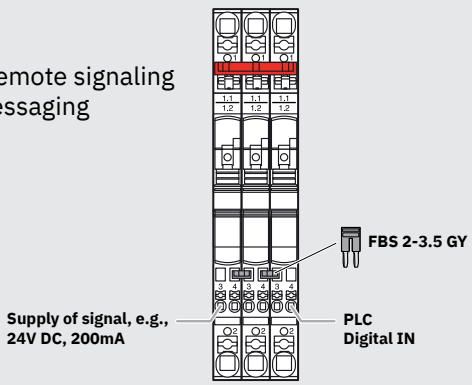
Easy feed-in and bridging with parallel PCB TMs



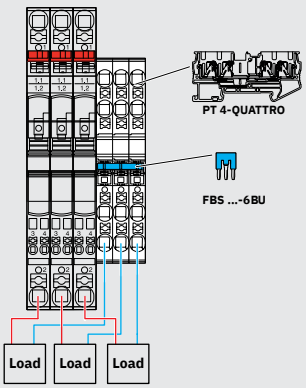
Bridging for fused potential distribution

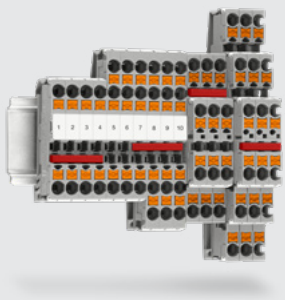


Bridging for remote signaling and group messaging



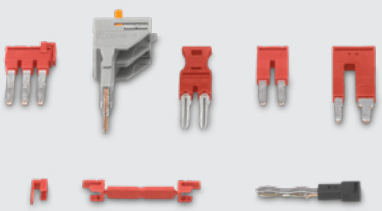
Connecting the loads





Terminal blocks

Feed-through and multi-conductor terminal blocks from 1.5 to 6 mm² can be combined systematically with the PTCB base element.



Plug-in bridges

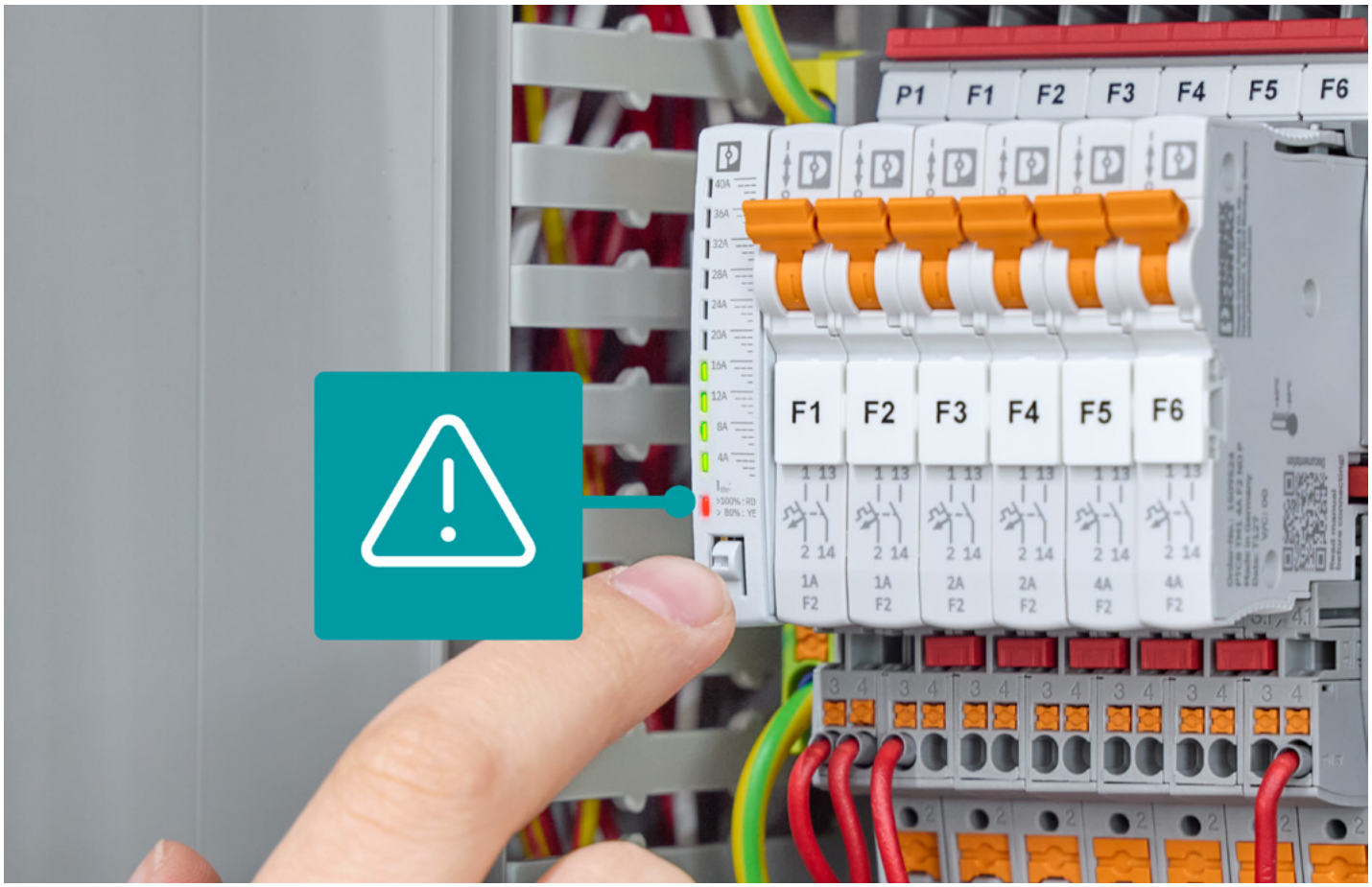
The multi-position plug-in bridges allow you to save time when carrying out any potential bridging tasks.

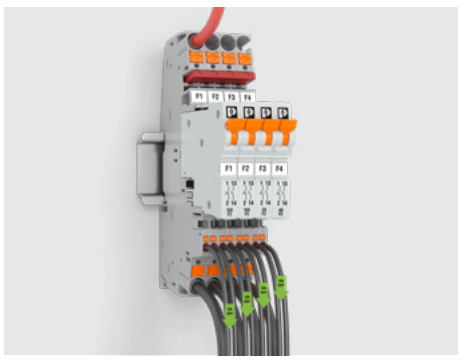
Easy potential distribution

The capability to bridge to the CLIPLINE complete terminal blocks greatly simplifies power distribution.

Visibility and control at your fingertips

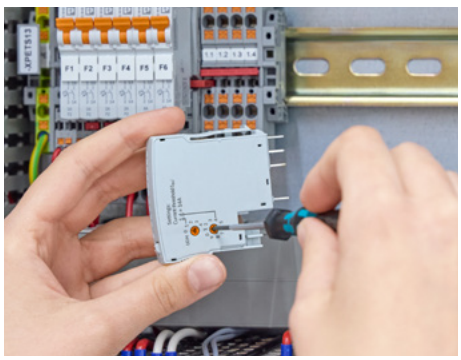
The plug-in thermal-magnetic circuit breakers indicate the current switching state at all times, directly on the device or via remote signaling as an individual or group signal. The additional alignable current monitoring unit (CMU) device informs you about the present load current – including the adjustable signaling threshold.





Remote signaling

The current switching state of the circuit breakers can be output at any time as a single or group signal via remote signaling.



Configurable signaling threshold

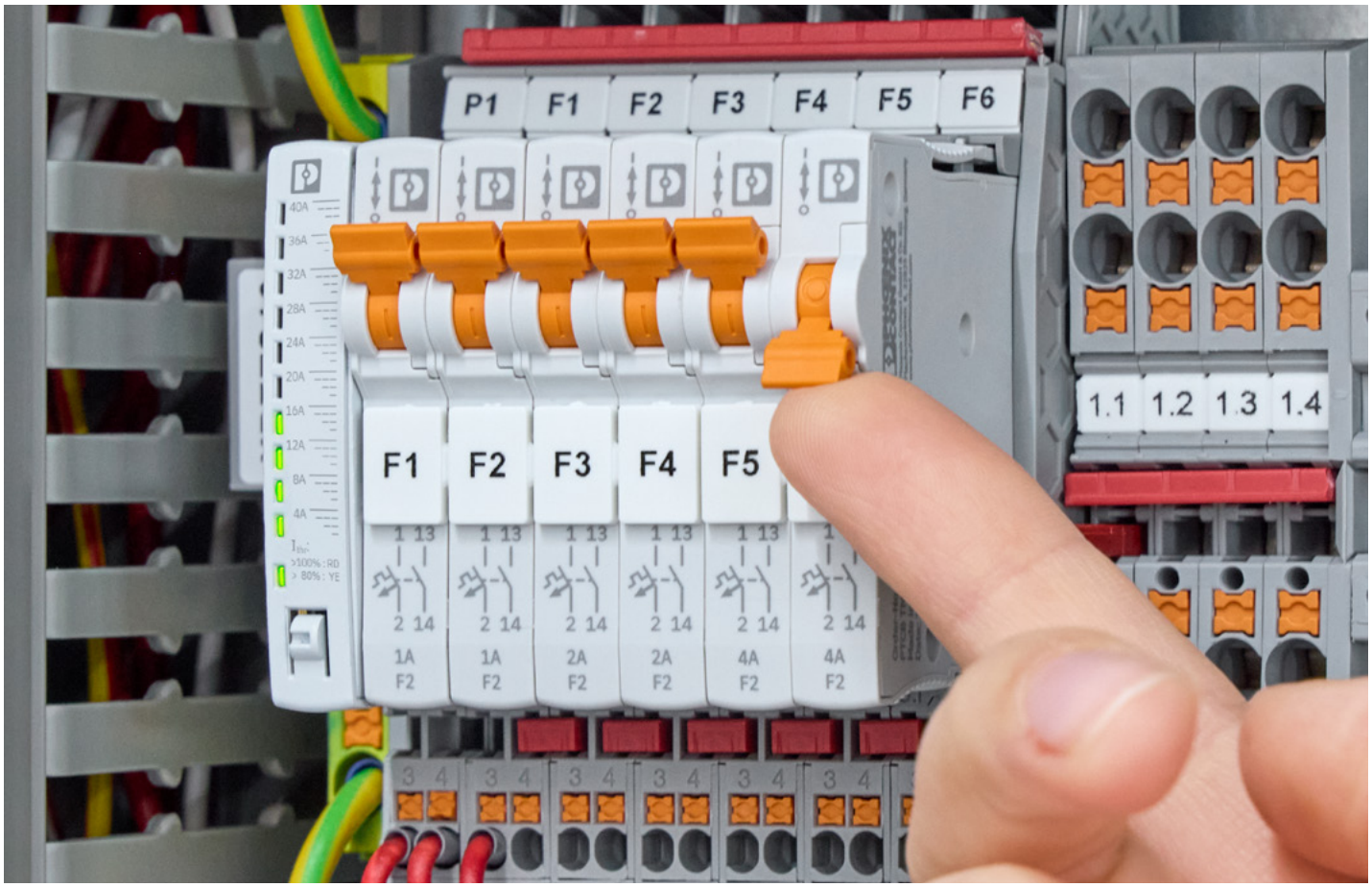
The signaling threshold can be set in 1 A increments on the side of the CMU connector via rotary coding switches.

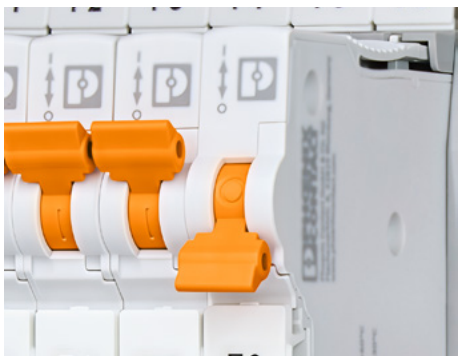
Easy PLC integration

The digital output enables the load state of the system to be easily requested via a PLC and viewed remotely.

Intuitive handling

The PTCB TM device circuit breakers feature intuitive handling from commissioning through to maintenance. The tilting lever allows the switching state to be clearly identified at all times, even when disconnected from the power supply. This eliminates the need for training and documentation and prevents unintentional adjustment or switching.



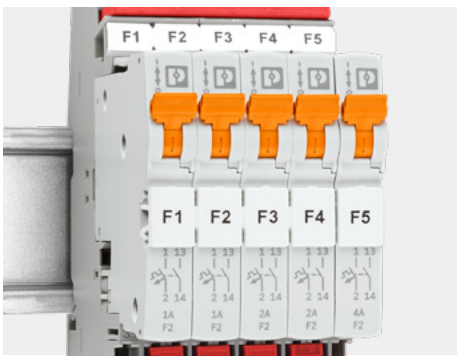


Up on – down off

Operation, based on miniature circuit breakers, is intuitive. The position of the lever indicates the switching state at all times.

Quick replacement

If required, the current value can be adjusted by changing the connector. The wiring remains the same.



Fixed nominal currents

Non-negotiable safety: fixed nominal currents ensure that circuits are safely protected.

The PTCB product family

Device protection in terminal block format

Two different technologies are aligned in the PTCB device circuit breaker family. The electronic circuit breakers enable the protection of sensitive loads. In the tripped state, they can be reset remotely.

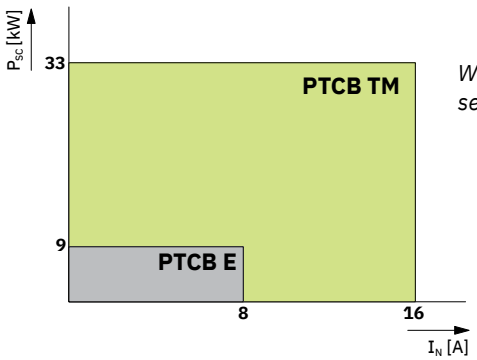
The thermal-magnetic version provides reliable protection for current-intensive loads. They are characterized by their high switching capacity and robust, EMC-compatible design – no software required.

Electronic protection for 24 V DC

The narrow and universal PTCB electronic circuit breakers are perfectly suited for simple, space-saving potential distribution. The single-channel, electronic device protection can be adjusted from 1 to 8 A and has an overall width of just 6 mm.

The PTCB portfolio also includes thermal-magnetic circuit breakers with high power reserves

Thermal-magnetic circuit breakers extend the PTCB range with robust solutions for high inrush currents, such as for motors and transformers. Electronic versions provide precise protection for sensitive loads. The PTCB series therefore covers a wide range of applications with safety and flexibility.



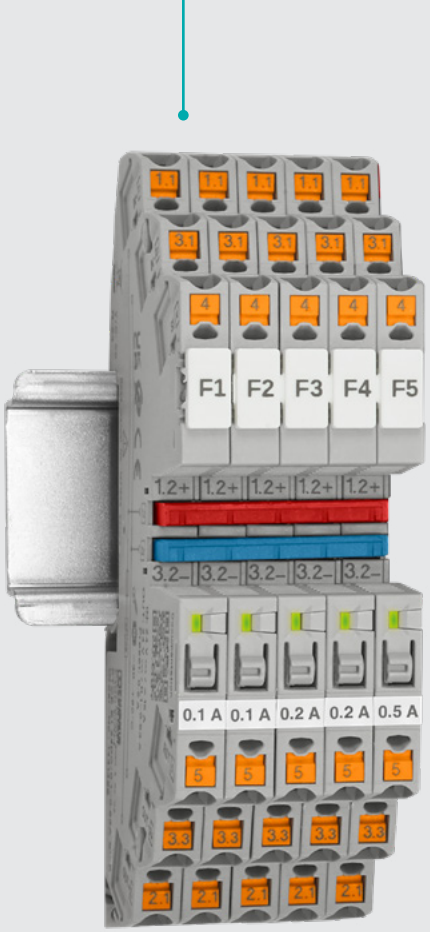
Wide range of PTCB series applications

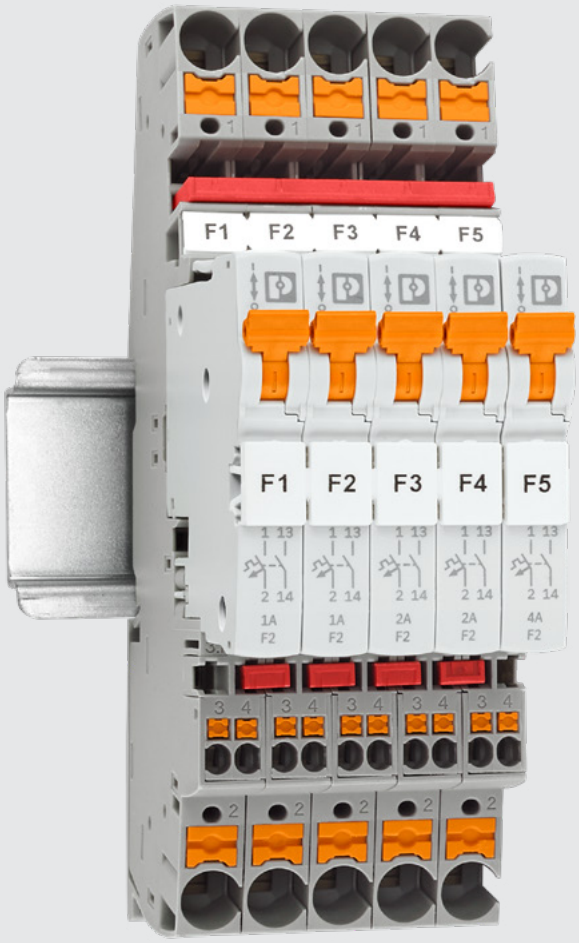
Fine electronic protection for 12 to 24 V DC

Protect applications under 1 A where conventional glass fuses are typically used and require replacement. The PTCB eFuse is available with standardized fuse values from 0.1 to 0.63 A.

Thermal-magnetic protection up to 56 V DC/277 V AC

The PTCB TM circuit breakers feature a robust design. With characteristic curves F2 and M1 and current values from 0.5 to 16 A, they are suitable for demanding loads.





Electronic protection for 48 V DC

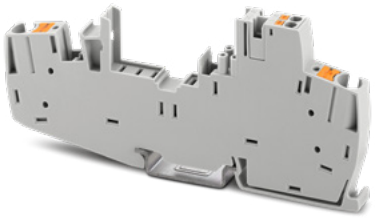
Protect your 48 V DC loads with the PTCB electronic circuit breakers. Select the appropriate breaker for your 48 V application, in adjustable and fixed nominal current versions from 1 to 6 A.

Product overview

Device circuit breakers with F2 characteristic curve, 1 N/O contact											
											
Rated current	0.5 A	1 A	2 A	3 A	4 A	5 A	6 A	8 A	10 A	12 A	16 A
Approvals	cULus, UL 1077, CB, EN60934										
Number of positions	1-position										
Operating voltage	10 V DC ... 56 V DC; 24 V AC ... 277 V AC										
Dim. (W x H x D) in mm	8.2 x 63.7 x 52.3										
Type	PTCB TM1 0.5A F2 NO P	PTCB TM1 1A F2 NO P	PTCB TM1 2A F2 NO P	PTCB TM1 3A F2 NO P	PTCB TM1 4A F2 NO P	PTCB TM1 5A F2 NO P	PTCB TM1 6A F2 NO P	PTCB TM1 8A F2 NO P	PTCB TM1 10A F2 NO P	PTCB TM1 12A F2 NO P	PTCB TM1 16A F2 NO P
Item number	1509512	1509519	1509520	1509522	1509524	1509528	1509529	1509532	1509535	1509537	1567580

Device circuit breakers with M1 characteristic curve, 1 N/O contact											
											
Rated current	0.5 A	1 A	2 A	3 A	4 A	5 A	6 A	8 A	10 A	12 A	16 A
Approvals	cULus, UL 1077, CB, EN60934										
Number of positions	1-position										
Operating voltage	10 V DC ... 56 V DC; 24 V AC ... 277 V AC										
Dim. (W x H x D) in mm	8.2 x 63.7 x 52.3										
Type	PTCB TM1 0.5A M1 NO P	PTCB TM1 1A M1 NO P	PTCB TM1 2A M1 NO P	PTCB TM1 3A M1 NO P	PTCB TM1 4A M1 NO P	PTCB TM1 5A M1 NO P	PTCB TM1 6A M1 NO P	PTCB TM1 8A M1 NO P	PTCB TM1 10A M1 NO P	PTCB TM1 12A M1 NO P	PTCB TM1 16A M1 NO P
Item number	1575555	1575557	1575558	1575565	1575566	1575571	1575572	1575573	1575580	1575581	1575586

Product overview

Accessories			
			
	Base element		**Divider plate**
Connection cross-section	Connection 1 (IN+/OUT+): 0.5 mm² … 10 mm² Connection 2 (OUT-/IN+): 0.5 mm² … 10 mm² Connection 3/4 (N/O contact): 0.14 mm² … 1.5 mm²		-
Dim. (W x H x D) in mm	8.2 x 122.9 x 54.1		2.2 x 122.9 x 42.9
Packing unit	1	10	10
Type	PTCB BE PT 6	PTCB BE PT 6/10	ATP-PTCB BE
Item number	1567576	1760600	1683464

Current monitoring unit	
	
Rated current	20 A
Operating voltage	24 V
Dim. (W x H x D) in mm	8.15 x 122.9 x 79.9 mm
Type	PTCB CMU 24DC/20A S P
Item number	1761792

Power Reliability – endless possibilities

Solutions for superior system availability

Increasing electrification, networking, and automation are contributing to the growing need for reliable power supply solutions. For dependable and efficient system operation, we offer solutions that combine surge protection, EMC filters, energy measuring devices, power supplies, and circuit breakers. Choose Phoenix Contact, a partner who provides you with holistic concepts for high system availability.

Surge protection

Our coordinated product portfolio for surge protection enables the implementation of protection concepts for almost any application.

EMC filters

The EMC filters limit and filter high-frequency interference voltages and currents for an EMC-compliant power supply.

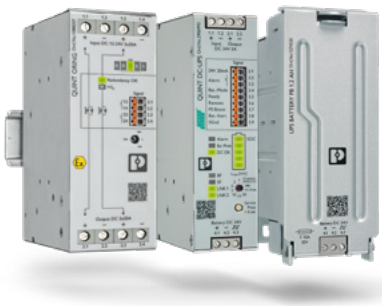
Energy monitoring

Efficient monitoring provides the basis for your energy management. Our coordinated measuring devices enable efficient energy data acquisition.

Power Reliability

Power supplies

Supply your applications safely and reliably. Choose from our range of AC/DC power supplies, DC/DC converters, DC/AC inverters, and power electronics.



Redundancy modules and UPS

With our redundancy modules and uninterruptible power supplies, you can prevent plant shutdowns and power failures.

Device circuit breakers

Protect your equipment against overloads and short circuits with electronic, thermal-magnetic, and thermal device circuit breakers.

Open communication with customers and partners worldwide

Phoenix Contact is a global market leader based in Germany. We are known for producing forward-thinking products and solutions for the comprehensive electrification, networking, and automation of all sectors of the economy and infrastructure. With a global network, we maintain close relationships with our customers, something we believe is essential for our common success.

You can find your local partner at

phoenixcontact.com

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