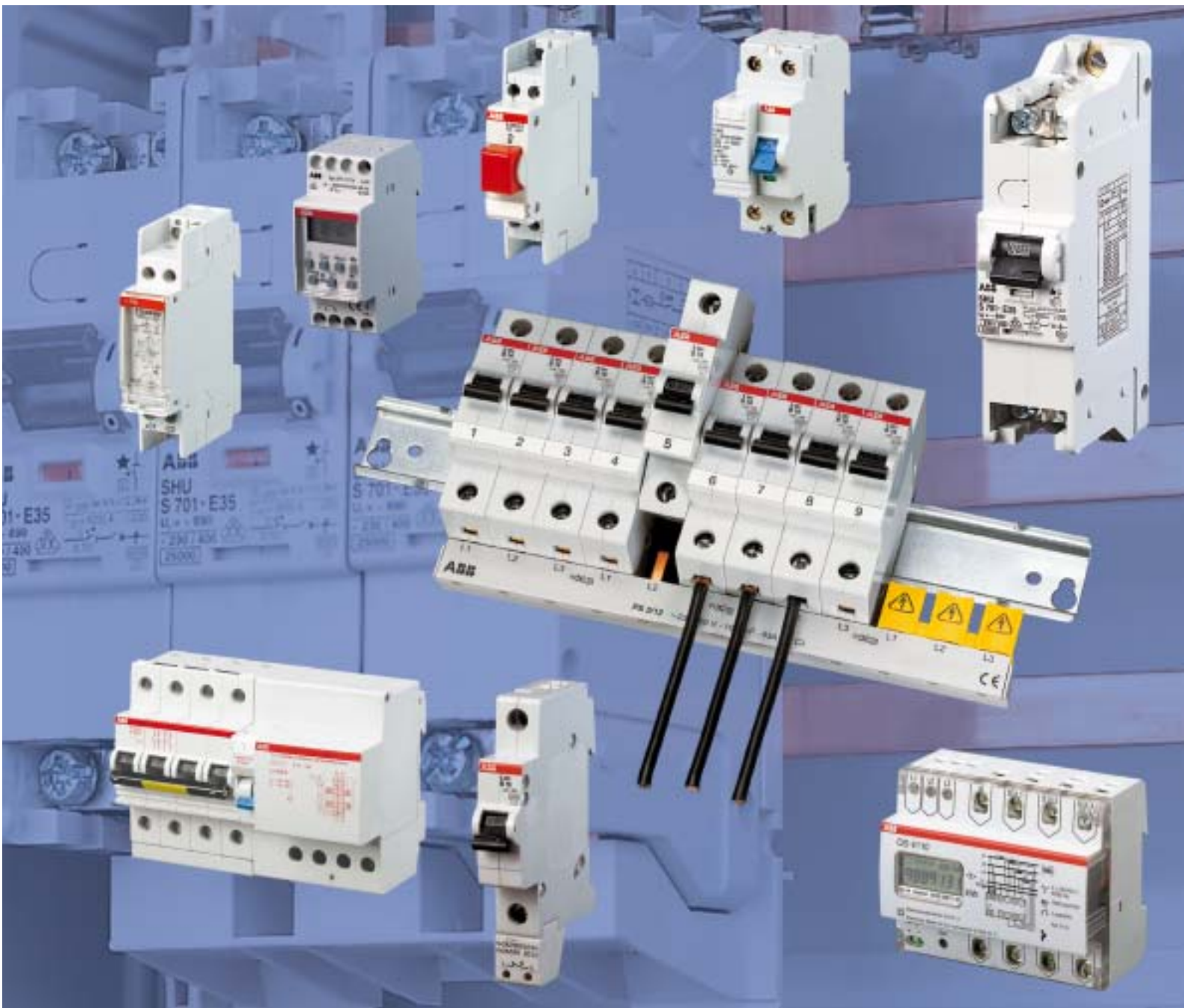


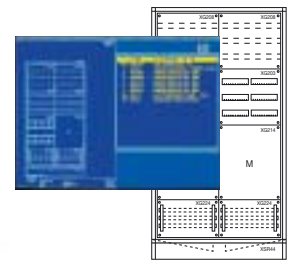
**System pro M / pro M compact**  
**System Connect**  
**Special Protection devices**

Electrical Installation Technique



# More efficiency through partnership

ABB and Striebel & John have joined forces so that efficient planning and installation methods in the field of electrical engineering are no longer a vision of the future. The result: a powerful total system that is more than the sum of its parts. Our benchmark is not just the standard - we are striving for perfection. This is a tall order indeed that can best be achieved by two experienced specialists than by one acting alone. What are we offering? Intelligent solutions for complete modern electrical installations.



**System Connect**  
Innovative components/  
enclosure system

**System pro M**  
Universal Installation  
System for DIN-rail

**System StrieSoft**  
Electrical Planning  
Software

**System pro E**  
Electrical Distribution  
System

**System pro M compact®**  
Increase safety - safe time

**EIB- Intelligent Installation Systems**  
Security Systems

**MCCB's/  
fuse-gear**  
Tmax, Isomax, Emax,  
SlimLine, FastLine, etc.

**Contactors-  
Motor protection**  
Contactors, Overload relays,  
Manual Motor starters

**Cordless tools**

**CEE CEWE  
Industrial plugs  
and sockets**



**Automation  
Systems**  
Advant® Controller 31 etc.

**Lighting  
components**

**Pilot devices**  
CombiLine

**Sensors**  
inductive, capacitive  
photoelectric/ultrasonic  
sensors



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# Contents

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<b>Contents</b>	<b>Page</b>
System pro <i>M</i> / System pro <i>M</i> compact.....	4
Miniature Circuit Breakers (MCB's), Residual Current-operated Circuit Breakers, Busbar blocks, Labelling material from the System pro <i>M</i> compact.....	6
Miniature Circuit Breakers (MCB's), Residual Current-operated Circuit Breakers and Surge Arresters from the System pro <i>M</i> .....	7
Protection devices for special applications.....	9
Selective Main Circuit Breakers S 700 with integrated Quick-Adapter.....	10
Modular DIN-Rail Components from the System pro <i>M</i> .....	12
Wiring Accessories / Labelling Components from the System pro <i>M</i> .....	15
Miniature Circuit Breakers (MCB's), Residual Current-operated Circuit Breakers Labelling material from the System <i>Connect</i> .....	16
System <i>Connect</i> - System components.....	18
System <i>Connect</i> - Basic complement of different frames.....	19
Applications Miniature Circuit Breakers (MCB's).....	20
Applications Residual Current-operated Circuit Breakers.....	21
Support of E-CHECK.....	22

# Variety with a system

## System pro M

### System pro M

Universal Installation System for DIN-rail

The System pro M is an universal installation system of built-in devices for DIN-rail mounting. It includes a complete range of products for protection, switching, control and monitoring functions which are sold worldwide. All components in the System pro M are matched and form the basis for perfect installation solutions. The System pro M from ABB is a product range which meets the highest demands of the market:

- Reliable, state of the art technology.
- Range depth and width covering practically all building installation applications.
  - residential installation
  - industrial and commercial installation
  - protection-and monitoring functions
  - control and monitoring functions
  - time switching functions
- System components with standard matching dimensions, module width and depth

- Simpler, more rational assembly according to standard terminal system and time-saving cross-writing.
- Safe installation with optimised terminal technology
- Shock-hazard protection in accordance with DIN VDE
- Reliable and easy to use device labelling

### System pro M

Universal Installation System for DIN-rail

### System Connect

Innovative components/ enclosure system

### System pro M compact®

Increase safety - safe time

### MCCB's/ fuse-gear

Tmax, Isomax, Emax, SlimLine, FastLine, etc.

### Contactors-Motor protection

Contactors, Overload relays, Manual Motor starters

### Automation Systems

Advant® Controller 31 etc.



### Complete range of the System pro M

- Miniature Circuit Breakers
- Residual current-operated circuit breakers
- Main residual current-operated circuit breakers
- People Protector
- Surge Arrestors
- Isolators
- Switches-pushbuttons-indicator lights
- Emergency lamp
- Timer
- Operating time meter
- Time relays
- SCHUKO-socket outlet
- Staircase lighting controller
- Remote control relays
- Belltransformers
- Operating time meters
- Digital and analogue ammeters and voltmeters

# Increase safety - safe time

**System StrieSoft**  
Electrical Planning Software

**System pro E**  
Electrical Distribution System

**EIB- Intelligent Installation Systems Security Systems**

**Cordless tools**

**CEE CEWE Industrial plugs and sockets**

**Lighting components**

**Pilot devices CombiLine**

**Sensors**  
inductive, capacitive photoelectric/ultrasonic sensors

**System pro M compact®**  
Increase safety - safe time

**System pro M compact®:**

The new standard in residential installation that provides more safety and convenience and saves time.

**Seeing instead of feeling your way**

Clear view of the connecting points: cross wiring has been moved to the back. Single wire supply is clearly visible at the front.

**Simpler to exchange**

Simple, quick installation of the devices - they can easily be removed from the assembly. New quick fastening technique.

**Better accessibility**

Gain in working space between the rows of devices: reduction of upper and lower shoulders of the components.

**Mistakes are ruled out**

Absolute safety during wiring and connection: newly developed bidirectional cylinder-lift terminal.



**Distinctive, uniform design**

All system components are characterized by a clear, functional design, from the miniature circuit breakers and residual current-operated circuit breakers to the modular installation devices. A standard design which makes the perfection of the technology and the electrician visible even to the layperson.





**Miniature Circuit Breakers S 200**

Tripping characteristics:  
B, C, K and Z  
 $I_n$ : B = 6 ... 40 A,<sup>1)</sup>  
C, K, Z = 0,5 ... 40 A<sup>1)</sup>  
 $U_n$ : 400 V AC  
60 V DC, 110 V DC (2-pole)  
Short circuit rupturing capacity:  $\frac{6000}{3}$

**Miniature Circuit Breakers S 200 with auxiliary contact**

Tripping characteristics:  
B, C, K and Z  
 $I_n$ : B = 6 ... 40 A,<sup>1)</sup>  
C, K, Z = 0,5 ... 40 A,<sup>1)</sup>  
 $U_n$ : 400 V AC  
60 V DC, 110 V DC (2-pol)  
Short circuit rupturing capacity:  $\frac{6000}{3}$




**Residual Current-operated Circuit Breakers F 200**

2-pole: F 202, 4-pole: F 204  
   
Short circuit withstand capacity:  $\frac{6000}{3}$   
Surge current withstand capacity up to 250 A

**F 202:**  
 $I_{\Delta n}$ : 10, 30 and 300 mA  
 $I_n$ : 16, 25, 40 A,<sup>1)</sup>

**F 204:**  
 $I_{\Delta n}$ : 30, 300 and 500 mA  
 $I_n$ : 25, 40 A<sup>1)</sup>

**Residual Current-operated Circuit Breakers F 204 selective**

selective type  
4-pole  
    
Short circuit withstand capacity:  $\frac{10000}{3}$   
Surge current withstand capacity up to 5000 A  
 $I_{\Delta n}$ : 300 mA  
 $I_n$ : 40 A<sup>1)</sup>

**Convincing benefits**

**Simpler to exchange**  
Simple, quick installation of the devices - they can easily be removed from the assembly. New quick fastening technique.

**Better accessibility**  
Gain in working space between the rows of devices: reduction of upper and lower shoulders of the components.

<sup>1)</sup> 63 A available May 2002



**Busbar Blocks PS...**

The new developed **pro M compact** cross-wiring busbar system comprises a complete range for safe and easy connection.

The busbars are available in fixed lengths, unnecessary to cut, to clean and to use the end caps. MCB's and RCD's of the **System pro M** are also connectable with these busbars.

**Labelling material**

for all units of the **System pro M compact** there are self-adhesive labelling material available.

The unprinted labels can be labelled by hand with wipe-resistant and waterproof pens or with PC-controlled labelling systems (plotter)

Printed labels are available with the following labelling:

- Labelling: 1- 10 (4x)
- Labelling: 1- 20 (2x)
- Labelling: 1- 40

Labels with pictogram symbols



**Miniature Circuit Breakers  
S 260 System pro M**

Tripping characteristics:  
B and C  
 $I_n$  : B = 6 ... 63 A  
          C = 0.5 ... 63 A  
 $U_n$ : 400 V AC  
          60 V DC, 110 V DC (2-pole)  
Short circuit rupturing  
capacity: 

6000
3



**Miniature Circuit Breakers  
S 270 System pro M**

Tripping characteristics: B, C, K, Z  
 $I_n$  : B = 6 ... 63 A  
          C = 0.5 ... 63 A  
          K = 0,5 ... 63 A  
          Z = 0,5 ... 63 A  
 $U_n$ : 400 V AC  
          60 V DC, 110 V DC (2-pole)  
Short circuit rupturing  
capacity: 

6000
3

10000
3

  
          K, Z  
          B, C



**High Rupturing Capacity  
Miniature Circuit Breakers  
S 280 System pro M**

Tripping characteristics:  
B, C, K and Z  
 $I_n$  : B = 6 ... 63 A  
          C = 0.5 ... 63 A  
          K = 0,2 ... 63 A  
          Z = 0,5 ... 63 A  
 $U_n$ : 400 V AC  
          60 V DC, 110 V DC (2-pole)  
Short circuit rupturing  
capacity: 

10000
25000

  
 $I_n$  : 10 ... 20(25) A



**High Rupturing Capacity  
Miniature Circuit Breakers  
S 280 UC System pro M**

for AC and DC current  
Tripping characteristics:  
B, K and Z  
 $I_n$  : B = 6 ... 25 A  
          K = 0,2 ... 63 A  
          Z = 0,5 ... 63 A  
 $U_n$ : 220 V DC, 440 V DC (2-pole)  
          415 V AC  
Short circuit rupturing  
capacity: 

6000
------



**Residual Current-operated  
Circuit Breakers F 370  
System pro M**

2-pole: F372, 4-pole: F374  
   
Short circuit withstand  
capacity: 

6000
------

  
Surge current withstand capacity  
up to 250 A  
**F 372:**  
 $I_{\Delta n}$ : 10 mA  
 $I_n$ : 16A  
 $I_{\Delta n}$ : 30 mA and 300 mA  
 $I_n$ : 25, 40 and 63 A  
**F 374:**  
 $I_{\Delta n}$ : 30, 300 and 500 mA  
 $I_n$ : 25, 40 and 63 A  
F 37 ... H with auxiliary contact  
  
**NEW:**  
short-time delay  
Typen F 372 R...  
          F 374 R...  
Rated residual current  $I_{\Delta n}$ : 30mA



**Residual Current-operated  
Circuit Breakers F 670  
System pro M**

2-pole: F672, 4-pole: F674  
   
Short circuit withstand  
capacity: 

10000
-------

  
Surge current withstand capacity  
up to 250 A  
 $I_{\Delta n}$ : 30, 100 und 300 mA  
 $I_n$ : 80 und 100 A  
  
F 67 ... H with auxiliary contact



**Main Residual Current-  
operated Circuit Breakers  
F 390 / F 690 System pro M**

selective type, 4-pole  
   
Short circuit withstand  
capacity: 

10000
-------

  
Surge current withstand capacity  
up to 5000 A  
 $I_{\Delta n}$ : 100 and 300 mA  
 $I_n$ : 40,63 and 100 A  
F 394/694 ... H with auxiliary  
          contact

**Symbols**

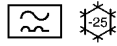
- selective release
- for AC fault currents and pulsating DC fault currents
- Suitable down to -25 °C



F 271

**Residual Current-operated Circuit Breakers with overcurrent tripping device "multiSTOTZ" F 270/6 System pro M**

- F 271 1-pole protected
- F 172 2-pole protected
- F 272/6 2-pole protected
- F 274/6 4-pole protected



Main switch capacity:  $I_{6000}$

Surge current withstand capacity up to 250 A

Tripping characteristics of the MCB part: B, C and K

$I_{\Delta n}$ : 30 mA

	1-pole	2-pole	4-pole
B	6...40 A	6...32 A	6...32
K	6...32 A	1...40 A	6...32 A

$I_{\Delta n}$ : 300 mA

	1-pole	2-pole
C	6...40 A	
K		1...40 A



F 172



F 272/6



P 271

**Miniature Circuit Breakers with Residual Current-operated tripping device "People Protector" P 270 System pro M**

- P 271 1-pole protected
- P 272 2-pole protected



Main switch capacity:  $I_{6000}$

Surge current withstand capacity up to 250 A

Tripping characteristics of the MCB part: B and K

$I_{\Delta n}$ : 10 mA

$I_n$ : B = 13 und 16 A  
K = 16 A



P 272

**FI-SCHUKOMAT F 402 SCHUKO®-socket outlet with residual current protection**

- 2-pole switching (L, N);
- PE monitoring
- RCD-protected outgoing circuits: L, N, PE
- Rated current  $I_r$ : 16 A
- Rated residual current  $I_{\Delta r}$ : 30mA
- Rated voltage  $U_r$ : 230V ~
- Rated frequency: 50/60 Hz

**Symbols**



for AC fault currents and pulsating DC fault currents



DC fault current



Suitable down to -25 °C



Limitor NB-B  
Limitor GN-B



Limitor Link



E 441  
Limitor V



E 441  
Limitor VTS



Limitor VE  
Limitor GE-C



Limitor VETS



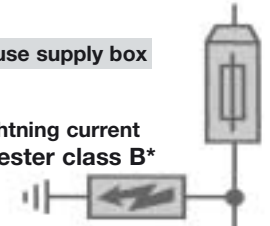
Limitor VD

**Surge Arrester "Limitor..." E440 System pro M**

Protection against overvoltage caused by indirect lightning effects and switching operations -also available with remote indicator.

**House supply box**

**Lightning current arrester class B\***



Type: blowing out

**Limitor M-B**

lightning impulse current  $I_{imp}$  75 kA (10/350)

**Limitor G-B**

(N-PE-Arrester)  
lightning impulse current  $I_{imp}$  100 kA (10/350)

Type: not blowing out

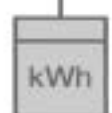
**Limitor NB-B**

$I_{imp}$  50 kA (10/350)

**Limitor GN-B**

(N-PE-Arrester)  
 $I_{imp}$  100 kA (10/350)

**Meter board**



Limitor Link,  $I_n$  35 A (if necessary)

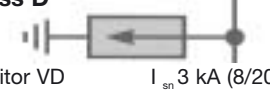
**Surge Arrester class C**



- Limitor V  $I_{imp}$  10 kA (8/20)
- Limitor VTS  $I_{imp}$  10 kA (8/20)
- Limitor VE  $I_{imp}$  15 kA (8/20)
- Limitor VETS  $I_{imp}$  15 kA (8/20)
- Limitor GE-C  $I_{imp}$  20 kA (8/20)

**Terminal**

**Surge Arrester class D**



- Limitor VD  $I_{sn}$  3 kA (8/20)
- Limitor VDTS  $I_{sn}$  3 kA (8/20)
- Limitor VDAS  $I_{sn}$  3 kA (8/20)
- Limitor VDTAS  $I_{sn}$  3 kA (8/20)



# Protection devices for special applications



## High Rupturing Capacity Miniature Circuit Breakers S 220

Tripping characteristics: K  
 $I_n$ : 0,2 ... 63 A  
 $U_n$ : 690 V AC  
 60 V DC, 110 V DC (2-pole)  
 Short circuit rupturing capacity: 10000



## High Rupturing Capacity Miniature Circuit Breakers S 290

Tripping characteristics: C,K  
 $I_n$ : 80, 100 and 125 A  
 $U_n$ : 400 V AC  
 60 V DC, 110 V DC (2-pole)  
 Short circuit rupturing capacity: 10000



## Manual Motor Starter MS 325

with thermal and electromagnetic tripping devices, wide range of accessories  
 $I_n$ : 0,1 ... 25 A  
 $U_n$ : 690 V AC  
 Short circuit rupturing capacity:  $\geq$  50000



## High Rupturing Capacity Miniature Circuit Breakers S 500 / S 500 UC

Tripping characteristics:  
 B and K  
 $I_n$ : B = 6 ... 63 A  
           K = 0,15 ... 45 A  
 $U_n$ : 690 V AC / 750 V DC (3-pole)  
 Short circuit rupturing capacity:  
     B 30000  
     K < 11 A 50000  
     K > 11 A 30000



## High Rupturing Capacity Miniature Circuit Breakers S 610

temperature-compensated, high rupturing capacity also for high rated currents  
 Tripping characteristics: K  
 $I_n$ : 2 ... 125 A  
 $U_n$ : 690 V AC  
 Short circuit rupturing capacity: 50000




## Selective Main Circuit Breaker S 700 with integrated Quick-Adapter

Tripping characteristics:  
 E and K  
 $I_n$ : 10 ... 100 A  
 $U_n$ : 690 V AC  
 Short circuit rupturing capacity: 25000  
 (detailed information page 10-11)




## Residual Current-operated Circuit Breakers F 674

4-pole: F 674  
  
 Short circuit withstand capacity: 10000  
 Surge current withstand capacity up to 250 A  
 $I_{\Delta n}$ : 30 and 300 mA  
 $I_n$ : 125 A




## Residual Current-operated Circuit Breakers F 804 universal current-sensitive

4-pole  
  
 Short circuit withstand capacity: 10000  
 Surge current withstand capacity min. 250 A  
 $I_{\Delta n}$ : 30 and 300 mA  
 $I_n$ : 63 A

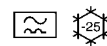


## Residual Current-operated Circuit Breakers F 220

4-pole  
  
 Short circuit withstand capacity: 6000  
3  
 Surge current withstand capacity min. 250 A  
 $I_{\Delta n}$ : 30 and 300 mA  
 $I_n$ : 16, 32, 63 A



## High Rupturing Capacity Residual current-operated Circuit Breakers with overcurrent protection F 500

F 503 3-pole protected  
 F 504 4-pole protected  
  
 Short circuit rupturing capacity: 30000  
 Surge current withstand capacity up to 250 A  
 Tripping characteristics of the MCB parts: C and K  
 $I_{\Delta n}$ : 30 und 300 mA  
 $I_n$ : K = 0,1...45 A  
           C = 63 A  
 $U_n$  = 230/400, 500 and 690 V AC

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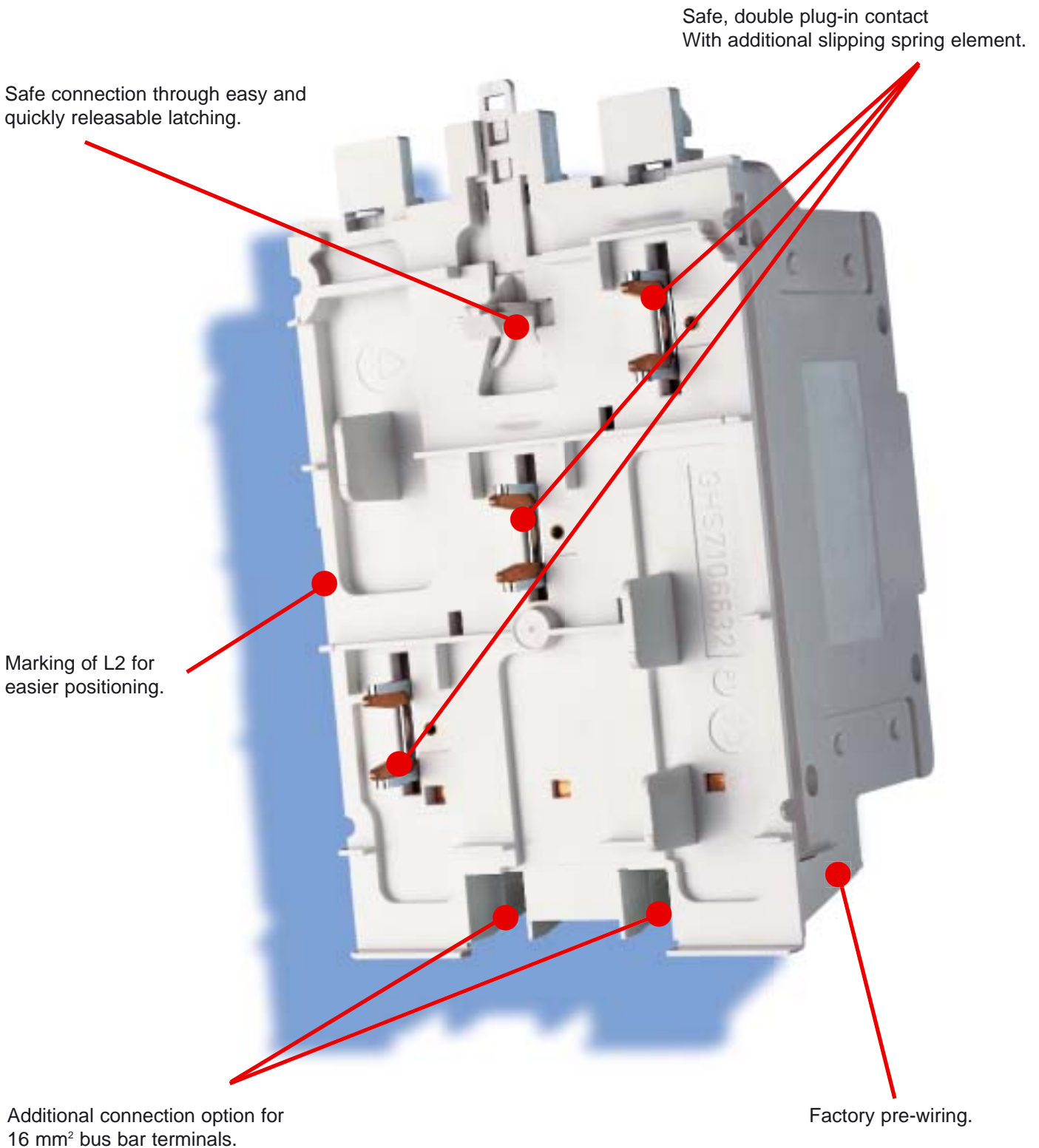
Selective Main Circuit Breakers S 700®  
with integrated Quick-Adapter

---

**Faster to install.**

**Easier to install.**

The tried and proven, voltage-independent S 700®  
Now supplied with the integrated quick adapter



# Selective Main Circuit Breakers S 700® with integrated Quick-Adapter



S 700 fitted with quick adapter



Rear view S 700 with quick adapter



Side view S 700 with quick adapter

## S 700® – tried and proven

### Now supplied together with the integrated quick adapter

#### The best choice for the meter mounting board:

#### S 700® series high performance main circuit breakers

Suitable for all areas in which overcurrent protective devices are used as group or, as the case may be, back-up fuses, as provided for e.g. by TAB 2000, the German Technical Connection Requirements.

The specific functional principle underlying S 700® solves frequent selectivity problems having previously occurred when overcurrent protective devices were connected in series.

S 700® makes a decisive contribution to more safety and comfort in modern fuseless electrical installations.



Thanks to the new, integrated quick adapter, the device can be simply plugged onto the busbar.

To insert the quick adapter make sure that it sits straight on the on the busbar and let it snap into place.

#### High surge withstand capability

The ABB STOTZ-KONTAKT S 700® also carries the distinctive ★ mark according to E DIN VDE 0645, next to the switching symbol. This mark guarantees to the user an additional safety reserve also with respect to its surge withstand capability and insulation properties.

This is made possible – among other things - through the tailor-made design of the device that meets even larger spacing requirements for longer clearance and creepage distances, thus providing for permanent surge withstand capability.

#### Marked with the VDE test label



This is the only label that guarantees full compliance with the respective device standard.





**Switches E 220  
16, 25, 32 A**

1 to 4 poles  
ON-OFF switches, with and without control lamp  
control switches  
change-over switches  
group switches

**Lastumschalter OT  
16...125 A (ohne Abb.)**

**Isolators E 240 / E 270  
45, 63, 80, 100, 125A**

1 to 4 poles



**Push buttons E 225- / E 227-  
16 A**

without control lamp: 1 NO + 1 NC  
with control lamp: 1 NO + 1 NC  
Colours:  
grey, clear, red, green, yellow,  
black and blue



**Indicator lights E 229-**

with lamp holder E 10  
Colours:  
clear, red, green, yellow, blue



**Alarm indicator E 228-WM**

with optical and accustic signal



**Socket outlet ("SCHUKO")  
E 1175 / E 1175 C  
16A**

2-poles + PE  
without / with cover  
Also french and italien version available.



**Electromechanical and  
electronic staircase time  
switches E 232-**

2300 W Filament lamp load,  
3- and 4-wire connection  
Time range E232-230 up to 5 min  
E232-230/ up to 12 min  
E232 E - 8/230 up to 12 min



**Semi-light module for  
staircase timers  
E 232 HLM**

reduced brightness continuously  
from 10 to 100 sec.



**Latching relays E 250  
16 A**

1 NO, 2 NO, 1NO + 1NC  
and 4 NO  
operating voltages:  
8, 12, 24, and 230V / 50Hz  
Special voltages on request



**Latching relays  
with electrical control E 260  
(centralized control)  
10 A**

1 NO, 2 NO, 1NO + 1NC  
operating voltages:  
24 V UC, 230 V AC



**Installation relays E 259 R-  
16 A**

1 NO, 1NO + 1NC, 2 NO  
operating voltages:  
8, 12, 24, and 230V / 50Hz  
Special voltages on request



**Priority switch E 451- / E 452-  
(load shedding relais)**

Rated current range for flow-type  
heaters with pneumatic control  
6,7 ... 39 A  
Rated current range for flow-type  
heaters with electronic control  
6,7 ... 39 A



**Measuring instruments with analog display  
VLM1 ... AMT 1 ...**

Class 1,5  
for voltage 300 and 500 V AC  
for AC currents from 5 to 30 A  
direct measurement in 6  
measuring ranges,  
5 ... 1000 A with measuring  
ranges



**Measuring instruments with digital display  
VLM - / AMT / FRZ**

Class 0,5  
mit Codierstecker für die Wahl  
der Meßbereiche für Wechsel- /  
Gleichströme von 15 bis 999 A,  
(Wandlermessung).  
Meßbereich für Wechsel- /  
Gleichspannung 600 V AC  
(Direktmessung)  
Meßbereich für Frequenz 40-80Hz  
(Direktmessung)



**Installation-Currents ESB ...**

**20 A**  
2 NO, 2 NC, 1 NO + 1 NC

**24 A**  
4 NO, 3 NO + 1 NC, 2 NO  
+ 2 NC, 4 NC  
1 NO + 3 NC  
add-on auxiliary contacts

**40 and 63 A**  
4 NO  
add-on auxiliary contacts

**Voltmeter-changeover switch  
MCV**

O - L1 - L2 - L3  
O - L1 - L2 - L3 - N

**Ammeter-changeover switch  
MCA 4**

O - L1 - L2 - L3



**Time clocks STU ...**

With dial synchronous drive  
without running reserve

Quarz drive with a running  
reserve of 72 hours



**Timers STT- ...**

Programmable time switches  
with microprocessor-controlled  
electronics. Available as 1-, 2-  
and 4-channel timers with daily,  
weekly and pulse programs.  
With 14, 36 and 128 memory  
units, free block formation of  
weekdays, holyday program,  
with one-way-program - after  
operation it is deleted auto-  
matically, summer/winter time  
change-over.  
User guidance via blinking  
symbols.

4-channel timer without or with  
radio-controlled time correction  
via DCF 77 signal.



**Undervoltage-monitoring relay  
E236-US**

3-phase undervoltage-monitoring  
(each of the lines L1, L2, L3  
to neutral conductor)

US1: permanent threshold value  
195 V; Hysteresis fix 5%

US2: permanent threshold value  
adjustment 160-240 V;  
Hysteresis fix 5%



**Emergency lamp for  
distribution panels  
LE - 230**

- The light is switched auto-  
matically in the event for  
power failure and goes off  
again when the power supply  
returns
- The apparatus area in the  
distribution panel is illuminated,  
thus facilitating troubleshooting.
- Illumination duration: 45 min.
- Charging time: 12 min.



**Bell transformers TS...**

- 8, 16, and 24 VA versions
- Without/with switch
- High reliability
- Optimal protection against  
unintentional touch of live parts
- Box terminals
- Quick mounting clip, lockable  
in open position



**Operating time meter E 233 -**

for 6 rated voltages  
 50Hz: 24V AC; 230V AC  
 60Hz: 24V AC; 120V AC, 240V AC  
 12-48V DC



**Time relays E 234**

- 10 functions
- High time accuracy
- Box terminals
- Optimal protection against unintentional touch of live parts
- Quick mounting clip, lockable in open position

**Special features:**

- Control voltage 12 to 230 V DC and AC 50/60Hz and a range of time from 0,1sec. to 40 hours in one unit
- Selector switch for time base, multiplication factor and operation mode of multifunction time relay
- With only 7 versions, all possible timing functions are covered
- Protection against unintentional touch of live parts acc. to VDE 0106, part 100 (BGB 4)
- Potential-free chargeover contact 1W



**Switch-disconnector ILTS**

1,3 and 3-pole + N  
 Main switch capacity 50 KA AC



**Modular bell SM**

Rated voltage 12 resp. 230 V AC.  
 For audible signalling in building installations.



**Twilight switch SDS ...**

With separate photo sensor  
 3 ... 2500 Lux



**Light level switch STL - 10 A**

with separate photo sensor, disconnection value 10 - 20000 Lux.  
 Possibility to switch 1 and 3 lighting groups



**Electronic potentiometer STD - EP**

for electronic control gears with input voltage 10 V DC for flicker-free brightness control of fluorescent lamps



**Dimmer / group dimmer STD...**

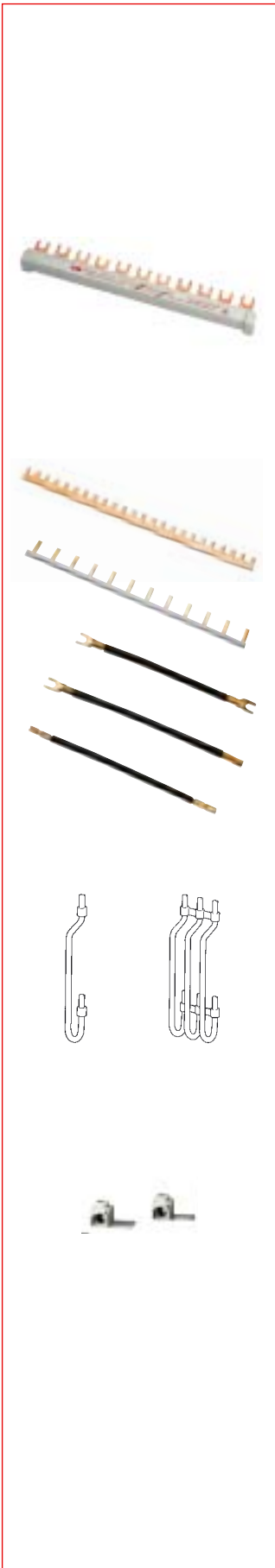
for brightness control of filament and fluorescent lamps with dimmable electronic ballasts, halogen and low-voltage halogen filament lamps with wound and electronic transformers.  
 For loads of 420 - 18 kW/kVA



**Energy meters EE ... DZ ... OD ...**

- Precise metering of energy consumption (kWh and/or kvarh)
- Transformer and direct connection
- Measurement range 0,05 - 65 A, > 65 A with current transformer
- Accuracy class 2 ( $\pm 2\%$ ) and 1 ( $\pm 1\%$ )
- Quick fixing onto DIN-rails
- Mounting orientation: free
- Insensitive to mechanical vibration
- Sealable terminal areas
- S0 Impulse output: selectable impulse frequency
- Programmable transformer ratio
- PTB-certified for Typ Delta Meter
- Type according to application:  
 Type -MINI-Meter  
 -Delta-Meter  
 -ODIN-Meter





**Wiring Accessories**

For the connection of Circuit Breakers, Residual Current-operated Circuit Breakers, Manual Motor Starters, fuses and other installation equipment

**Busbar blocks  
SZ - PSB...**

Cross sections 10 and 16 mm<sup>2</sup> for 1-, 2-, 3- or 4-pole interconnection fork and pin type, allround protection against unintentional touch of live parts acc. to DIN VDE 0106 T 100

**Comb busbar  
SZ - KS ...**

Cross sections 6, 12, 24 and 36 mm<sup>2</sup>, for single pole interconnection fork and pin type

**Prefabricated flexible connectors  
SZ - DB ...**

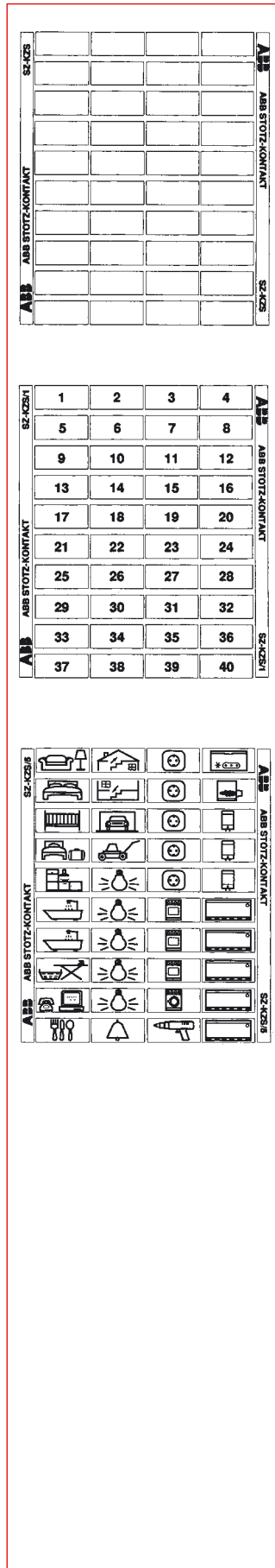
Cross sections 6 and 10 mm<sup>2</sup> with fork and pin type cable lugs

**Wiring connectors SZ - VS**

for wiring of components in the distribution switchboard with a tier spacing of 125 mm

**Connection terminals SZ - AS ...**

for busbar, supply, 25 and 35 mm<sup>2</sup>, fork and pin type



**Labelling material for pro M devices**

**Label mats SZ - KZS ...**

The unprinted labels can be labelled by hand with wipe-resistant and waterproof pens or with PC-controlled labelling systems (plotter)

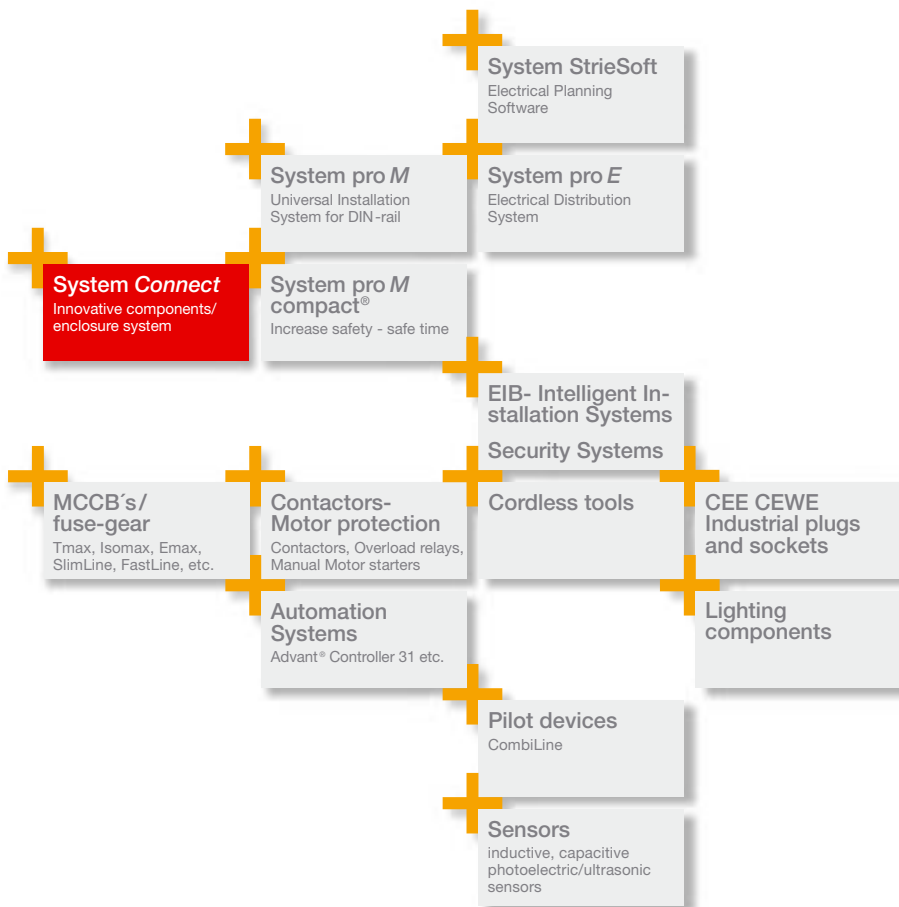
Printed labels are available with the following labelling:

- Labelling 1 - 20 (2 x)
- Labelling 1 - 40
- Labelling 41 - 80
- Labelling 81 - 120
- Labelling 121 - 160
- Labelling 1 - 10 (4x)
- Labelling 11 - 20 (4x)

Labels with pictogram symbols

# A system like never before

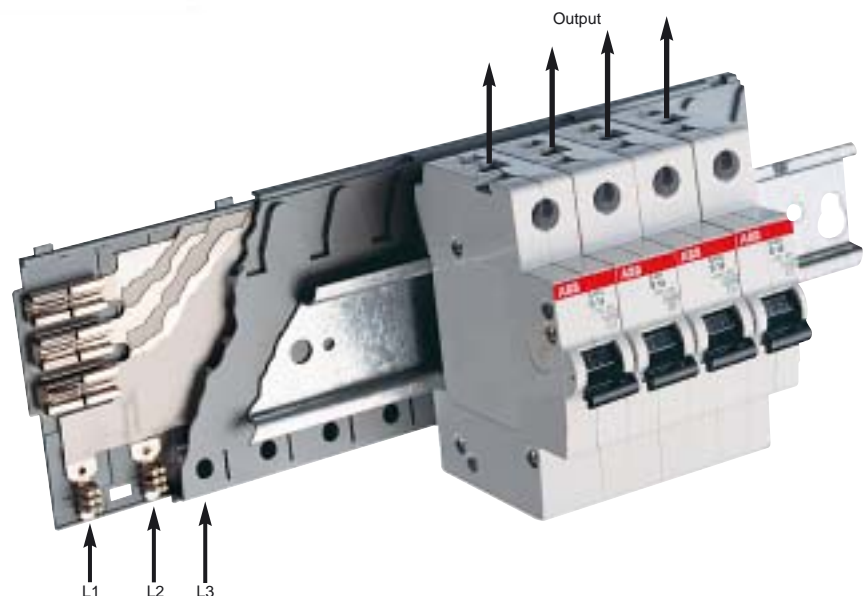
## System Connect



**System Connect**  
Innovative components/  
enclosure system

### Concentration on the essential

- Complete system units each consisting of a distribution board, some basic components and a mounting frame for the components.
- New type of plug-in technology called "Safe Connect".
- Highly efficient installation due to savings in both time and materials.
- Perfect functional reliability and safety.
- Considerable simplification of planning, purchasing and organisational processes for the electrical installer.



### On site

**System Connect** can be installed easily and without any problems on site both by experienced and less experienced employees. Any changes that need to be carried out in the short term can also be quickly implemented using the innovative plug-in technique.

### System Connect

- assembly, connection of the devices and cross wiring are carried out time-effectively in one single step.
- Plug-in-rails with integrated cross wiring.
- Devices are placed quickly, precisely and securely.
- Continuous power supply between the devices and the rail.



# Miniature Circuit Breakers (MCB's) Residual Current-operated Circuit Breakers Labelling material





**Miniature Circuit Breakers S 440**

Tripping characteristics:  
B, C, K and Z  
I<sub>n</sub>: B = 6 ... 40 A  
C, K, Z = 0,5 ... 40 A  
U<sub>n</sub>: 400 V AC  
60 V DC  
Short circuit rupturing capacity:  $\frac{6000}{3}$

**Miniature Circuit Breakers S 440 with auxiliary contact**

Tripping characteristics:  
B, C, K and Z  
I<sub>n</sub>: B = 6 ... 40 A  
C, K, Z = 0,5 ... 40 A  
U<sub>n</sub>: 400 V AC  
60 V DC  
Short circuit rupturing capacity:  $\frac{6000}{3}$




**Residual Current-operated Circuit Breakers F 200**

2-pole: F 442, 4-pole: F 444  
   
Short circuit withstand capacity:  $\frac{6000}{3}$   
Surge current withstand capacity up to 250 A

**F 442:**  
I<sub>Δn</sub>: 10, 30 and 300 mA  
I<sub>n</sub>: 16, 25, 40 A

**F 444:**  
I<sub>Δn</sub>: 30, 300 and 500 mA  
I<sub>n</sub>: 25, 40 A

**Residual Current-operated Circuit Breakers F 444 selective type**

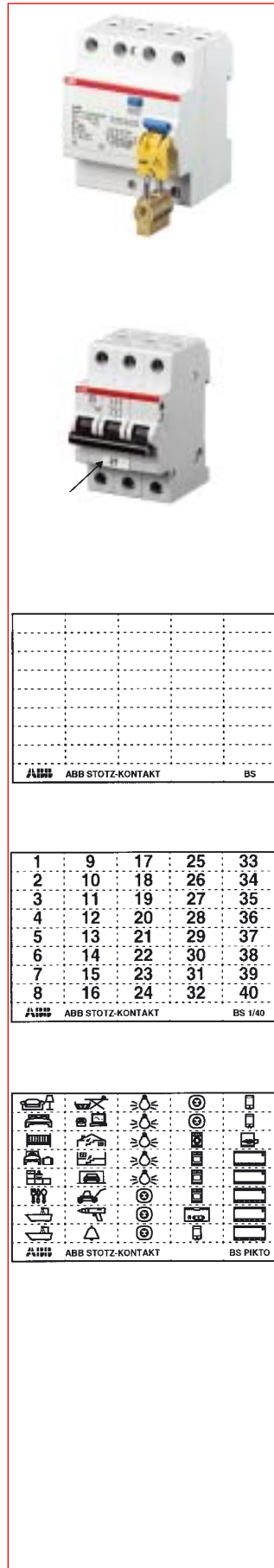
selective type   
4-pole  
   
Short circuit withstand capacity:  $\frac{10000}{3}$   
Surge current withstand capacity up to 5000 A  
I<sub>Δn</sub>: 300 mA  
I<sub>n</sub>: 40 A

**Supply MCB's Energy module EM 441**

Energy supply with supply MCB's, alternative with energy modules.  
Rated current I<sub>n</sub> / line 40 A

EM-LS  
441-B16

EM 441



**Locking device for MCB's and switches**

For protection against unauthorized or unsafe actuation on the operating lever. An adapter permits blocking of the operating lever both in the OFF positions of the switch.

**Labelling material**

For all devices of the **System Connect** self-adhesive labelling material are available. A fixing line on the devices allowed exact placement.




The unprinted labels can be labelled by hand with wipe-resistant and waterproof pens or with PC-controlled labelling systems (plotter)

Printed labels are available with the following labelling:

- Labelling: 1- 10 (4x)
- Labelling: 1- 20 (2x)
- Labelling: 1- 40

Labels with pictogram symbols

**Symbols**

-  selective release
-  for AC fault currents and pulsating DC fault currents
-  Suitable down to -25 °C



### Innovative system technology

With its new System Connect, ABB STOTZ-KONTAKT offers an integrated system which will fundamentally change the landscape of residential installation technologies. With its pioneering approach, System Connect is first step towards a new era of electrical installation:

A seamlessly integrated, flexible overall system to tackle the challenges of the 21st century.

The recent installation technology combines the competencies and long years of experience of ABB STOTZ-KONTAKT and Striebel & John:

Everything in System Connect is the result of a hand-in-glove co-operation of both system partners.

System Connect is thus not only the first-ever system that seamlessly integrates distribution board and its equipment.

At the same time, it represents a new way of implementing electrical installation requirements:

The leap from solving technical details to providing overall solutions.

- Complete system units supplied ex works, consisting of a distribution board, mounting frame and a basic device kit.
- New plug-on technology „Safe Connect“.
- Highest efficiency of installation work due to working hours and materials saved.
- Perfect functional safety and reliability.
- Planning, buying and work flow for the electrician made much simpler.



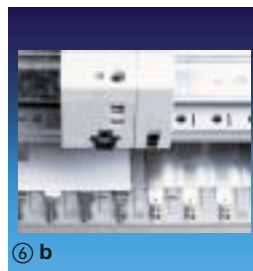
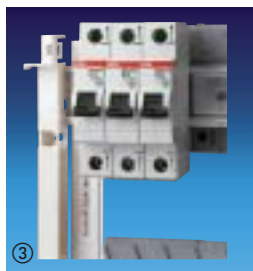
### System Connect focuses on what is really important – profit from our no-frills approach:

- Every system unit includes a complete distribution board with mounting frame in "Safe-Connect" technology and a basic device kit.

### These are your benefits:

- New, fault-free Safe-Connect technology, the innovative ABB plug-on technology for the fast, precise installation of components on mounting frames already offering integrated cross-wiring.
- Compact, demand-oriented range of Connect devices available in all types required for residential installation.
- Mounting frames of various types. Each supplied with three supply MCBs (or, alternatively via four-pole RCCBs), a basic kit of MCBs, and one RCCB plus EnergyModule including prewiring.
- According to the type chosen, a specific Connect flush-mounted wall box equipped with snap-on N/PE terminals, including cover, plaster protection cover, labelling system, and tailor-made masking frame, sheet steel door, or as the case may be, surface-mounted hood-type distribution board with door.
- Additional installation gear may be fitted easily any time e.g. from the System pro M range for special purposes including timers, staircase time delay switches, etc.. Also suitable for the installation of ordinary MCBs and RCCBs.





**Its parts and pertaining technical details**

**Flush-mounted wall box ①**

Comes with N/PE terminal, plaster protection cover and cover, sealing strips, and labelling system. Can be used for hollow-wall installations in combination with the optional hollow-wall kit.

**Masking frame and steel sheet door ②**

style: white, RAL 9016

**Surface-mounted hood-type distribution board**

With dimensionally stable rear wall so that separate mounting frames can be simply snapped into place, comes together with N/PE terminals, labelling system, sealing strip and steel sheet door.

**Supply MCB ③**

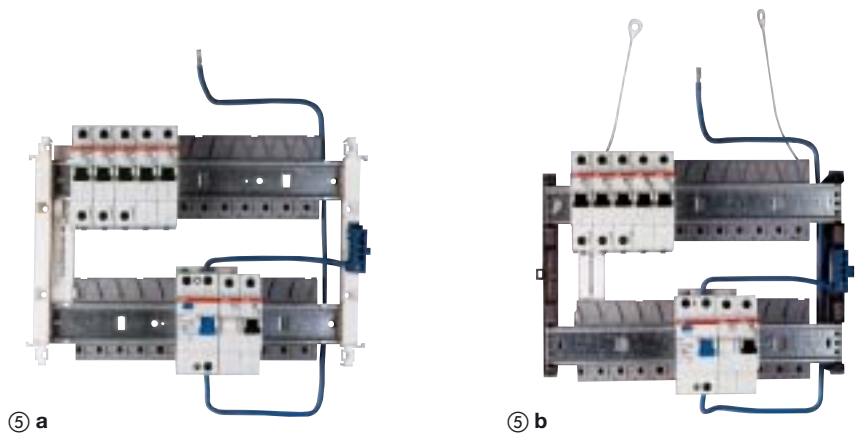
Pre-assembled modules for energy supply into the system. Alternatively: via 4-pole RCCBs.

**Series connector ④**

Pre-assembled component for distribution of energy to the modules. No looping through required. (fig. shows flush-mounted style)

**Mounting frame for flush-mounted ⑤ a and wall-mounted style ⑤ b**

The mounting frames are partly fitted with three supply MCBs, (or, alternatively via 4-pole RCCBs), a basic MCB kit and 1 2-pole RCCB plus energy module (does not apply to alternative 4-pole RCCB), including pre-wiring.



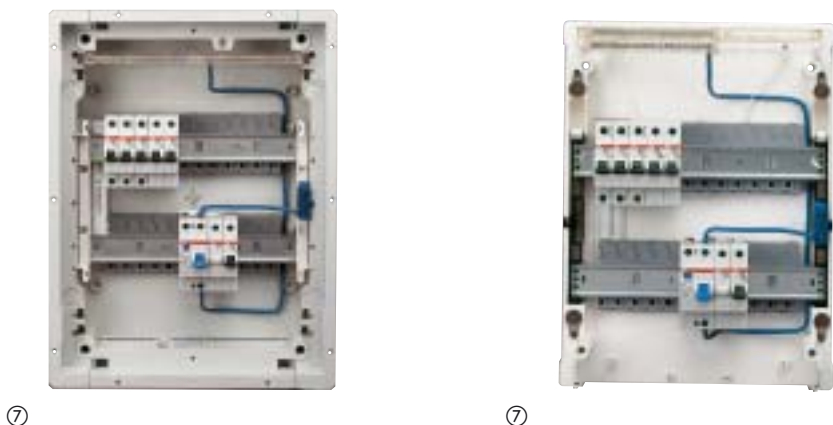
**Connect RCCB busbar ⑥ a, ⑥ b**

Supplementing the ordinary Connect busbar, specially designed, divided plug-on bus bar with pre-assembled RCCB.

Slots for RCCB-protected circuits (e.g. bathroom, outdoor socket outlets, etc.) as well as additional slots for circuits not protected by RCCBs.

**Factory pre-wired ⑦**

The necessary wiring of the N conductor plus separate N/RCCB terminal is already made at our works.



# Application of Miniature Circuit Breakers

## Ranges of MCB's



Range of application	S 200 S 440	S 260 S 270	S 280	S 220	S 500	S 610	S 700
Industrial networks 690 V~				S 220	S 500	S 610	S 700
Motor protection Transformers 		S 270-K	S 280-K	S 220-K	S 500-K	S 610-K	S 700-K
Power supplies Photovoltaik			S 280 UC		S 500 UC		
Protection of semiconductor devices High impedances 		S 270-Z	S 280-Z				
High selectivity 							S 700
Suitable as main switch/ disconnecter 			S 280	S 220	S 500	S 610	S 700
Export USA, Canada 		S 260 S 270	S 280 S 280 UC	S 220	S 500		
Ship classification GL* LRS BV DNV		S 260 S 270	S 280 S 280 UC	S 220	S 500*	S 610**	S 700*
Rated rupturing capacity $I_{cn}/A$ $I_n/A$	6 000 ≤ 40	6 000 ≤ 63	25 000 10 ... 20	10 000 ≤ 32	30 000 ≤ 63	50 000 ≤ 100	25 000 ≤ 100
Residential installation system	S 200 S 440						

\* only GL; \*\* in prepare

# Residual Current-operated Circuit Breakers and fields of application

## Ranges of FI and FI/LS



Anwendungsbereiche	DIN VDE.....	Geforderte Empfindlichkeit $I_n$ mA	F 200 F 440 F 370 F 670	F 390 F 690	F 270 P 270	F 220 F 804
Socket outlets up to 20 A, Outdoor installations	0100 - 470	10...30	F 200 F 440 F 370 F 670		F 270 P 270	
Locations exposed to fire hazards	0100 - 482	10 u. 300	F 200 F 440 F 370 F 670	F 390 F 690	F 270 P 270	
Locations containing a bath tub, shower basin or swimming pool	0100 - 701 0100 - 702	10...30 10...30	F 200 F 440 F 370 F 670		F 270 P 270	
Construction site installation socket outl. - 16 A socket outl. - 32 A other socket outlets	0100 - 704 BG F&E	10...30 10...30 $\leq 300...500$	F 200 F 440 F 370 F 670	F 390 F 690	F 270 P 270	
Agricultural and horticultural premises; regular socket outlets	0100 - 705	$\leq 300...500$ 10...30	F 200 F 440 F 370 F 670	F 390 F 690	F 270 P 270	
Electrical installations in caravans and caravan parcs	0100 - 708	10...30	F 200 F 440 F 370 F 670		F 270 P 270	
Electrical installations in Marinas	0100 - 721	10...30	F 200 F 440 F 370 F 670		F 270 P 270	
Temporary buildings, vehicles for traveling exhibitions, shows, stages	0100 - 722	30 und 300	F 200 F 440 F 370 F 670	F 390 F 690	F 270 P 270	
Elec. installations in locations for medical purposes	0107	a) bei $I_n \leq 63$ A 10...30 b) bei $I_n \leq 63$ A $\leq 300$	F 200 F 440 F 370 F 670	F 390 F 690	F 270 P 270	
Devices in high voltage installations with electron. components causing possible $I_{\Delta b}$ Typ A, Typ B	0160 DIN EN 50 178	$\leq 4$ kVA 10...30 $> 4$ kVA 10...30	F 200 F 440 F 370 F 670 $I_{\Delta b}$ Typ A	F 390 P 690 $I_{\Delta b}$ Typ A	F 270 P 270 $I_{\Delta b}$ Typ A	F 220 F 804 $I_{\Delta b}$ Typ B



**Special support for the E-CHECK campaign by the electrical installers**

ABB is an official sponsor of this initiative by the ArGE media and lends extensive support both in its preparation and execution.



**Step 1: Test**

The electrical installation is tested in terms of its safety for people and materials assets Available as a component partner for discussing any questions regarding electrical equipment.

**Step 2: Advice**

Advice is given about technical safety and further topics such as saving energy, mod cons, lighting technology, modernisation and much more.

**Step 3: Sell**

Depending on the requirement, the sale and installation of products such as RCCBs, people-protectors, luminaires and lightning technology, lightning and overvoltage arresters, alarm signalling systems, EIB, ISDN, home communication systems and much more.



**ABB support for the E-CHECK from the beginning**

- Testing devices and training on how to use them
- Seminars/training courses and information
- Display systems for exhibitions
- Practical examples for using the E-CHECK for additional sales
- In the framework of the E-CHECK, there is a comprehensive product range available from alarm systems to EIB building system technology for requirements such as the protection of people and possessions





ABB STOTZ-KONTAKT, the Heidelberg-based company, develops, manufactures and sells highly modern, modular systems for electrical building installations. It offers complete installation ranges for a wide variety of applications:

## System pro M

### For classic installation applications

The modular **System pro M** for installation on DIN rails incorporates Europe's best-selling miniature circuit-breakers and residual-current-operated circuit-breakers as well as a complete range of built-in devices.

The system components have been designed with various functions and performance capabilities and are therefore to able optimally cover the complete range of applications in building installation:

- conventional domestic electrical installations
- industrial and commercial installations
- protection and switch functions
- checking and monitoring tasks
- control and time-dependent tasks etc.

## System pro M compact®

The extension of **System pro M** for targeted use in domestic electrical installations stands out due to its compact and easily comprehensible range of miniature circuit-breakers, residual-current-operated circuit-breakers and cross wiring tools as well as an optimised installation technology taking into account the special circumstances and requirements of domestic electrical installations.

## System Connect

This pioneering system concept contains seamlessly integrated system units – consisting of miniature circuit-breakers and residual-current-operated circuit-breakers as well as apparatus racks and flush-mounted wall boxes - was designed to suit the special requirements of domestic electrical installations.

The new plug-in connection technology for the devices and apparatus rack ensures quick and reliable installations: assembly, connection of the devices and cross wiring are carried out time-effectively in one single step. If need be, component sets may still be changed quickly and flexibly right until transfer takes place; devices may also be exchanged easily at some later date, and economically in terms of both money and time, at that.

The entire **System Connect** was developed by ABB STOTZ-KONTAKT and Striebel & John, within the framework of their successful system partnership.

## EIB-Installation Systems

### For intelligent Building Installation

Highly modern, programmable installation systems with bus technology based on the European EIB standard.

#### ABB i-bus® EIB

System with special 2-core bus cable, primarily for new buildings.

#### ABB Powernet EIB

System for retrofitting in existing buildings. Transfer of information via the existing network.

## Security Systems

### All-in-one Protection

Wide range of security systems and components: intruder and fire alarm systems, radio-controlled alarm systems, door locking system and signalling components.

During the century-long experience of the company, it has always contributed pioneering solutions to the safe application of electricity.

Today, ABB STOTZ-KONTAKT GmbH is an integral part of the ABB Group, a major player on the electrical and electronic markets.



#### ABB STOTZ-KONTAKT GmbH

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