Technical data

High performance Main Circuit Breakers S 700® Range

When connecting aluminium conductors, ensure that the contact surfaces of the conductors are cleaned, brushed and treated with grease.
Re-tighten contact terminals after 6 to 8 weeks' time.

Standard Terms for Delivery and Sale

For domestic business, the Standard Terms for Delivery of Products and Services of the Electrical Industry (ABB Form 2292) shall apply in connection with the Standard Sales Terms (ABB Form 2327) in their then applicable version. For foreign business, the Standard Terms for Delivery of Products and Services of the Electrical Industry (ABB Form 2293 German-English, or ABB Form 2294 German- French) shall apply in connection with the Standard Sales Terms (ABB-Form 2381 English) in their then applicable version.

Warranty

We assume warranty in accordance with the Standard Sales and Delivery Terms. Complaints shall be made in writing within eight days following receipt of the goods.

Technical information and illustrations are not binding and subject to change without notice.

High performance main circuit breakers S 700® range

Contents page

High performance main circuit breakers
S 700® range

SK 0029 B 98

- high selectivity
- switching capacity 25 kA
- disconnecting properties
- easy-to-use
- voltage-independent
- conforms to TAB 2000
- high energy limitation
- temperature-compensated

Overview

The S700 high performance main circuit breakers are selective main-line circuit breakers according to E DIN VDE 0645. Irrespective of the current rating of the S700, short-circuit selectivity of downstream MCBs is at least

$\frac{6000}{3} \Rightarrow$ 6 KA or $\frac{10\,000}{3} \Rightarrow$ 10 KA.

The short-circuit capacity of the S700 is 25 KA throughout the entire rated current range.

STOTZ high performance main circuit breakers are suitable to disconnect and isolate circuits.

Operation and position indication is such as for MCBs in the sub-distribution, so that also laymen are able to use the device.

High performance main circuit breakers S700 operate irrespective of voltages according to E DIN VDE 0645.

S700 is supplied with two different trip characteristics:

E = **E**xact trip characteristic

K = **K**raft (power) trip characteristic

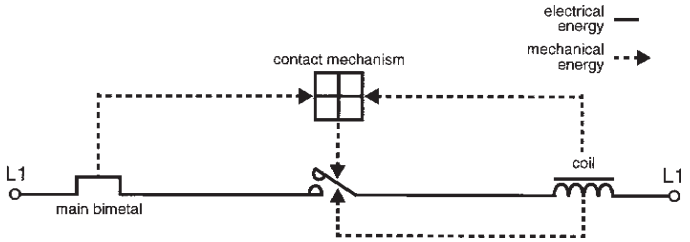
High performance main circuit breakers S700 fulfil all the requirements of selective main-line circuit breakers according to TAB 2000 (Technische Anschlussbedingungen, Technical Connection Requirements).

Function

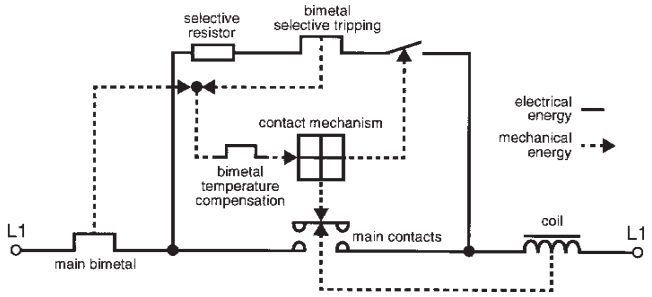
STOTZ high performance main circuit breakers S700 operate independent of voltages. Neither for switching it on or off nor for its protective function does it require auxiliary energy to be applied.

Its simple design ensures reliable protective functioning - irrespective of line faults or type of system.

Functioning of an MCB according to DIN VDE 0641



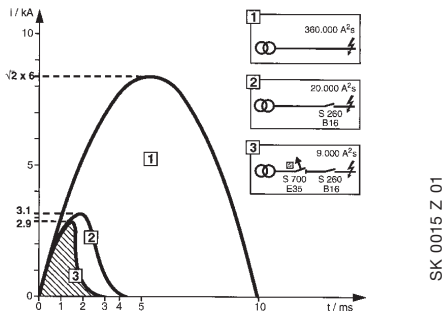
Functioning of a selective high performance main circuit breaker according to E DIN VDE 0645



Energy limitation

The design of the selective high performance main circuit breaker S700 is such that if a short circuit occurs it supports the cascaded downstream MCBs. The installation benefits from its energy-limiting effects and harmful repercussions on the supply system of the operator are minimized.

Energy-limiting properties



Application

High performance main circuit breakers of the S700 series are used as group or back-up miniature circuit breakers and replace low-voltage high-breaking-capacity fuses (l.v. h.b.c. fuses) in switchboards or distribution boards.

For more than 20 years, ABB-STOTZ-Kontakt has sold millions of these solutions, such as within the primary supply system at the meter mounting board according to TAB 2000.

Technical data:

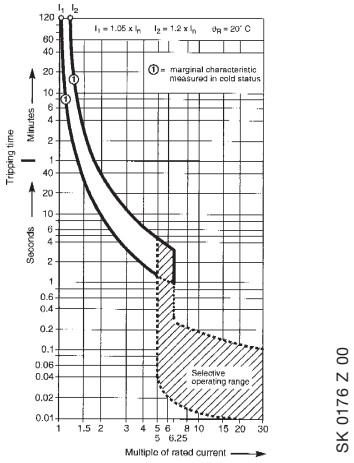
standards:	E DIN VDE 0645, DIN VDE 0660 Part 101
No. of poles:	1, 2, 3, 4
trip characteristics:	E, K
rated current I_n/I_e:	16 … 125 A (125A released soon)
rated voltage U_n/U_e:	single-pole 230/400 V AC multipole 400 V AC
rated switching capacity I_{cn}:	25 kA, at 230/400 V~
frequency:	50 … 60 Hz
insulation co-ordination:	
– overvoltage category	IV
– pollution degree	3
– surge withstand capability $U_{imp\ (1.2/50)}$	6 kV (at 2000 m) test voltage when new: 12.3 KV at N.N. when used: 9.8 KV at N.N.
– disconnection functionality	yes
– power-frequency test voltage	2 kV (50/60 Hz) 1 min
degree of protection (according to DIN VDE 0100):	IP 20, in the distribution board IP 40
mounting position:	any
fixing:	with accessories onto snap-on rails EN 50022, 35 mm or busbars, see pages 10/11.
connection:	saddle terminals at top and bottom. Suitable for connecting single-, multi- and finely stranded conductors from 2.5 mm^2 to 50 mm^2; multi-stranded up to 70 mm^2
storage temperature:	T_{max}: + 70 °C / + 158 °F, T_{min}: – 40 °C / - 40 °F
ambient temperature:	T_{max}: + 55 °C / +131 °F, T_{min}: – 25 °C / -13 °F
shock resistance:	30 g, at least 3 impacts, shock duration 11 ms
vibration resistance according to DIN IEC 68-2-6:	2 g, 20 frequency cycles 5 … 150 … 15 Hz
position indication according to IEC 73:	OFF = green, ON = red
weight:	see selection tables

Contact us for more technical data.

Tripping

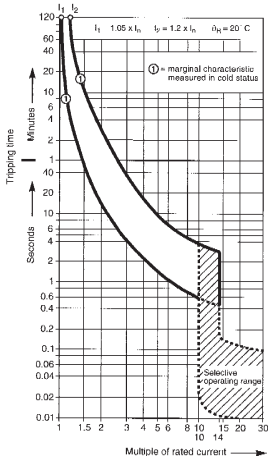
trip characteristic	rated current	delayed thermal tripping			short-time delay selective tripping		
		non-tripping current	tripping current	tripping time	delayed tripping	short-time delay tripping	tripping time
		I1	I2	t	I3	I4	t
E according to E DIN VDE 0645	10 to 100 A	1.05 x I_n		≥ 2 h	5 x I_n		0.05s < t < 5s (I_n ≤ 32 A) 0.05s < t < 10s (I_n > 32 A)
			1.2 x I_n	< 2 h		6.25 x I_n	0.01s < t < 0.3s
K according to DIN VDE 0660	16 to 50 A	1.05 x I_n		≥ 2 h	10 x In		0.05 s < t < 5s (I_n ≤ 32 A) 0.05 s < t < 10s (I_n > 32 A)
			1.2 x I_n	< 2 h		14 x I_n	0.01 s < t < 0.3s
	63 to 100 A	1.05 x I_n		≥ 2 h	8 x I_n		0.05 s < t < 10s
			1.2 x I_n	< 2 h		12 x I_n	0.01 s < t < 0.3s

Trip characteristics



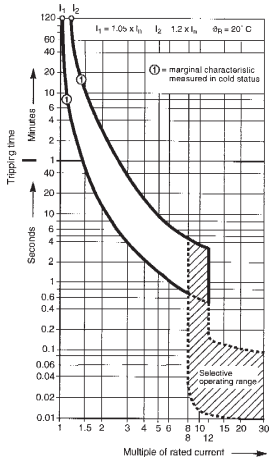
SK 0176 Z 00

trip characteristic E 10 to E 100 (E 125)



SK 0175 Z 00

trip characteristic K 16 to K 50

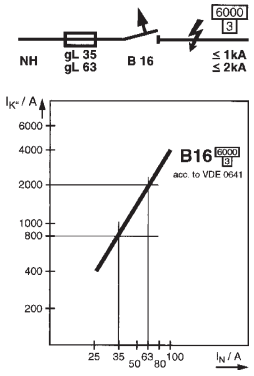


SK 0174 Z 00

trip characteristic K 63 to K 100 (K 125)

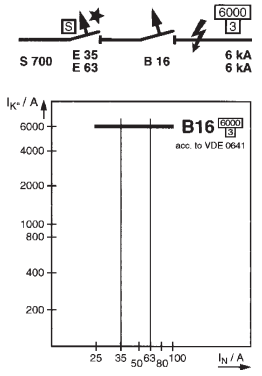
Selectivity

Selectivity limits fuse 35/63 A and MCB B 16

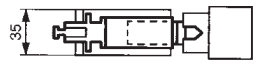


SK 0040 Z 01

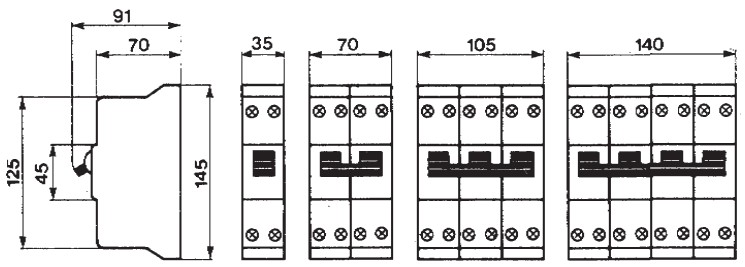
Selectivity high performance main circuit breaker 35/63 A and MCB B 16



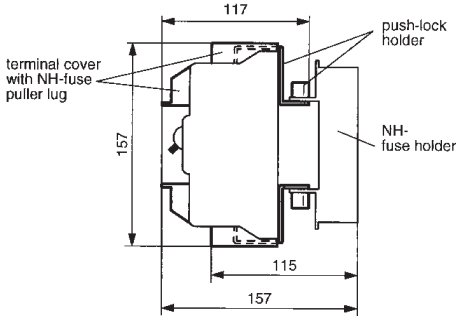
SK 0041 Z 01



Dimension drawings (measurements in mm)



SK 0129 Z 91



SK 0039 Z 01

High performance main circuit breakers
S 700® range

E selective

according to E DIN VDE 0645

25 000

SK 0029 B 98

SK 0011 B 95

SK 0001 B 95

SK 0012 B 95

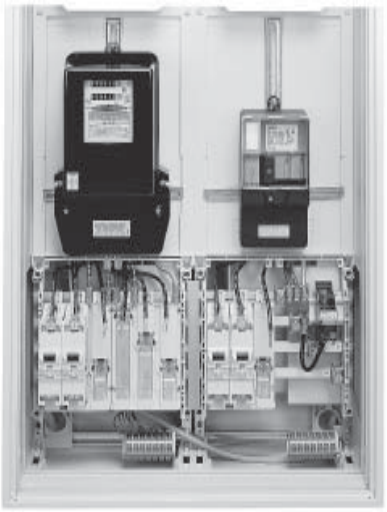
Selection table

No. of poles	rated current I_n A	**order details** **order code**	order code	**bbn 4012233 EAN**	**price** 1 piece **DM**	price group	pack. 1 pc. kg	pack unit pc.
1	10	**S 701-E 10 sel**	GH S701 5001 R0449	**52250 7**			0.55	3
	16	**S 701-E 16 sel**	GH S701 5001 R0469	**52270 5**				
	20	**S 701-E 20 sel**	GH S701 5001 R0489	**52290 3**				
	25	**S 701-E 25 sel**	GH S701 5001 R0519	**52310 8**				
	32	**S 701-E 32 sel**	GH S701 5001 R0529	**52320 7**				
	35	**S 701-E 35 sel**	GH S701 5001 R0539	**52340 5**				
	40	**S 701-E 40 sel**	GH S701 5001 R0559	**52360 3**				
	50	**S 701-E 50 sel**	GH S701 5001 R0579	**52380 1**				
	63	**S 701-E 63 sel**	GH S701 5001 R0599	**52400 6**				
	80	**S 701-E 80 sel**	GH S701 5001 R0629	**52420 4**				
	100	**S 701-E 100 sel**	GH S701 5001 R0639	**52440 2**				
2	10	**S 702-E 10 sel**	GH S702 5001 R0449	**79380 8**			1.10	2
	16	**S 702-E 16 sel**	GH S702 5001 R0469	**10520 0** ①				
	20	**S 702-E 20 sel**	GH S702 5001 R0489	**94900 7**				
	25	**S 702-E 25 sel**	GH S702 5001 R0519	**10400 5** ①				
	32	**S 702-E 32 sel**	GH S702 5001 R0529	**10540 8** ①				
	35	**S 702-E 35 sel**	GH S702 5001 R0539	**10530 9** ①				
	40	**S 702-E 40 sel**	GH S702 5001 R0559	**10550 7** ①				
	50	**S 702-E 50 sel**	GH S702 5001 R0579	**10560 6** ①				
	63	**S 702-E 63 sel**	GH S702 5001 R0599	**05200 9** ①				
	80	**S 702-E 80 sel**	GH S702 5001 R0629	**10960 4** ①				
	100	**S 702-E 100 sel**	GH S702 5001 R0639	**06250 3** ①				
3	16	**S 703-E 16 sel**	GH S703 5001 R0469	**86570 3**			1.65	1
	20	**S 703-E 20 sel**	GH S703 5001 R0489	**52630 7**				
	25	**S 703-E 25 sel**	GH S703 5001 R0519	**52650 5**				
	32	**S 703-E 32 sel**	GH S703 5001 R0529	**52660 4**				
	35	**S 703-E 35 sel**	GH S703 5001 R0539	**52680 2**				
	40	**S 703-E 40 sel**	GH S703 5001 R0559	**52700 7**				
	50	**S 703-E 50 sel**	GH S703 5001 R0579	**52720 5**				
	63	**S 703-E 63 sel**	GH S703 5001 R0599	**52740 3**				
	80	**S 703-E 80 sel**	GH S703 5001 R0629	**52760 1**				
	100	**S 703-E 100 sel**	GH S703 5001 R0639	**52780 9**				
4	16	**S 704-E 16 sel**	GH S704 5001 R0469	**11060 0** ①			2.20	1
	20	**S 704-E 20 sel**	GH S704 5001 R0489	**11070 9** ①				
	25	**S 704-E 25 sel**	GH S704 5001 R0519	**10410 4** ①				
	32	**S 704-E 32 sel**	GH S704 5001 R0529	**11080 8** ①				
	35	**S 704-E 35 sel**	GH S704 5001 R0539	**10420 3** ①				
	40	**S 704-E 40 sel**	GH S704 5001 R0559	**11090 7** ①				
	50	**S 704-E 50 sel**	GH S704 5001 R0579	**11100 3** ①				
	63	**S 704-E 63 sel**	GH S704 5001 R0599	**11110 2** ①				
	80	**S 704-E 80 sel**	GH S704 5001 R0629	**11120 1** ①				
	100	**S 704-E 100 sel**	GH S704 5001 R0639	**06260 2** ①				

① **bbn No.: 40 16779**

The S 700 high performance main circuit breakers comply with construction size 5, according to DIN 43 880, in connection with adaptors for mounting rails S 700 BT 2 and BT 3 (page 10).
They comply with construction size 6 in connection with adaptors for busbars S 700 SA, S 700 SAK and S 700 SA 1 (page 11).

Use of S 700 as back-up fuse at the meter mounting board



SK 0083 B 96

SK 0070 B 96

High performance main circuit breakers
S 700® range

K selective

according to E DIN VDE 0645

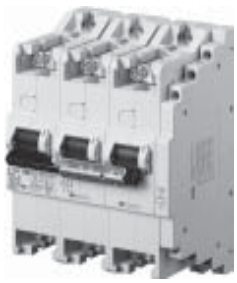
25 000

SK 0009 B 90

SK 0160 B 00

SK 0002 B 95

SK 0162 B 00



SK 0097 B 00

Selection table

No. of poles	rated current I_n A	order details type code	order code	bbn 40 12233 EAN	price 1 piece DM	price group	w'ght 1 pc. kg	pack. unit pc.
1	16	**S 701-K 16 sel**	GH S701 5001 R0467	**52260 6**			0.55	3
	20	**S 701-K 20 sel**	GH S701 5001 R0487	**52280 4**				
	25	**S 701-K 25 sel**	GH S701 5001 R0517	**52300 9**				
	35	**S 701-K 35 sel**	GH S701 5001 R0537	**52330 6**				
	40	**S 701-K 40 sel**	GH S701 5001 R0557	**52350 4**				
	50	**S 701-K 50 sel**	GH S701 5001 R0577	**52370 2**				
	63	**S 701-K 63 sel**	GH S701 5001 R0597	**52390 0**				
	80	**S 701-K 80 sel**	GH S701 5001 R0627	**52410 5**				
	100	**S 701-K 100 sel**	GH S701 5001 R0637	**52430 3**				
2	16	**S 702-K 16 sel**	GH S702 5001 R0467	**10980 2** ①			1.10	2
	20	**S 702-K 20 sel**	GH S702 5001 R0487	**10970 3** ①				
	25	**S 702-K 25 sel**	GH S702 5001 R0517	**10990 1** ①				
	35	**S 702-K 35 sel**	GH S702 5001 R0537	**11000 6** ①				
	40	**S 702-K 40 sel**	GH S702 5001 R0557	**11010 5** ①				
	50	**S 702-K 50 sel**	GH S702 5001 R0577	**11020 4** ①				
	63	**S 702-K 63 sel**	GH S702 5001 R0597	**11030 3** ①				
	80	**S 702-K 80 sel**	GH S702 5001 R0627	**11040 2** ①				
	100	**S 702-K 100 sel**	GH S702 5001 R0637	**11050 1** ①				
3	16	**S 703-K 16 sel**	GH S703 5001 R0467	**52610 9**			1.75	1
	20	**S 703-K 20 sel**	GH S703 5001 R0487	**52620 8**				
	25	**S 703-K 25 sel**	GH S703 5001 R0517	**52640 6**				
	35	**S 703-K 35 sel**	GH S703 5001 R0537	**52670 3**				
	40	**S 703-K 40 sel**	GH S703 5001 R0557	**52690 1**				
	50	**S 703-K 50 sel**	GH S703 5001 R0577	**52710 6**				
	63	**S 703-K 63 sel**	GH S703 5001 R0597	**52730 4**				
	80	**S 703-K 80 sel**	GH S703 5001 R0627	**52750 2**				
	100	**S 703-K 100 sel**	GH S703 5001 R0637	**52770 0**				
4	16	**S 704-K 16 sel**	GH S704 5001 R0467	**11130 0** ①			2.30	1
	20	**S 704-K 20 sel**	GH S704 5001 R0487	**11140 9** ①				
	25	**S 704-K 25 sel**	GH S704 5001 R0517	**11150 8** ①				
	35	**S 704-K 35 sel**	GH S704 5001 R0537	**11160 7** ①				
	40	**S 704-K 40 sel**	GH S704 5001 R0557	**11170 6** ①				
	50	**S 704-K 50 sel**	GH S704 5001 R0577	**96520 5**				
	63	**S 704-K 63 sel**	GH S704 5001 R0597	**95550 3**				
	80	**S 704-K 80 sel**	GH S704 5001 R0627	**11180 5** ①				
	100	**S 704-K 100 sel**	GH S704 5001 R0637	**11190 4** ①				

① **bbn-No. 40 16779**

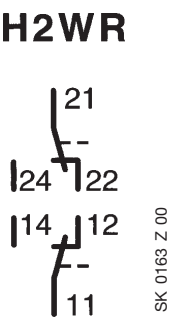
Model with fitted auxiliary switch (2 two-way switches)

auxiliary switch type code	order code	surcharge in DM
S 70① - K② + HS -H 2WR	GH S701 0316 R000 ③	

① No. of poles, ② rated current, ③ R No. of devices without auxiliary switch

The surcharge refers to the corresponding device without auxiliary switch.

example: GH S703 0316 R0597
= S 703 K63 + HS - H 2WR
GH S703 5001 R0597
= S 703 K63 without auxiliary switch



SK 0163 Z 00


SK 0165 B 91

S 700 BT 2


SK 0071 B 96

S 700 BT 3


SK 0166 B 91

S 700 KA 1


SK 0167 B 91


SK 0174 B 91

S 700 KA 2/3 **S 700 KA 4**


SK 0072 B 96

S 700 KA 5


SK 0169 B 91


SK 0170 B 91

S 700 SPA **S 700 SPB 1**
S 700 SPB 2


SK 0073 B 96

S 700 SPB 3

The large range of accessories allows for optimum installations for the most various applications.

Selection table accessories

model	**order details** type code	order code	**bbn 40 12233 EAN**	**price** 1 piece **DM**	price group	w'ght 1 pc. kg	pack unit pc.
Mounting board for high performance main circuit breakers for fixing onto **two** mounting rails 35 mm according to DIN EN 50 022 (adjustable to distances of 112.5 and 125 mm respectively)							
required for: S 701: 1 piece S 703: 2 pieces	**S 700 BT 2**	GH S700 1902 R0002	**52040 4**			0.07	10
Mounting board for high performance main circuit breakers for optional fixing onto **one** or **two** mounting rails 35 mm according to DIN EN 50 022 (rail-to-rail clearance 125 mm in the case of two mounting rails)							
required for: S 701: 1 piece S 703: 2 pieces	**S 700 BT 3**	GH S700 1902 R0003	**28440 0** ①				10
Terminal covers to cover terminals within the overall dimensions (2 pieces required for each one pole)							
2 pc. / pole required	**S 700 KA 1**	GH S700 1903 R0001	**52050 3**			0.001	6
to cover terminals and cutouts at meter mounting boards with 112.5 mm rail-to-rail clearance							
2 pc. / pole required	**S 700 KA 2**	GH S700 1907 R0001	**52090 9**			0.01	6
to cover terminals and cutouts at meter mounting boards with 125 mm rail-to-rail clearance							
2 pc. / pole required	**S 700 KA 3**	GH S700 1908 R0001	**52100 5**			0.01	6
Terminal cover with entries for cables up to 50 mm². sealable, degree of protection: IP 30 (2 pieces required for each one pole)							
2 pc. / pole required	**S 700 KA 4**	GH S700 1913 R0001	**52140 1**			0.015	6
Terminal cover to cover terminals within the overall dimensions, has openings (BGV A2) for screwdrivers to connect cables (2 pieces required for each one pole)							
2 pc. / pole required	**S 700 KA 5**	GH S700 1903 R0005	**24300 1** ①			0.003	6
Switch-off prevention cap							
for 1-pole devices	**S 700 SPA**	GH S700 1905 R0001	**52060 2**			0.001	10
Operation prevention cap							
transparent	**S 700 SPB 1**	GH S700 1906 R0001	**52070 1**			0.002	10
grey	**S 700 SPB 2**	GH S700 1906 R0002	**52080 0**			0.002	10
Operation prevention cap for optional locking with utility company key and/or padlock/screw							
transparent	**S 700 SPB 3**	GH S700 1918 R0001	**28450 9** ①			0.012	3

① **bbb-No.: 40 16779**


SK 0065 B 96

S 700 SA


SK 0074 B 96

S 700 SAK


SK 0075 B 96

S 700 SA 1


SK 0102 B 93

S 701 with l.v. h.b.c. push-lock terminal
S 700-NH 00 and terminal cover S 700-AB 00


VSM 221.90

SKL-N6

S 700 SPE SK 0079 Z 94

Selection table accessories

model	order details type code	product No.	bbn 40 12233 EAN	price 1 piece DM	price group	w'ght 1 pc. kg	pack. unit pc.

Busbar adaptor

Busbar adaptor (for 3 S 701 or 1 S 703)
rail-to-rail clearance 40 mm, Cu number 0.230

	S 700 SA	GH S700 1102 R0001	**52000 8**			0.35	1

Busbar adaptor with terminals 50 mm² for incoming supply
(for 3 S 701 or 1 S 703)
rail-to-rail clearance 40 mm, Cu number 0.570

	S 700 SAK	GH S700 1103 R0001	**52020 6**			0.65	1

Busbar adaptor single-pole
rail-to-rail clearance 40 mm, adjustable for connection to L1 or L2 or L3, CU number 0.230

	S 700 SA 1	GH S700 1917 R0001	**25430 4** ①			0.105	1

L.v. h.b.c. push-lock terminal
connecting a single-pole high performance main circuit breaker S 701 to a size 00 n l.v. h.b.c. fuse holder
1 set includes 2 l.v. h.b.c. push-lock holders and 2 terminal covers with integrated l.v. h.b.c. puller lug.

required for S 701 1 set = 2 pieces	**S 700-NH 00**	GH S700 1911 R0001	**52120 3**			0.05	1 set

Terminal cover with integrated l.v. h.b.c. puller lug

required for S 701 = 2 pieces	**S 700-AB 00**	GH S700 1912 R0001	**52130 2**			0.008	2pieces

Busbar terminals for Cu 12 x 5

lead cross section up to 10 mm²	**SKL-N6**	GH L290 1200 R0006	**00450 3** ①				1

Lock preventing unauthorized switching, hasp diameter 3 mm

for 3-pole devices	**S 700 SPE**	GH S700 1909 R0001	**52110 4**			0.002	10
padlock with 2 keys	**SA 2**	GJ F110 1903 R0002	**58770 4**			0.02	10

Label carrier with protection cap and labels
1 package = 50 label holders, 50 transparent covers,
60 non-adhesive and 75 self-adhesive labels

	BA 50	FP TN47 2625 R0001	**01498 7** ②				1 set

① **bbn-No.: 40 16779**
② **bbn-No.: 40 13614**

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.

Pub. No. G SK 04008 01 S0201

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