

Selective Main Circuit-Breakers

S 750 and S 750 DR series acc. to DIN VDE 0641-21

Selective main circuit-breakers of the S 750 and S 750 DR series are SMCBs according to DIN VDE 0641-21 with voltage-independent Operating principle. This means that they do not rely on a control circuit to make or break contact (SHU) and are therefore particularly suitable for use in energy distribution-systems with maximum availability requirements. Two mounting variants are available: S 750 for bus bars and S 750 DR for DIN rail mounting.



- High short-circuit breaking capability of 25 kA over the complete rated current range
- High energy-limiting capacity by current-limiting selectivity
- Suitable for selective overcurrent protection at the meter mounting board and in general-purpose electric main distribution boards
- Suitable to disconnect and isolate electric circuits
- Voltage-independent function (no connection to neutral)
- Applicable in installation acc. to:
Overvoltage category I ... IV,
pollution degree 1 ... 3
- S 750 DR version for DIN rail mounting
- S 750 version for mounting on busbar systems without using any tools, with screwless connection on load side and additional cage terminals for the supply to the busbar system
- Isolation function according to IEC 60364-5-53
- Additional contact position indicator
RED = ON ; GREEN = OFF
- Lockable and sealable
- For operation by ordinary people

Fields of application

- As isolating device in meter boards for downstream customer's installation
- In main distribution boards or switchgear as a selective group or back-up protection device, especially where a high degree of continuity of supply is required, e.g. for installations related to "Safety Services" (IEC 60346-5-56), "Medical Locations" (IEC 60364-7-710) etc.
- For general applications with tripping characteristic E
- For the protection of areas where high current peaks (e.g. start-up currents) occur during operation, using circuit-breakers with tripping characteristic K (S 750 DR)

Purpose

- Ensure power supply capability over a large temperature range
- Protect wires and cables in case of operational overload or short-circuit
- Additional limitation of let-through current and let-through energy in case of short-circuit tripping in final circuit
- Disconnection and isolation of the system, also by ordinary people
- Special selectivity with respect to downstream circuit breakers and upstream fuses
- Ensure a high availability of the electrical power supply



Selective Main Circuit-Breaker series S 750 and S 750 DR Function

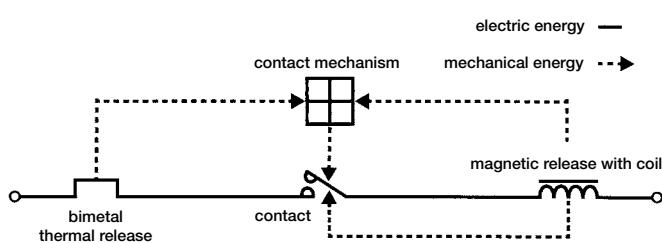
ABB SMCB operate according to a voltage-independent principle. They do not require an auxiliary source, neither for making / breaking contact nor for the protective function. For overload tripping, a thermostatic bimetal is used. As usual for circuit-breakers, it is necessary to separate the main contacts in a time less than 1ms by using a short-circuit "hammer trip" solenoid to ensure effective short-circuit limitation. When the downstream protection device has tripped because of a short-circuit, the contact tips reclose automatically through a simple spring-type system without requiring auxiliary energy.

If a short-circuit occurs between the S 750 (DR) and the downstream circuit-breaker, another bimetal release enables short-time delayed tripping. Both the selective release and the

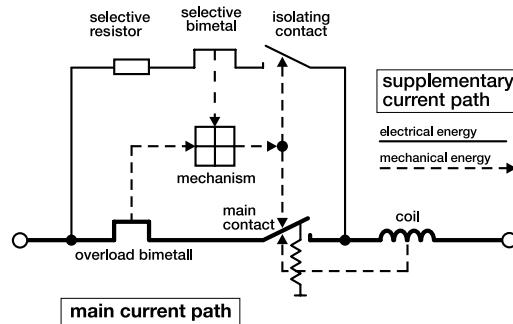
overload release trip the mechanism and ensure that the contact tips remain in the open position enabling isolating. The current is limited and the arc is quenched as in the case of standard circuit-breakers by means of quick contact opening by a "hammer trip" solenoid and quick build-up of the arc voltage in the quenching chamber.

This operating principle achieves a particularly high selective behaviour – **the current-limiting selectivity**. In case of short-circuit in final circuits, the S 750 (DR) supports the downstream circuit breaker and limits the energy and thus minimizes the impact on the whole installation and the feeding supply network. This selective behaviour of the S 750 (DR) offers major advantages compared to fuse-based technologies.

Operating principle of a circuit-breaker



Operating principle of the selective main circuit breaker S 750 (DR)

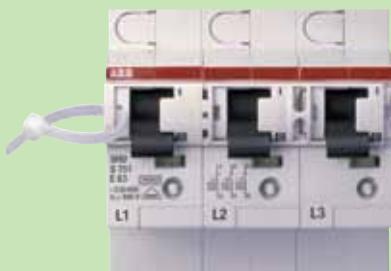


Locking

The S 750 (DR) is provided with an integrated locking tab which makes it possible to block all poles simultaneously. The integrated locking tab locks the circuit-breaker in ON or OFF position and can be additionally protected by a padlock, wire seal or cable tie. When locked in ON position, the

protective function is maintained in case of a fault: The blocked switch handle still permits the tripping of the mechanism and opening of the contacts in case of overload or short-circuit (trip-free mechanism). The indicator shows "green" also in case of a fault with ON position locked – giving you the certainty that power is switched off.

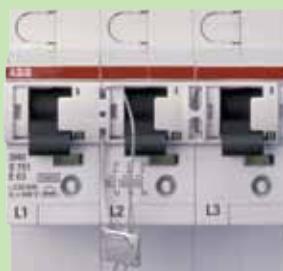
Protecting the locked position with a cable tie



Protecting the locked position with a padlock



Protecting the locked position with a wire seal



Selective Main Circuit-Breaker series S 750 and S 750 DR

Technical data

	S 750 DR	S 750
General Data		
Standards	DIN VDE 0641-21	DIN VDE 0641-21
Poles	1-, 2-, 3-, 4-pole, 3 x 1-pole	1-pole, 3 x 1-pole
Rated current I_n	A	16...63 A
Rated frequency f	Hz	50/60 Hz
DIN VDE 0641-21		
Tripping characteristics	$E_{\text{selective}}, K_{\text{selective}}$	$E_{\text{selective}}$
Rated operational voltage U_n	V	230/400 V AC
Rated breaking capacity I_{cn}	kA	25 kA
Rated insulation voltage U_i	V	690 V AC
Selectivity limit current I_{s1}	kA	rated breaking capacity of downstream breaker (min.) – see selectivity tables
Ovvoltage category	IV	IV
Pollution degree	3	3
Rated impulse withstand voltage U_{imp}	kV	6 kV
Impulse withstand voltage acc. to IEC 60364-5-53 (at 2000m above sea level)	kV	8 kV
Impulse withstand test voltage (1.2 / 50 μ s)	kV	9.8 kV
Isolation function acc. to IEC 60364-53	yes	yes
Dielectric te	kV	2 kV (50/60 Hz, 1 min.)
Mechanical Data		
Contact position indication	via toggle (I-ON / O-OFF), via trip indicator (red-ON / green-OFF)	
IP protection degree acc. to IEC / EN 60529	IP40 (when protected by internal cabinet cover)	
Shock resistance acc. to IEC / EN 60068-2-27	25 g, min. 3 shocks, duration 13 ms	
Vibration resistance acc. to IEC/EN 60 068-2-6	2 g, 20 cycles 5...150...5 Hz	2 g, 20 cycles 5...150...5 Hz
Environmental conditions (damp heat cyclic) acc. to IEC / EN 60068-2-30	°C / RH	28 cycles: 55 °C / 90...96% – 25 °C / 95...100%
Ambient temperature	°C	-25 ... +55 °C
Storage temperature	°C	-40 ... +70 °C
Installation		
Wire connection (Top)	frame terminal to connect solid and rigid stranded conductors incl. flexible conductors 2.5...50 mm ²	
Wire connection (Bottom)	frame terminal to connect solid and rigid stranded conductors incl. flexible conductors 2.5...50 mm ²	
Max. torque	Nm	2,5 ... 3 Nm
Recommended Screwdriver	slotted: 1 x 5.5, Pozidrive: PZ 2	
Mounting	DIN rail 35 mm acc. to EN 60715	
Locking	integrated blocking device, additional locking by 3 mm padlock, 1mm seal wire or cable binder	
Mounting position	any	
Supply	any	
Dimensions and weight		
Size acc. to DIN 43880	3	6
Width	27 mm per pole	
Pole dimensions (H x T x B)	mm	see drawings
Pole weight	g	see ordering tables
Accessories	3 mm padlock	

Selective Main Circuit-Breaker series S 750 and S 750 DR

Technical data

Tripping behavior

tripping characteristic acc. to DIN VDE 0641-21	reference ambient temperature	delayed overload tripping			short-time delayed tripping current	short-time delayed tripping current	short-circuit tripping tripping time
		conventional non-tripping current	conventional tripping current	tripping time			
	T_{ref} ¹	I_{nt}	I_t	t	I_{tv}	I_{tk}	t
$E_{selective}$	30 °C	1.05 × I_n		≥ 2 h	5 × I_n		0.05 s < t < 5 s ($I_n \leq 32$ A) 0.05 s < t < 10 s ($I_n > 32$ A)
			1.2 × I_n	< 2 h		6.25 × I_n	0.01 s < t < 0.3 s
$K_{selective}$	20 °C	1.05 × I_n		≥ 2 h	8 × I_n		0.05 s < t < 15 s
			1.2 × I_n	< 2 h		12 × I_n	0.01 s < t < 0.3 s

¹ Reference ambient temperature 30 °C (in the case of higher ambient temperatures, the current values are reduced by ca. 5 % per each 10 K)

Deviating ambient temperature

tripping characteristic acc. to DIN VDE 0641-21	Rated current I_n /A	Maximum operating current at ambient temperature T							
		-20 °C	-10 °C	0 °C	+10 °C	+20 °C	+30 °C	+40 °C	+50 °C
$E_{selective}$	16	19.8	19.1	18.4	17.6	16.8	16.0	15.1	14.2
	20	24.7	23.8	22.9	22.0	21.0	20.0	18.9	17.8
	25	30.9	29.8	28.7	27.5	26.3	25.0	23.6	22.2
	35	43.2	41.7	40.1	38.5	36.8	35.0	33.1	31.1
	40	49.4	47.7	45.9	44.0	42.1	40.0	37.8	35.5
	50	61.8	59.6	57.4	55.0	52.6	50.0	47.3	44.4
	63	77.8	75.1	72.3	69.3	66.2	63.0	59.6	56.0
$K_{selective}$	16	19.1	18.4	17.6	16.8	16.0	16.0	15.1	14.2
	20	23.8	22.9	22.0	21.0	20.0	20.0	18.9	17.8
	25	29.8	28.7	27.5	26.3	25.0	25.0	23.6	22.2
	35	41.7	40.1	38.5	36.8	35.0	35.0	33.1	31.1
	40	47.7	45.9	44.0	42.1	40.0	40.0	37.8	35.5
	50	59.6	57.4	55.0	52.6	50.0	50.0	47.3	44.4
	63	75.1	72.3	69.3	66.2	63.0	63.0	59.6	56.0

Internal resistance and power loss per pole

Rated current I_n /A	S 750 E		S 750 DR E		S 750 DR K	
	Internal resistance ¹ R_i /mΩ	Power loss ² P_v /W	Internal resistance ¹ R_i /mΩ	Power loss ² P_v /W	Internal resistance ¹ R_i /mΩ	Power loss ² P_v /W
16	15.3	4.5	15.3	4.1	14.5	3.9
20	11.3	6.0	11.3	5.4	10.7	5.1
25	8.7	6.5	8.7	5.9	8.3	5.5
35	4.5	6.9	4.5	6.3	4.3	6.2
40	3.8	6.4	3.4	6.1	3.2	5.8
50	3.5	8.0	2.9	7.6	2.8	7.2
63	2.3	9.7	2.1	8.7	2.1	8.7

¹ in cold state

² at rated current

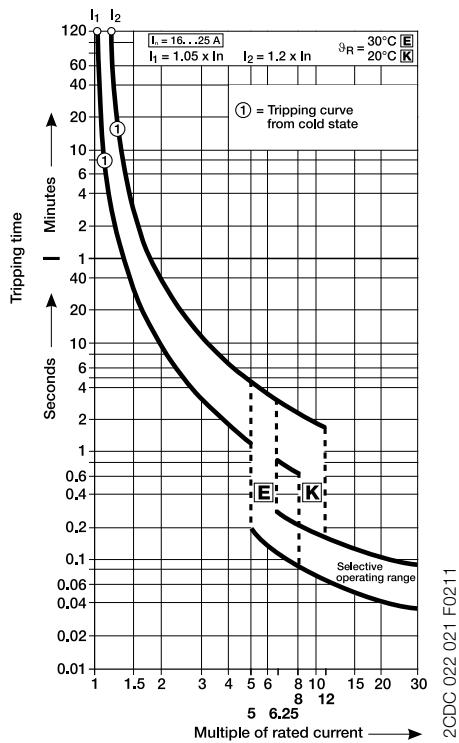
Back-up protection

Main circuit breakers of the S 750(DR) series are capable of switching off short-circuit currents of up to 25 kA automati-cally in networks with a rated voltage of 230 / 400 V. Back-up

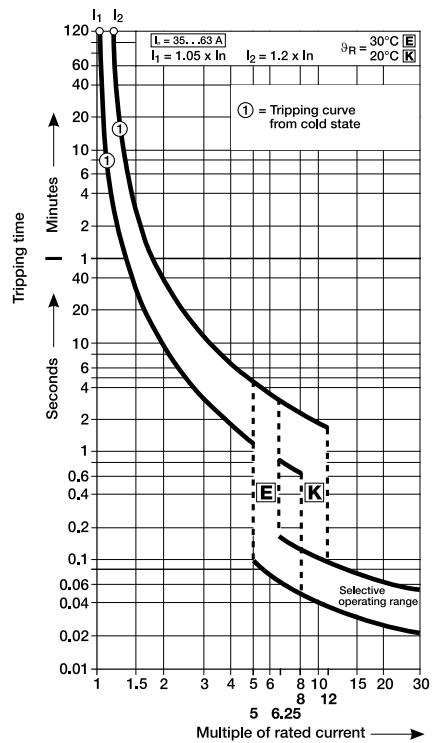
protection is only necessary if the prospective short-circuit current may exceed 25 kA prosp. at the installation point. Further information on back-up protection is available on request.

Selective Main Circuit-Breaker series S750 and S750 DR Tripping characteristics

trip curve 16 ... 25 A



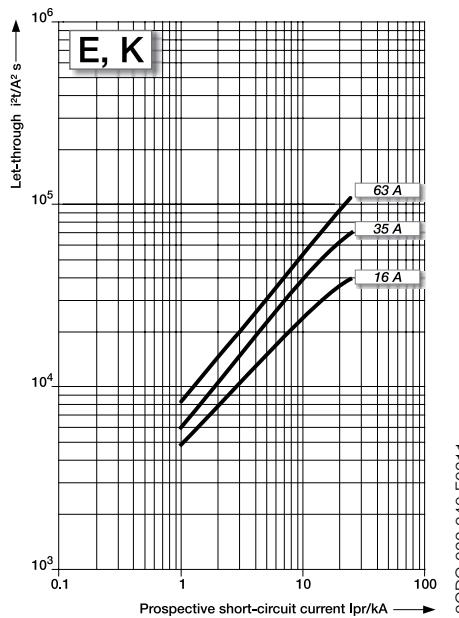
trip curve 35 ... 63 A



2CDC 022 021 F0211

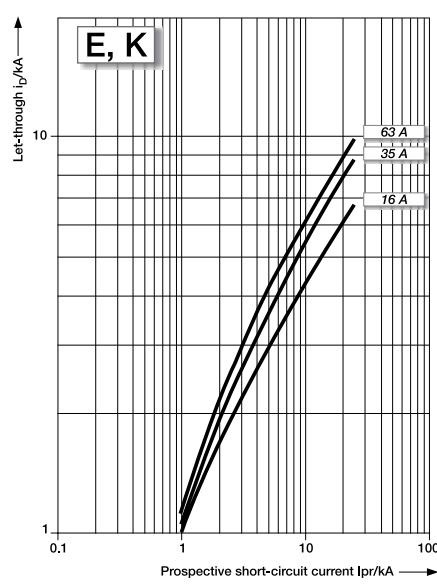
2CDC 022 022 F0211

diagram of let-through values I^2t 16...63 A



2CDC 022 040 F0211

diagram of let-through values I_D 16...63 A



2CDC 022 042 F0211

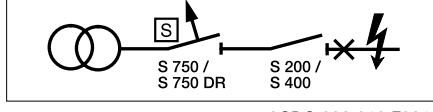
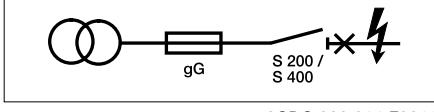
Selective Main Circuit-Breaker series S 750 and S 750 DR

Short-circuit selectivity

When ABB miniature circuit-breaker are used in combination with the S 750(DR), higher short-circuit currents can be disconnected than are indicated as permissible rated switching capacity of device. Considering the values given in the table, the

S 750 (DR) operates selectively with respect to the combination with the final device. If other mcbs are used selectivity for 6 kA and 10 kA devices is available up to the rated switching capacity of the downstream device.

Short-circuit discrimination of S 750 (DR) with respect to downstream MCB S 200/S 400 compared to fuse protection¹

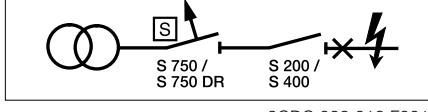
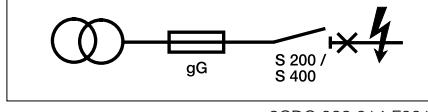
MCBs				2CDC 022 013 F0011			2CDC 022 014 F0011									
		Char.	I _{cn} [kA]	S 750/S 750 DR						fuse						
final circuit:	I _{cn} [kA]			E/K						gG						
				25												
S 200 S 400 E	C	6	≤2	10	10	10	10	10	10	1	1.2	4	6	6	6	
			3	10	10	10	10	10	10	0.3	0.7	1.2	4.6	6	6	
			4	10	10	10	10	10	10	0.3	0.6	0.9	2.8	6	6	
			6	10	10	10	10	10	10	0.2	0.4	0.7	1.5	3	5.5	
	B, C		8	10	10	10	10	10	10	0.2	0.4	0.7	1.4	2.8	4.5	
			10	10	10	10	10	10	10	0.2	0.4	0.6	1.2	2	3.3	
	B, C		13	10	10	10	10	10	10	0.6	1.2	2	3.3			
			16	10	10	10	10	10	10	0.6	1.1	1.8	2.8			
			20		10	10	10	10	10	1	1.6	2.4				
			25		10	10	10	10	10	1.6	2.4					
			32			10	10	10		1.3	2.2					
			40				10	10		2.2						
S 200	K	6			S 750/S 750 DR						fuse					
					E/K						gG					
					25											
			≤2	10	10	10	10	10	10	0.3	1.2	4	6	6	6	
			3	10	10	10	10	10	10	0.3	0.7	1	3.2	6	6	
			4	10	10	10	10	10	10	0.3	0.6	0.8	2.1	5.3	6	
			6	10	10	10	10	10	10	0.2	0.4	0.7	1.3	2.8	6	
			8	10	10	10	10	10	10	0.2	0.4	0.6	1.1	2	3.5	
			10	10	10	10	10	10	10	0.2	0.3	0.5	0.9	1.5	2.3	
			16		10	10	10	10	10	0.4	0.8	1.3	2.1			
			20		10	10	10	10	10	0.8	1.3	2.1				
			25		10	10	10	10	10	1.1	1.7					
			32			10	10	10		1.1	1.7					
			40				10	10		1.3						

¹ The selectivity limit current I_{s1} results from the let-through I²t-value of S 200/S 400 and the pre-arcing (melting) I²t-value of a fuse acc. to IEC/EN 60269

Selective Main Circuit-Breaker series S 750 und S 750 DR

Short-circuit selectivity

Short-circuit discrimination of S 750 (DR) with respect to downstream MCB S 200 / S 400 compared to fuse protection¹

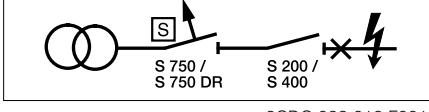
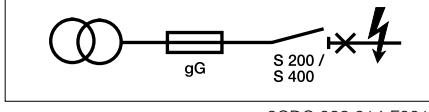
MCBs			2CDC 022 013 F0011		2CDC 022 014 F0011									
final circuit:	supply side:	S 750 / S 750 DR						fuse						
	Char.	I_{cn} [kA]	E/K						gG					
			25						25					
S 200	Z	6	≤ 2	10	10	10	10	10	0.5	2	6	6	6	6
			3	10	10	10	10	10	0.3	0.7	1.2	6	6	6
			4	10	10	10	10	10	0.3	0.6	1.1	4.2	6	6
			6	10	10	10	10	10	0.2	0.4	0.8	2	5.2	6
			8	10	10	10	10	10	0.2	0.4	0.6	1.3	3.1	6
			10	10	10	10	10	10	0.3	0.5	1	2	3.6	
			16		10	10	10	10		0.5	0.9	1.5	2.8	
			20			10	10	10			0.7	1.2	2.1	
			25				10	10				1.1	1.8	
			32					10				1.1	1.8	
			40						10				1.8	
S 200 M S 400 M	B, C	10	≤ 2	15	15	15	15	15	1	1.2	4	10	10	10
			3	15	15	15	15	15	0.3	0.7	1.2	4.6	10	10
			4	15	15	15	15	15	0.3	0.6	0.9	2.8	10	10
			6	15	15	15	15	15	0.2	0.5	0.8	1.5	3	7
			8	15	15	15	15	15	0.2	0.4	0.7	1.4	2.8	4.5
			10	15	15	15	15	15	0.2	0.4	0.6	1.2	2	3.3
			13	15	15	15	15	15		0.6	1.2	2	3.3	
			16		15	15	15	15		0.6	1.1	1.8	2.8	
			20			15	15	15			1	1.6	2.4	
			25				15	15				1.6	2.4	
			32					15				1.3	2.2	
			40						15				2.2	
S 200 M S 400 M	K	10	≤ 2	10	10	10	10	10	0.3	1.2	4	10	10	10
			3	10	10	10	10	10	0.3	0.7	1	3.2	10	10
			4	10	10	10	10	10	0.3	0.6	0.8	2.1	5.3	10
			6	10	10	10	10	10	0.2	0.4	0.7	1.3	2.8	6
			8	10	10	10	10	10	0.2	0.4	0.6	1.1	2	3.5
			10	10	10	10	10	10	0.2	0.3	0.5	0.9	1.5	2.3
			16		10	10	10	10		0.4	0.8	1.3	2.1	
			20			10	10	10			0.8	1.3	2.1	
			25				10	10				1.1	1.7	
			32					10				1.1	1.7	
			40						10				1.3	

¹ The selectivity limit current I_{sl} results from the let-through I^2t -value of S 200 / S 400 and the pre-arcning (melting) I^2t -value of a fuse acc. to IEC / EN 60269

Selective Main Circuit-Breaker series S 750 and S 750 DR

Short-circuit selectivity

Short-circuit discrimination of S 750 (DR) with respect to downstream MCB S 200/S 400 compared to fuse protection¹

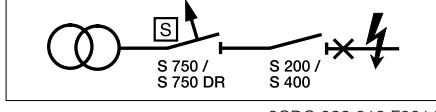
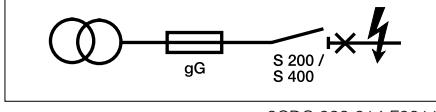
MCBs		 2CDC 022 013 F0011		 2CDC 022 014 F0011												
		E/K						gG								
final circuit:	Char.	I _{cn} [kA]	E/K						gG							
		I _n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63	
S 200 M	Z	10	≤2	10	10	10	10	10	10	0.5	2	10	10	10	10	
			3	10	10	10	10	10	10	0.3	0.7	1.2	7	10	10	
			4	10	10	10	10	10	10	0.3	0.6	1.1	4.2	10	10	
			6	10	10	10	10	10	10	0.2	0.4	0.8	2	5.2	10	
			8	10	10	10	10	10	10	0.2	0.4	0.6	1.3	3.1	8	
			10	10	10	10	10	10	10	0.3	0.5	1	2	3.6		
			16		10	10	10	10	10		0.5	0.9	1.5	2.8		
			20			10	10	10	10			0.7	1.2	2.1		
			25				10	10	10				1.1	1.8		
			32					10	10				1.1	1.8		
			40						10					1.8		
S 200 P	B	25	6	25	25	25	25	25	25	0.2	0.4	0.6	1.2	2.6	6	
			10	25	25	25	25	25	25	0.2	0.3	0.5	1	1.8	3.1	
			13	25	25	25	25	25	25		0.5	1	1.7	3		
			16		25	25	25	25	25		0.5	0.9	1.6	3		
			20			25	25	25	25		0.9	1.4	2.3			
			25				25	25	25			1.4	2.3			
			32					15	15	15			1.2	2.1		
			40						15	15				2.1		
S 200 P	C	25	supply side:	S 750 / S 750 DR						fuse						
			Char.	E/K						gG						
			I _{cn} [kA]	25						gG						
			I _n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
			≤2	25	25	25	25	25	25	25	1	2	25	25	25	25
			3	25	25	25	25	25	25	25	0.3	0.8	1.5	6	10	10
			4	25	25	25	25	25	25	25	0.3	0.6	1	3.3	6	10
			6	25	25	25	25	25	25	25	0.2	0.4	0.6	1.2	2.6	6
			8	25	25	25	25	25	25	25	0.2	0.4	0.6	1.1	2.4	4
			10	25	25	25	25	25	25	25	0.2	0.3	0.5	1	1.8	3.1
			13	25	25	25	25	25	25	25		0.5	1	1.7	3	
			16		25	25	25	25	25	25		0.5	0.9	1.6	3	
			20			25	25	25	25	25		0.9	1.4	2.3		
			25				25	25	25	25			1.4	2.3		
			32					15	15	15			1.2	2.1		
			40						15	15				2.1		

¹ The selectivity limit current I_{sl} results from the let-through I²t-value of S 200/S 400 and the pre-arcing (melting) I²t-value of a fuse acc. to IEC/EN 60269

Selective Main Circuit-Breaker series S 750 and S 750 DR

Short-circuit selectivity

Short-circuit discrimination of S 750 (DR) with respect to downstream MCB S 200 / S 400 compared to fuse protection¹

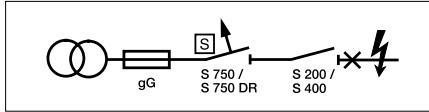
MCBs		 2CDC 022 013 F0011		 2CDC 022 014 F0011												
		supply side:	S 750 / S 750 DR	fuse						gG						
final circuit: Char.	I _{cn} [kA]	E/K						gG								
		25						16 20 25 35 50 63								
S 200 P	K	25	≤2	25	25	25	25	25	25	0.4	0.7	3	25			
			3	25	25	25	25	25	25	0.4	0.6	1	3.5			
			4	25	25	25	25	25	25	0.3	0.5	0.9	2.1			
			6	25	25	25	25	25	25	0.3	0.4	0.6	1.2			
			8	25	25	25	25	25	25	0.3	0.4	0.5	1.2			
			10	25	25	25	25	25	25	0.2	0.3	0.4	0.9			
			13	25	25	25	25	25	25	0.3	0.4	0.8	1.3			
			16	25	25	25	25	25	25	0.4	0.8	1.2	2			
			20	25	25	25	25	25	25	0.7	1.1	1.8				
			25	25	25	25	25	25	25	1	1.5					
			32				15	15	15	1	1.5					
			40				15	15	15	1.3						
S 200 P	Z	25	≤2	25	25	25	25	25	25	0.6	1.2	25	25			
			3	25	25	25	25	25	25	0.4	0.6	1	3.5			
			4	25	25	25	25	25	25	0.3	0.5	0.9	2.1			
			6	25	25	25	25	25	25	0.3	0.4	0.6	1.2			
			8	25	25	25	25	25	25	0.3	0.4	0.5	1.1			
			10	25	25	25	25	25	25	0.2	0.3	0.4	1			
			16	25	25	25	25	25	25	0.4	0.9	1.6	3			
			20	25	25	25	25	25	25	0.9	1.3	2.3				
			25	25	25	25	25	25	25	1.3	2.2					
			32				15	15	15	1.2	2.1					
			40				15	15	15	2.1						

¹ The selectivity limit current I_{s1} results from the let-through I²t-value of S 200 / S 400 and the pre-arcning (melting) I²t-value of a fuse acc. to IEC/EN 60269

Selective Main Circuit-Breaker series S 750 and S 750 DR

Short-circuit selectivity

Short-circuit discrimination (in kA) apply for combinations¹: fuse gL/gG – S 750 (DR) – S 200 / S 400

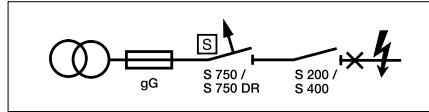
		 2CDC 022 015 F0011												≥ 125 A gG														
		fuse: 63 A gG				80 A gG				100 A gG				≥ 125 A gG														
final circuit:	supply side:		S 750 / S 750 DR																									
	Char.		E/K												25													
	I _{cn} [kA]																											
S 200 S 400 E	C	6	I _n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63									
			≤ 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15									
			3	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
			4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
	B, C	6	6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
			8	7	5	5	5	10	10	10	8	10	10	10	10	10	10	10	10									
	B, C	6	10	7	5	5	5	10	10	10	8	10	10	10	10	10	10	10	10									
			13	6	6	6	5	9	8	8	7	10	10	10	10	10	10	10	10									
			16	6	6	6	5	9	8	8	7	10	10	10	10	10	10	10	10									
			20	5	5	4.5	4.5	6	7	7	6.5	10	10	10	10	10	10	10	10									
			25		4.5	4.5	4		7	6	6		10	10	10		10	10	10									
			32			4	3.5			6	5.5			9	9		10	10										
			40				3			5				8			10											
S 200 S 400 E	K. Z	6	fuse:		63 A gG				80 A gG				100 A gG				≥ 125 A gG											
			supply side:		S 750 / S 750 DR																							
			Char.		E/K												25											
			I _{cn} [kA]																									
			I _n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63									
			≤ 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15									
			3	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
			4	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
			6	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10									
			8	7	6	6	5	10	10	10	8	10	10	10	10	10	10	10	10									
			10	7	6	6	5	10	10	10	8	10	10	10	10	10	10	10	10									
			13	6	6	6	5	9	8	8	7	10	10	10	10	10	10	10	10									
			16	6	6	6	5	9	8	8	7	10	10	10	10	10	10	10	10									
			20	5	5	4.5	4.5	8	7	7	6.5	10	10	10	10	10	10	10	10									
			25		4.5	4.5	4		7	6	6		10	10	10		10	10	10									
			32			4	3.5			6	5.5			9	9		10	10										
			40				3			5				8			10											

¹ The selectivity limit current I_{s1} results from the let-through I²t-value of S 750(DR) plus S 200/S 400 and the pre-arcing (melting) I²t-value of a fuse acc. to IEC/EN 60269

Selective Main Circuit-Breaker series S 750 and S 750 DR

Short-circuit selectivity

Short-circuit discrimination (in kA) apply for combinations¹: fuse gL/gG – S 750 (DR) – S 200/S 400

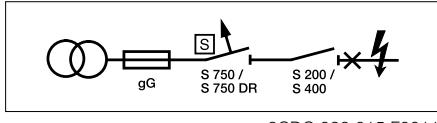
		 2CDC 022 015 F0011																						
	fuse:	63 A gG				80 A gG				100 A gG				≥ 125 A gG										
final circuit:	supply side:	S 750 / S 750 DR												E/K										
	Char.	E/K												25										
	I_{cn} [kA]	I_n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63						
S 200 M S 400 M	C	10	≤ 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15						
			3	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15						
			4	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15						
			6	10	10	10	10	15	15	15	10	15	15	15	15	15	15	15						
	B, C	10	8	7	6	6	5	10	10	10	8	15	15	15	15	15	15	15						
			10	7	6	6	5	10	10	10	8	15	15	15	15	15	15	15						
			13	6	6	6	5	9	8	8	7	10	10	10	10	15	15	15						
			16	6	6	6	5	9	8	8	7	10	10	10	10	15	15	15						
	B, C	10	20	5	5	4.5	4.5	8	7	7	6.5	10	10	10	10	15	15	15						
			25	4.5	4.5	4		7	6	6		10	10	10		15	15	15						
			32		4	3.5			6	5.5		9	9			15	15							
			40			3			5			8				14								
S 200 M S 400 M	K, Z	10	≤ 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15						
			3	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15						
			4	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15						
			6	10	10	10	10	15	15	15	10	15	15	15	15	15	15	15						
			8	7	6	6	5	10	10	10	8	15	15	15	15	15	15	15						
			10	7	6	6	5	10	10	10	8	15	15	15	15	15	15	15						
			13	6	6	6	5	9	8	8	7	10	10	10	10	15	15	15						
			16	6	6	6	5	9	8	8	7	10	10	10	10	15	15	15						
			20	5	5	4.5	4.5	8	7	7	6.5	10	10	10	10	15	15	15						
			25	4.5	4.5	4		7	6	6		10	10	10		15	15	15						
			32		4	3.5			6	5.5		9	9			15	15							
			40			3			5			8				14								

¹ The selectivity limit current I_{sl} results from the let-through I^2t -value of S 750 (DR) plus S 200/S 400 and the pre-arcing (melting) I^2t -value of a fuse acc. to IEC/EN 60269

Selective Main Circuit-Breaker series S 750 and S 750 DR

Short-circuit selectivity

Short-circuit discrimination (in kA) apply for combinations¹: fuse gL/gG – S 750 (DR) – S 200 / S 400

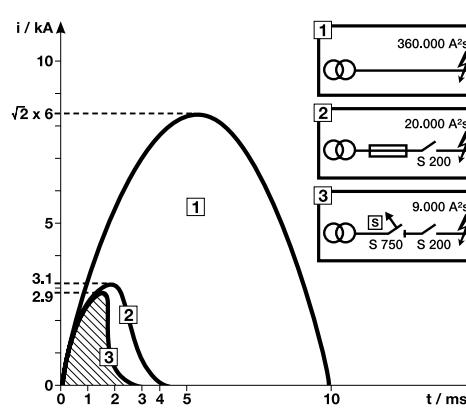
		 2CDC 022 015 F0011												≥ 125 A gG														
		fuse: 63 A gG				80 A gG				100 A gG				≥ 125 A gG														
final circuit:	supply side:		S 750 / S 750 DR																									
	Char.		E/K												25													
	I _{cn} [kA]		25																									
S 200 P	C	25	I _n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63									
			≤ 2	15	15	15	15	25	25	25	25	25	25	25	25	25	25	25	25									
			3	15	15	15	15	25	25	15	15	25	25	25	25	25	25	25	25									
			4	15	15	15	15	20	20	15	15	25	25	25	25	25	25	25	25									
	B, C	25	6	10	10	10	10	17	16	15	14	25	25	20	20	25	25	25	25									
			8	7	6	6	5	10	10	10	8	20	20	15	15	25	25	25	25									
	C	10	10	7	6	6	5	10	10	10	8	20	15	15	15	25	25	25	25									
			13	6	6	6	5	9	8	8	7	15	15	15	15	22	22	20	20									
			16	6	6	6	5	9	8	8	7	12	12	10	10	22	22	20	18									
			20	5	5	4.5	4.5	8	7	7	6.5	12	12	10	10	20	20	20	18									
	B, C	15	25		4.5	4.5	4		7	6	6		10	10	10		15	15	15									
			32			4	3.5			6	5.5			10	10		15	15	15									
			40				3			5				9				15										
S 200 P	K, Z	25	fuse: 63 A gG		80 A gG				100 A gG				≥ 125 A gG															
			supply side:		S 750 / S 750 DR																							
			Char.		E/K												25											
			I _{cn} [kA]		25																							
			I _n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63									
			50	≤ 2	15	15	15	15	25	25	25	25	25	25	25	25	25	25	25									
			3	15	15	15	15	25	25	15	15	25	25	25	25	25	25	25	25									
			4	15	15	15	15	20	20	15	15	25	25	25	25	25	25	25	25									
			6	10	10	10	10	17	16	15	14	25	25	20	20	25	25	25	25									
			8	7	6	6	5	10	10	10	8	20	20	15	15	25	25	25	25									
			10	7	6	6	5	10	10	10	8	20	15	15	15	25	25	25	25									
			13	6	6	6	5	9	8	8	7	15	15	15	15	22	22	20	20									
			16	6	6	6	5	9	8	8	7	12	12	10	10	22	22	20	18									
			20	5	5	4.5	4.5	8	7	7	6.5	12	12	10	10	20	20	20	18									
			25		4.5	4.5	4		7	6	6		10	10	10		15	15	15									
			32			4	3.5			6	5.5			10	10		15	15	15									
			40				3			5				9				15										

¹ The selectivity limit current I_{s1} results from the let-through I²t-value of S 750(DR) plus S 200/S 400 and the pre-arcing (melting) I²t-value of a fuse acc. to IEC/EN 60269

Energy limitation

S 750 (DR) selective main circuit breakers operate in such a way that they support cascaded downstream mcbs when a short-circuit occurs. Its energy-limiting features preserve the installation and reduce harmful repercussions on the network of the operator to a minimum.

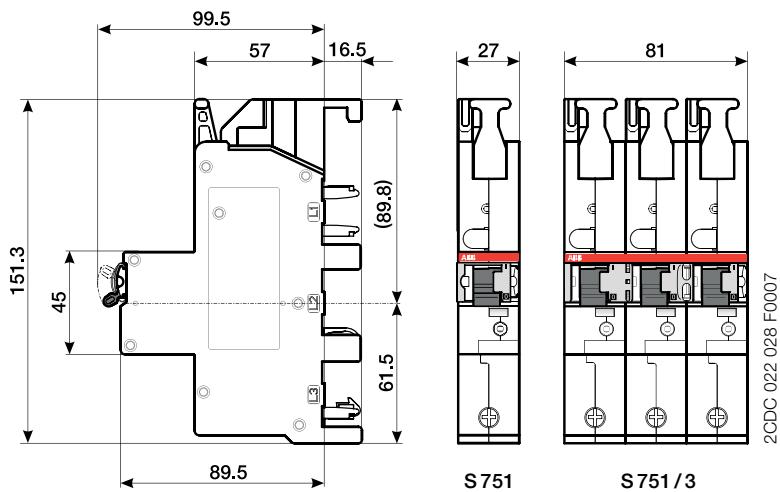
Independant of current rating of S 750 (DR), short-circuit selectivity of up to 10,000 A or even higher is available for the downstream miniature circuit-breakers.



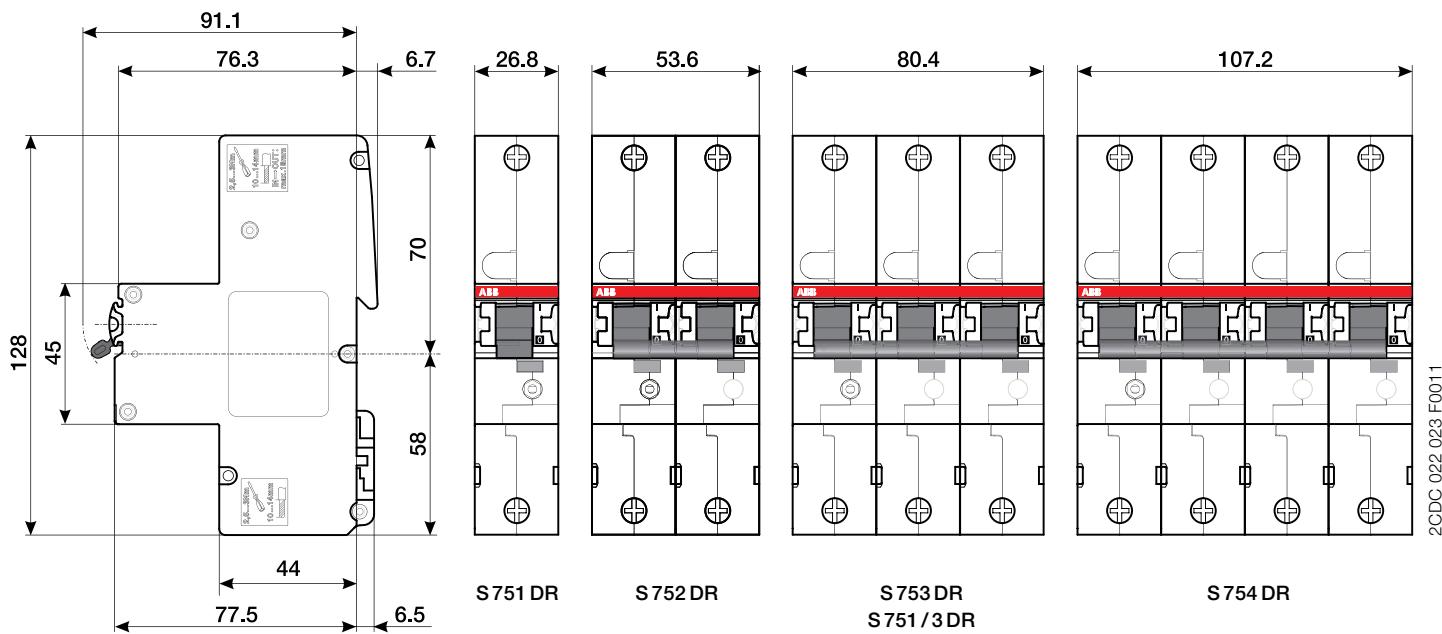
Selective Main Circuit-Breaker series S 750 und S 750 DR

Dimensional drawing

S 750



S 750 DR



Selective Main Circuit-Breaker series S 750 and S 750 DR

Order data S 750 for bus bar connection, Tripping characteristic E

E
selective

according to
DIN VDE 0641-21

25000



2CDC 021 207 F0007



2CDC 021 205 F0007

No. of poles	rated current I _n /A	Type	Order code	bbn 4016779 EAN	Weight 1 pc. kg	pack. unit pc.
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S 751/3 unit 3 x single-pole, busbar connection at L1, L2 and L3

3x1	16	S751/3-E16	2CDS781001R4162	660525	1.2	1
3x1	20	S751/3-E20	2CDS781001R4202	660518	1.2	1
3x1	25	S751/3-E25	2CDS781001R4252	660501	1.2	1
3x1	35	S751/3-E35	2CDS781001R4352	660495	1.2	1
3x1	40	S751/3-E40	2CDS781001R4402	660488	1.2	1
3x1	50	S751/3-E50	2CDS781001R4502	660471	1.2	1
3x1	63	S751/3-E63	2CDS781001R4632	660464	1.2	1

S 751 single-pole, three-phase set, busbar connection at L1, L2, L3

1	16	S751-E16	2CDS781001R3162	663922*	1.2	1 Satz
1	20	S751-E20	2CDS781001R3202	663939*	1.2	1 Satz
1	25	S751-E25	2CDS781001R3252	663946*	1.2	1 Satz
1	35	S751-E35	2CDS781001R3352	663960*	1.2	1 Satz
1	40	S751-E40	2CDS781001R3402	663977*	1.2	1 Satz
1	50	S751-E50	2CDS781001R3502	663984*	1.2	1 Satz
1	63	S751-E63	2CDS781001R3632	663991*	1.2	1 Satz

S 751 single-pole, busbar connection at L1

1	16	S751-E16 L1	2CDS781001R5162	698078	0.4	1
1	20	S751-E20 L1	2CDS781001R5202	698092	0.4	1
1	25	S751-E25 L1	2CDS781001R5252	698115	0.4	1
1	35	S751-E35 L1	2CDS781001R5352	698139	0.4	1
1	40	S751-E40 L1	2CDS781001R5402	698153	0.4	1
1	50	S751-E50 L1	2CDS781001R5502	698573	0.4	1
1	63	S751-E63 L1	2CDS781001R5632	698597	0.4	1

S 751 single-pole, busbar connection at L2

1	16	S751-E16 L2	2CDS781001R6162	698627	0.4	1
1	20	S751-E20 L2	2CDS781001R6202	698641	0.4	1
1	25	S751-E25 L2	2CDS781001R6252	698658	0.4	1
1	35	S751-E35 L2	2CDS781001R6352	698672	0.4	1
1	40	S751-E40 L2	2CDS781001R6402	698696	0.4	1
1	50	S751-E50 L2	2CDS781001R6502	698719	0.4	1
1	63	S751-E63 L2	2CDS781001R6632	698733	0.4	1

S 751 single-pole, busbar connection at L3

1	16	S751-E16 L3	2CDS781001R7162	698757	0.4	1
1	20	S751-E20 L3	2CDS781001R7202	698771	0.4	1
1	25	S751-E25 L3	2CDS781001R7252	698795	0.4	1
1	35	S751-E35 L3	2CDS781001R7352	698818	0.4	1
1	40	S751-E40 L3	2CDS781001R7402	698832	0.4	1
1	50	S751-E50 L3	2CDS781001R7502	698856	0.4	1
1	63	S751-E63 L3	2CDS781001R7632	698870	0.4	1

*EAN of the package unit

Selective Main Circuit-Breaker series S 750 and S 750 DR

Order data S 750 for DIN rail mounting, Tripping characteristic E

E
selective

according to
DIN VDE 0641-21

25 000



2CDC 021 007 S0011

No. of poles	rated current I _n /A	Type	Order code	bbn 4016779	Weight 1 pc. kg	pack. unit pc.
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S 751 DR

1	16	S 751 DR-E16	2CDH781001R0162	838061	0.35	3
1	20	S 751 DR-E20	2CDH781001R0202	838078	0.35	3
1	25	S 751 DR-E25	2CDH781001R0252	838085	0.35	3
1	35	S 751 DR-E35	2CDH781001R0352	838092	0.35	3
1	40	S 751 DR-E40	2CDH781001R0402	838108	0.35	3
1	50	S 751 DR-E50	2CDH781001R0502	838139	0.35	3
1	63	S 751 DR-E63	2CDH781001R0632	838207	0.35	3



2CDC 021 006 S0011

S 751 DR/3 unit, 3 x single-pole

3x1	16	S 751/3 DR-E16	2CDH781001R2162	838788	1.05	1
3x1	20	S 751/3 DR-E20	2CDH781001R2202	838801	1.05	1
3x1	25	S 751/3 DR-E25	2CDH781001R2252	838825	1.05	1
3x1	35	S 751/3 DR-E35	2CDH781001R2352	838849	1.05	1
3x1	40	S 751/3 DR-E40	2CDH781001R2402	838863	1.05	1
3x1	50	S 751/3 DR-E50	2CDH781001R2502	838887	1.05	1
3x1	63	S 751/3 DR-E63	2CDH781001R2632	838900	1.05	1



2CDC 021 023 S0011

S 752 DR

2	16	S 752 DR-E16	2CDH782001R0162	838245	0.7	2
2	20	S 752 DR-E20	2CDH782001R0202	838252	0.7	2
2	25	S 752 DR-E25	2CDH782001R0252	838269	0.7	2
2	35	S 752 DR-E35	2CDH782001R0352	838276	0.7	2
2	40	S 752 DR-E40	2CDH782001R0402	838283	0.7	2
2	50	S 752 DR-E50	2CDH782001R0502	838313	0.7	2
2	63	S 752 DR-E63	2CDH782001R0632	838382	0.7	2



2CDC 021 022 S0011

S 753 DR

3	16	S 753 DR-E16	2CDH783001R0162	838429	1.05	1
3	20	S 753 DR-E20	2CDH783001R0202	838436	1.05	1
3	25	S 753 DR-E25	2CDH783001R0252	838443	1.05	1
3	35	S 753 DR-E35	2CDH783001R0352	838450	1.05	1
3	40	S 753 DR-E40	2CDH783001R0402	838467	1.05	1
3	50	S 753 DR-E50	2CDH783001R0502	838498	1.05	1
3	63	S 753 DR-E63	2CDH783001R0632	838566	1.05	1



2CDC 021 014 S0011

S 754 DR

4	16	S 754 DR-E16	2CDH784001R0162	838603	1.4	1
4	20	S 754 DR-E20	2CDH784001R0202	838610	1.4	1
4	25	S 754 DR-E25	2CDH784001R0252	838627	1.4	1
4	35	S 754 DR-E35	2CDH784001R0352	838634	1.4	1
4	40	S 754 DR-E40	2CDH784001R0402	838641	1.4	1
4	50	S 754 DR-E50	2CDH784001R0502	838672	1.4	1
4	63	S 754 DR-E63	2CDH784001R0632	838740	1.4	1

Selective Main Circuit-Breaker series S 750 and S 750 DR

Order data S 750 for DIN rail mounting, Tripping characteristic K

K
selective
according to
DIN VDE 0641-21

25 000



2CDC 021 007 S0011



2CDC 021 006 S0011



2CDC 021 023 S0011



2CDC 021 022 S0011



2CDC 021 014 S0011

No. of poles	rated current I _n /A	Type	Order code	bbn 4016779 EAN	Weight 1 pc. kg	pack. unit pc.
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S 751 DR

1	16	S 751 DR-K16	2CDH781001R0467	838115	0.35	3
1	20	S 751 DR-K20	2CDH781001R0487	838122	0.35	3
1	25	S 751 DR-K25	2CDH781001R0517	838146	0.35	3
1	35	S 751 DR-K35	2CDH781001R0547	838153	0.35	3
1	40	S 751 DR-K40	2CDH781001R0557	838160	0.35	3
1	50	S 751 DR-K50	2CDH781001R0577	838177	0.35	3
1	63	S 751 DR-K63	2CDH781001R0607	838184	0.35	3

S 751 DR/3 unit, 3 x single-pole

3x1	16	S 751/3DR-K16	2CDH781001R2467	838795	1.05	1
3x1	20	S 751/3DR-K20	2CDH781001R2487	838818	1.05	1
3x1	25	S 751/3DR-K25	2CDH781001R2517	838832	1.05	1
3x1	35	S 751/3DR-K35	2CDH781001R2547	838856	1.05	1
3x1	40	S 751/3DR-K40	2CDH781001R2557	838870	1.05	1
3x1	50	S 751/3DR-K50	2CDH781001R2577	838894	1.05	1
3x1	63	S 751/3DR-K63	2CDH781001R2607	838917	1.05	1

S 752 DR

2	16	S 752 DR-K16	2CDH782001R0467	838290	0.7	2
2	20	S 752 DR-K20	2CDH782001R0487	838306	0.7	2
2	25	S 752 DR-K25	2CDH782001R0517	838320	0.7	2
2	35	S 752 DR-K35	2CDH782001R0547	838337	0.7	2
2	40	S 752 DR-K40	2CDH782001R0557	838344	0.7	2
2	50	S 752 DR-K50	2CDH782001R0577	838351	0.7	2
2	63	S 752 DR-K63	2CDH782001R0607	838368	0.7	2

S 753 DR

3	16	S 753 DR-K16	2CDH783001R0467	838474	1.05	1
3	20	S 753 DR-K20	2CDH783001R0487	838481	1.05	1
3	25	S 753 DR-K25	2CDH783001R0517	838504	1.05	1
3	35	S 753 DR-K35	2CDH783001R0547	838511	1.05	1
3	40	S 753 DR-K40	2CDH783001R0557	838528	1.05	1
3	50	S 753 DR-K50	2CDH783001R0577	838535	1.05	1
3	63	S 753 DR-K63	2CDH783001R0607	838542	1.05	1

S 754 DR

4	16	S 754 DR-K16	2CDH784001R0467	838658	1.4	1
4	20	S 754 DR-K20	2CDH784001R0487	838665	1.4	1
4	25	S 754 DR-K25	2CDH784001R0517	838689	1.4	1
4	35	S 754 DR-K35	2CDH784001R0547	838696	1.4	1
4	40	S 754 DR-K40	2CDH784001R0557	838702	1.4	1
4	50	S 754 DR-K50	2CDH784001R0577	838719	1.4	1
4	63	S 754 DR-K63	2CDH784001R0607	838726	1.4	1

Selective Main Circuit-Breaker series S 750 and S 750 DR Order data accessories



SA 2

SK 0109 B 91

No. of poles	Type	Order code	bbn 4016779 EAN	Weight 1 pc. kg	pack. unit pc.
Padlock					
with 2 keys	SA 2	GFJ1 101 903 R0002	58770 4	0.02	10
identical locking	SA 2i	GFJ1 109 999 R0001	96940 1	0.02	10

Contact

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