Data sheet

Selective Main Circuit-Breakers S 750 DR series acc. to IEC/EN 60947-2

Selective main circuit-breakers (SMCB) of the S 750 DR series are circuit-breakers with particular selectivity functions based on voltage-independent operating principle. This means that they do not rely on a control circuit to make or break contact and are therefore particularly suitable for use in energy distributionsystems with maximum availability requirements. The unique working principle of “current limiting selectivity” offers new approaches for coordination of overcurrent protective devices.

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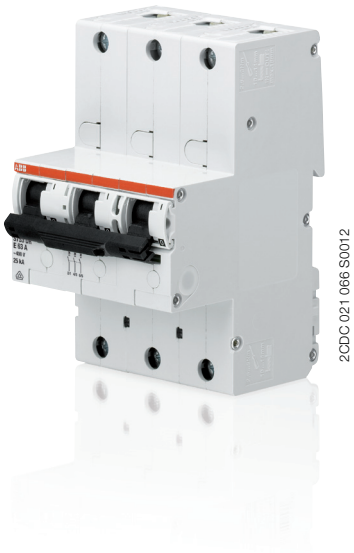

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- High short-circuit breaking capability of 25 kA over the complete rated current range
- High energy-limiting capacity by current-limiting selectivity
- Suitable for selective overcurrent protection in general-purpose electric main distribution boards
- Suitable to disconnect and isolate electric circuits
- Voltage-independent function (no connection to neutral)
- Applicable in installations acc. to:
  overvoltage category I … IV,
  pollution degree 1 … 3
- For DIN rail mounting
- 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 main 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: tripping characteristic E
- For the protection of circuits where high current peaks occur (e.g. inrush currents): tripping characteristic K

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

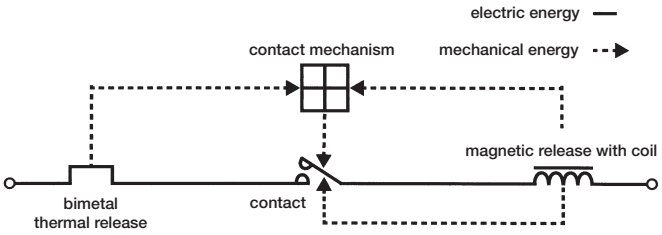
Selective Main Circuit-Breaker series S 750 DR
Function

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.

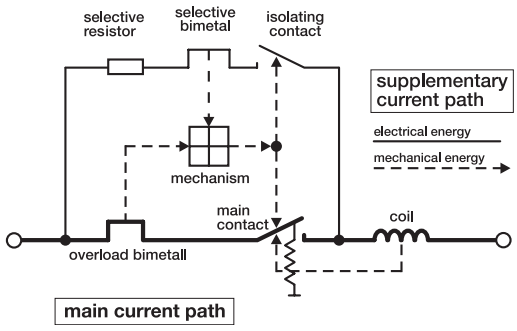
If a short-circuit occurs between the S 750 DR and the downstream circuit-breaker, another bimetal release enables short-time delayed tripping. Both the selective release and the overload release trip the mechanism and ensure that the contact tips remain in the open position enabling isolating. The current 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



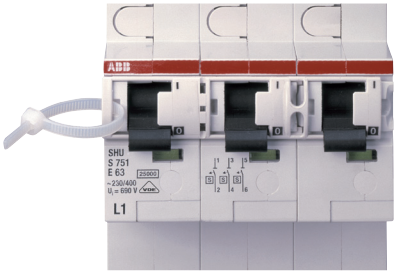
Operating principle of the selective main circuit breaker S 750 DR



Locking

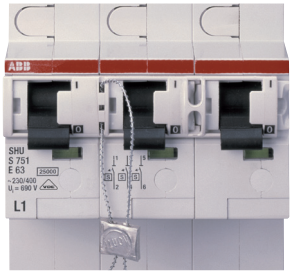
The S 750 DR is provided with an integrated locking tab which makes it possible to block the all poles simultaneously. The integrated locking tab locks the circuit-breaker in ON or OFF position and can be additionally protected by a padlock, wire seal or cable tie. When locked in ON position, the protective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

		S 750 DR
General Data		
Standards		IEC/EN 60947-2
Poles		1-, 2-, 3-, 4-pole
Rated current I_n	A	16…63
Rated frequency f	Hz	50 / 60
DIN VDE 0641-21		
Tripping characteristics		$E_{selective}$, $K_{selective}$
Rated operational voltage U_e	V AC	230 (1-pole), 400 (2-, 3-, 4-pole)
Rated breaking capacity I_{cu}	kA	25
Rated service breaking capacity I_{cs}	kA	12.5
Rated insulation voltage U_i	V	690
Selectivity limit current I_{s1}	kA	rated breaking capacity of downstream breaker (min.) – see selectivity tables
Overvoltage category		IV
Pollution degree		3
Rated impulse withstand voltage U_{imp}	kV	6
Impulse withstand voltage acc. to IEC 60364-5-53 (at 2000m above sea level)	kV	8
Impulse withstand test voltage (1.2 / 50 µs)	kV	9.8
Isolation function acc. to IEC 60364-53		yes
Dielectric test voltage	kV	2 (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 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 60068-2-6		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 / 90…96 – 25 / 95…100
Ambient temperature	°C	-25 … +55
Storage temperature	°C	-40 … +70
Installation		
Wire connection (Top)		frame terminal to connect solid and rigid stranded conductors incl. flexible conductors 2.5…50 mm²
Wire connection (Bottom)		frame terminal to connect solid and rigid stranded conductors incl. flexible conductors 2.5…50 mm²
Max. torque	Nm	2.5 … 3
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 cabel binder
Mouting position		any
Supply		any
Dimensions and weight		
Size acc. to DIN 43880		3
Width	mm	27 (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 DR
Technical data

Tripping behavior

tripping characteristic	reference ambient temperature	delayed overload tripping			short-time delayed short-circuit tripping		
		conventional non-tripping current	conventional tripping current	tripping time	delayed tripping current	short-time delayded tripping current	tripping time
	T_{ref} [1]	I_{nt}	I_t	t	I_{tv}	I_{tk}	t
E selective	30 °C	1.05 x I_n		≥ 2 h	5 x I_n		0.05 s < t < 5 s (I_n ≤ 32 A) 0.05 s < t < 10 s (I_n > 32 A)
			1.2 x I_n	< 2 h		6.25 x I_n	0.01 s < t < 0.3 s
K selective	20 °C	1.05 x I_n		≥ 2 h	8 x I_n		0.05 s < t < 15 s
			1.2 x I_n	< 2 h		12 x 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	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 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
16	15.3	4.1	14.5	3.9
20	11.3	5.4	10.7	5.1
25	8.7	5.9	8.3	5.5
35	4.5	6.3	4.3	6.2
40	3.4	6.1	3.2	5.8
50	2.9	7.6	2.8	7.2
63	2.1	8.7	2.1	8.7

[1] in cold state

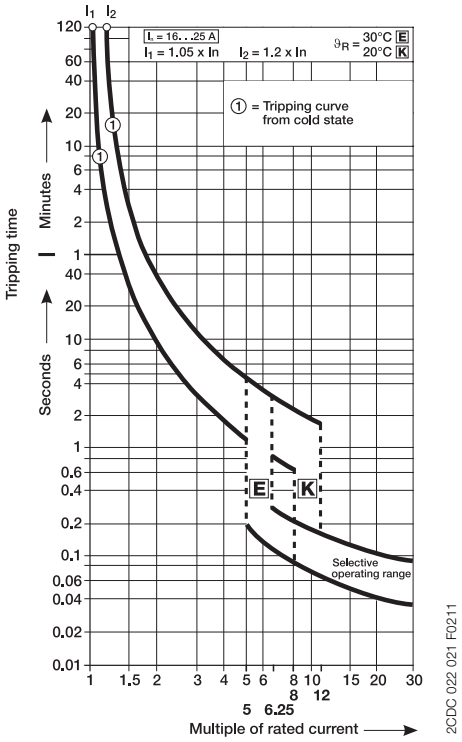
[2] at rated current

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 automatically 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 S 750 DR
Tripping characteristics

trip curve 16 ... 25 A



trip curve 35 ... 63 A

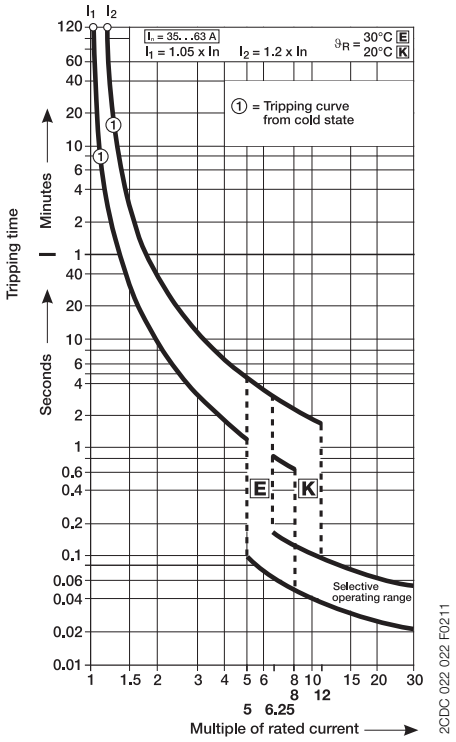
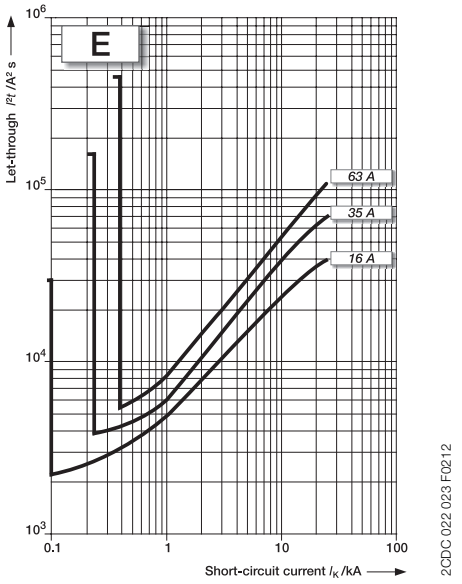


diagram of let-through values I²t 16 ... 63 A



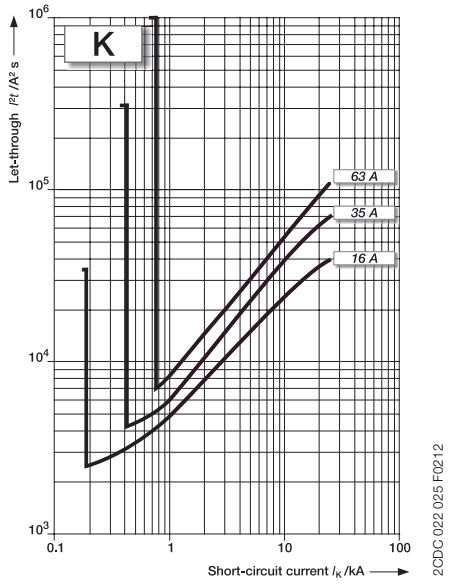
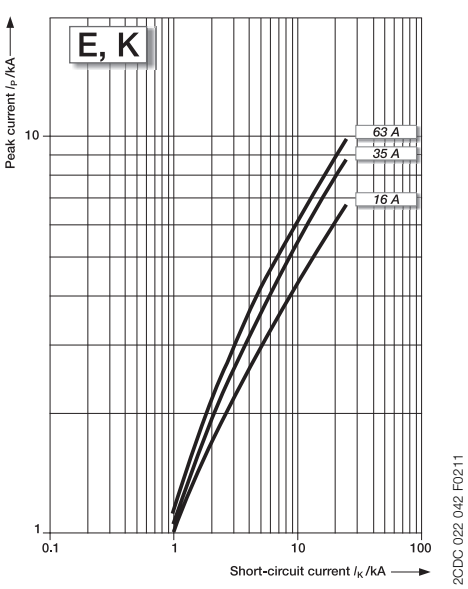


diagram of let-through values I_D 16 ... 63 A



Selective Main Circuit-Breaker series 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 protection[1]

MCBs

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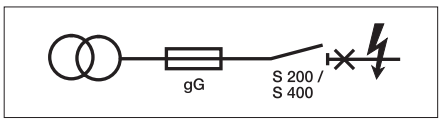

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final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 S 400 E	C	6	≤ 2	10	10	10	10	10	10	10	1	1.2	4	6	6	6
			3	10	10	10	10	10	10	10	0.3	0.7	1.2	4.6	6	6
			4	10	10	10	10	10	10	10	0.3	0.6	0.9	2.8	6	6
	B, C		6	10	10	10	10	10	10	10	0.2	0.4	0.7	1.5	3	5.5
	C		8	10	10	10	10	10	10	10	0.2	0.4	0.7	1.4	2.8	4.5
	B, C		10	10	10	10	10	10	10	10	0.2	0.4	0.6	1.2	2	3.3
			13	10	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					1.6	2.4
			32					10	10	10					1.3	2.2
			40						10	10						2.2

final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200	K	6	≤ 2	10	10	10	10	10	10	10	0.3	1.2	4	6	6	6
			3	10	10	10	10	10	10	10	0.3	0.7	1	3.2	6	6
			4	10	10	10	10	10	10	10	0.3	0.6	0.8	2.1	5.3	6
			6	10	10	10	10	10	10	10	0.2	0.4	0.7	1.3	2.8	6
			8	10	10	10	10	10	10	10	0.2	0.4	0.6	1.1	2	3.5
			10	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	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					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 I^2t-value of 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 DR
Short-circuit selectivity

Short-circuit discrimination of S 750 DR with respect to downstream MCB S 200 / S 400 compared to fuse protection[1]

MCBs

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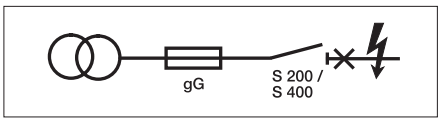

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final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200	Z	6	≤ 2	10	10	10	10	10	10	10	0.5	2	6	6	6	6
			3	10	10	10	10	10	10	10	0.3	0.7	1.2	6	6	6
			4	10	10	10	10	10	10	10	0.3	0.6	1.1	4.2	6	6
			6	10	10	10	10	10	10	10	0.2	0.4	0.8	2	5.2	6
			8	10	10	10	10	10	10	10	0.2	0.4	0.6	1.3	3.1	6
			10	10	10	10	10	10	10	10		0.3	0.5	1	2	3.6
			16		10	10	10	10	10	10			0.5	0.9	1.5	2.8
			20			10	10	10	10	10				0.7	1.2	2.1
			25				10	10	10	10					1.1	1.8
			32					10	10	10					1.1	1.8
			40						10	10						1.8

final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 M S 400 M	C	10	≤ 2	15	15	15	15	15	15	15	1	1.2	4	10	10	10
			3	15	15	15	15	15	15	15	0.3	0.7	1.2	4.6	10	10
			4	15	15	15	15	15	15	15	0.3	0.6	0.9	2.8	10	10
	B, C		6	15	15	15	15	15	15	15	0.2	0.5	0.8	1.5	3	7
	C		8	15	15	15	15	15	15	15	0.2	0.4	0.7	1.4	2.8	4.5
	B, C		10	15	15	15	15	15	15	15	0.2	0.4	0.6	1.2	2	3.3
			13	15	15	15	15	15	15	15			0.6	1.2	2	3.3
			16		15	15	15	15	15	15			0.6	1.1	1.8	2.8
			20			15	15	15	15	15				1	1.6	2.4
			25				15	15	15	15					1.6	2.4
			32					15	15	15					1.3	2.2
			40						15	15						2.2

final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 M S 400 M	K	10	≤ 2	10	10	10	10	10	10	10	0.3	1.2	4	10	10	10
			3	10	10	10	10	10	10	10	0.3	0.7	1	3.2	10	10
			4	10	10	10	10	10	10	10	0.3	0.6	0.8	2.1	5.3	10
			6	10	10	10	10	10	10	10	0.2	0.4	0.7	1.3	2.8	6
			8	10	10	10	10	10	10	10	0.2	0.4	0.6	1.1	2	3.5
			10	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	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					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 I^2t-value of 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 DR
Short-circuit selectivity

Short-circuit discrimination of S 750 DR with respect to downstream MCB S 200 / S 400 compared to fuse protection[1]

MCBs

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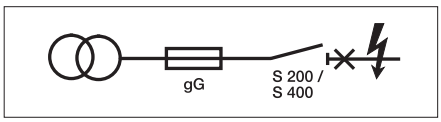

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final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 M	Z	10	≤ 2	10	10	10	10	10	10	10	0.5	2	10	10	10	10
			3	10	10	10	10	10	10	10	0.3	0.7	1.2	7	10	10
			4	10	10	10	10	10	10	10	0.3	0.6	1.1	4.2	10	10
			6	10	10	10	10	10	10	10	0.2	0.4	0.8	2	5.2	10
			8	10	10	10	10	10	10	10	0.2	0.4	0.6	1.3	3.1	8
			10	10	10	10	10	10	10	10		0.3	0.5	1	2	3.6
			16		10	10	10	10	10	10			0.5	0.9	1.5	2.8
			20			10	10	10	10	10				0.7	1.2	2.1
			25				10	10	10	10					1.1	1.8
			32					10	10	10					1.1	1.8
			40						10	10						1.8

final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 P	B	25	6	25	25	25	25	25	25	25	0.2	0.4	0.6	1.2	2.6	6
			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
		15	32					15	15	15					1.2	2.1
			40						15	15						2.1

final circuit:	supply side:			S 750 DR							fuse					
	Char.			E / K							gG					
		I_{cu} [kA]		25												
			I_n [A]	16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 P	C	25	≤ 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
		15	32					15	15	15					1.2	2.1
			40						15	15						2.1

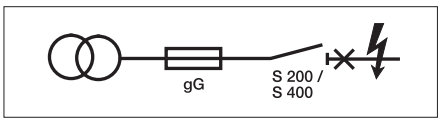
[1] The selectivity limit current I_{s1} results from the let-through I^2t-value of S 200 / S 400 and the pre-arcing (melting) I^2t-value of a fuse acc. to IEC / EN 60269

Selective Main Circuit-Breaker series S 750 DR
Short-circuit selectivity

Short-circuit discrimination of S 750 DR with respect to downstream MCB S 200 / S 400 compared to fuse protectionn[1]

MCBs

2CDC 022 013 F0011



2CDC 022 014 F0011

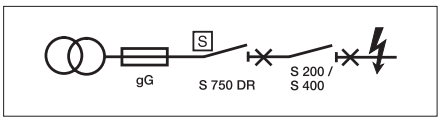
final circuit: supply side:	Char.	I_{cu} [kA]	I_n [A]	S 750 DR E/K 25							fuse gG					
				16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 P	K	25	≤ 2	25	25	25	25	25	25	25	0.4	0.7	3	25	25	25
			3	25	25	25	25	25	25	25	0.4	0.6	1	3.5	10	10
			4	25	25	25	25	25	25	25	0.3	0.5	0.9	2.1	7	10
			6	25	25	25	25	25	25	25	0.3	0.4	0.6	1.2	2.8	5.5
			8	25	25	25	25	25	25	25	0.3	0.4	0.5	1.2	2.5	4
			10	25	25	25	25	25	25	25	0.2	0.3	0.4	0.9	1.7	3.1
			13	25	25	25	25	25	25	25		0.3	0.4	0.8	1.3	2.2
			16		25	25	25	25	25	25			0.4	0.8	1.2	2
			20			25	25	25	25	25				0.7	1.1	1.8
			25				25	25	25	25					1	1.5
		15	32					15	15	15					1	1.5
			40						15	15						1.3

final circuit: supply side:	Char.	I_{cu} [kA]	I_n [A]	S 750 DR E/K 25							fuse gG					
				16	20	25	35	40	50	63	16	20	25	35	50	63
S 200 P	Z	25	≤ 2	25	25	25	25	25	25	25	0.6	1.2	25	25	25	25
			3	25	25	25	25	25	25	25	0.4	0.6	1	3.5	10	10
			4	25	25	25	25	25	25	25	0.3	0.5	0.9	2.1	7	10
			6	25	25	25	25	25	25	25	0.3	0.4	0.6	1.2	2.8	6
			8	25	25	25	25	25	25	25	0.3	0.4	0.5	1.1	2.5	3.5
			10	25	25	25	25	25	25	25	0.2	0.3	0.4	1	1.9	3.3
			16		25	25	25	25	25	25			0.4	0.9	1.6	3
			20			25	25	25	25	25				0.9	1.3	2.3
			25				25	25	25	25					1.3	2.2
		15	32					15	15	15					1.2	2.1
			40						15	15						2.1

[1] The selectivity limit current I_{s1} results from the let-through I^2t-value of 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 DR
Short-circuit selectivity

Short-circuit discrimination (in kA) apply for combinations[1]: fuse gL / gG – S 750 DR – S 200 / S 400



2CDC 022 015 F0011

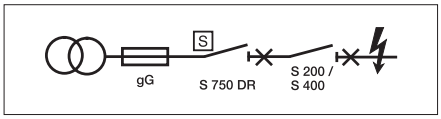
final circuit:	fuse:		63 A gG				80 A gG				100 A gG				≥ 125 A gG			
	supply side:		S 750 DR															
	Char.		E / K															
		I_{cu} [kA]	25															
		I_n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63
S 200 S 400 E	C	6	≤ 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
			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	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	C		8	7	6	6	5	10	10	10	8	10	10	10	10	10	10	10	10
	B, C		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	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	10
			32			4	3.5			6	5.5			9	9			10	10
			40				3				5				8				10

final circuit:	fuse:		63 A gG				80 A gG				100 A gG				≥ 125 A gG			
	supply side:		S 750 DR															
	Char.		E / K															
		I_{cu} [kA]	25															
		I_n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63
S 200 S 400 E	K. Z	6	≤ 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 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 DR
Short-circuit selectivity

Short-circuit discrimination (in kA) apply for combinations[1]: fuse gL / gG – S 750 DR – S 200 / S 400



2CDC 022 015 F0011

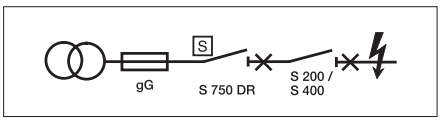
	fuse:			63 A gG				80 A gG				100 A gG				≥ 125 A gG			
	supply side:			S 750 DR															
final circuit:	Char.			E / K															
		I_{cu} [kA]		25															
			I_n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63
S 200 M S 400 M	C	10	≤ 2	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15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

	fuse:			63 A gG				80 A gG				100 A gG				≥ 125 A gG			
	supply side:			S 750 DR															
final circuit:	Char.			E / K															
		I_{cu} [kA]		25															
			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	K. Z	10	≤ 2	15	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	15
			4	15	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	15
			8	7	6	6	5	10	10	10	8	15	15	15	15	15	15	15	15
			10	7	6	6	5	10	10	10	8	15	15	15	15	15	15	15	15
			13	6	6	6	5	9	8	8	7	10	10	10	10	15	15	15	15
			16	6	6	6	5	9	8	8	7	10	10	10	10	15	15	15	15
			20	5	5	4.5	4.5	8	7	7	6.5	10	10	10	10	15	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_{s1} 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 DR
Short-circuit selectivity

Short-circuit discrimination (in kA) apply for combinations[1]: fuse gL / gG – S 750 DR – S 200 / S 400



2CDC 022 015 F0011

final circuit:			fuse:	63 A gG				80 A gG				100 A gG				≥ 125 A gG			
			supply side:	S 750 DR															
	Char.			E / K															
		I_{cu} [kA]		25															
			I_n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63
S 200 P	C	25	≤ 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		6	10	10	10	10	17	16	15	14	25	25	20	20	25	25	25	25
	C		8	7	6	6	5	10	10	10	8	20	20	15	15	25	25	25	25
	B, C		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
		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
			40				3				5				9				15

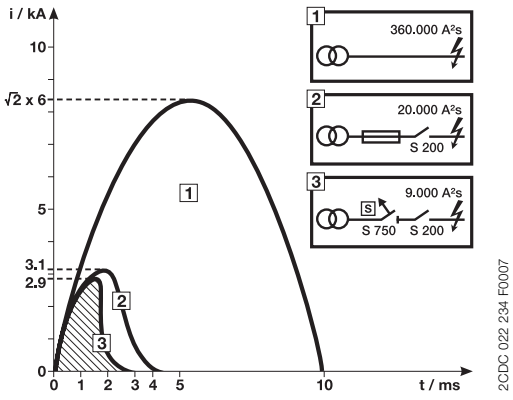
final circuit:			fuse:	63 A gG				80 A gG				100 A gG				≥ 125 A gG			
			supply side:	S 750 DR															
	Char.			E / K															
		I_{cu} [kA]		25															
			I_n [A]	35	40	50	63	35	40	50	63	35	40	50	63	35	40	50	63
S 200 P	K, Z	50	≤ 2	15	15	15	15	25	25	25	25	25	25	25	25	25	25	25	25
		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
			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
		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
			40				3				5				9				15

[1] The selectivity limit current I_{s1} 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

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.

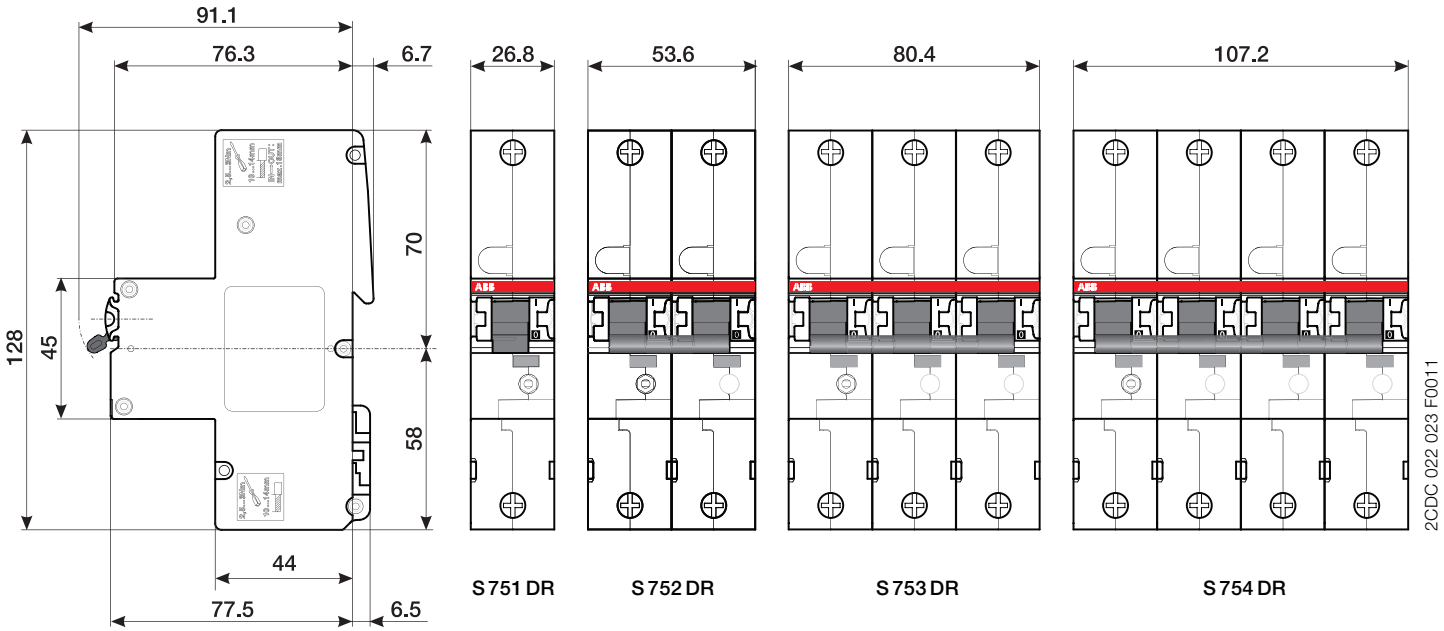
Independant of current rating of S 750 DR, short-circuit selectivity of up to 10,000 A or even higher is available for the downstream miniature circuit-breakers.



2CDC 022 234 F0007

Selective Main Circuit-Breaker series S 750 DR
Dimensional drawing

S 750 DR



Selective Main Circuit-Breaker series S 750 DR
Order data S 750 DR, Tripping characteristic E

E selective


2CDC 021 064 S0012


2CDC 021 065 S0012


2CDC 021 066 S0012


2CDC 021 067 S0012


Sk109b91

SA 2

No. of poles	Rated current I_n / A	Type	Order code	bbn 4016779 EAN	Weight 1 pc. kg	pack. unit pc.
S 751 DR						
1	16	S 751 DR-E16	2CDH781010R0162	4016779878968	0.35	3
1	20	S 751 DR-E20	2CDH781010R0202	4016779878975	0.35	3
1	25	S 751 DR-E25	2CDH781010R0252	4016779878982	0.35	3
1	32	S 751 DR-E32	2CDH781010R0322	4016779878999	0.35	3
1	40	S 751 DR-E40	2CDH781010R0402	4016779879019	0.35	3
1	50	S 751 DR-E50	2CDH781010R0502	4016779879026	0.35	3
1	63	S 751 DR-E63	2CDH781010R0632	4016779879033	0.35	3
1	80	S 751 DR-E80	2CDH781010R0802	4016779879040	0.35	3
1	100	S 751 DR-E100	2CDH781010R0822	4016779879057	0.35	3
S 752 DR						
2	16	S 752 DR-E16	2CDH782010R0162	4016779879361	0.7	2
2	20	S 752 DR-E20	2CDH782010R0202	4016779879378	0.7	2
2	25	S 752 DR-E25	2CDH782010R0252	4016779879385	0.7	2
2	32	S 752 DR-E32	2CDH782010R0322	4016779879392	0.7	2
2	40	S 752 DR-E40	2CDH782010R0402	4016779879415	0.7	2
2	50	S 752 DR-E50	2CDH782010R0502	4016779879422	0.7	2
2	63	S 752 DR-E63	2CDH782010R0632	4016779879439	0.7	2
2	80	S 752 DR-E80	2CDH782010R0802	4016779879446	0.7	2
2	100	S 752 DR-E100	2CDH782010R0822	4016779879453	0.7	2
S 753 DR						
3	16	S 753 DR-E16	2CDH783010R0162	4016779879569	1.05	1
3	20	S 753 DR-E20	2CDH783010R0202	4016779879576	1.05	1
3	25	S 753 DR-E25	2CDH783010R0252	4016779879583	1.05	1
3	32	S 753 DR-E32	2CDH783010R0322	4016779879590	1.05	1
3	40	S 753 DR-E40	2CDH783010R0402	4016779879613	1.05	1
3	50	S 753 DR-E50	2CDH783010R0502	4016779879620	1.05	1
3	63	S 753 DR-E63	2CDH783010R0632	4016779879637	1.05	1
3	80	S 753 DR-E80	2CDH783010R0802	4016779879644	1.05	1
3	100	S 753 DR-E100	2CDH783010R0822	4016779879651	1.05	1
S 754 DR						
4	16	S 754 DR-E16	2CDH784010R0162	4016779879767	1.4	1
4	20	S 754 DR-E20	2CDH784010R0202	4016779879774	1.4	1
4	25	S 754 DR-E25	2CDH784010R0252	4016779879781	1.4	1
4	32	S 754 DR-E32	2CDH784010R0322	4016779879798	1.4	1
4	40	S 754 DR-E40	2CDH784010R0402	4016779879811	1.4	1
4	50	S 754 DR-E50	2CDH784010R0502	4016779879828	1.4	1
4	63	S 754 DR-E63	2CDH784010R0632	4016779879835	1.4	1
4	80	S 754 DR-E80	2CDH784010R0802	4016779879842	1.4	1
4	100	S 754 DR-E100	2CDH784010R0822	4016779879859	1.4	1

Accessories

Padlock

with 2 keys	SA 2	GFJ1 101 903 R0002		0.02	10
identical locking	SA 2i	GFJ1 109 999 R0001		0.02	10

Selective Main Circuit-Breaker series S 750 DR
Order data S 750 DR, Tripping characteristic K

K selective


2CDC 021 064 S0012


2CDC 021 065 S0012


2CDC 021 066 S0012


2CDC 021 067 S0012


Sk109b91

SA 2

No. of poles	Rated current I_n / A	Type	Order code	bbn 4016779 EAN	Weight 1 pc. kg	pack. unit pc.
S 751 DR						
1	16	S 751 DR-K16	2CDH781010R0467	4016779879064	0.35	3
1	20	S 751 DR-K20	2CDH781010R0487	4016779879071	0.35	3
1	25	S 751 DR-K25	2CDH781010R0517	4016779879088	0.35	3
1	32	S 751 DR-K32	2CDH781010R0537	4016779879095	0.35	3
1	40	S 751 DR-K40	2CDH781010R0557	4016779879118	0.35	3
1	50	S 751 DR-K50	2CDH781010R0577	4016779879125	0.35	3
1	63	S 751 DR-K63	2CDH781010R0607	4016779879132	0.35	3
1	80	S 751 DR-K80	2CDH781010R0627	4016779879149	0.35	3
1	100	S 751 DR-K100	2CDH781010R0637	4016779879156	0.35	3
S 752 DR						
2	16	S 752 DR-K16	2CDH782010R0467	4016779879460	0.7	2
2	20	S 752 DR-K20	2CDH782010R0487	4016779879477	0.7	2
2	25	S 752 DR-K25	2CDH782010R0517	4016779879484	0.7	2
2	32	S 752 DR-K32	2CDH782010R0537	4016779879491	0.7	2
2	40	S 752 DR-K40	2CDH782010R0557	4016779879514	0.7	2
2	50	S 752 DR-K50	2CDH782010R0577	4016779879521	0.7	2
2	63	S 752 DR-K63	2CDH782010R0607	4016779879538	0.7	2
2	80	S 752 DR-K680	2CDH782010R0627	4016779879545	0.7	2
2	100	S 752 DR-K100	2CDH782010R0637	4016779879552	0.7	2
S 753 DR						
3	16	S 753 DR-K16	2CDH783010R0467	4016779879668	1.05	1
3	20	S 753 DR-K20	2CDH783010R0487	4016779879675	1.05	1
3	25	S 753 DR-K25	2CDH783010R0517	4016779879682	1.05	1
3	32	S 753 DR-K32	2CDH783010R0537	4016779879699	1.05	1
3	40	S 753 DR-K40	2CDH783010R0557	4016779879712	1.05	1
3	50	S 753 DR-K50	2CDH783010R0577	4016779879729	1.05	1
3	63	S 753 DR-K63	2CDH783010R0607	4016779879736	1.05	1
3	80	S 753 DR-K80	2CDH783010R0627	4016779879743	1.05	1
3	100	S 753 DR-K100	2CDH783010R0637	4016779879750	1.05	1
S 754 DR						
4	16	S 754 DR-K16	2CDH784010R0467	4016779879866	1.4	1
4	20	S 754 DR-K20	2CDH784010R0487	4016779879873	1.4	1
4	25	S 754 DR-K25	2CDH784010R0517	4016779879880	1.4	1
4	32	S 754 DR-K32	2CDH784010R0537	4016779879897	1.4	1
4	40	S 754 DR-K40	2CDH784010R0557	4016779879910	1.4	1
4	50	S 754 DR-K50	2CDH784010R0577	4016779879927	1.4	1
4	63	S 754 DR-K63	2CDH784010R0607	4016779879934	1.4	1
4	80	S 754 DR-K80	2CDH784010R0627	4016779879941	1.4	1
4	100	S 754 DR-K100	2CDH784010R0637	4016779879958	1.4	1

Accessories

Padlock					
with 2 keys	SA 2	GFJ1 101 903 R0002		0.02	10
identical locking	SA 2i	GFJ1 109 999 R0001		0.02	10

Contact

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