

System pro M compact® Supplementary protector S 200 PR for ring-tongue applications acc. to UL1077



2CDC021026S0011



2CDC021016S0012

The S 200 PR is a high-performance supplementary protector with ring cable lug connections conforming to UL, CSA, and IEC standards. The integrated captive connecting screws simplify the connection of electric lines, provides extra protection and saves time. This supplementary protector is a valuable addition to the well-known system pro M compact® range which allow most of the UL1077, CSA 22.2 No. 235 and IEC-approved components to be combined effortlessly with the new model line.

Standards and approvals

Standards

UL 1077

CSA 22.2 No. 235

IEC/EN 60947-2

Approvals

UL 1077

US

CSA 22.2 No.235

CA

VDE

DE

Supplementary protector S 200 PR

Technical data

General Data	
Standards	UL1077, CSA 22.2 No. 235, IEC/EN 60947-2
Poles	1P, 2P, 3P, 4P
Rated current I_n	0.2 - 63 A
Rated frequency f	50/60 Hz
Tripping characteristics	K
IEC/EN 60947-2	
Rated operational voltage U_n	1P: 230 V AC, 2 ... 4P: 400 V AC
Power frequency recovery voltage U_{max}	1P: 253 V AC, 2 ... 4P: 440 V AC
Min. operating voltage	12 V AC
Rated insulation voltage U_i	250 V AC (phase to ground), 500 V AC (phase to phase)
Rated ultimate short-circuit breaking capacity I_{cu}	15 kA
Rated service short-circuit breaking capacity I_{cs}	11.2 kA (≤ 40 A); 7.5 kA (> 40 A)
Overvoltage Category	III
Pollution Degree	2
Rated impulse withstand voltage U_{imp} (1.2/50 μ s)	4 kV (test voltage 6.2 kV at sea level; 5 kV at 2000 m)
Dielectric test voltage	2.0 kV (50/60 Hz, 1 min)
Reference temperature for tripping characteristics	20 °C
Electrical endurance	$I_n \leq 25$ A: 20,000 ops., $I_n > 25$ A: 10,000 ops.
UL / CSA	
Rated voltage	1P: 277 V AC, 2 ... 4P: 480Y/277 V AC
Rated interrupting capacity	10 kA
Application	Ring tongue terminal, not for general use
Reference temperature for tripping characteristics	25 °C
Electrical endurance	6,000 ops. (AC), 1 cycle (1s.-ON, 9s.-OFF)
Mechanical data	
Housing	Insulation group I, RAL 7035
Toggle	Insulation group II, black, sealable
Contact position indication	Real CPI (green OFF / red ON)
Protection degree acc. to EN 60529	IP20, IP40 in enclosure with cover
Mechanical endurance	20,000 ops.
Shock resistance acc. to IEC/EN 60068-2-27	25 g - 2 shocks - 13 ms
Vibration resistance acc. to IEC/EN 60068-2-6	5g - 20 cycles at 5 ... 150 ... 5 Hz at 0.8 I_n
Environmental conditions acc. to DIN EN 60068-2-30	28 cycles with 55 °C/90-96 % and 25 °C/95-100%
Ambient temperature	-25 ... +55 °C
Storage temperature	-40 ... +70 °C
Installation	
Terminal	Ring Tongue Terminal
Cross section of conductors (top/bottom)	18 - 4 AWG
Torque	2.8 Nm 25 in.-lbs.
Screw driver	No. 2 Pozidrive
Mounting	On DIN rail 35 mm, acc. to EN 60 715 by fast clip
Mounting position	any
Supply side	top or bottom
Dimensions and weight	
Mounting dimensions acc. to DIN 43880	Mounting dimension 1
Pole dimensions (H x D x W)	100 x 69 x 17.5
Pole weight	approx. 125 g
Combination with auxiliary elements	
Integrated auxiliary switch	No
Signal contact/auxiliary switch, shunt trip, undervoltage release	Yes

Supplementary protector S 200 PR

Tripping characteristic, internal resistance and power loss

Tripping characteristic K

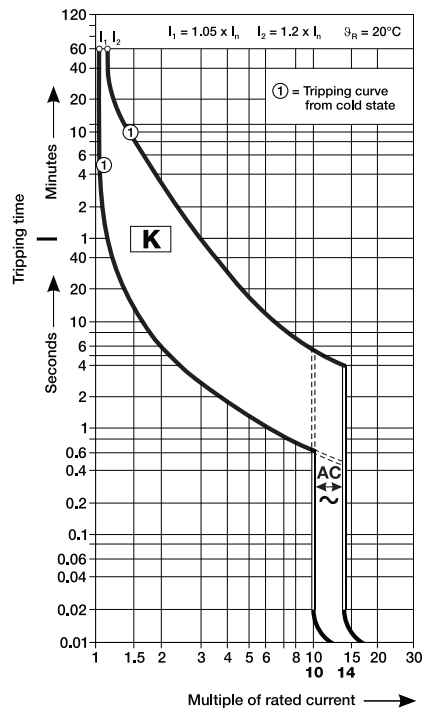
Rated current I_n 0.5 to 63 A	Thermal release ¹⁾		Tripping time	Electromagnetic release ²⁾	
	Currents: conventional non-tripping current I_1	conventional tripping current I_2		Currents: hold current surges	trip at least at
	$1.05 \cdot I_n$	$1.2 \cdot I_n$	> 1 h < 1 h	not applicable	
	$1.05 \cdot I_n$	$1.2 \cdot I_n$	> 2 h < 1 h ³⁾	$10 \cdot I_n$	> 0.2 s < 0.2 s

¹⁾ The thermal releases are calibrated to a nominal reference ambient temperature; for K the reference value is 20 °C. In the case of higher ambient temperatures, the current values fall by approx. 6 % for each 10 K temperature rise.

²⁾ The indicated tripping values of electromagnetic tripping devices apply to a frequency of 50/60 Hz. The thermal release operates independent of frequency.

³⁾ As from operating temperature (after $I_1 > 1$ h or, as applicable, 2 h)

K characteristic



2CDC 022 005 F0211

Internal resistance and power loss

Rated current A	Internal resistance per pole ⁴⁾ mΩ	Power loss per pole ⁴⁾ W
0.2	25300	1.01
0.3	13700	1.23
0.5	4740	1.19
0.75	2067	1.16
1	1270	1.27
1.5	610	1.56
2	442	1.77
3	140	1.26
4	109	1.75
5	50	1.26
6	54	1.94
8	22	1.41
10	18.2	1.82
13	14.8	2.50
15	8.1	1.83
16	11.1	2.83
20	8.5	3.40
25	5.5	3.43
30	3.8	3.39
32	4.6	4.70
35	3.9	4.76
40	2.8	4.40
50	1.7	4.25
60	1.7	6.18
63	1.9	7.56

⁴⁾ Internal resistances and power loss are subject to application-specific and environment-specific conditions and are therefore to be considered as typical values.

Supplementary protector S 200 PR

Derating

For installation of supplementary protectors at temperatures that are different from the reference temperature and installations of several supplementary protectors directly side by side, derating factors apply to be considered.

Ambient temperature

The rated value of the current of a supplementary protectors with K characteristic refers to a reference ambient temperature of 20 °C.

The following table shows derating factors for ambient temperature from –40 to 70 °C for the characteristic K.

Rated current I_n A	Maximum operating current at ambient temperature T °C											
	–40 °C	–30 °C	–20 °C	–10 °C	0 °C	10 °C	20 °C	30 °C	40 °C	50 °C	60 °C	70 °C
0.5	0.66	0.64	0.61	0.59	0.56	0.53	0.50	0.47	0.43	0.40	0.35	0.31
1.0	1.32	1.27	1.22	1.17	1.12	1.06	1.00	0.94	0.87	0.79	0.71	0.61
1.6	2.12	2.04	1.96	1.88	1.79	1.70	1.60	1.50	1.39	1.26	1.13	0.98
2.0	2.65	2.55	2.45	2.35	2.24	2.12	2.00	1.87	1.73	1.58	1.41	1.22
3.0	4.0	3.8	3.7	3.5	3.4	3.2	3.0	2.8	2.6	2.4	2.1	1.8
4.0	5.3	5.1	4.9	4.7	4.5	4.2	4.0	3.7	3.5	3.2	2.8	2.4
6.0	7.9	7.6	7.3	7.0	6.7	6.4	6.0	5.6	5.2	4.7	4.2	3.7
8.0	10.8	10.2	9.8	9.4	8.9	8.5	8.0	7.5	6.9	6.3	5.7	4.9
10.0	13.2	12.7	12.2	11.7	11.2	10.6	10.0	9.4	8.7	7.9	7.1	6.1
13.0	17.2	16.6	15.9	15.2	14.5	13.8	13.0	12.2	11.3	10.3	9.2	8.0
16.0	21.2	20.4	19.6	18.8	17.9	17.0	16.0	15.0	13.9	12.6	11.3	9.8
20.0	26.5	25.5	24.5	23.5	22.4	21.2	20.0	18.7	17.3	15.8	14.1	12.2
25.0	33.1	31.9	30.6	29.3	28.0	26.5	25.0	23.4	21.7	19.8	17.7	15.3
32.0	42.3	40.8	39.2	37.5	35.8	33.9	32.0	29.9	27.7	25.3	22.6	19.6
40.0	52.9	51.0	49.0	46.9	44.7	42.4	40.0	37.4	34.6	31.6	28.3	24.5
50.0	66.1	63.7	61.2	58.6	55.9	53.0	50.0	46.8	43.3	39.5	35.4	30.6
63.0	83.3	80.3	77.2	73.9	70.4	66.8	63.0	58.9	54.6	49.8	44.5	38.6

Influence of adjacent devices

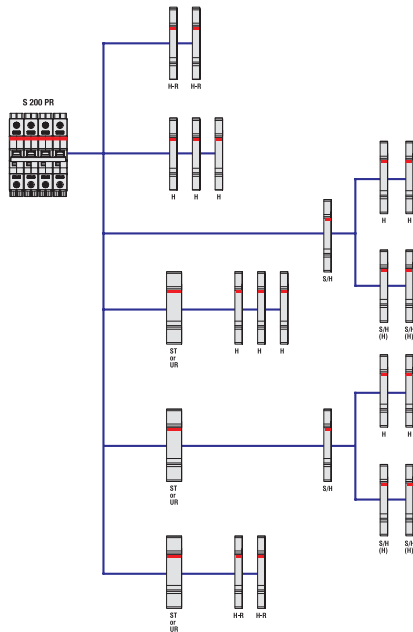
If several miniature circuit breakers are installed directly side by side with high load on all poles, a correction factor has to be applied to the rated current (see table). If distance pieces (spacers) are used, the factor is not to be considered.

No. of adjacent devices	Factor F
1	1
2	0.95
3	0.9
4	0.86
5	0.82
6	0.795
7	0.78
8	0.77
9	0.76
>9	0.76

Supplementary protector S 200 PR

Accessories, dimensional drawings and instructions for use

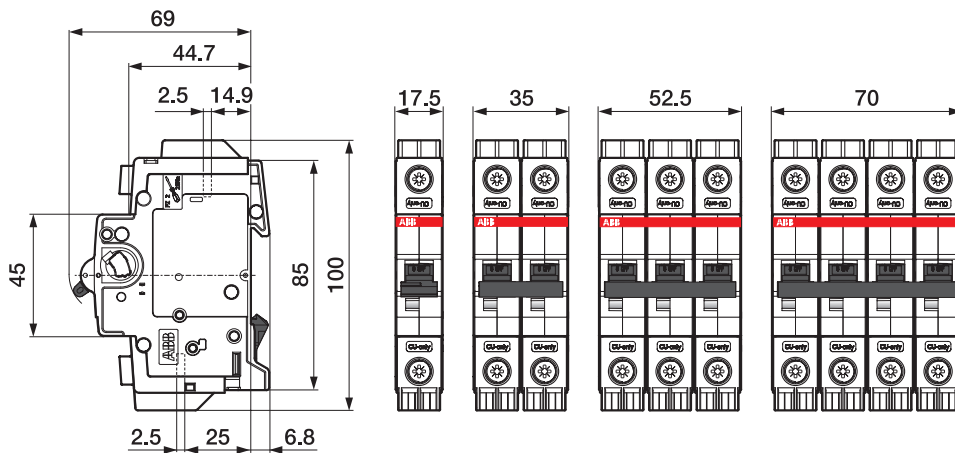
Accessory overview



- H Auxiliary contact S2C-H6R
- H-R Auxiliary contact S2C-H6-...R
- S/H Signal/Auxiliary contact S2C-S/H6R
- S/H (H) Signal/Auxiliary contact S2C-S/H6R used as auxiliary contact
- ST Shunt trip S2C-A...
- UR Undervoltage release S2C-UA

2CDC 092 002 F0111

Dimensional drawing



2CDC 022 001 F0011

Instructions for use

Ring Tongue Details

Only or ring cable lugs	Rated voltage 480V/277 V AC	Insulated only 	A max. 11.0 mm (0.43")	B max. 12.2 mm (0.48")	C Suitable for M5 (0.20")
	Rated voltage 240/240 V AC	Insulated only 	A max. 14.0 mm (0.55")	B max. 12.2 mm (0.48")	C Suitable for M5 (0.20")

CU only
 60/75°C
 (140/167°F)

max. 2.0 mm
 (0.08")

PZ 2 Torque: 2.8 Nm (25lb-in)

2CDC 022 003 F0211

Ring Tongue Terminal, Special purpose - Not for general use

Installation Instructions

Please insert or withdraw the cable lug only when the screw is completely open.

Please make sure that the terminal screw penetrates the ring lug hole properly and completely during tightening.

Please ensure that the screw is securely tightened before applying any mechanical force on the cable / cable lug.

$< 2.8 \text{ Nm}$
 2.8 Nm

Do not apply abnormal downward pressure on the screw during tightening or loosening of the screw.

$F = \text{max. } 30 \text{ N}$
 $F = \text{Maximum to operate}$

Please follow the Ring Tongue Details on the rear of this sheet.

Supplementary protector S 200 PR

Ordering data



2CDC021026S0011



2CDC021011S0012

Number of poles	Rated current In A	Type	Order code	bbn/EAN 401677	Weight per PCE kg	Packing unit PCE
1	0.2	S201PR-K0.2	2CDS271427R0087	9846868	0.140	10
	0.3	S201PR-K0.3	2CDS271427R0117	9846875	0.140	10
	0.5	S201PR-K0.5	2CDS271427R0157	9846882	0.140	10
	0.75	S201PR-K0.75	2CDS271427R0187	9846899	0.140	10
	1	S201PR-K1	2CDS271427R0217	9846905	0.140	10
	1.6	S201PR-K1.6	2CDS271427R0257	9846912	0.140	10
	2	S201PR-K2	2CDS271427R0277	9846929	0.140	10
	3	S201PR-K3	2CDS271427R0317	9846936	0.140	10
	4	S201PR-K4	2CDS271427R0337	9846943	0.140	10
	5	S201PR-K5	2CDS271427R0357	9846950	0.140	10
	6	S201PR-K6	2CDS271427R0377	9846967	0.140	10
	8	S201PR-K8	2CDS271427R0407	9846974	0.140	10
	10	S201PR-K10	2CDS271427R0427	9846981	0.140	10
	13	S201PR-K13	2CDS271427R0447	9846998	0.140	10
	15	S201PR-K15	2CDS271427R0457	9847001	0.140	10
	16	S201PR-K16	2CDS271427R0467	9847018	0.140	10
	20	S201PR-K20	2CDS271427R0487	9847025	0.140	10
	25	S201PR-K25	2CDS271427R0517	9847032	0.140	10
	30	S201PR-K30	2CDS271427R0527	9847049	0.140	10
	32	S201PR-K32	2CDS271427R0537	9847056	0.140	10
35	S201PR-K35	2CDS271427R0547	9847063	0.140	10	
40	S201PR-K40	2CDS271427R0557	9847070	0.140	10	
50	S201PR-K50	2CDS271427R0577	9847087	0.140	10	
60	S201PR-K60	2CDS271427R0587	9847094	0.140	10	
63	S201PR-K63	2CDS271427R0607	9847100	0.140	10	
2	0.2	S202PR-K0.2	2CDS272427R0087	9847117	0.280	5
	0.3	S202PR-K0.3	2CDS272427R0117	9847124	0.280	5
	0.5	S202PR-K0.5	2CDS272427R0157	9847131	0.280	5
	0.75	S202PR-K0.75	2CDS272427R0187	9847148	0.280	5
	1	S202PR-K1	2CDS272427R0217	9847155	0.280	5
	1.6	S202PR-K1.6	2CDS272427R0257	9847162	0.280	5
	2	S202PR-K2	2CDS272427R0277	9847179	0.280	5
	3	S202PR-K3	2CDS272427R0317	9847186	0.280	5
	4	S202PR-K4	2CDS272427R0337	9847193	0.280	5
	5	S202PR-K5	2CDS272427R0357	9847209	0.280	5
	6	S202PR-K6	2CDS272427R0377	9847216	0.280	5
	8	S202PR-K8	2CDS272427R0407	9847223	0.280	5
	10	S202PR-K10	2CDS272427R0427	9847230	0.280	5
	13	S202PR-K13	2CDS272427R0447	9847247	0.280	5
	15	S202PR-K15	2CDS272427R0457	9847254	0.280	5
	16	S202PR-K16	2CDS272427R0467	9847261	0.280	5
	20	S202PR-K20	2CDS272427R0487	9847278	0.280	5
	25	S202PR-K25	2CDS272427R0517	9847285	0.280	5
	30	S202PR-K30	2CDS272427R0527	9847292	0.280	5
	32	S202PR-K32	2CDS272427R0537	9847308	0.280	5
35	S202PR-K35	2CDS272427R0547	9847315	0.280	5	
40	S202PR-K40	2CDS272427R0557	9847322	0.280	5	
50	S202PR-K50	2CDS272427R0577	9847339	0.280	5	
60	S202PR-K60	2CDS272427R0587	9847346	0.280	5	
63	S202PR-K63	2CDS272427R0607	9847353	0.280	5	

Supplementary protector S 200 PR

Ordering data



2CDC0021016S0012

Number of poles	Rated current I_n A	Type	Order code	bbn/EAN 401677	Weight per PCE kg	Packing unit PCE
3	0.2	S203PR-K0.2	2CDS273427R0087	9847360	0.420	3
	0.3	S203PR-K0.3	2CDS273427R0117	9847377	0.420	3
	0.5	S203PR-K0.5	2CDS273427R0157	9847384	0.420	3
	0.75	S203PR-K0.75	2CDS273427R0187	9847391	0.420	3
	1	S203PR-K1	2CDS273427R0217	9847407	0.420	3
	1.6	S203PR-K1.6	2CDS273427R0257	9847414	0.420	3
	2	S203PR-K2	2CDS273427R0277	9847421	0.420	3
	3	S203PR-K3	2CDS273427R0317	9847438	0.420	3
	4	S203PR-K4	2CDS273427R0337	9847445	0.420	3
	5	S203PR-K5	2CDS273427R0357	9847452	0.420	3
	6	S203PR-K6	2CDS273427R0377	9847469	0.420	3
	8	S203PR-K8	2CDS273427R0407	9847476	0.420	3
	10	S203PR-K10	2CDS273427R0427	9847483	0.420	3
	13	S203PR-K13	2CDS273427R0447	9847490	0.420	3
	15	S203PR-K15	2CDS273427R0457	9847506	0.420	3
	16	S203PR-K16	2CDS273427R0467	9847513	0.420	3
	20	S203PR-K20	2CDS273427R0487	9847520	0.420	3
	25	S203PR-K25	2CDS273427R0517	9847537	0.420	3
	30	S203PR-K30	2CDS273427R0527	9847544	0.420	3
	32	S203PR-K32	2CDS273427R0537	9847551	0.420	3
35	S203PR-K35	2CDS273427R0547	9847568	0.420	3	
40	S203PR-K40	2CDS273427R0557	9847575	0.420	3	
50	S203PR-K50	2CDS273427R0577	9847582	0.420	3	
60	S203PR-K60	2CDS273427R0587	9847599	0.420	3	
63	S203PR-K63	2CDS273427R0607	9847605	0.420	3	
4	0.2	S204PR-K0.2	2CDS274427R0087	9847612	0.560	2
	0.3	S204PR-K0.3	2CDS274427R0117	9847629	0.560	2
	0.5	S204PR-K0.5	2CDS274427R0157	9847636	0.560	2
	0.75	S204PR-K0.75	2CDS274427R0187	9847643	0.560	2
	1	S204PR-K1	2CDS274427R0217	9847650	0.560	2
	1.6	S204PR-K1.6	2CDS274427R0257	9847667	0.560	2
	2	S204PR-K2	2CDS274427R0277	9847674	0.560	2
	3	S204PR-K3	2CDS274427R0317	9847681	0.560	2
	4	S204PR-K4	2CDS274427R0337	9847698	0.560	2
	5	S204PR-K5	2CDS274427R0357	9847704	0.560	2
	6	S204PR-K6	2CDS274427R0377	9847711	0.560	2
	8	S204PR-K8	2CDS274427R0407	9847728	0.560	2
	10	S204PR-K10	2CDS274427R0427	9847735	0.560	2
	13	S204PR-K13	2CDS274427R0447	9847742	0.560	2
	15	S204PR-K15	2CDS274427R0457	9847759	0.560	2
	16	S204PR-K16	2CDS274427R0467	9847766	0.560	2
	20	S204PR-K20	2CDS274427R0487	9847773	0.560	2
	25	S204PR-K25	2CDS274427R0517	9847780	0.560	2
	30	S204PR-K30	2CDS274427R0527	9847797	0.560	2
	32	S204PR-K32	2CDS274427R0537	9847803	0.560	2
35	S204PR-K35	2CDS274427R0547	9847810	0.560	2	
40	S204PR-K40	2CDS274427R0557	9847827	0.560	2	
50	S204PR-K50	2CDS274427R0577	9847834	0.560	2	
60	S204PR-K60	2CDS274427R0587	9847841	0.560	2	
63	S204PR-K63	2CDS274427R0607	9847858	0.560	2	



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