

M300P (magnetic tripping only)

Data sheet



System pro *M compact*® M300P miniature circuit breakers comply with IEC/EN 60947-2, protecting the installation against short circuit in commercial and industrial applications by supporting a breaking capacity of 25 kA.

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M300P
Miniature Circuit Breaker

M300P MCB is designed to be used in installations where high breaking capacities are required to protect against short-circuits.

M300P is compliant to the product standards IEC/EN 60947-2 and features the following main technical characteristics:

- Rated nominal current: 0.5 A ... 63 A
- Magnetic Tripping: $I_{mag}: 12 \times I_n$
- Pole variant: 1, 2, 3, 4
- Rated breaking capacity I_{cu} : 25 kA; 100 kA (≤ 6 A)
- Rated operational voltage U_e : 240/415 V AC
- Rated impulse withstand voltage U_{imp} : 6 kV

Application benefits

- Integrated trip indicator for clear signalization of tripping events on site
- Dual DIN-Rail release for fast and easy installation
- Fully compatible with whole range of System pro *M compact*® accessories supporting lots of different functions
- Quick and easy product identification by QR-code along with direct access to the ABB product database
- Terminals equipped with fail safe feature to avoid improper installation
- Supply possible from top or bottom and in parallel with cables and busbars thanks to terminals composed by two different openings
- Excellent technical performance to ensure safety and protection of installation and personal
- Certified quality and compliance

M300P

Technical data



M300P

		M300P
General Data	Standards	IEC/EN 60947-2
	Poles	1P, 2P, 3P, 4P
	Magnetic Tripping	$I_{mag}: 12 \times I_n$
	Rated current I_n	0.5...63 A
	Rated frequency f	50 / 60 Hz, DC
	Rated insulation voltage U_i acc. to IEC/EN 60664-1	500 V AC
	Overvoltage category	IV
	Pollution degree	3
Data acc. to IEC/EN 60947-2	Magnetic Tripping	$I_{mag}: 12 \times I_n$
	Rated operational voltage U_e	1P: 240 V AC, 72 V DC 2P: 415 V AC, 125 V DC 3P, 4P: 415 V AC
	Max. power frequency recovery voltage U_{max}	1P: 264 V AC, 72 V DC 2P, 3P, 4P: 462 V AC, 125 V DC
	Min. operating voltage	12 V AC – 12 V DC
	Rated ultimate short-circuit breaking capacity I_{cu}	25 kA; 100 kA ($\leq 6A$)
	Rated service short-circuit breaking capacity I_{cs}	12.5 kA ($\leq 25 A$); 10 kA (32-40 A); 7.5 kA (>40 A)
	Rated impulse withstand voltage U_{imp} (1.2/5 μs)	6 kV
	Electrical endurance	$I_n < 32 A$: 20,000 ops. (AC), $I_n \geq 32 A$: 10,000 ops. (AC); 1,500 ops. (DC)

M300P

Mechanical data

		M300P
Mechanical Data	Housing	Insulation group I, RAL 7035
	Toggle	Insulation group II, black, sealable
	Contact position indication	Real CPI (green OFF / red ON)
	Trip position indicator	TPI (grey NO TRIP / orange TRIP)
	Protection degree acc. to DIN 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	5 g - 20 cycles at 5 ... 150 ... 5 Hz at 0.8 I _n
	Environmental conditions (damp heat cyclic) acc. to IEC/EN 60068-2-30	28 cycles with 55 °C/90-96 % and 25 °C/95-100 %
	Ambient temperature	-40 ... +70 °C
	Storage temperature	-50 ... +70 °C
Installation	Terminal	Failsafe bi-directional cylinder-lift terminal
	Cross-section of conductors (top/bottom)	solid, stranded: 35 mm ² / 35 mm ² flexible: 25 mm ² / 25 mm ² 14 – 4 AWG
	Cross-section of busbars (top/bottom)	10 mm ² / 10 mm ² 14 – 8 AWG
	Torque	2.8 Nm; 18 in-lbs.
	Screw driver	No. 2 Pozidrive
	Mounting	on DIN rail 35 mm, acc. to EN 60715 by dual DIN-rail release
	Mounting position	any
	Supply	any
Dimensions and weight	Mounting dimensions acc. to DIN 43880	1
	Pole dimensions (H x D x W)	88 x 69 x 17.5 mm
	Pole weight approx.	124 g
Combination with auxiliary elements	Auxiliary contact	Yes
	Bottom fixed auxiliary contact	Yes
	Signal contact	Yes
	Shunt trip	Yes
	Undervoltage release	Yes
	Motor operating device	Yes
Standard	IEC/EN 60947-2	

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Tripping behavior and Influence of adjacent devices

Tripping behavior M300P

Acc. to	Rated current	Electromagnetic release ¹⁾	
		Currents:	Tripping time
		trip at least at	
IEC/EN 60947-2	0.5 to 63 A	$12 \cdot I_n$	< 0.1 s

¹⁾ The indicated electromagnetic tripping values apply to a frequency range of 16 2/3... 60 Hz. For different network frequencies or direct current the values change according to the multiplier in the table below

	AC			DC
	100 Hz	200 Hz	400 Hz	
Multiplier	1.1	1.2	1.5	1.5

Influence of adjacent devices

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

No. of adjacent devices	Factor F
1	1
2, 3	0.9
4, 5	0.8
≥ 6	0.75

Accessory Overview

2CDC092002F0212

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M301



M302



M303

Number of poles	Rated current [A]	Order details			Weight 1 piece kg	Pack unit pc.
		Bbn 40 16779 EAN	Type code	Ordercode		
1	0.5	089326	M301P-D0.5	2CDA381799R0982	0.124	10
	1	086820	M301P-D1	2CDA381799R0011	0.124	10
	1.6	089319	M301P-D1.6	2CDA381799R0971	0.124	10
	2.5	089241	M301P-D2.5	2CDA381799R0291	0.124	10
	4	089197	M301P-D4	2CDA381799R0041	0.124	10
	6.3	089265	M301P-D6.3	2CDA381799R0361	0.124	10
	10	089203	M301P-D10	2CDA381799R0101	0.124	10
	12.5	089289	M301P-D12.5	2CDA381799R0491	0.124	10
	16	089210	M301P-D16	2CDA381799R0161	0.124	10
	20	089227	M301P-D20	2CDA381799R0201	0.124	10
	25	089234	M301P-D25	2CDA381799R0251	0.124	10
	32	089258	M301P-D32	2CDA381799R0321	0.124	10
	40	089272	M301P-D40	2CDA381799R0401	0.124	10
	50	089296	M301P-D50	2CDA381799R0501	0.124	10
	63	089302	M301P-D63	2CDA381799R0631	0.124	10
2	0.5	089470	M302P-D0.5	2CDA382799R0981	0.248	5
	1	089333	M302P-D1	2CDA382799R0011	0.248	5
	1.6	089463	M302P-D1.6	2CDA382799R0971	0.248	5
	2.5	089395	M302P-D2.5	2CDA382799R0291	0.248	5
	4	089340	M302P-D4	2CDA382799R0041	0.248	5
	6.3	089418	M302P-D6.3	2CDA382799R0361	0.248	5
	10	089357	M302P-D10	2CDA382799R0101	0.248	5
	12.5	089432	M302P-D12.5	2CDA382799R0491	0.248	5
	16	089364	M302P-D16	2CDA382799R0161	0.248	5
	20	089371	M302P-D20	2CDA382799R0201	0.248	5
	25	089388	M302P-D25	2CDA382799R0251	0.248	5
	32	089401	M302P-D32	2CDA382799R0321	0.248	5
	40	089425	M302P-D40	2CDA382799R0401	0.248	5
	50	089449	M302P-D50	2CDA382799R0501	0.248	5
	63	089456	M302P-D63	2CDA382799R0631	0.248	5
3	0.5	089623	M303P-D0.5	2CDA383799R0981	0.372	1
	1	089487	M303P-D1	2CDA383799R0011	0.372	1
	1.6	089616	M303P-D1.6	2CDA383799R0971	0.372	1
	2.5	089548	M303P-D2.5	2CDA383799R0291	0.372	1
	4	089494	M303P-D4	2CDA383799R0041	0.372	1
	6.3	089562	M303P-D6.3	2CDA383799R0361	0.372	1
	10	089500	M303P-D10	2CDA383799R0101	0.372	1
	12.5	089586	M303P-D12.5	2CDA383799R0491	0.372	1
	16	089517	M303P-D16	2CDA383799R0161	0.372	1
	20	089524	M303P-D20	2CDA383799R0201	0.372	1
	25	089531	M303P-D25	2CDA383799R0251	0.372	1
	32	089555	M303P-D32	2CDA383799R0321	0.372	1
	40	089579	M303P-D40	2CDA383799R0401	0.372	1
	50	089593	M303P-D50	2CDA383799R0501	0.372	1
	63	089609	M303P-D63	2CDA383799R0631	0.372	1



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M304

Number of poles	Rated current [A]	Order details			Weight 1 piece	Pack unit
		Bbn 40 16779 EAN	Type code	Ordercode	kg	pc.
4	0.5	089777	M304P-D0.5	2CDA384799R0981	0.496	1
	1	089630	M304P-D1	2CDA384799R0011	0.496	1
	1.6	089760	M304P-D1.6	2CDA384799R0971	0.496	1
	2.5	089692	M304P-D2.5	2CDA384799R0291	0.496	1
	4	089647	M304P-D4	2CDA384799R0041	0.496	1
	6.3	089715	M304P-D6.3	2CDA384799R0361	0.496	1
	10	089654	M304P-D10	2CDA384799R0101	0.496	1
	12.5	089739	M304P-D12.5	2CDA384799R0491	0.496	1
	16	089661	M304P-D16	2CDA384799R0161	0.496	1
	20	089678	M304P-D20	2CDA384799R0201	0.496	1
	25	089685	M304P-D25	2CDA384799R0251	0.496	1
	32	089708	M304P-D32	2CDA384799R0321	0.496	1
	40	089722	M304P-D40	2CDA384799R0401	0.496	1
	50	089746	M304P-D50	2CDA384799R0501	0.496	1
	63	089753	M304P-D63	2CDA384799R0631	0.496	1

