

E-T-A® Thermal-Magnetic Circuit Breakers 3300/3400

Description

Single pole thermal-magnetic circuit breakers with tease-free, trip-free, press-to-reset, snap action mechanism (R-type TM CBE to EN 60934; M-type with manual release -H). Available with fast acting and standard magnetic tripping characteristics - types 3300 and 3400 - both with threadneck panel mounting. Options include auxiliary contacts, a separate shunt tap terminal (-A3), and pull-to-trip manual release (-H).

Typical applications

Control systems, instrumentation, medical equipment, machine tools, robotics.

Accessories

- X 210 663 01 Water splash cover/knurled nut assembly for version with press-to-reset only (-IG2).
- X 200 801 08 Concertina style splash cover/hex nut assembly for version with press-to-reset only (-IG2).

Ordering information

Type No.	
3300	fast acting
3400	standard delay
Mounting	
IG2	moulded threadneck M12x1, protection class II, not with -H leave blank for metal threadneck (required for -H)
Terminal design	
P10	blade terminals 6.3-0.8
K20	screw terminals M3.5x5.5 with clamp (not with -Si and -A3)
Shunt terminal (optional)	
A3	same as main terminals, up to $I_N=7$ A max. load 5 A
Manual release (optional)	
H	manual release facility (pull) not with -IG for M12x1 metal threadneck only.
Auxiliary contacts (optional)	
Si	with silver-plated solder terminals (N/O and N/C)
Current ratings	
0.05...16 A	

3400 - IG2 - P10 - [] - [] - Si - 10 A ordering example, without manual release and with moulded threadneck
3400 - [] - P10 - [] - H - Si - 10 A ordering example, with manual release and metal threadneck

The exact part number required can be built up from the table of choices shown above. Ordering references for optional features should be omitted if not required.

Standard current ratings and typical internal resistance values

Current ratings (A)	Internal resistance (Ω)		Current ratings (A)	Internal resistance (Ω)	
	3300	3400		3300	3400
0.05	477	447	3	0.18	0.19
0.1	131	131	4	0.109	0.090
0.2	41	40	5	0.066	0.061
0.3	19.6	19.3	6	0.046	0.041
0.4	10.4	10.4	7	0.032	0.034
0.5	7.2	7.1	8	0.020	≤0.02
0.6	4.8	4.3	10	≤0.02	≤0.02
0.8	2.5	2.5	12	≤0.02	≤0.02
1	1.93	1.67	13	≤0.02	≤0.02
1.5	0.81	0.61	14	≤0.02	≤0.02
2	0.44	0.38	15	≤0.02	≤0.02
2.5	0.27	0.24	16	≤0.02	≤0.02



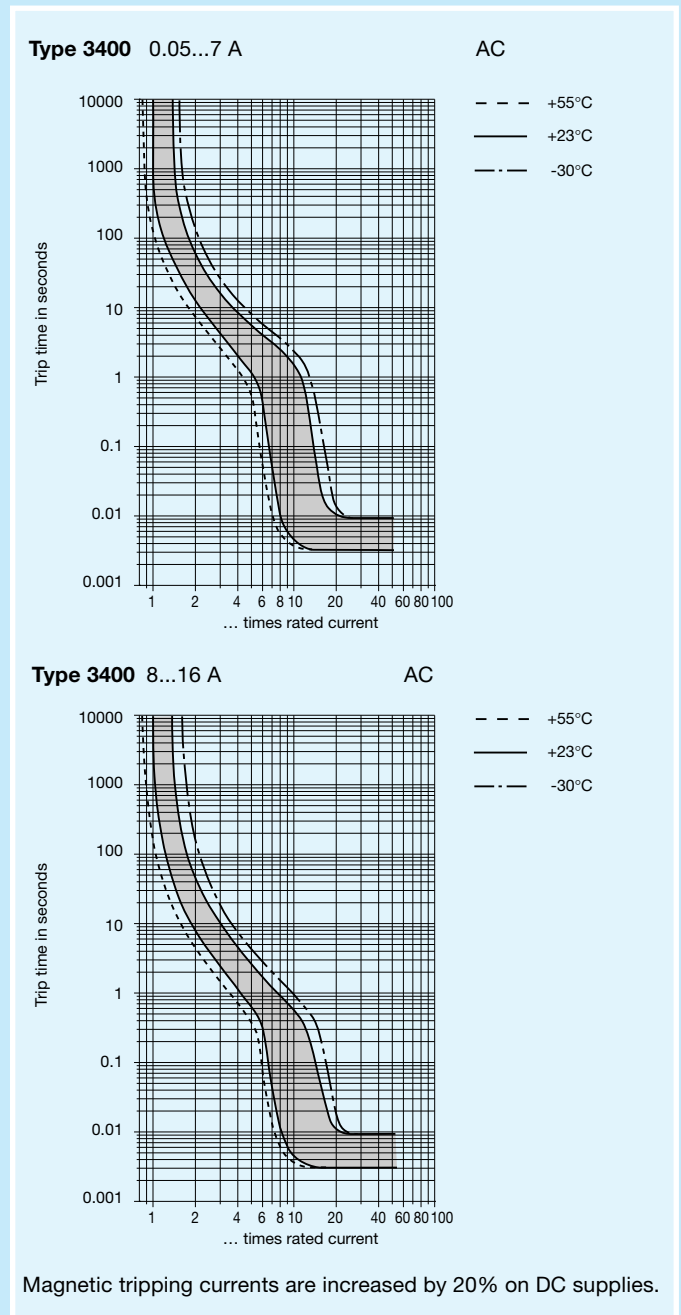
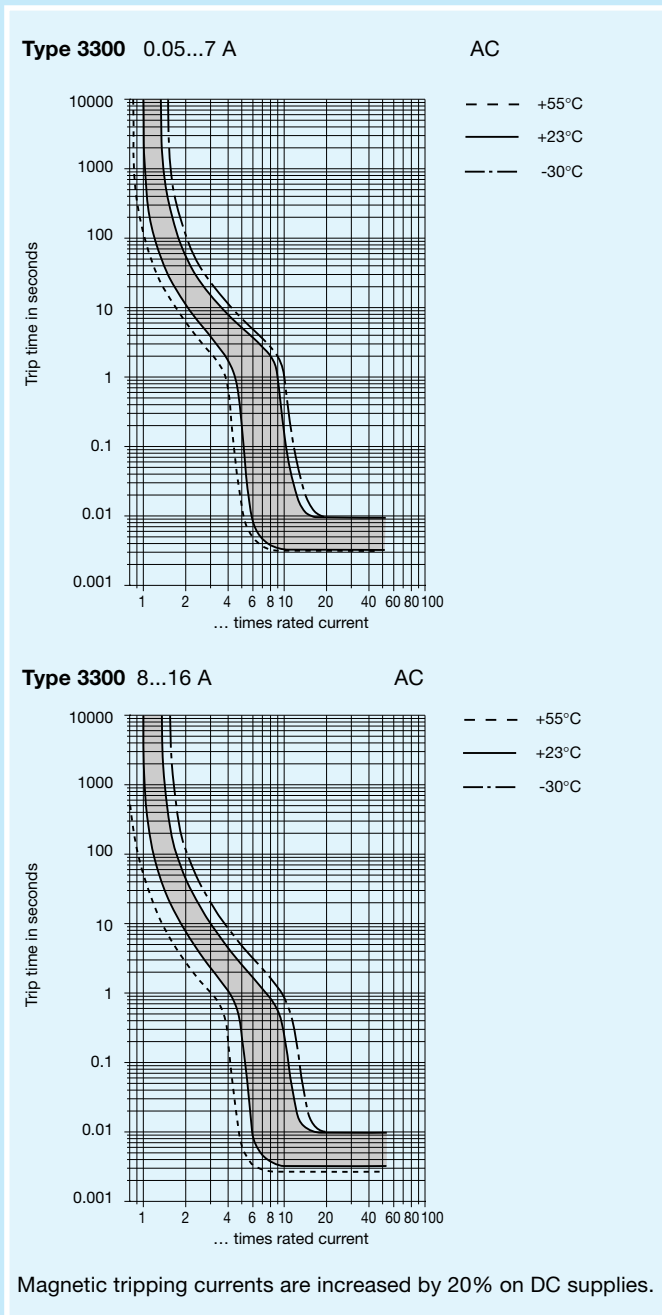
3300 fast acting **3400** standard delay

Technical data

Max. voltage rating	AC 250 V, 50/60 Hz; DC 65 V		
Current ratings	0.05...16 A		
Auxiliary circuit	1 A, AC 250 V/DC 65 V resistive load		
Protection class (IEC 730-1)	I (II when mounted to the installation drawing)		
Typical life	5000 operations at $2xI_N$		
Temperature range	0...+55 °C		
Creepage resistance	PTI 600 to IEC 112		
Insulation co-ordination (IEC 664 and 664 A)	Rated impulse withstand voltage	Pollution degree	
	operating area	4 kV	3
	main circuit/aux. circuit	4 kV	3
	aux. circuit 4-5/6-7	1.5 kV	2
Dielectric strength (IEC 664 and 664A)	Test voltage	operating area	
	operating area	AC 4000 V double insulation	
	main circuit/aux. circuit	AC 2000 V	
	aux. circuit 4-5/6-7	AC 840 V	
Insulation resistance	>100 MΩ (DC 500 V)		
Interrupting capacity (VDE 0660, Part 101, P-2)	0.05...0.8 A self-limiting		
	1...2 A	200 A	
	2.5...16 A	400 A	
Interrupting capacity (UL 1077/EN 60 934 PC1)	I_N	U_N	
	0.05...4.5 A	AC 250 V	200 A
	5...8 A	AC 250 V	1000 A
	9...15 A	AC 125 V	1000 A
	0.05...15 A	DC 65 V	200 A

Environmental protection (IEC 529/DIN 40050)	operating area IP 40 terminal area IP 00	
Vibration	5 g (57-500 Hz) ±0.38 mm (10-57 Hz) to IEC 68-2-6, test Fc 10 frequency cycles/axis	
Shock	25 g (11 ms) to IEC 68-2-27, test Ea	
Corrosion	96 hours at 5 % saltspray to IEC 68-2-11, test Ka	
Humidity	240 hours at 95 % RH to IEC 68-2-3, test Ca	
Mass	3300: approx. 55 g 3400: approx. 50 g	

Typical time/current characteristics



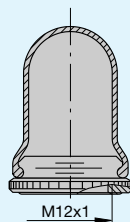
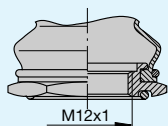
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Accessories

For push buttons with M12 threadneck (-IG2)
(not with manual release -H)

Hex nut with splash cover, black
X 201 296 01 (IP 64)
X 200 801 08 (IP 66) with O-ring

Water splash cover, transparent with knurled nut
X 210 663 01 (IP 64)



The time/current characteristic curve depends on the ambient temperature prevailing. In order to eliminate nuisance tripping, please multiply the circuit breaker current ratings by the derating factor shown below.

Ambient temperature °C	-10	0	+10	+20	+30	+40	+50	+60
Multiplication factor	0.84	0.92	1	1	1	1.08	1.16	1.23