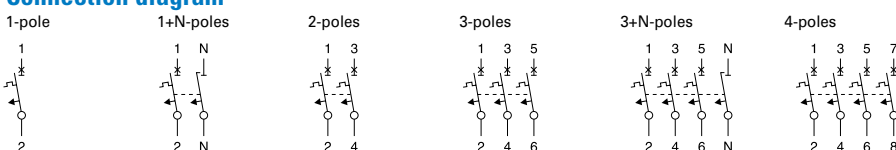


Technical Data

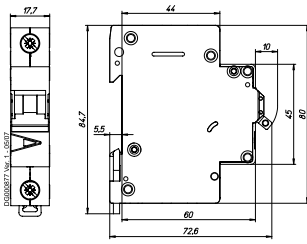
		FAZ-T
Productstandard		IEC/EN 60947-2, IEC/EN 60898-1
Classified according to		IEC 61373, EN 45545-2
Current test marks as printed onto the device		
Number of poles		1, 1p+N, 2, 3, 3p+N, 4
Mechanical		
Device width		17.7 mm (1p), 27 mm (1p+N), 36 mm (2p), 54 mm (3p), 72 mm (3p+N), 72 mm (4p)
Frame size		45 mm
Device height		80 mm
Device depth		60 mm
Terminals		lift terminal
Terminal capacity rigid solid/stranded wire		1-25 mm ²
Terminal screw		M5 (with slotted screw acc. to EN ISO 4757-Z2, PZ2)
Fastening torque of terminal screws		max. 2.4 Nm
Snap on fixing		tristable (on DIN rail acc. to EN 50022)
Finger proof		acc. to VBG4, ÖVE EN-6
Degree of protection (DIN VDE 0470)		
Surface mounted		IP20
Built-in behind panel		IP40
Contact position indicator		red / green
Electrical		
Rated voltage	U_n	255/440 V AC (Characteristic B, C), 240/415 V AC (Characteristic D) 60 V DC per pole
Rated current	I_n	Type B, C, D: 1, 2, 3, 4, 6, 10, 12, 13, 15, 16, 20, 25, 32, 40 A
Rated insulation voltage	U_i	440 V AC
Rated impulse withstand voltage	U_{imp}	4 kV (1.2/50) μ sec
Tripping characteristic		
Conventional non-tripping current		$I_{nt} = 1,13 I_n$
Conventional tripping current		$I_t = 1,45 I_n$
Reference temperature		40 °C
Temperature factor		0.4%/K
Instantaneous tripping current	I_{mt}	Type B: $3 I_n < I_{mt} = 5 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$ Type C: $5 I_n < I_{mt} = 10 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$ Type D: $10 I_n < I_{mt} = 20 I_n \cdot t (I_{mt}) < 0.1 \text{ sec}$
Rated ultimate short-circuit breaking capacity I_{cu} (IEC/EN 60947-2)		Type B 1-25 A: 25 kA, 32-40 A: 20 kA Type C 1-25 A: 25 kA, 32-40 A: 20 kA Type D 1p/1p+N/2p - 1-13 A: 25 kA, 15-20 A: 20 kA, 25-40 A: 15 kA 3p/3p+N/4p - 1-16 A: 25 kA, 20 A: 20 kA, 25-40 A: 15 kA
Rated service short-circuit breaking capacity I_{cs} (IEC/EN 60947-2)		for $I_{cu} = 25 \text{ kA} \rightarrow I_{cs} = 12.5 \text{ kA}$: 240/415 V AC; $I_{cu} = 15 \text{ kA}$: 255/440 V AC for $I_{cu} = 20 \text{ kA} \rightarrow I_{cs} = 10 \text{ kA}$: 240/415 V AC; $I_{cu} = 15 \text{ kA}$: 255/440 V AC for $I_{cu} = 15 \text{ kA} \rightarrow I_{cs} = 7.5 \text{ kA}$
Rated short-circuit breaking capacity I_{cn} (IEC/EN 60898-1)		Type B 1-25 A: 15 kA, 32-40 A: 10 kA Type C 1-25 A: 15 kA, 32-40 A: 10 kA Type D 1-16 A: 15 kA, 20-40 A: 10 kA
Selectivity class		3 (acc. to EN 60898)
Number of electrical operations		> 4.000 (IEC/EN 60898)
Number of mechanical operations		> 10,000 (IEC/EN 60947)
Climatic conditions		acc. to IEC 68-2 (25..55°C / 90..95% RH)
Operating temperature range		-40°C up to +75°C

Connection diagram

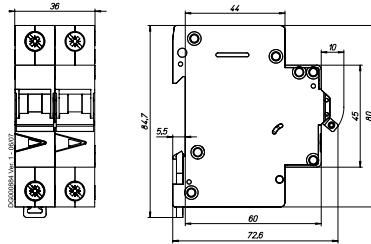


Dimensions (mm) FAZ-T

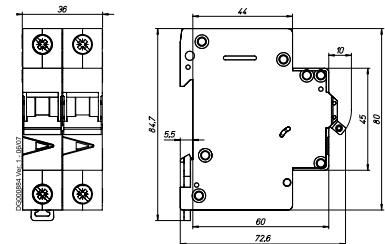
1-pole



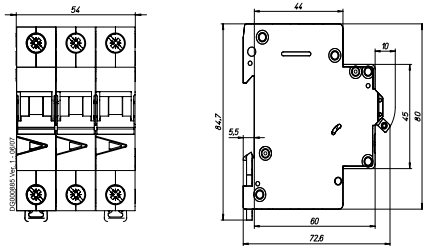
1+N-poles



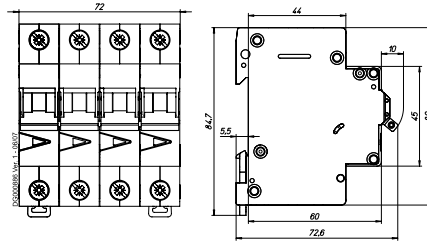
2-poles



3-poles

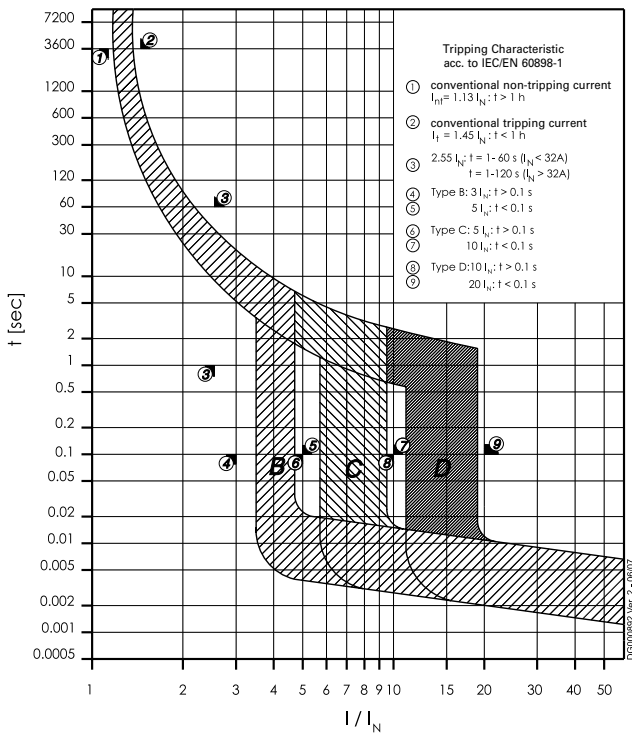


3+N-poles, 4-poles



Tripping Characteristics FAZ-T

Characteristics B, C and D - EN60898



Power Loss at I_n FAZ-T (50/60 Hz)

Type B						
I_n [A]	1p P [W]	1pN P [W]	2p P [W]	3p P [W]	3pN* P [W]	4p P [W]
1	1.6	1.7	3.1	4.7	4.8	6.3
2	1.4	1.5	2.8	4.1	4.3	5.5
3	2.5	2.7	5.0	7.6	7.8	10.1
4	1.4	1.6	2.9	4.4	4.5	5.8
6	1.8	2.0	3.6	5.5	5.6	7.3
10	1.9	2.1	3.9	5.9	6.1	7.8
12	2.8	3.2	5.9	8.7	9.0	11.5
13	2.5	2.9	5.3	7.8	8.1	10.3
15	2.1	2.4	4.4	6.5	6.7	8.6
16	2.2	2.6	4.7	6.9	7.2	9.1
20	3.2	3.6	6.6	9.8	10.1	13.0
25	3.0	3.5	6.4	9.4	9.7	12.4
32	3.7	4.4	8.1	12.1	12.5	15.8
40	3.4	4.1	7.5	11.2	11.5	14.6

* symmetrical load

Type C						
I_n [A]	1p P [W]	1pN P [W]	2p P [W]	3p P [W]	3pN* P [W]	4p P [W]
1	1.6	1.7	3.1	4.7	4.8	6.3
2	1.4	1.5	2.8	4.1	4.3	5.5
3	1.2	1.3	2.4	3.6	3.7	4.8
4	1.4	1.6	2.9	4.4	4.5	5.8
6	1.5	1.6	2.9	4.4	4.6	5.9
10	1.5	1.7	3.0	4.6	4.7	6.1
12	2.1	2.4	4.4	6.5	6.8	8.6
13	2.5	2.9	5.3	7.8	8.1	10.3
15	2.1	2.4	4.4	6.5	6.7	8.6
16	2.2	2.6	4.7	6.9	7.2	9.1
20	3.2	3.6	6.6	9.8	10.1	13.0
25	3.0	3.5	6.4	9.4	9.7	12.4
32	3.7	4.4	8.1	12.1	12.5	15.8
40	3.4	4.1	7.5	11.2	11.5	14.6

* symmetrical load

Type D						
I_n [A]	1p P [W]	1pN P [W]	2p P [W]	3p P [W]	3pN* P [W]	4p P [W]
1	0.8	0.9	1.6	2.4	2.5	3.2
2	1.0	1.1	2.0	3.0	3.1	4.0
3	1.2	1.3	2.4	3.6	3.7	4.8
4	1.4	1.6	2.9	4.4	4.5	5.8
6	1.5	1.6	2.9	4.4	4.6	5.9
10	1.5	1.7	3.0	4.6	4.7	6.1
12	1.7	2.0	3.6	5.3	5.4	7.0
13	1.9	2.2	4.0	5.9	6.1	7.8
15	2.1	2.4	4.4	6.5	6.7	8.6
16	2.2	2.6	4.7	6.9	7.2	9.1
20	2.0	2.2	4.1	6.1	6.2	8.1
25	2.5	2.9	5.2	7.7	7.9	10.2
32	3.4	4.0	7.4	11.1	11.4	14.5
40	3.2	3.8	7.0	10.4	10.7	13.6

* symmetrical load

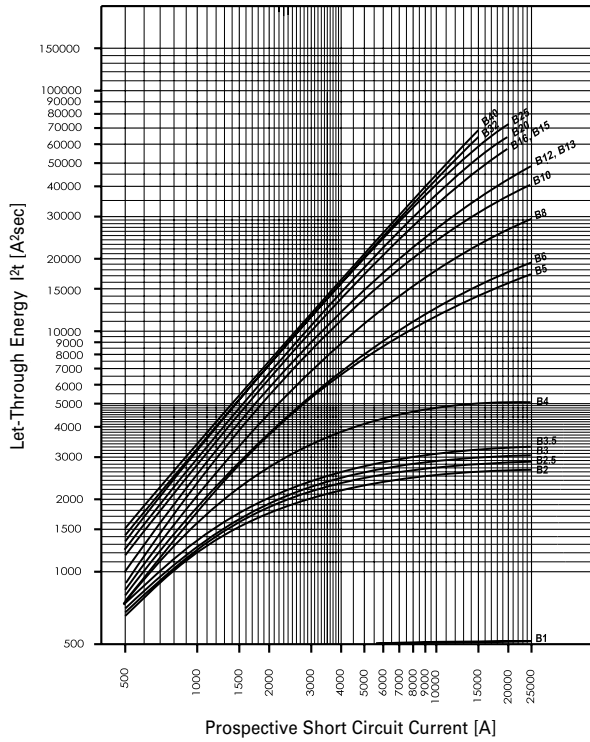
Influence of Ambient Temperature FAZ-T

On Load Carrying Capacity (temperature derating)

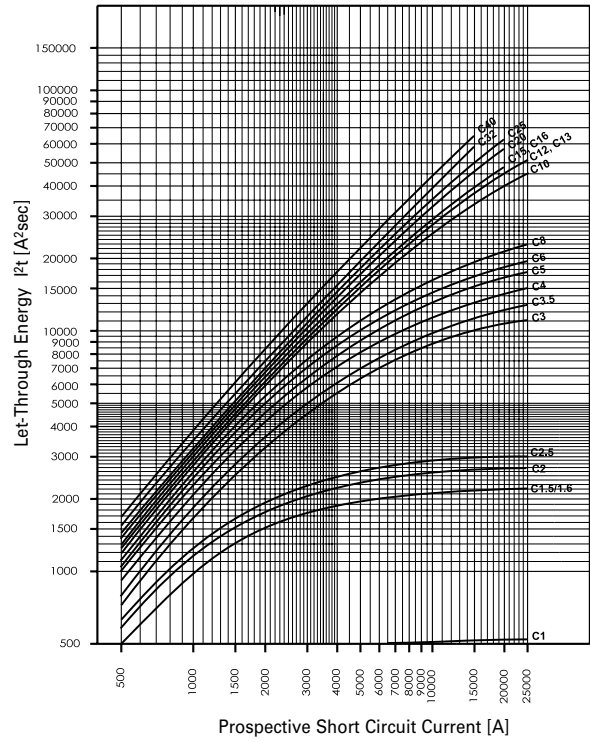
I_n [A]	Ambient temperature T [°C]																
	-40	-30	-20	-10	0	10	20	30	35	40	45	50	55	60	65	70	75
1	1.3	1.2	1.2	1.2	1.1	1.1	1	1	0.99	0.97	0.95	0.93	0.9	0.89	0.87	0.85	0.83
2	2.6	2.5	2.4	2.3	2.2	2.2	2.1	2	2	1.9	1.9	1.9	1.8	1.8	1.7	1.7	1.7
3	3.8	3.7	3.6	3.5	3.4	3.3	3.1	3	3	2.9	2.8	2.8	2.7	2.7	2.6	2.5	2.5
4	5.1	5	4.8	4.7	4.5	4.3	4.2	4	3.9	3.9	3.8	3.7	3.6	3.5	3.5	3.4	3.3
6	7.7	7.5	7.2	7	6.7	6.5	6.3	6	5.9	5.8	5.7	5.6	5.4	5.3	5.2	5.1	5
10	13	12	12	12	11	11	10	10	9.9	9.7	9.5	9.3	9	8.9	8.7	8.5	8.3
12	15	15	14	14	13	13	13	12	12	12	11	11	11	11	10	10	10
13	17	16	16	15	15	14	14	13	13	13	12	12	12	12	11	11	11
15	19	19	18	17	17	16	16	15	15	15	14	14	14	13	13	13	12
16	20	20	19	19	18	17	17	16	16	15	15	15	14	14	14	14	13
20	26	25	24	23	22	22	21	20	20	19	19	19	18	18	17	17	17
25	32	31	30	29	28	27	26	25	25	24	24	23	23	22	22	21	21
32	41	40	38	37	36	35	33	32	32	31	30	30	29	28	28	27	26
40	51	50	48	47	45	43	42	40	39	39	38	37	36	35	35	34	33

Maximum Let-Through Energy FAZ-T

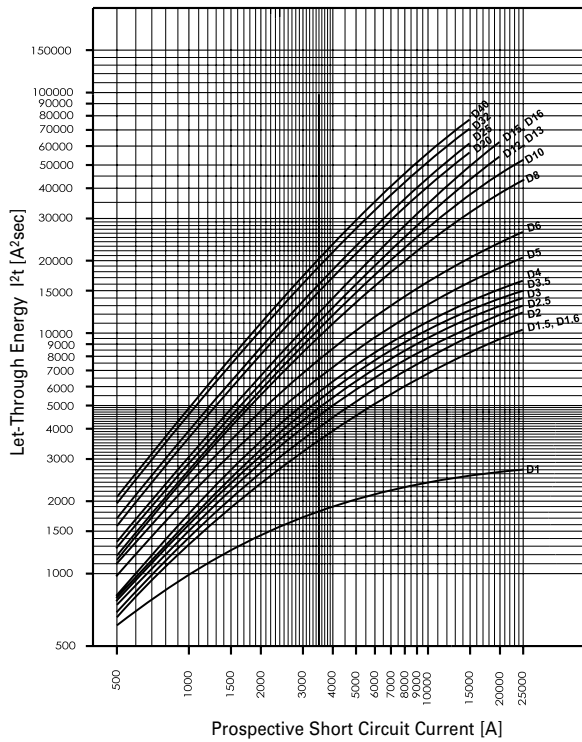
Type B



Type C

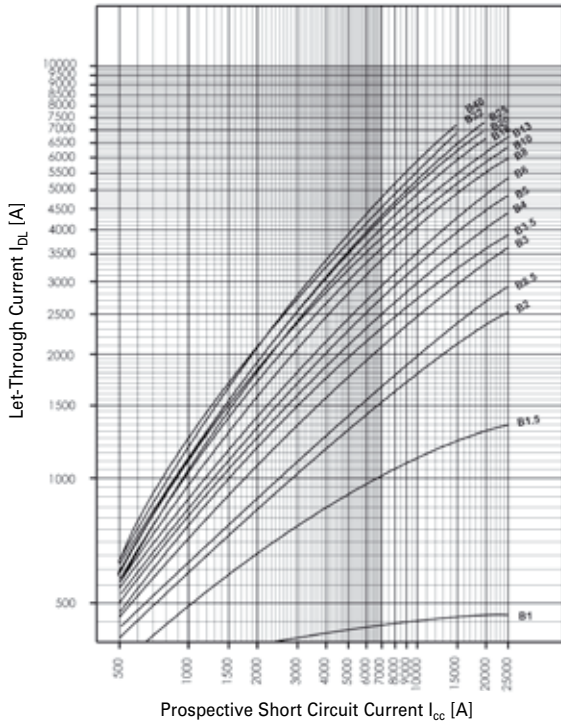


Type D

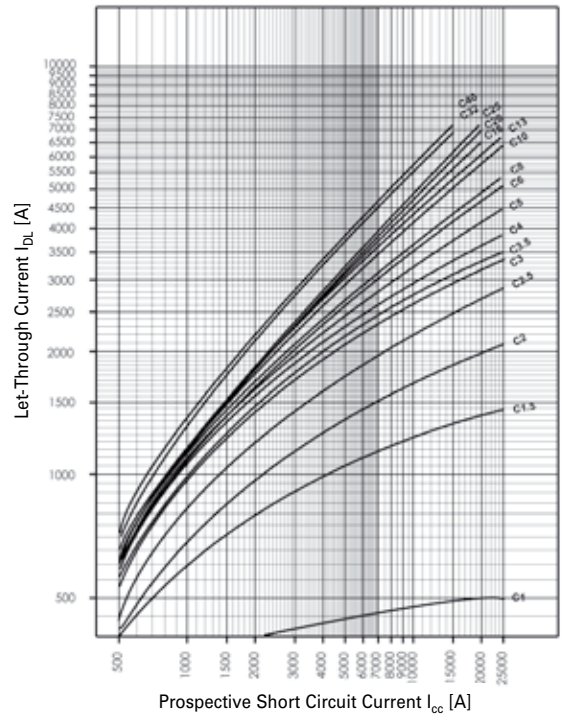


Maximum Let-Through Current FAZ-T

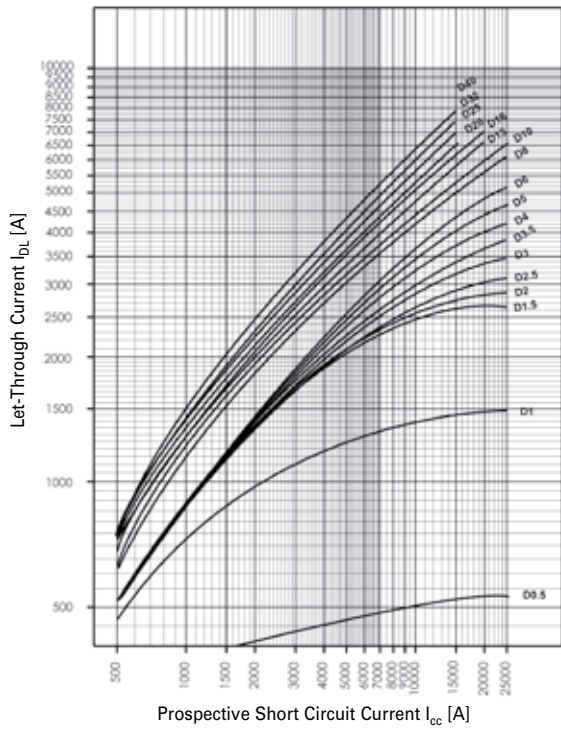
Type B



Type C



Type D

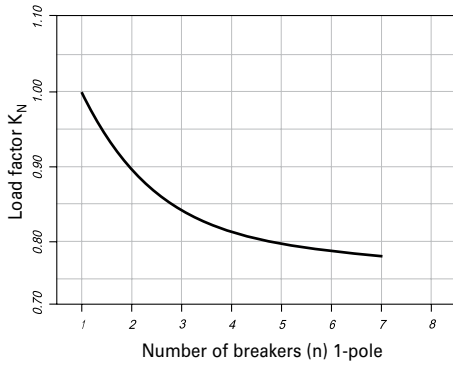


Influence of the Line Frequency FAZ-T

On the Instantaneous Tripping Current I_{MA}

	Line Frequency f [Hz]						
	16 ² / ₃	50	60	100	200	300	400
$I_{MA}(f)/I_{MA}(50\text{ Hz})$ [%]	91	100	101	106	115	134	141

Load rating in case of circuit breakers arranged one next to the other FAZ-T



Derating table for FAZ/FAZ-T above 2000m sea level

60898	60947		
U_n 230/400V	U_n 230/400V		
B, C, D ≤63A	B, C ≤63A and D ≤40A	D50, D63	B, C, D ≤63A

Above sea level (m)	Overtoltage category	Disconnect function	I/I_n	I_{cn}	I_{cs}	I_{cu}		I_{cs}
m	x	x	x	kA	kA	kA	kA	kA
≤2000	III	yes	1	10	7.5	15	10	7.5
>2000-2500	II	no	0.93	6	6	10	6	6
>2500-3000	II	no	0.88	6	6	10	6	6
>3000-3500	II	no	0.83	6	6	10	6	6
>3500-4000	II	no	0.78	6	6	10	6	6