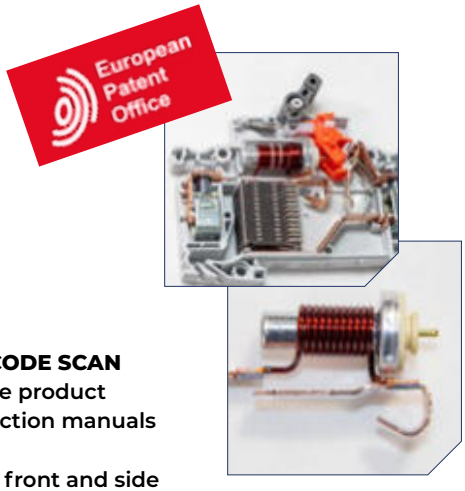
Miniature circuit breakers ETIMAT P - NEW GENERATION



EXACT TRACEABILITY AND HIGHEST QUALITY CONTROL
Fully automated assembly line with 17 different tests and measurements during assembly process to ensure best functionality of each finished product.
All important components are marked with a DMC code, containing individual test results and thus ensuring exact traceability and highest quality control of every MCB.

PATENTED CONSTRUCTION The unique technology of combined thermomagnetic tripping unit with integrated thermal release prevents both manual tampering of the overload settings and material deterioration, ensuring precise and reliable overload tripping through the entire lifecycle of the MCB.





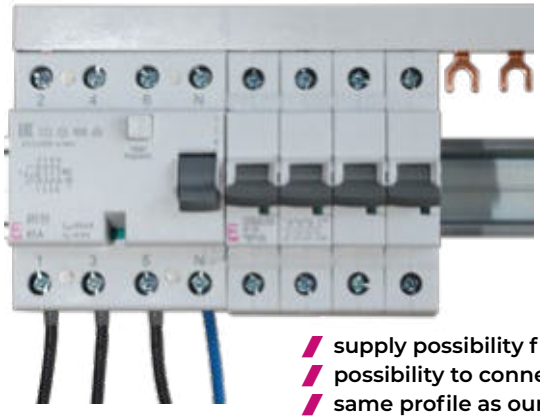
ALL DATA AVAILABLE WITH A SINGLE QR CODE SCAN
Every product has a QR code with a link to the product webpage with all relevant information, instruction manuals and other technical materials.
All important technical data is printed on the front and side of the MCB.
Every product is marked with EAN code.

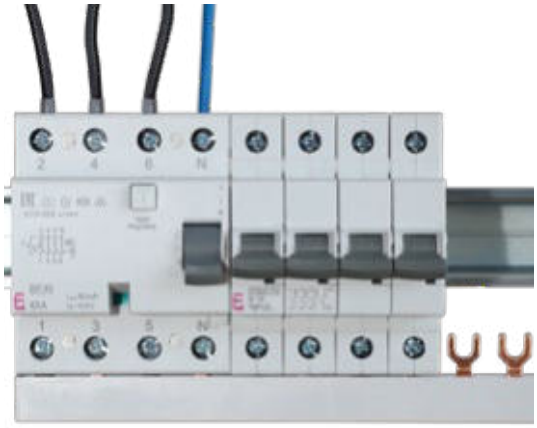
SUPERIOR TECHNICAL FEATURES
reduced power dissipation
high electrical endurance: 20.000 operating cycles
operation in DC circuits with voltage up to 60V DC/pole
construction solutions protected by two international patents





SPECIAL RESET VERSION
In the reset version, the toggle position clearly indicates the reason for tripping, preventing user mistakes and always making it clear whether the system turning off was intentional (manual) or the result of a fault in the electrical circuit.





- supply possibility from top or bottom
- possibility to connect wires to terminals up to 25 mm²
- same profile as our other modular devices resulting in a coordinated and streamlined look to the installation

ASTI / Miniature Circuit Breakers

- The possibility of mounting up to 3 auxiliary / signal switches



- 4-module devices are equipped with sturdy pins, thus ensuring a rigid / smooth movement of the toggles. All the MCBs also offer enough space for marking labels.

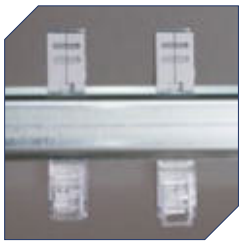


- Double connection possibility - all MCBs can be simultaneously connected to busbar and conductor, both from above and below





- NO WOBBLE™ technology new snapping unit enables easy, firm and secure DIN-rail mounting and replacement



- Trip-free mechanism ensures that MCB trips even if the toggle is held in ON position
- Separate indication of contacts' real state (independent of the toggle position) ensures additional user safety
- Green flag: contacts open, red flag: contacts closed





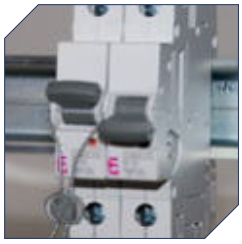
- The possibility of mounting a terminal cover
- The possibility of locking the handle in the "ON/OFF" position



- Better protection of terminals against touching the parts under voltage
- "ON/OFF" mark on the switch button
- The possibility of sealing in "ON" or "OFF" position







Miniature circuit breaker ETIMAT P6

Rated short-circuit capacity	Rated current	Tripping characteristic
6 kA	**0,5 - 63 A**	**B, C, D**

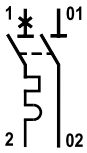
Technical data

Rated voltage	240/415V AC; max 60V DC/pol
Min. operating voltage	12V AC/DC
Max operating voltage	250/440V AC
Rated current	0,5-63A
Rated frequency	50/60Hz
Rated insulation voltage	500V
Rated impulse withstand voltage	6kV (acc. to 60947-2)
Shock resistance	30g, min 2 shocks, t=13ms
Rated short-circuit capacity	6 kA
Energy limiting class	3; B,C
Tripping characteristic	B, C, D
Back-up fuse	100A gG
Index of protection	IP 20 (IP 40)
Terminals	1-25mm², min 1,4Nm / max 2,5Nm
Terminal screw	M5 (Pozidrive PZ2)
Mechanical endurance	20.000 op. cycles
Electrical endurance	20.000 op. cycles
Ambient temperatureT	max -40°C ... +70°C
Storage temperature	max -60°C ... +70°C
Supply possibility	top or bottom
Build-in width	18mm/pol
Insulating class	B
Overvoltage category	III
Pollution degree	2
Mounting on the rail	EN 60715
Mounting position	any
Sealing possibility	✓
Terminal coverP	✓
Contact position indicator	✓
Locking device	✓
Resistance to vibrations acc. to IEC 60068-2-7	5g (10,60 & 500Hz)
Standards	IEC/EN 60898-1, IEC 60947-2

1p



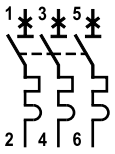
1p+n



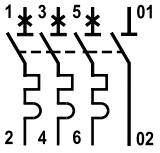
2p

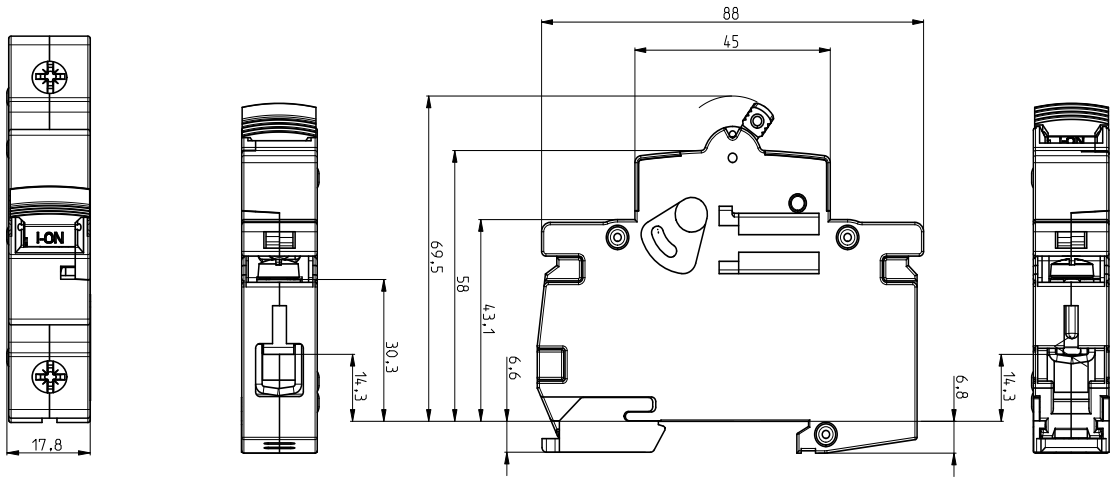


3p



3p+n





Tripping characteristics

Characteristic	Test current	Tripping time	Result
B, C, D	1,13 I_n	t ≥ 3600 s	No tripping
B, C, D	1,45 I_n	t < 3600 s	Tripping
B, C, D	2,55 I_n	1s < t < 60 s	Tripping
B	3,00 I_n	t ≤ 0,1 s	No tripping
C	5,00 I_n	t ≤ 0,1 s	No tripping
D	10,00 I_n	t ≤ 0,1 s	No tripping
B	5,00 I_n	t < 0,1 s	Tripping
C	10,00 I_n	t < 0,1 s	Tripping
D	20,00 I_n	t < 0,1 s	Tripping

LEARN MORE

1-pole

I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	Type D	Code No. D	
0,5	240/415	/	/	ETIMAT P6 1p C 0,5	001900021	ETIMAT P6 1p D 0,5	001900041	12/108
1		ETIMAT P6 1p B 1	001900002	ETIMAT P6 1p C 1	001900022	ETIMAT P6 1p D 1	001900042	12/108
1,6		ETIMAT P6 1p B 1,6	001900003	ETIMAT P6 1p C 1,6	001900023	ETIMAT P6 1p D 1,6	001900043	12/108
2		ETIMAT P6 1p B 2	001900004	ETIMAT P6 1p C 2	001900024	ETIMAT P6 1p D 2	001900044	12/108
3		ETIMAT P6 1p B 3	001900005	ETIMAT P6 1p C 3	001900025	ETIMAT P6 1p D 3	001900045	12/108
4		ETIMAT P6 1p B 4	001900006	ETIMAT P6 1p C 4	001900026	ETIMAT P6 1p D 4	001900046	12/108
6		ETIMAT P6 1p B 6	001900007	ETIMAT P6 1p C 6	001900027	ETIMAT P6 1p D 6	001900047	12/108
10		ETIMAT P6 1p B 10	001900008	ETIMAT P6 1p C 10	001900028	ETIMAT P6 1p D 10	001900048	12/108
13		ETIMAT P6 1p B 13	001900009	ETIMAT P6 1p C 13	001900029	ETIMAT P6 1p D 13	001900049	12/108
16		ETIMAT P6 1p B 16	001900010	ETIMAT P6 1p C 16	001900030	ETIMAT P6 1p D 16	001900050	12/108
20		ETIMAT P6 1p B 20	001900011	ETIMAT P6 1p C 20	001900031	ETIMAT P6 1p D 20	001900051	12/108
25		ETIMAT P6 1p B 25	001900012	ETIMAT P6 1p C 25	001900032	ETIMAT P6 1p D 25	001900052	12/108
32		ETIMAT P6 1p B 32	001900013	ETIMAT P6 1p C 32	001900033	ETIMAT P6 1p D 32	001900053	12/108
40		ETIMAT P6 1p B 40	001900014	ETIMAT P6 1p C 40	001900034	ETIMAT P6 1p D 40	001900054	12/108
50		ETIMAT P6 1p B 50	001900015	ETIMAT P6 1p C 50	001900035	ETIMAT P6 1p D 50	001900055	12/108
63		ETIMAT P6 1p B 63	001900016	ETIMAT P6 1p C 63	001900036	/	/	12/108



1-pole+N

I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	Type D	Code No. D	
0,5	240	/	/	ETIMAT P6 1p+N C 0,5	001900121	ETIMAT P6 1p+N D 0,5	001900141	6/54
1		ETIMAT P6 1p+N B 1	001900102	ETIMAT P6 1p+N C 1	001900122	ETIMAT P6 1p+N D 1	001900142	6/54
1,6		ETIMAT P6 1p+N B 1,6	001900103	ETIMAT P6 1p+N C 1,6	001900123	ETIMAT P6 1p+N D 1,6	001900143	6/54
2		ETIMAT P6 1p+N B 2	001900104	ETIMAT P6 1p+N C 2	001900124	ETIMAT P6 1p+N D 2	001900144	6/54
3		ETIMAT P6 1p+N B 3	001900105	ETIMAT P6 1p+N C 3	001900125	ETIMAT P6 1p+N D 3	001900145	6/54
4		ETIMAT P6 1p+N B 4	001900106	ETIMAT P6 1p+N C 4	001900126	ETIMAT P6 1p+N D 4	001900146	6/54
6		ETIMAT P6 1p+N B 6	001900107	ETIMAT P6 1p+N C 6	001900127	ETIMAT P6 1p+N D 6	001900147	6/54
10		ETIMAT P6 1p+N B 10	001900108	ETIMAT P6 1p+N C 10	001900128	ETIMAT P6 1p+N D 10	001900148	6/54
13		ETIMAT P6 1p+N B 13	001900109	ETIMAT P6 1p+N C 13	001900129	ETIMAT P6 1p+N D 13	001900149	6/54
16		ETIMAT P6 1p+N B 16	001900110	ETIMAT P6 1p+N C 16	001900130	ETIMAT P6 1p+N D 16	001900150	6/54
20		ETIMAT P6 1p+N B 20	001900111	ETIMAT P6 1p+N C 20	001900131	ETIMAT P6 1p+N D 20	001900151	6/54
25		ETIMAT P6 1p+N B 25	001900112	ETIMAT P6 1p+N C 25	001900132	ETIMAT P6 1p+N D 25	001900152	6/54
32		ETIMAT P6 1p+N B 32	001900113	ETIMAT P6 1p+N C 32	001900133	ETIMAT P6 1p+N D 32	001900153	6/54
40		ETIMAT P6 1p+N B 40	001900114	ETIMAT P6 1p+N C 40	001900134	ETIMAT P6 1p+N D 40	001900154	6/54
50		ETIMAT P6 1p+N B 50	001900115	ETIMAT P6 1p+N C 50	001900135	ETIMAT P6 1p+N D 50	001900155	6/54
63		ETIMAT P6 1p+N B 63	001900116	ETIMAT P6 1p+N C 63	001900136	/	/	6/54



2-pole

I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	Type D	Code No. D	
0,5	415	/	/	ETIMAT P6 2p C 0,5	001900221	ETIMAT P6 2p D 0,5	001900241	6/54
1		ETIMAT P6 2p B 1	001900202	ETIMAT P6 2p C 1	001900222	ETIMAT P6 2p D 1	001900242	6/54
1,6		ETIMAT P6 2p B 1,6	001900203	ETIMAT P6 2p C 1,6	001900223	ETIMAT P6 2p D 1,6	001900243	6/54
2		ETIMAT P6 2p B 2	001900204	ETIMAT P6 2p C 2	001900224	ETIMAT P6 2p D 2	001900244	6/54
3		ETIMAT P6 2p B 3	001900205	ETIMAT P6 2p C 3	001900225	ETIMAT P6 2p D 3	001900245	6/54
4		ETIMAT P6 2p B 4	001900206	ETIMAT P6 2p C 4	001900226	ETIMAT P6 2p D 4	001900246	6/54
6		ETIMAT P6 2p B 6	001900207	ETIMAT P6 2p C 6	001900227	ETIMAT P6 2p D 6	001900247	6/54
10		ETIMAT P6 2p B 10	001900208	ETIMAT P6 2p C 10	001900228	ETIMAT P6 2p D 10	001900248	6/54
13		ETIMAT P6 2p B 13	001900209	ETIMAT P6 2p C 13	001900229	ETIMAT P6 2p D 13	001900249	6/54
16		ETIMAT P6 2p B 16	001900210	ETIMAT P6 2p C 16	001900230	ETIMAT P6 2p D 16	001900250	6/54
20		ETIMAT P6 2p B 20	001900211	ETIMAT P6 2p C 20	001900231	ETIMAT P6 2p D 20	001900251	6/54
25		ETIMAT P6 2p B 25	001900212	ETIMAT P6 2p C 25	001900232	ETIMAT P6 2p D 25	001900252	6/54
32		ETIMAT P6 2p B 32	001900213	ETIMAT P6 2p C 32	001900233	ETIMAT P6 2p D 32	001900253	6/54
40		ETIMAT P6 2p B 40	001900214	ETIMAT P6 2p C 40	001900234	ETIMAT P6 2p D 40	001900254	6/54
50		ETIMAT P6 2p B 50	001900215	ETIMAT P6 2p C 50	001900235	ETIMAT P6 2p D 50	001900255	6/54
63		ETIMAT P6 2p B 63	001900216	ETIMAT P6 2p C 63	001900236	/	/	6/54



3-pole

I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	Type D	Code No. D	
0,5	415	/	/	ETIMAT P6 3p C 0,5	001900321	ETIMAT P6 3p D 0,5	001900341	4/36
1		ETIMAT P6 3p B 1	001900302	ETIMAT P6 3p C 1	001900322	ETIMAT P6 3p D 1	001900342	4/36
1,6		ETIMAT P6 3p B 1,6	001900303	ETIMAT P6 3p C 1,6	001900323	ETIMAT P6 3p D 1,6	001900343	4/36
2		ETIMAT P6 3p B 2	001900304	ETIMAT P6 3p C 2	001900324	ETIMAT P6 3p D 2	001900344	4/36
3		ETIMAT P6 3p B 3	001900305	ETIMAT P6 3p C 3	001900325	ETIMAT P6 3p D 3	001900345	4/36
4		ETIMAT P6 3p B 4	001900306	ETIMAT P6 3p C 4	001900326	ETIMAT P6 3p D 4	001900346	4/36
6		ETIMAT P6 3p B 6	001900307	ETIMAT P6 3p C 6	001900327	ETIMAT P6 3p D 6	001900347	4/36
10		ETIMAT P6 3p B 10	001900308	ETIMAT P6 3p C 10	001900328	ETIMAT P6 3p D 10	001900348	4/36
13		ETIMAT P6 3p B 13	001900309	ETIMAT P6 3p C 13	001900329	ETIMAT P6 3p D 13	001900349	4/36
16		ETIMAT P6 3p B 16	001900310	ETIMAT P6 3p C 16	001900330	ETIMAT P6 3p D 16	001900350	4/36
20		ETIMAT P6 3p B 20	001900311	ETIMAT P6 3p C 20	001900331	ETIMAT P6 3p D 20	001900351	4/36
25		ETIMAT P6 3p B 25	001900312	ETIMAT P6 3p C 25	001900332	ETIMAT P6 3p D 25	001900352	4/36
32		ETIMAT P6 3p B 32	001900313	ETIMAT P6 3p C 32	001900333	ETIMAT P6 3p D 32	001900353	4/36
40		ETIMAT P6 3p B 40	001900314	ETIMAT P6 3p C 40	001900334	ETIMAT P6 3p D 40	001900354	4/36
50		ETIMAT P6 3p B 50	001900315	ETIMAT P6 3p C 50	001900335	ETIMAT P6 3p D 50	001900355	4/36
63		ETIMAT P6 3p B 63	001900316	ETIMAT P6 3p C 63	001900336	/	/	4/36



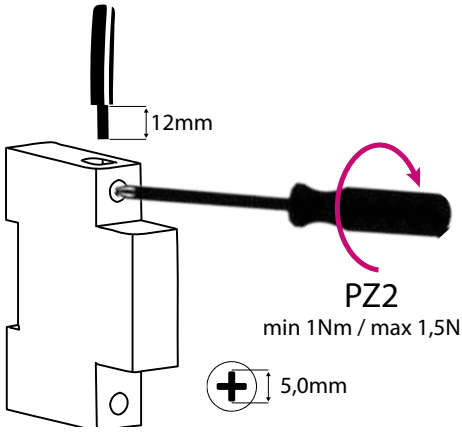
3-pole+N

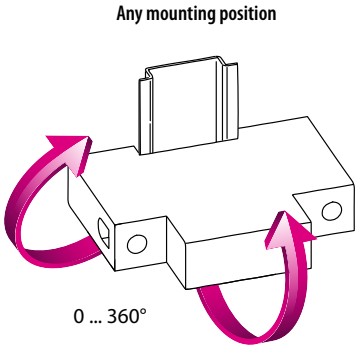
I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	Type D	Code No. D	
0,5	415	/	/	ETIMAT P6 3p+N C 0,5	001900421	ETIMAT P6 3p+N D 0,5	001900441	3/27
1		ETIMAT P6 3p+N B 1	001900402	ETIMAT P6 3p+N C 1	001900422	ETIMAT P6 3p+N D 1	001900442	3/27
1,6		ETIMAT P6 3p+N B 1,6	001900403	ETIMAT P6 3p+N C 1,6	001900423	ETIMAT P6 3p+N D 1,6	001900443	3/27
2		ETIMAT P6 3p+N B 2	001900404	ETIMAT P6 3p+N C 2	001900424	ETIMAT P6 3p+N D 2	001900444	3/27
3		ETIMAT P6 3p+N B 3	001900405	ETIMAT P6 3p+N C 3	001900425	ETIMAT P6 3p+N D 3	001900445	3/27
4		ETIMAT P6 3p+N B 4	001900406	ETIMAT P6 3p+N C 4	001900426	ETIMAT P6 3p+N D 4	001900446	3/27
6		ETIMAT P6 3p+N B 6	001900407	ETIMAT P6 3p+N C 6	001900427	ETIMAT P6 3p+N D 6	001900447	3/27
10		ETIMAT P6 3p+N B 10	001900408	ETIMAT P6 3p+N C 10	001900428	ETIMAT P6 3p+N D 10	001900448	3/27
13		ETIMAT P6 3p+N B 13	001900409	ETIMAT P6 3p+N C 13	001900429	ETIMAT P6 3p+N D 13	001900449	3/27
16		ETIMAT P6 3p+N B 16	001900410	ETIMAT P6 3p+N C 16	001900430	ETIMAT P6 3p+N D 16	001900450	3/27
20		ETIMAT P6 3p+N B 20	001900411	ETIMAT P6 3p+N C 20	001900431	ETIMAT P6 3p+N D 20	001900451	3/27
25		ETIMAT P6 3p+N B 25	001900412	ETIMAT P6 3p+N C 25	001900432	ETIMAT P6 3p+N D 25	001900452	3/27
32		ETIMAT P6 3p+N B 32	001900413	ETIMAT P6 3p+N C 32	001900433	ETIMAT P6 3p+N D 32	001900453	3/27
40		ETIMAT P6 3p+N B 40	001900414	ETIMAT P6 3p+N C 40	001900434	ETIMAT P6 3p+N D 40	001900454	3/27
50		ETIMAT P6 3p+N B 50	001900415	ETIMAT P6 3p+N C 50	001900435	ETIMAT P6 3p+N D 50	001900455	3/27
63		ETIMAT P6 3p+N B 63	001900416	ETIMAT P6 3p+N C 63	001900436	/	/	3/27

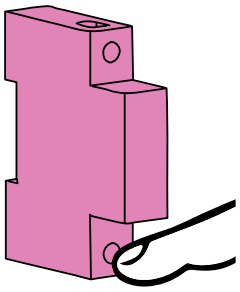


Circuit breakers type ETIMAT P6 / 3-pole + N are suitable for use as 4-pole circuit breakers

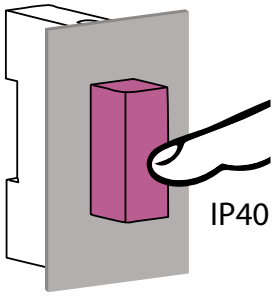
ASTI / Miniature Circuit Breakers



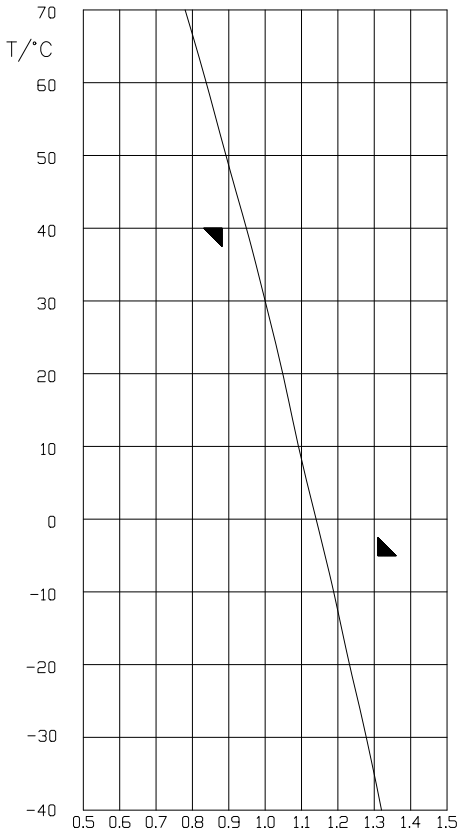




IP20



Effect of the ambient temperature on the tripping characteristic



I_n [A]	Ambient temperature T/°C											
	-40	-30	-20	-10	0	10	20	30	40	50	60	70
0,5	0,66	0,64	0,62	0,60	0,57	0,55	0,53	0,5	0,48	0,45	0,42	0,39
1	1,32	1,28	1,23	1,19	1,14	1,09	1,05	1	0,95	0,89	0,84	0,78
1,6	2,11	2,05	1,97	1,90	1,82	1,74	1,68	1,6	1,52	1,42	1,34	1,25
2	2,64	2,56	2,46	2,38	2,28	2,18	2,10	2	1,90	1,78	1,68	1,56
4	5,28	5,12	4,92	4,76	4,56	4,36	4,20	4	3,80	3,56	3,36	3,12
6	7,92	7,68	7,38	7,14	6,84	6,54	6,30	6	5,70	5,34	5,04	4,68
10	13,2	12,8	12,3	11,9	11,4	10,9	10,5	10	9,50	8,90	8,40	7,80
13	17,2	16,6	16,0	15,5	14,8	14,2	13,7	13	12,4	11,6	10,9	10,1
16	21,1	20,5	19,7	19,0	18,2	17,4	16,8	16	15,2	14,2	13,4	12,5
20	26,4	25,6	24,6	23,8	22,8	21,8	21,0	20	19,0	17,8	16,8	15,6
25	33,0	32,0	30,8	29,8	28,5	27,3	26,3	25	23,8	22,3	21,0	19,5
32	42,2	41,0	39,4	38,1	36,5	34,9	33,6	32	30,4	28,5	26,9	25,0
40	52,8	51,2	49,2	47,6	45,6	43,6	42,0	40	38,0	35,6	33,6	31,2
50	66,0	64,0	61,5	59,5	57,0	54,5	52,6	50	47,5	44,5	42,0	39,0
63	83,2	80,6	77,5	75,0	71,8	68,7	66,2	63	59,9	56,1	52,9	49,1

Correction factor is valid for current with times over 30 s

I(x°C) - test current at x ambient temperature

I(30°C) - test current at 30°C ambient temperature

$$k = \frac{I(x°C)}{I(30°C)}$$

Resistance and power dissipation

characteristic	I_n [A]	R/Pole [mΩ]	P/Pole [w]
B, C	0,5	3587	1,16
	1	935	1,21
	1,6	382	1,26
	2	264	1,37
	3	170	1,55
	4	69,6	1,38
	6	40,3	1,96
	10	16,9	2,00
	13	11,4	2,08
	16	8,17	2,26
	20	6,73	2,53
	25	5,03	2,96
	32	3,92	3,44
	40	3,3	3,2
	50	2,22	3,57
	63	1,71	4,59
D	0,5	/	/
	1	1183	1,55
	1,6	/	/
	2	303	1,58
	3	135	1,52
	4	81,8	1,66
	6	40,0	1,78
	10	17,3	1,57
	13	11,3	2,04
	16	8,59	2,31
	20	7,17	2,73
	25	4,77	2,91
	32	3,92	3,44
	40	/	/
	50	/	/
	63	/	/

Selectivity / Selectivity limit (kA)

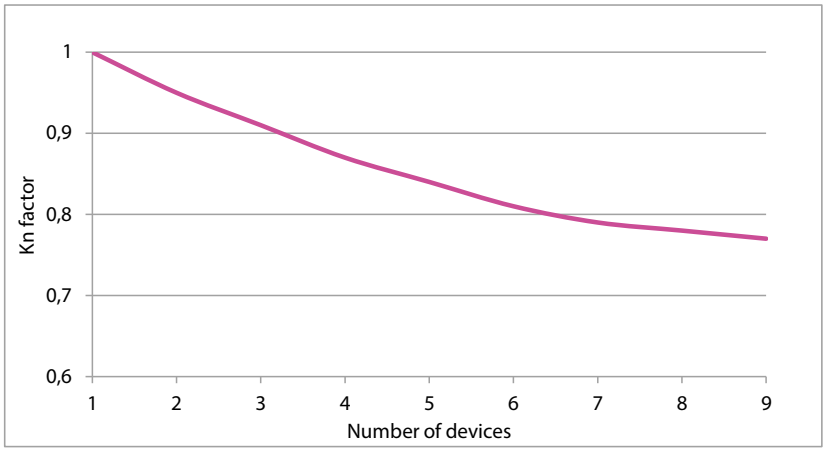
ETIMAT	gG NV fuse-links										
	20	25	32	35	40	50	63	80	100	125	160
B 6	0,5	0,78	1,2	1,4	1,7	2,4	4,6	6,0	6,0	6,0	6,0
B 10/13	0,45	0,65	1,1	1,3	1,6	2,2	4,0	6,0	6,0	6,0	6,0
B 16		0,55	1,0	1,2	1,5	2,0	3,6	5,5	6,0	6,0	6,0
B 20			0,85	1,2	1,5	1,8	3,1	4,6	6,0	6,0	6,0
B 25				1,1	1,4	1,7	2,9	4,0	6,0	6,0	6,0
B 32					1,3	1,6	2,5	3,4	5,5	6,0	6,0
B 40						1,5	2,2	3,1	4,9	6,0	6,0
B 50							2,1	2,9	4,0	6,0	6,0
B 63								2,5	3,3	5,1	6,0
ETIMAT	**gG NV fuse-linksgG NV fuse-links**										
	20	25	32	35	40	50	63	80	100	125	160
C,D 6	0,52	0,82	1,3	1,5	2,0	2,7	5,1	6,0	6,0	6,0	6,0
C,D 10/13	0,47	0,70	1,1	1,4	1,8	2,3	4,0	6,0	6,0	6,0	6,0
C,D 16		0,61	0,92	1,2	1,5	1,9	3,2	5,0	6,0	6,0	6,0
C,D 20			0,90	1,1	1,4	1,7	2,9	4,2	6,0	6,0	6,0
C,D 25				1,0	1,3	1,6	2,7	3,9	6,0	6,0	6,0
C,D 32					1,2	1,5	2,3	3,4	5,2	6,0	6,0
C,D 40						1,4	2,1	3,0	4,6	6,0	6,0
C,D 50							2,0	2,7	3,8	6,0	6,0
C,D 63								2,3	3,2	5,5	6,0

R: measured at 0.1*In
P: measured at In

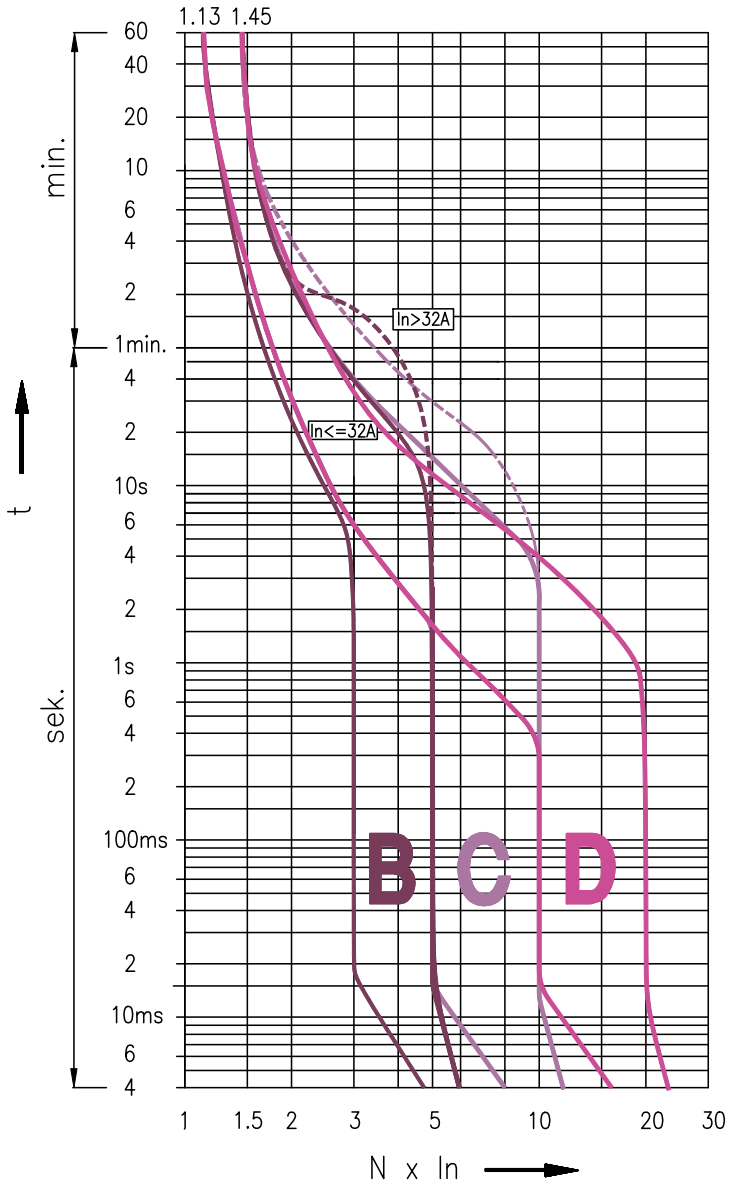
Effect of number of poles on the tripping characteristic ETIMAT P6

Correction factor K_n

Number of devices	Kn
1	1
2	0,95
3	0,91
4	0,87
5	0,84
6	0,81
7	0,79
8	0,78
9	0,77
>9	0,77



Time current characteristics I/t at 50 and 60Hz ETIMAT P6



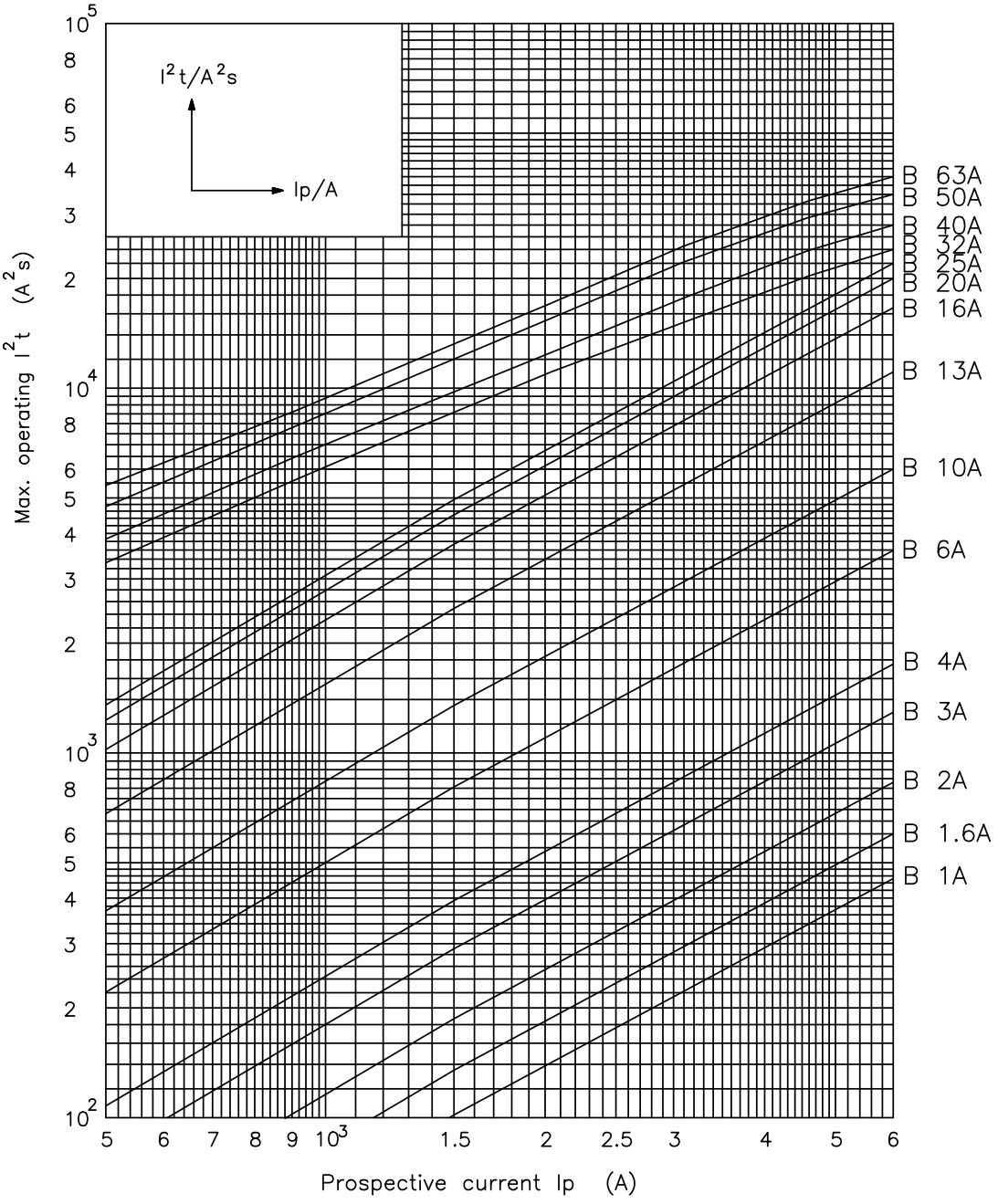
Conductor cross-section	Number of single conductors, rigid, single-wire CU conductor				
[mm²]	1	2	3	4	5
1,5	✓	✓	✓	✓	×
2,5	✓	✓	✓	×	×
4	✓	✓	✓	×	×
6	✓	✓	×	×	×
10	✓	✓	×	×	×
16	✓	×	×	×	×
25	✓	×	×	×	×

Remark: When you use more than 2 cables you have to be careful how those cables are inserted to ensure proper pressure on each cable

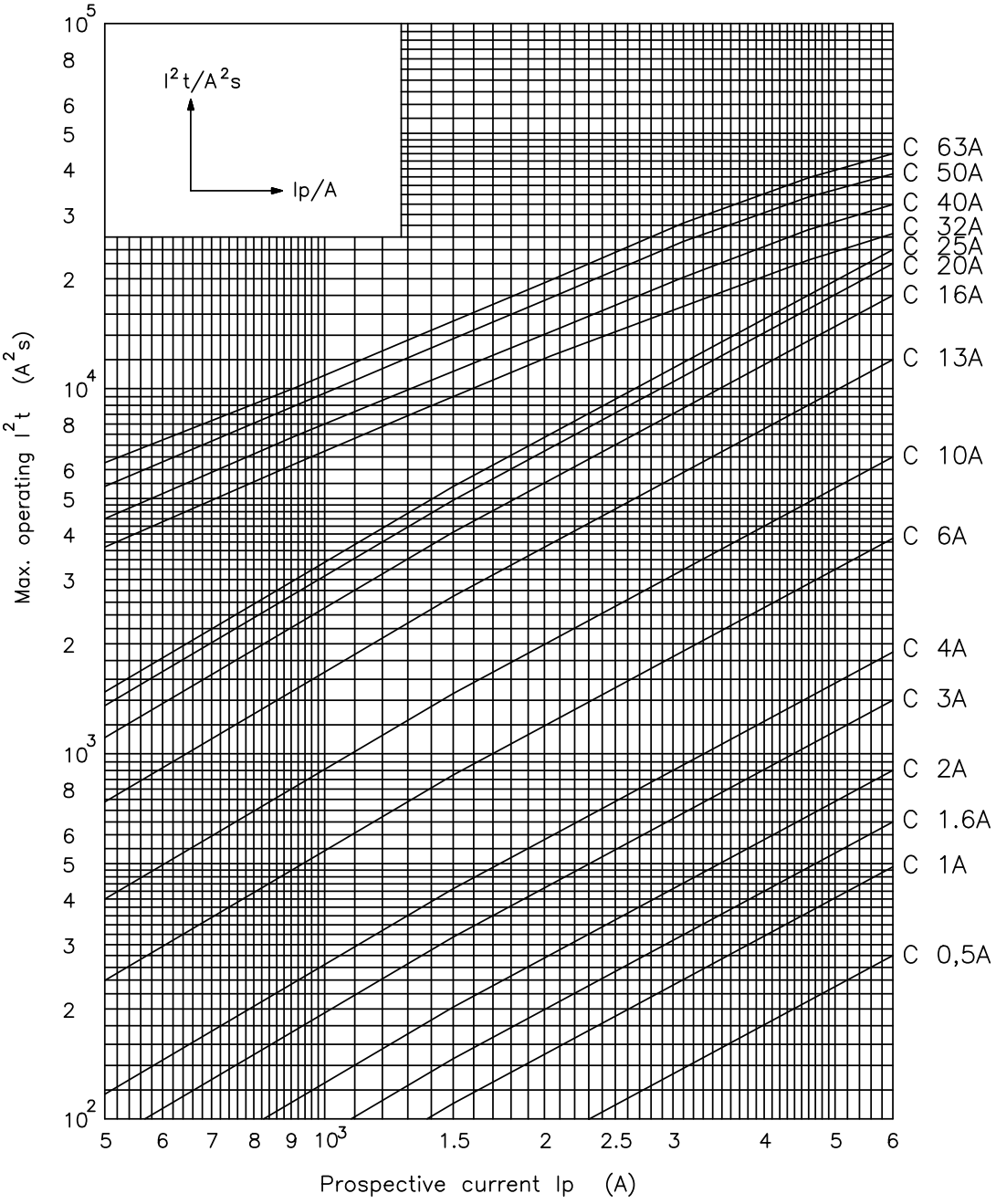
Conductor cross-section	Number of single conductors, flexible Cu conductors with cable ferrule					
[mm²]	1	2	3	4	5	6
1,5	✓	✓	✓	✓	✓	✓
2,5	✓	✓	✓	✓	✓	✓
4	✓	✓	✓	✓	✓	✓
6	✓	✓	✓	×	×	×
10	✓	✓	×	×	×	×
16	✓	×	×	×	×	×
25	✓	×	×	×	×	×

Combination of rigid single-wire and flexible multi-wire Cu conductors is not allowed

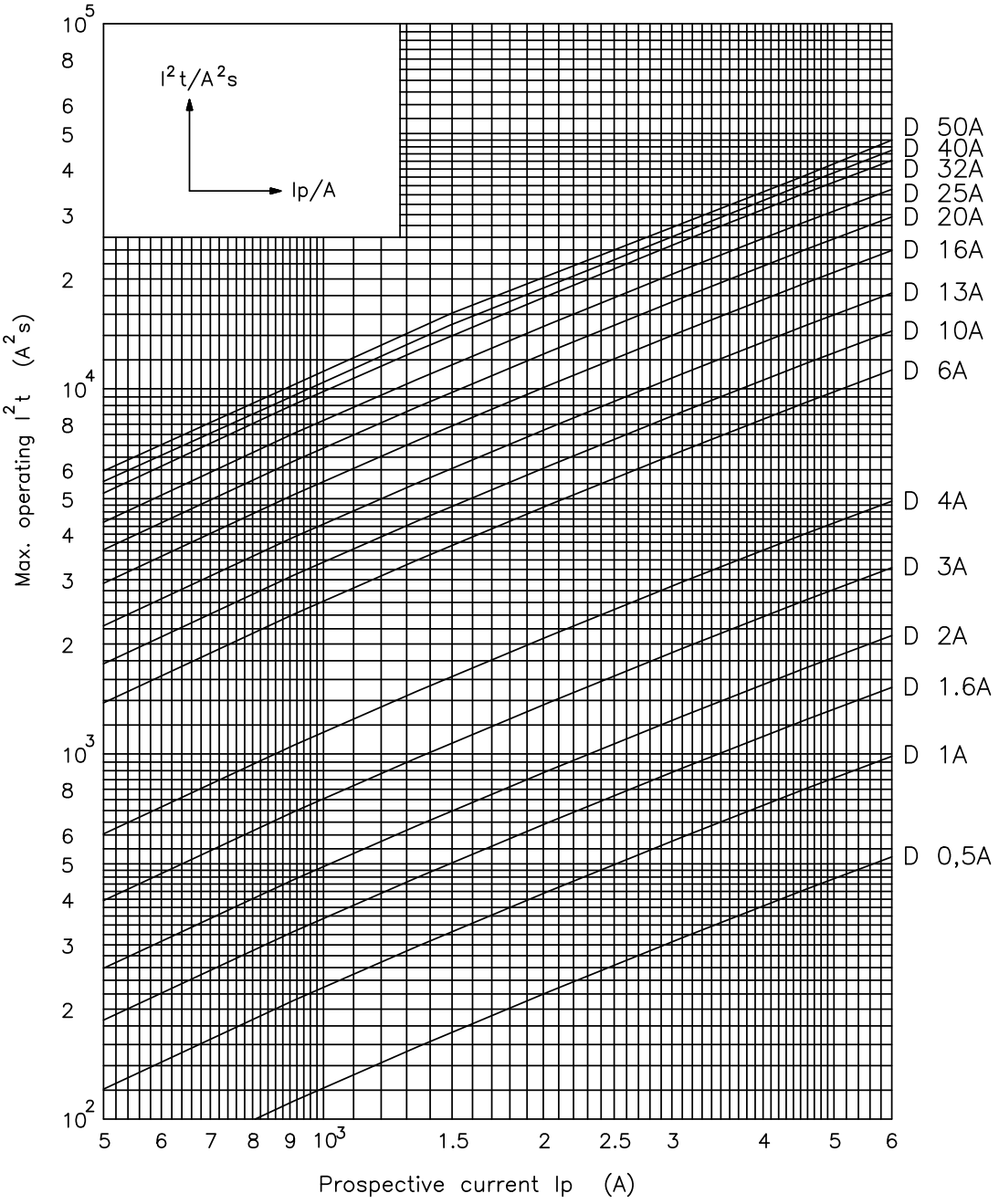
Melting energy characteristics I²t ETIMAT P6



Melting energy characteristics I²t ETIMAT P6



Melting energy characteristics I²t ETIMAT P6



Cut-off characteristics I²t ETIMAT P6

