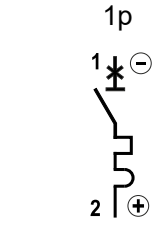
Miniature circuit breaker ETIMAT P10-DC

Rated short-circuit capacity	Rated current	Tripping characteristic
10 kA	**0,5 - 63 A**	**B, C, K, Z**

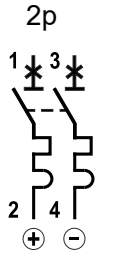
Application: Miniature circuit breakers ETIMAT DC are used for protection of conductors in direct current electric circuits. 1-pole circuit breakers are used for voltages up to 220 V d.c., while 2-pole circuit breakers with poles connected in a series are used for higher voltages (up to 440 V d.c.). When connecting the MCB ETIMAT DC , attention must be paid to polarity as connected in a wrong way the MCB can be destroyed. Note that two 1-pole MCBs cannot be used instead of one 2-pole MCB.

Technical data

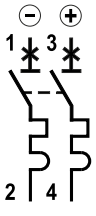
Rated voltage - for 1-pole U_n	220 V DC
- for 2-pole U_n	220 V /440 V DC
Rated time constant L/R	4 ms
Rated current In	0,5-32A (K & Z), 0,5-63A (C), 2-63A (B)
Rated short-circuit capacity	10 kA
Tripping characteristic	B, C, K, Z
Energy limiting classInsulating class	3
Insulating class	B
Pollution degree	2
Back-up fuse	100 A gG
Ambient temperature	-40°C ... +70°C
Storage temperature	-60°C ... +70°C
Terminals	1-25mm², min 1,4Nm / max 2,5Nm
Terminal screw	M5 (Pozidrive PZ2)
Mounting position	any
Sealing possibility	✓
Terminal cover	✓
Contact position indicator	✓
Locking device	✓
Resistance to vibrations (IEC 60068-2-7)	5g (10,60 & 500Hz)
Standards	IEC 60898, EN 60898, DIN VDE 0641



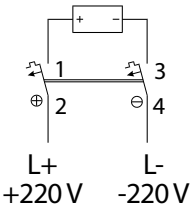
supply top or bottom, considering polarity

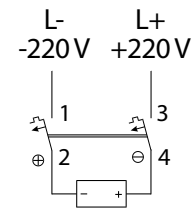


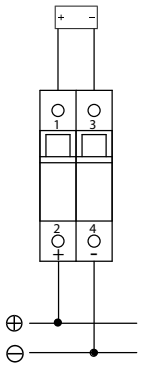
Supply bottom

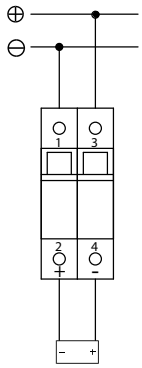


Supply top









1-pole, characteristic B, C

I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	g	
0,5	220	/	/	ETIMAT P10-DC 1p C0,5	001903021	94	12/108
1		ETIMAT P10-DC 1p B1	001903002	ETIMAT P10-DC 1p C1	001903022	94	12/108
1,6		ETIMAT P10-DC 1p B1,6	001903003	ETIMAT P10-DC 1p C1,6	001903023	94	12/108
2		ETIMAT P10-DC 1p B2	001903004	ETIMAT P10-DC 1p C2	001903024	94	12/108
3		ETIMAT P10-DC 1p B3	001903005	ETIMAT P10-DC 1p C3	001903025	94	12/108
4		ETIMAT P10-DC 1p B4	001903006	ETIMAT P10-DC 1p C4	001903026	94	12/108
6		ETIMAT P10-DC 1p B6	001903007	ETIMAT P10-DC 1p C6	001903027	94	12/108
10		ETIMAT P10-DC 1p B10	001903008	ETIMAT P10-DC 1p C10	001903028	94	12/108
13		ETIMAT P10-DC 1p B13	001903009	ETIMAT P10-DC 1p C13	001903029	94	12/108
16		ETIMAT P10-DC 1p B16	001903010	ETIMAT P10-DC 1p C16	001903030	94	12/108
20		ETIMAT P10-DC 1p B20	001903011	ETIMAT P10-DC 1p C20	001903031	94	12/108
25		ETIMAT P10-DC 1p B25	001903012	ETIMAT P10-DC 1p C25	001903032	95	12/108
32		ETIMAT P10-DC 1p B32	001903013	ETIMAT P10-DC 1p C32	001903033	95	12/108
40		ETIMAT P10-DC 1p B40	001903014	ETIMAT P10-DC 1p C40	001903034	95	12/108
50		ETIMAT P10-DC 1p B50	001903015	ETIMAT P10-DC 1p C50	001903035	103	12/108
63		ETIMAT P10-DC 1p B63	001903016	ETIMAT P10-DC 1p C63	001903036	106	12/108



1-pole, characteristic K, Z

I_n [A]	U_n [V]	Type K	Code No. K	Type Z	Code No. Z	g	
0,5	220	ETIMAT P10-DC 1p K0,5	001903061	ETIMAT P10-DC 1p Z0,5	001903081	94	12/108
1		ETIMAT P10-DC 1p K1	001903062	ETIMAT P10-DC 1p Z1	001903082	94	12/108
1,6		ETIMAT P10-DC 1p K1,6	001903063	ETIMAT P10-DC 1p Z1,6	001903083	94	12/108
2		ETIMAT P10-DC 1p K2	001903064	ETIMAT P10-DC 1p Z2	001903084	94	12/108
3		ETIMAT P10-DC 1p K3	001903065	ETIMAT P10-DC 1p Z3	001903085	94	12/108
4		ETIMAT P10-DC 1p K4	001903066	ETIMAT P10-DC 1p Z4	001903086	94	12/108
6		ETIMAT P10-DC 1p K6	001903067	ETIMAT P10-DC 1p Z6	001903087	94	12/108
10		ETIMAT P10-DC 1p K10	001903068	ETIMAT P10-DC 1p Z10	001903088	94	12/108
13		ETIMAT P10-DC 1p K13	001903069	ETIMAT P10-DC 1p Z13	001903089	94	12/108
16		ETIMAT P10-DC 1p K16	001903070	ETIMAT P10-DC 1p Z16	001903090	94	12/108
20		ETIMAT P10-DC 1p K20	001903071	ETIMAT P10-DC 1p Z20	001903091	94	12/108
25		ETIMAT P10-DC 1p K25	001903072	ETIMAT P10-DC 1p Z25	001903092	95	12/108
32		ETIMAT P10-DC 1p K32	001903073	ETIMAT P10-DC 1p Z32	001903093	95	12/108

2-pole, characteristic B, C

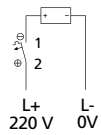
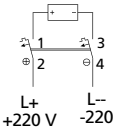
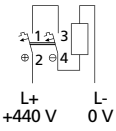
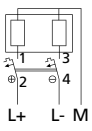
I_n [A]	U_n [V]	Type B	Code No. B	Type C	Code No. C	g	
0,5	440	/	/	ETIMAT P10-DC 2p C0,5	001903221	190	6/54
1		ETIMAT P10-DC 2p B1	001903202	ETIMAT P10-DC 2p C1	001903222	190	6/54
1,6		ETIMAT P10-DC 2p B1,6	001903203	ETIMAT P10-DC 2p C1,6	001903223	190	6/54
2		ETIMAT P10-DC 2p B2	001903204	ETIMAT P10-DC 2p C2	001903224	190	6/54
3		ETIMAT P10-DC 2p B3	001903205	ETIMAT P10-DC 2p C3	001903225	190	6/54
4		ETIMAT P10-DC 2p B4	001903206	ETIMAT P10-DC 2p C4	001903226	190	6/54
6		ETIMAT P10-DC 2p B6	001903207	ETIMAT P10-DC 2p C6	001903227	190	6/54
10		ETIMAT P10-DC 2p B10	001903208	ETIMAT P10-DC 2p C10	001903228	190	6/54
13		ETIMAT P10-DC 2p B13	001903209	ETIMAT P10-DC 2p C13	001903229	190	6/54
16		ETIMAT P10-DC 2p B16	001903210	ETIMAT P10-DC 2p C16	001903230	190	6/54
20		ETIMAT P10-DC 2p B20	001903211	ETIMAT P10-DC 2p C20	001903231	190	6/54
25		ETIMAT P10-DC 2p B25	001903212	ETIMAT P10-DC 2p C25	001903232	193	6/54
32		ETIMAT P10-DC 2p B32	001903213	ETIMAT P10-DC 2p C32	001903233	193	6/54
40		ETIMAT P10-DC 2p B40	001903214	ETIMAT P10-DC 2p C40	001903234	193	6/54
50		ETIMAT P10-DC 2p B50	001903215	ETIMAT P10-DC 2p C50	001903235	208	6/54
63		ETIMAT P10-DC 2p B63	001903216	ETIMAT P10-DC 2p C63	001903236	215	6/54

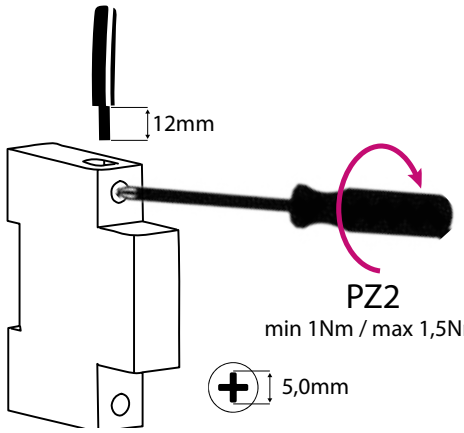


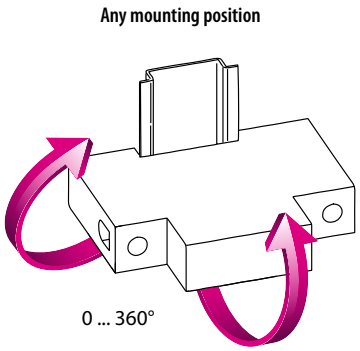
2-pole, characteristic K, Z

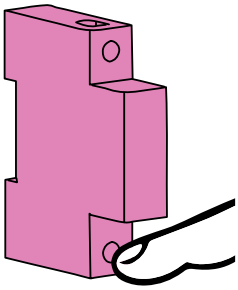
I_n [A]	U_n [V]	Type K	Code No. K	Type Z	Code No. Z	g	
0,5	440	ETIMAT P10-DC 2p K0,5	001903261	ETIMAT P10-DC 2p Z0,5	001903281	190	6/54
1		ETIMAT P10-DC 2p K1	001903262	ETIMAT P10-DC 2p Z1	001903282	190	6/54
1,6		ETIMAT P10-DC 2p K1,6	001903263	ETIMAT P10-DC 2p Z1,6	001903283	190	6/54
2		ETIMAT P10-DC 2p K2	001903264	ETIMAT P10-DC 2p Z2	001903284	190	6/54
3		ETIMAT P10-DC 2p K3	001903265	ETIMAT P10-DC 2p Z3	001903285	190	6/54
4		ETIMAT P10-DC 2p K4	001903266	ETIMAT P10-DC 2p Z4	001903286	190	6/54
6		ETIMAT P10-DC 2p K6	001903267	ETIMAT P10-DC 2p Z6	001903287	190	6/54
10		ETIMAT P10-DC 2p K10	001903268	ETIMAT P10-DC 2p Z10	001903288	190	6/54
13		ETIMAT P10-DC 2p K13	001903269	ETIMAT P10-DC 2p Z13	001903289	190	6/54
16		ETIMAT P10-DC 2p K16	001903270	ETIMAT P10-DC 2p Z16	001903290	190	6/54
20		ETIMAT P10-DC 2p K20	001903271	ETIMAT P10-DC 2p Z20	001903291	190	6/54
25		ETIMAT P10-DC 2p K25	001903272	ETIMAT P10-DC 2p Z25	001903292	193	6/54
32		ETIMAT P10-DC 2p K32	001903273	ETIMAT P10-DC 2p Z32	001903293	193	6/54

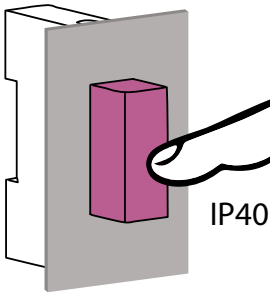
Connecting diagrams in direct current electric circuits

Rated voltage of circuit breaker	220 V ⎓	220/440 V ⎓	220/440 V ⎓	220/440 V ⎓
.Voltage between conductors - max.	220 V ⎓	440 V ⎓	440 V ⎓	440 V ⎓
Voltage between conductor and earth - max..	220 V ⎓	220 V ⎓	440 V ⎓	220 V ⎓
Circuit breaker	1-pole	2-pole	2-pole	2-pole
Connecting diagram				

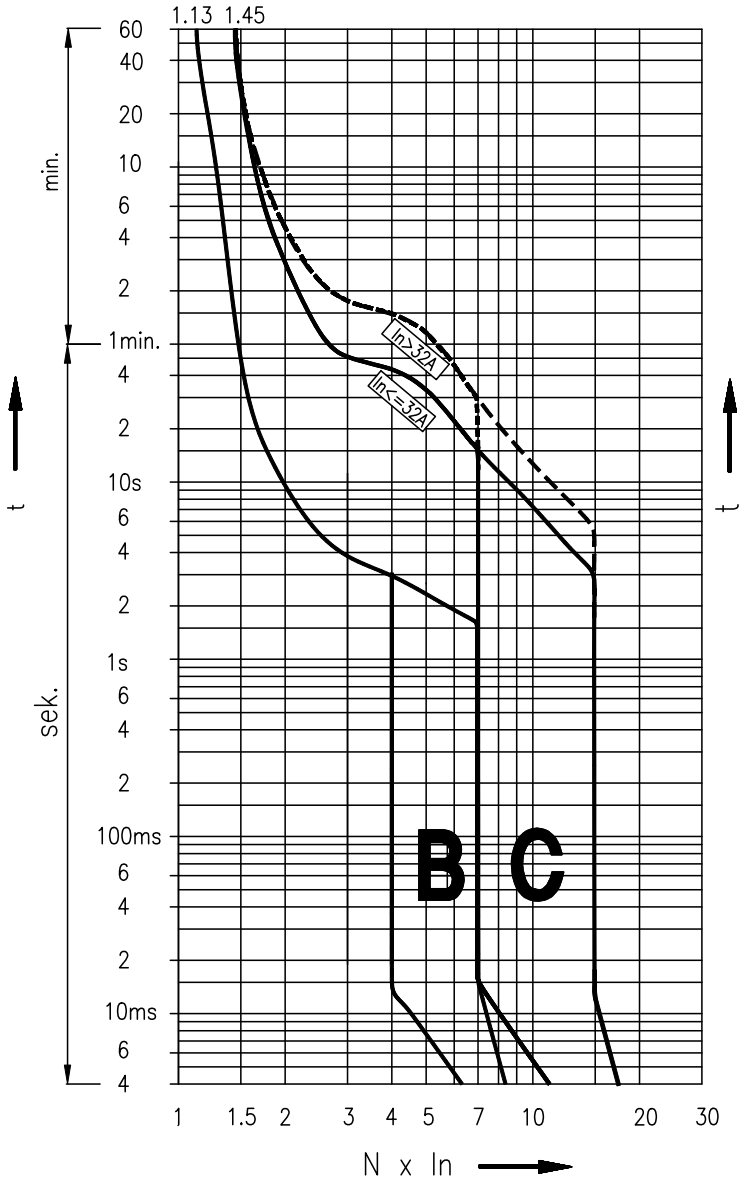


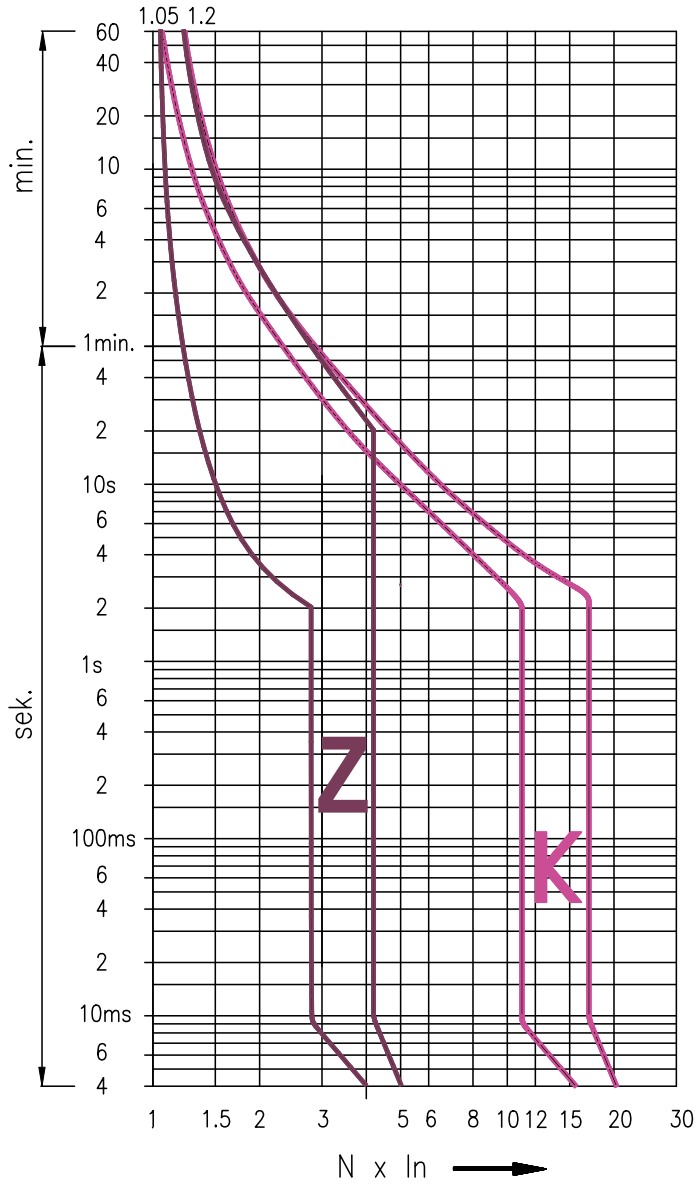






Time current characteristics I/t, ETIMAT P10-DC





Conductor cross-section [mm²]	Number of single conductors, rigid, single-wire CU conductor				
	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 [mm²]	Number of single conductors, flexible Cu conductors with cable ferrule					
	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