

SUMMARY OF MODELS OF FUSE-LINKS FOR SEMICONDUCTOR PROTECTION

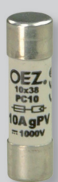
					
Type	PV510	PV514	PV522	PC10	PT22
Rated current I_n	up to 32 A	up to 63 A	up to 125 A	up to 20 A	up to 50 A
Rated voltage U_n	AC	690 V	690 V	-	1 500 V
	DC	250 V, 440 V	250 V, 440 V, 600 V, 700 V	250 V, 440 V, 600 V, 700 V	1 000 V
Fuse-link size	10x38	14x51	22x58	10x38	22x127
Utilization category of the fuse-link	gR, aR	gR, aR	gR, aR	gPV	gR/gS, gR, aR

Use					
Fuse switch-disconnectors 	OPVP10 ..	OPVP14..	OPVP22 ..	-	-
Fuse disconnectors 	-	-	-	-	OPT22..
Fuse holder 	-	-	-	OPVF10..	-

Accessories					
Disconnecting links 	ZPV10	ZPV14	ZPV22	ZPV10	ZPT22
Replacement tongs 	KV				

CYLINDRICAL FUSE-LINKS PV5, PC10, PT22

- They are intended for protection of semiconductor devices.
- Extremely low values of I_{2tc} and cut-off current.
- Small dimensions and low power losses.
- The fuse-links do not contain harmful substances according to the RoHS Regulation (cadmium, lead and other).
- Possibility of use in fuse switch-disconnectors OPVP (PV5..), fuse disconnectors OPT (PT22) or holders for cylindrical fuse-links
- Utilization category gR for protection of semiconductor devices against overload and short-circuit.
- Utilization category aR for protection of semiconductor devices only against short-circuit.
- Utilization category gPV for protection of photovoltaic systems.
- Utilization category gR/gS for protection of semiconductor devices against overload and short-circuit.
- If fuse-links are used in fuse switch-disconnectors, it is necessary to adapt connecting cross-sections of conductors due to thermal load on the disconnector in fuse-link blowing. At the same time the time/ /current characteristic is changed from gR to aR. Required connecting cross-sections of conductors and characteristics are stated in the chapter "Conditions for the use of fuse-links in fuse switch-disconnectors" see page F32 ÷ F33.



Fuse-links PV510 up to AC 690 V / DC 700 V

I_n [A]	Type	Order code	Power losses [W]	I^2t_t [A ² s]	I^2t_c [A ² s]	Weight [kg]	Package [pcs]
6	PV510 6A gR	OEZ:15200	2.50	0.5	7	0.010	20
10	PV510 10A gR	OEZ:15202	3.30	1.3	18	0.010	20
12	PV510 12A gR	OEZ:15203	4.00	1.9	35	0.010	20
16	PV510 16A gR	OEZ:15204	6.00	3.0	45	0.010	20
20	PV510 20A gR	OEZ:15205	7.80	5.9	110	0.010	20
25	PV510 25A gR	OEZ:15206	8.70	12.0	140	0.010	20
32	PV510 32A gR	OEZ:15207	12.00	50.0	450	0.010	20

Fuse-links PV514 up to AC 690 V / DC 700 V

I_n [A]	Type	Order code	Power losses [W]	I^2t_t [A ² s]	I^2t_c [A ² s]	Weight [kg]	Package [pcs]
6	PV514 6A gR	OEZ:08660	3.10	0.5	4	0.030	10
10	PV514 10A gR	OEZ:08670	4.60	1.4	15	0.030	10
16	PV514 16A gR	OEZ:08664	6.70	3.2	32	0.030	10
20	PV514 20A gR	OEZ:08665	7.40	6.3	68	0.030	10
25	PV514 25A gR	OEZ:08666	8.40	13	108	0.030	10
32	PV514 32A gR	OEZ:08667	12.30	19	175	0.030	10
40	PV514 40A gR	OEZ:08669	11.70	43	470	0.030	10
50	PV514 50A gR	OEZ:08661	16.30	140	830	0.030	10
63	PV514 63A aR	OEZ:08662	16.70	330	2 100	0.030	10

Fuse-links PV522 up to AC 690 V / DC 700 V

I_n [A]	Type	Order code	Power losses [W]	I^2t_t [A ² s]	I^2t_c [A ² s]	Weight [kg]	Package [pcs]
25	PV522 25A gR	OEZ:13790	8.10	13	180	0.060	10
32	PV522 32A gR	OEZ:13791	9.00	25	420	0.060	10
40	PV522 40A gR	OEZ:13792	12.50	42	700	0.060	10
50	PV522 50A gR	OEZ:13793	15.20	74	1 250	0.060	10
63	PV522 63A gR	OEZ:13794	17.50	94	2 400	0.060	10
80	PV522 80A gR	OEZ:13795	23.00	320	8 000	0.060	10
100	PV522 100A gR	OEZ:13796	28.10	850	11 500	0.060	10
125	PV522 125A aR	OEZ:13797	35.30	1500	29 000	0.060	10

Fuse-links PC10 up to DC 1 000 V

I_n [A]	Type	Order code	Power losses [W]	I^2t_t [A ² s]	I^2t_c [A ² s]	Weight [kg]	Package [pcs]
2	PC10 2A gPV	OEZ:41235	1.30	1.0	18	0.010	20
4	PC10 4A gPV	OEZ:41236	1.62	2.5	29	0.010	20
6	PC10 6A gPV	OEZ:41237	1.72	2.6	53	0.010	20
8	PC10 8A gPV	OEZ:41238	1.88	5.5	105	0.010	20
10	PC10 10A gPV	OEZ:41239	2.21	20	145	0.010	20
12	PC10 12A gPV	OEZ:41240	2.70	40	221	0.010	20
16	PC10 16A gPV	OEZ:41241	2.90	114	454	0.010	20
20	PC10 20A gPV	OEZ:41242	3.60	190	761	0.010	20

CYLINDRICAL FUSE-LINKS PV5, PC10, PT22



Fuse-links PT22 up to AC 1 500 V / DC 1 000 V

I_n [A]	Type	Order code	Power losses [W]	I^2t_t [A ² s]	AC I^2t_c [A ² s]	DC I^2t_c [A ² s]	Colour marking	Weight [kg]	Package [pcs]
1	PT22 1A gR/gS*	OEZ:08601	2.00	0.1	2	5	-	0.096	5
2	PT22 2A gR/gS*	OEZ:08598	2.54	1	4	10	pink	0.096	5
4	PT22 4A gR/gS*	OEZ:08342	5.30	7	55	44	brown	0.096	5
6	PT22 6A gR/gS*	OEZ:08341	6.37	8	150	110	green	0.096	5
10	PT22 10A gR/gS	OEZ:08340	3.05	90	540	450	red	0.096	5
16	PT22 16A gR/gS	OEZ:08339	4.66	310	1 120	1 500	grey	0.096	5
20	PT22 20A gR/gS	OEZ:08338	5.36	570	2 850	3 400	blue	0.096	5
25	PT22 25A gR/gS	OEZ:08668	6.93	910	3 300	3 900	yellow	0.096	5
32	PT22 32A gR/gS	OEZ:08663	6.69	2650	9 050	12 500	violet	0.096	5
40	PT22 40A gR	OEZ:08337	9.40	3260	12 800	18 500	black	0.096	5
50	PT22 50A aR	OEZ:08343	11.60	6480	26 000	27 500	-	0.096	5

* In tripping of PT22 up to 6 A, overvoltage arises higher than 10 kV. For this reason we recommend protection by surge voltage arrester of type 2 e.g. SVC-350-3..



Accessories

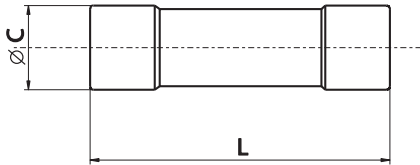
Disconnecting links	ZP..	page E12
Replacement tongs	KV	page E12

CYLINDRICAL FUSE-LINKS PV5, PC10, PT22

Specifications

Type		PV510	PV514	PV522	PC10	PT22	
Standards		IEC 60269-1, -2, -4; EN 60269-1, -4 EN 60269	IEC 60269-1, -2, -4; EN 60269-1, -4 EN 60269	IEC 60269-1, -2, -4; EN 60269-1, -4 EN 60269	IEC 60269-1, -6; EN 60269-1, -6	IEC 60269-1, -4; EN 60269-1, -4	
Approval marks							
Rated operating voltage	U _n	AC 690 V	6 ÷ 32 A	6 ÷ 63 A	25 ÷ 125 A	-	
		AC 1500 V	-	-	-	1 ÷ 50 A	
		DC 1000 V	-	-	-	2 ÷ 20 A	1 ÷ 50 A
		DC 700 V	-	6 ÷ 10 A	25 A	-	-
		DC 600 V	-	16 ÷ 32 A	32 A	-	-
		DC 440 V	6 ÷ 16 A	40 A	40 A	-	-
		DC 250 V	20 ÷ 32 A	50 ÷ 63 A	50 ÷ 125 A	-	
Rated operating current	I _n	6 ÷ 32 A	6 ÷ 63 A	25 ÷ 125 A	2 ÷ 20 A	1 ÷ 50 A	
Rated frequency	f _n	50 Hz	50 Hz	50 Hz	-	50 Hz	
Breaking capacity (RMS)	I ₁	AC	120 kA	120 kA	120 kA	30 kA	
		DC	50 kA	50 kA	50 kA	30 kA	
Time constant (L/R)		-	-	-	1 ÷ 3 ms	10 ÷ 15 ms	
Utilization category		gR	gR, aR	gR, aR	gPV	gR/gS, gR, aR	
Size		10 x 38	14 x 51	22 x 58	10 x 38	22 x 127	

Dimensions

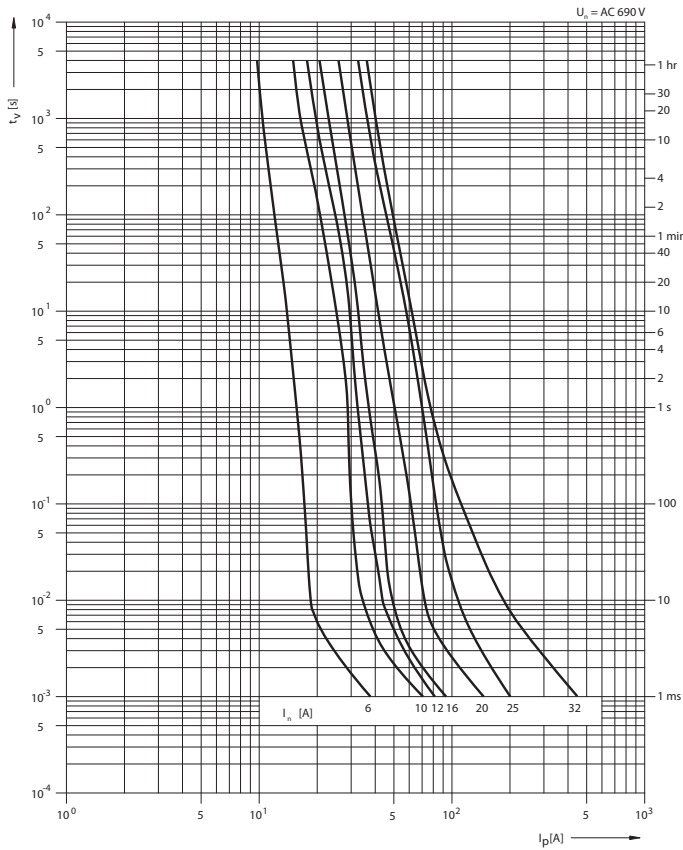


Type	$\varnothing C$	L
PV510	10.3	38
PV514	14.3	51
PV522	22.2	58
PC10	10.3	38
PT22	22.2	127

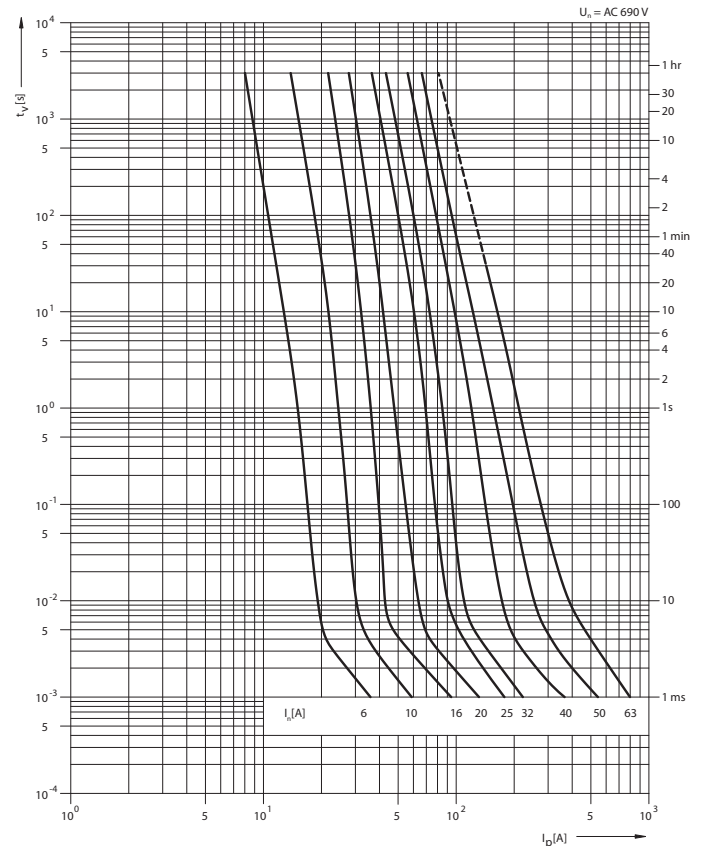
CYLINDRICAL FUSE-LINKS PV5, PC10, PT22

Characteristics

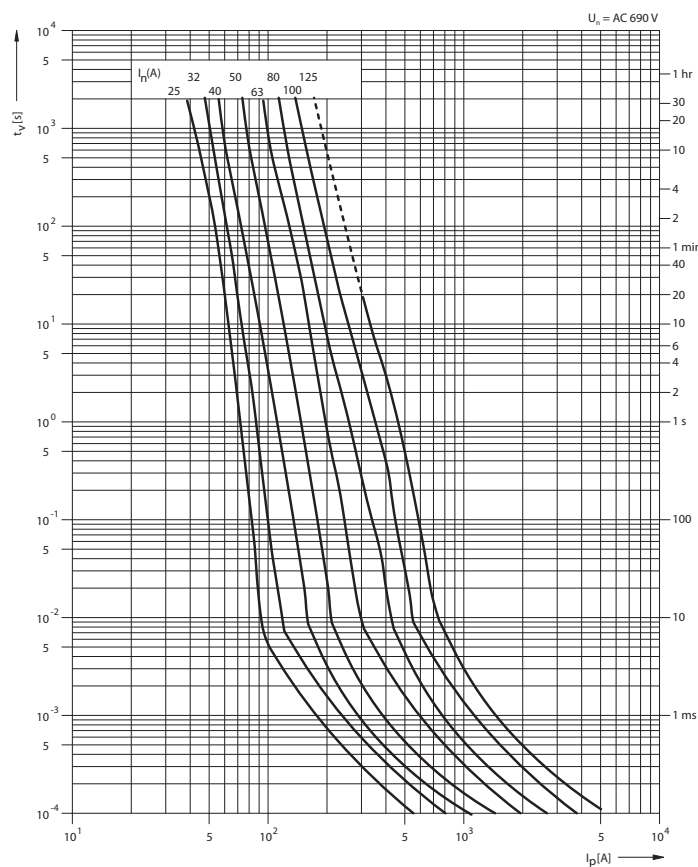
Prearing time/current characteristic
PV510 gR



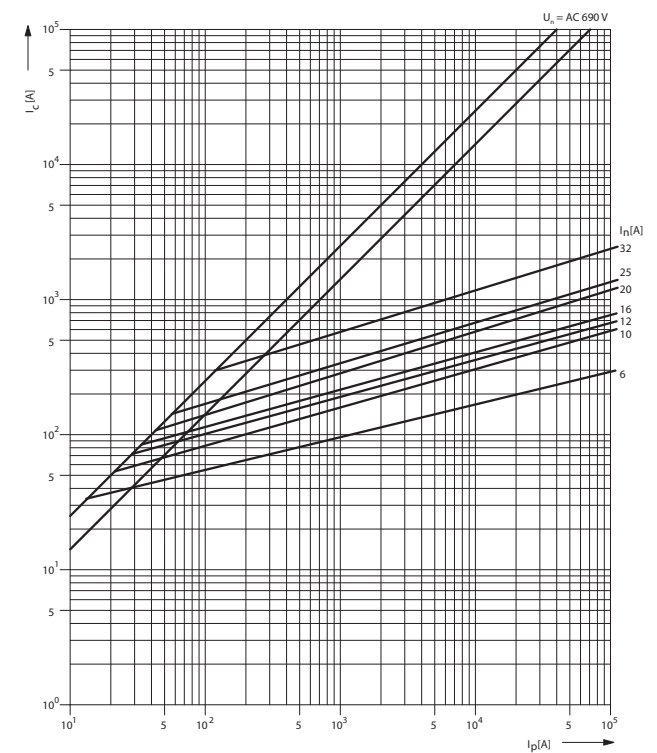
Prearing time/current characteristic
PV514 gR, aR



Prearing time/current characteristic
PV522 gR, aR



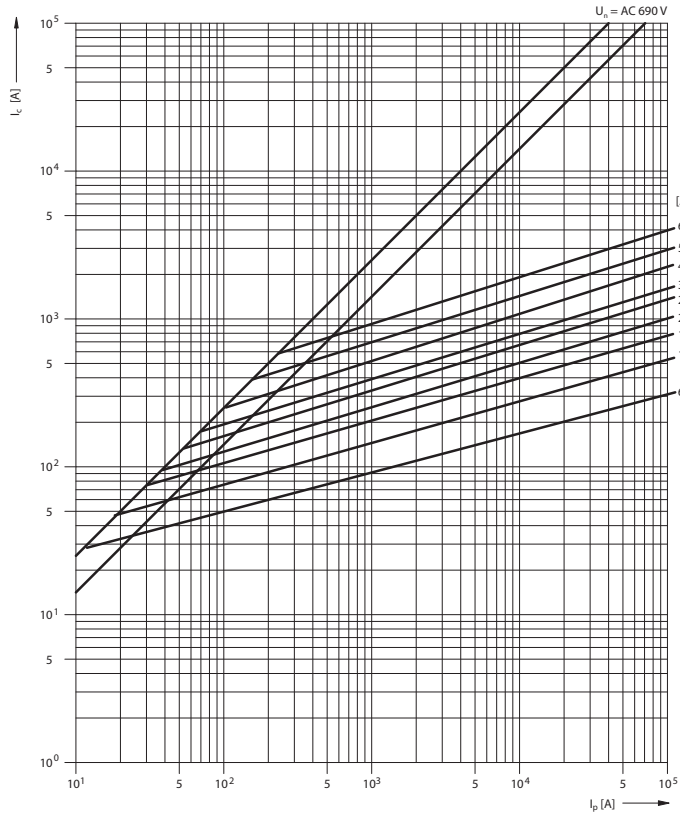
Cut-off characteristic
PV510 gR



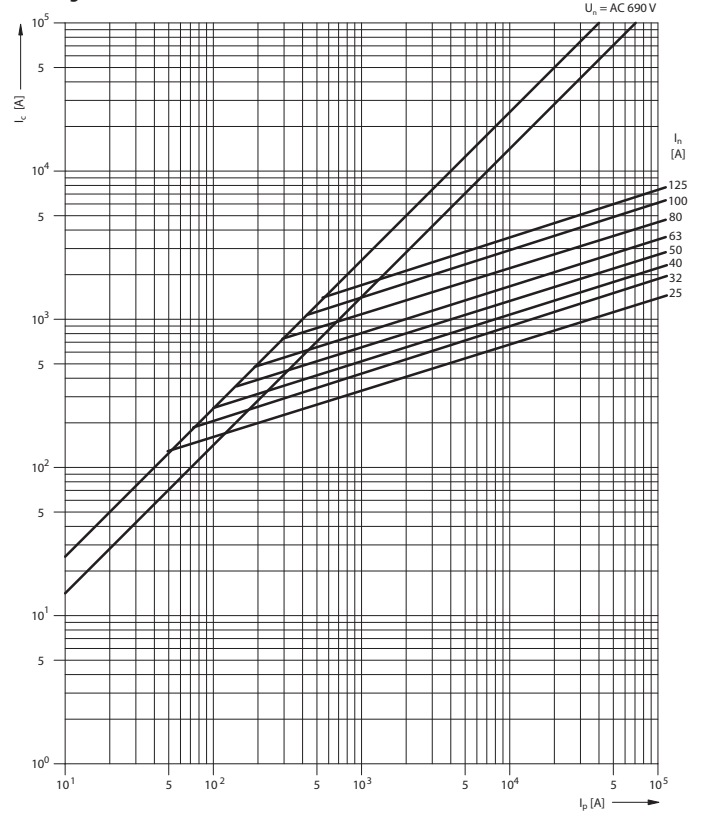
CYLINDRICAL FUSE-LINKS PV5, PC10, PT22

Characteristics

Cut-off characteristic
PV514 gR, aR

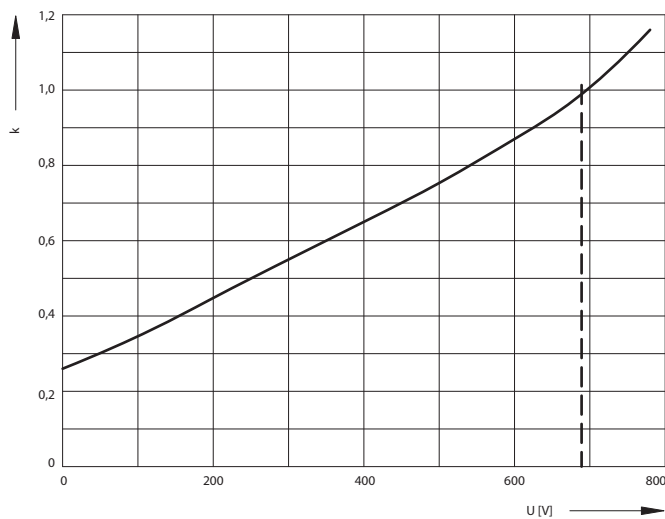


Cut-off characteristic
PV522 gR, aR

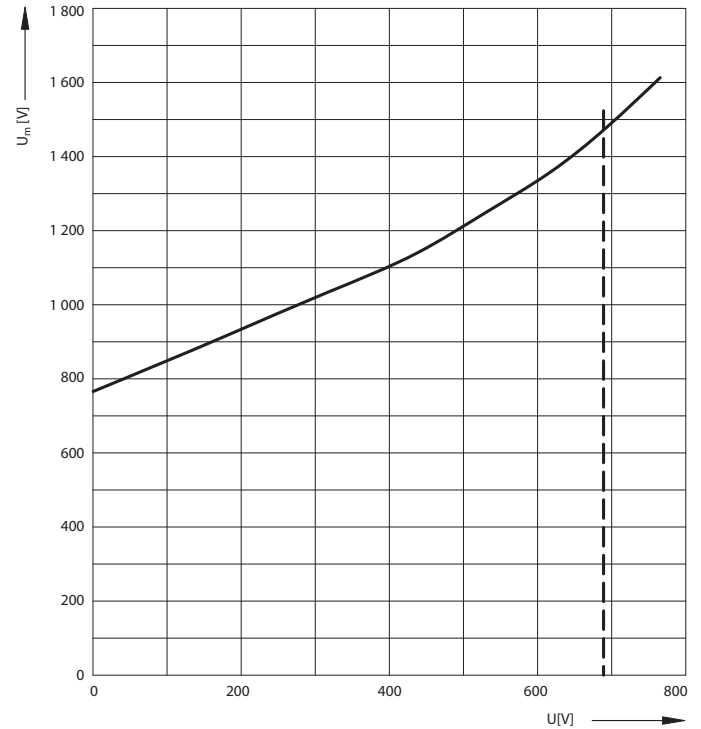


Correction factor „k” of I^2t_c dependence on operating voltage
 $(I^2t_c)_{(U)} = k \times I^2t_c$

PV510, PV514, PV522



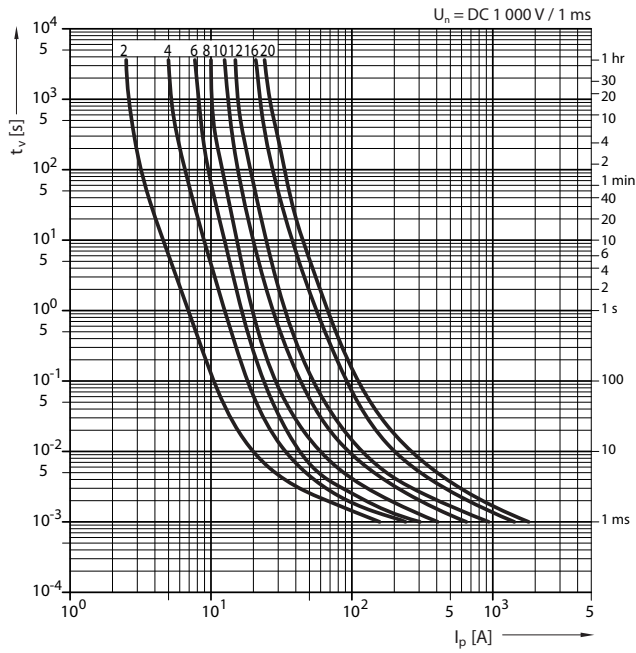
Overvoltage dependence on operating voltage
PV510, PV514, PV522



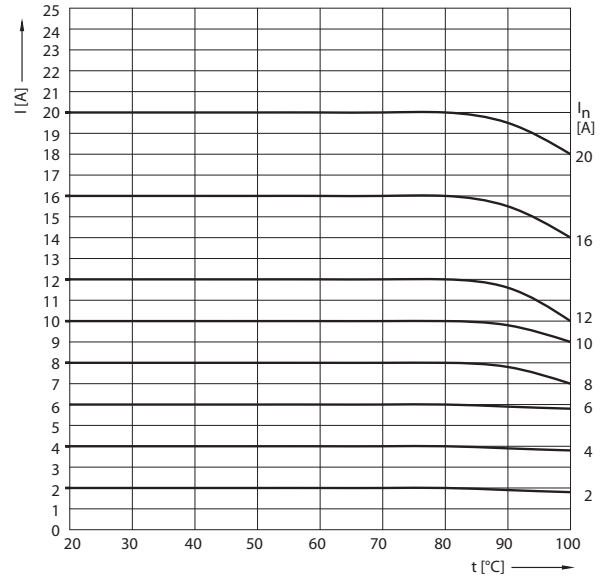
CYLINDRICAL FUSE-LINKS PV5, PC10, PT22

Characteristics

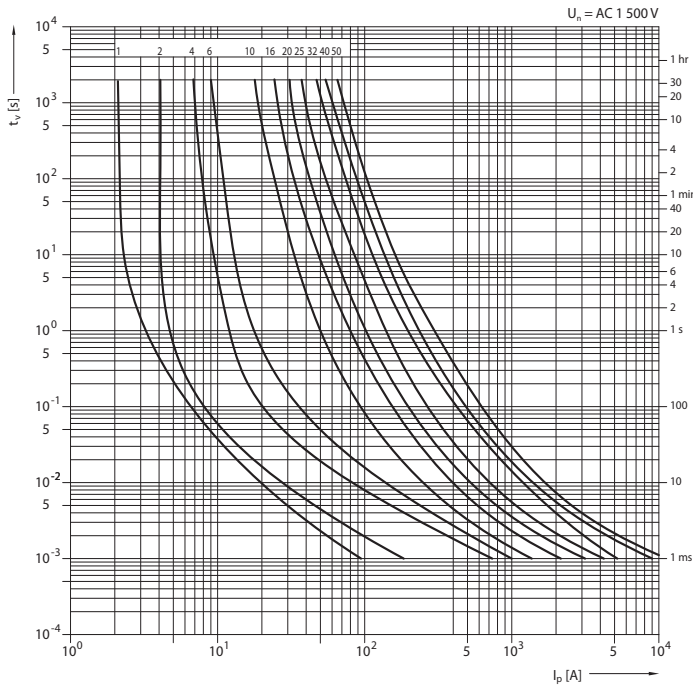
Prearing time/current characteristic
PC10 gPV



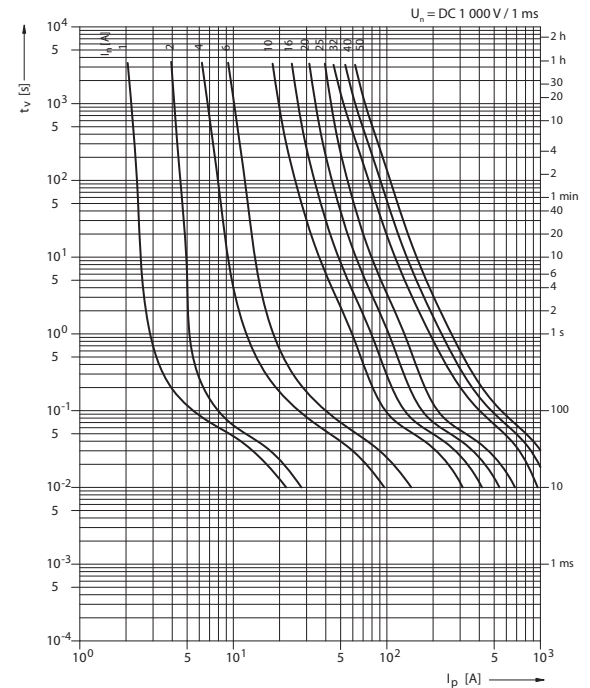
Influence of ambient temperature
PC10 gPV



Prearing time/current characteristic
PT22



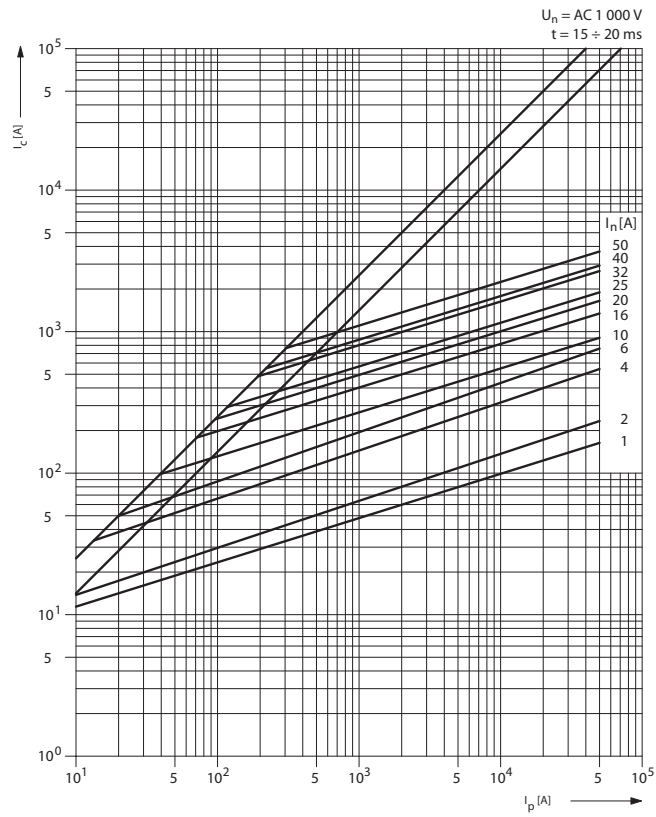
Prearing time/current characteristic
PT22



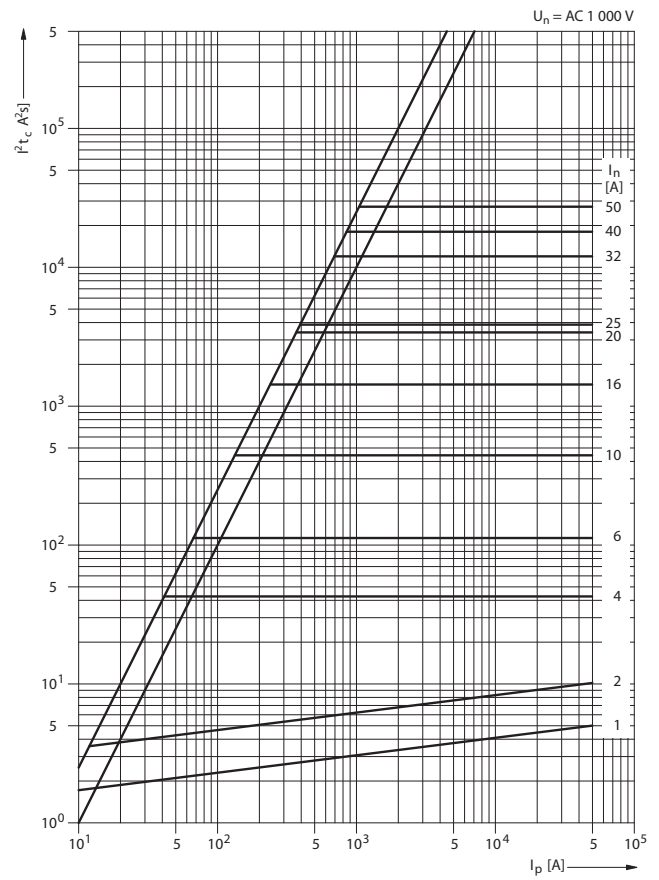
CYLINDRICAL FUSE-LINKS PV5, PC10, PT22

Characteristics

Cut-off characteristic PT 22



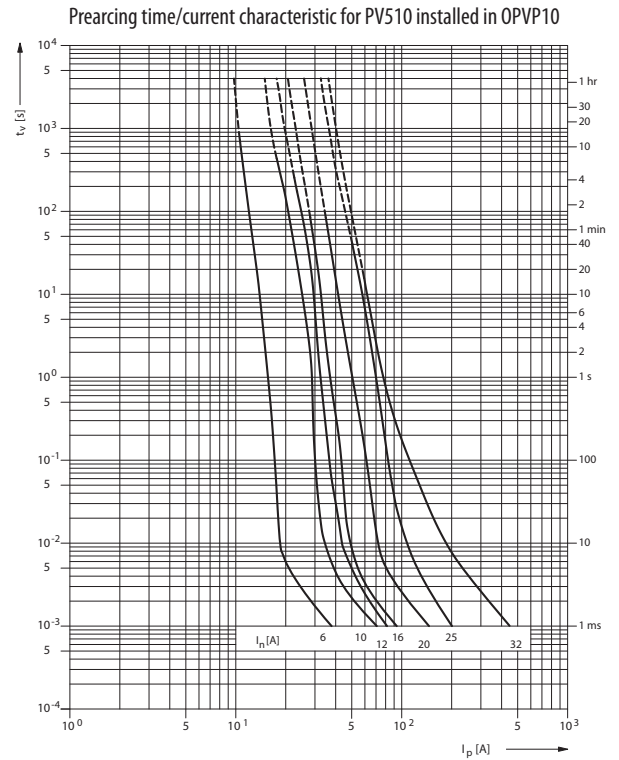
I^2t_c characteristic PT 22



CONDITIONS FOR THE USE OF FUSE-LINKS IN FUSE SWITCH-DISCONNECTORS

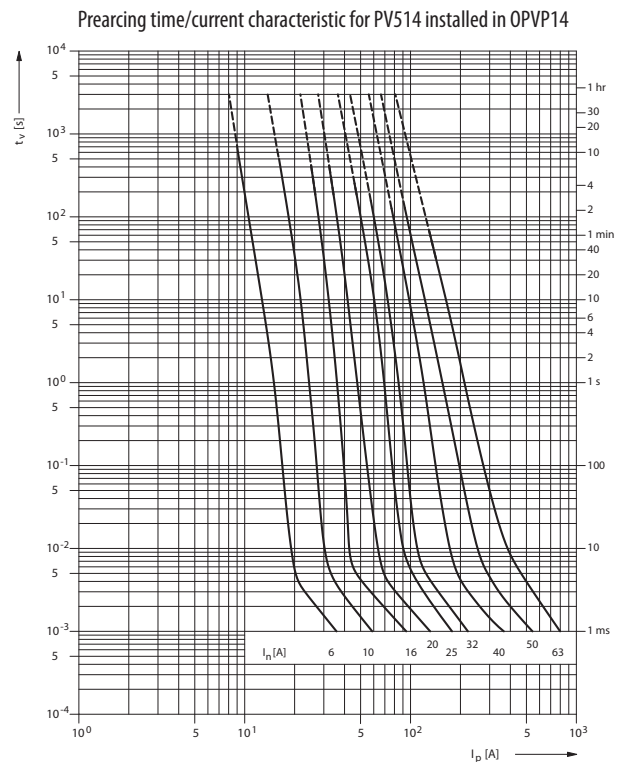
Use of cylindrical fuse-links PV510 in fuse switch-disconnectors OPVP10 installed side-by-side

Fuse-link	Cross-section of Cu conductor [mm ²]	Reduced rated current [A]		
		1-pole	3-pole	≥ 7-pole
PV510 6A	1.0	6.0	6.0	6.0
PV510 10A	1.5	10.0	9.5	9.0
PV510 12A	1.5	12.0	11.0	10.0
	2.5	12.0	11.0	11.0
PV510 16A	2.5	16.0	13.0	12.5
	4.0	16.0	13.5	12.5
	6.0	16.0	14.5	14.0
PV510 20A	10.0	16.0	16.0	15.5
	2.5	18.5	15.0	14.0
	4.0	19.5	16.0	15.5
	6.0	20.0	17.0	16.5
PV510 25A	10.0	20.0	19.0	17.5
	16.0	20.0	20.0	19.5
	4.0	22.5	18.5	18.0
	6.0	24.0	19.5	19.5
PV510 25A	10.0	25.0	22.5	20.5
	16.0	25.0	23.5	22.5
	25.0	25.0	25.0	25.0
PV510 32A	6.0	26.0	22.5	22.0
	10.0	28.0	25.0	23.0
	16.0	31.0	27.0	25.5
	25.0	32.0	30.0	28.0



Use of cylindrical fuse-links PV514 in fuse switch-disconnectors OPVP14 installed side-by-side

Fuse-link	Cross-section of Cu conductor [mm ²]	Reduced rated current [A]		
		1-pole	3-pole	≥ 7-pole
PV514 6A	1.0	6.0	6.0	6.0
PV514 10A	1.5	10.0	10.0	10.0
	2.5	10.0	10.0	10.0
PV514 16A	2.5	16.0	13.0	12.0
	4.0	16.0	15.0	14.0
PV514 20A	2.5	17.5	16.5	16.0
	4.0	19.5	17.5	16.5
	6.0	20.0	17.5	17.5
PV514 25A	4.0	23.5	21.0	20.5
	6.0	24.5	21.5	21.0
	10.0	25.0	23.5	23.5
PV514 32A	16.0	25.0	25.0	24.5
	6.0	26.5	23.5	22.0
	10.0	28.0	26.0	24.5
PV514 32A	16.0	31.0	28.0	27.5
	25.0	32.0	30.5	29.5
	10.0	34.0	31.0	30.0
PV514 40A	16.0	37.5	34.0	33.0
	25.0	40.0	36.5	36.0
PV514 50A	10.0	38.5	34.5	33.5
	16.0	42.0	38.0	36.0
	25.0	46.5	42.5	40.5
PV514 63A	16.0	51.0	46.0	44.0
	25.0	56.0	50.0	49.0



CONDITIONS FOR THE USE OF FUSE-LINKS IN FUSE SWITCH-DISCONNECTORS

Use of cylindrical fuse-links PV510 in fuse switch-disconnectors OPVP10 installed side-by-side

Fuse-link	Cross-section of Cu conductor [mm ²]	Reduced rated current [A]				
		1-pole	3-pole	5-pole	7-pole	10-pole
PV522 25A	4	25.0	23.0	21.5	21.5	21.0
	6	25.0	23.0	23.0	23.0	22.5
	10	25.0	25.0	24.5	24.5	24.5
PV522 32A	6	30.5	27.0	26.5	26.5	26.0
	10	32.0	29.0	28.5	28.0	28.0
	16	32.0	31.5	30.5	30.0	30.0
	25	32.0	32.0	32.0	32.0	32.0
PV522 40A	10	36.5	32.5	32.0	31.5	31.5
	16	39.5	36.0	35.5	34.5	34.5
	25	40.0	38.0	36.5	36.5	36.5
PV522 50A	10	41.0	37.5	36.0		
	16	44.0	39.5	38.5	38.0	38.0
	25	48.0	42.5	42.0	41.5	41.5
PV522 63A	35	50.0	46.0	46.0	45.0	44.0
	16	51.5	46.0	44.5	44.5	44.0
	25	56.0	50.0	49.5	49.0	48.5
PV522 80A	35	60.0	54.5	53.5	53.0	52.5
	50	63.0	58.5	57.5	56.0	55.0
	25	67.0	59.0	58.5	57.0	57.0
PV522 100A	35	69.0	64.0	62.5	62.0	61.0
	50	72.0	67.0	65.0	65.0	64.0
	35	81.0	75.0	74.0	73.0	71.0
PV522 125A	50	85.0	80.0	79.0	79.0	78.0
	50	102.0	95.0	93.0	92.0	91.0

