SG69511

Description

- High-quality residual current device / miniature circuit breaker combination, line voltage-independent
- Contact position indicator red - green
- Fault current tripping indicator white - blue
- Guide for secure terminal connection
- 3-position DIN rail clip, permits removal from existing busbar system
- Comprehensive range of accessories can be mounted subsequently
- Wide variety of rated tripping currents
- Rated currents up to 40 A
- Tripping characteristics B, C
- Rated breaking capacity 4.5 kA

Type AC

4.5 kA, 2-pole
Conditionally surge current-proof 250 A, type AC

SG69511

Characteristic B

$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
10/0.03	PKP42-10/2/B/003	111581	1/60
13/0.03	PKP42-13/2/B/003	111582	1/60
16/0.03	PKP42-16/2/B/003	111583	1/60
20/0.03	PKP42-20/2/B/003	111584	1/60
25/0.03	PKP42-25/2/B/003	111585	1/60
32/0.03	PKP42-32/2/B/003	111586	1/60
40/0.03	PKP42-40/2/B/003	111587	1/60

SG69511

Characteristic C

$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
6/0.03	PKP42-6/2/C/003	111606	1/60
10/0.03	PKP42-10/2/C/003	111607	1/60
13/0.03	PKP42-13/2/C/003	111608	1/60
16/0.03	PKP42-16/2/C/003	111609	1/60
20/0.03	PKP42-20/2/C/003	111610	1/60
25/0.03	PKP42-25/2/C/003	111611	1/60
32/0.03	PKP42-32/2/C/003	111612	1/60
40/0.03	PKP42-40/2/C/003	111613	1/60

Explanation PKP42:
P = xPole, KP.2 = Combined RCD/MCB Devices, 4 = 4.5 kA

Specifications | Combined RCD/MCB Devices PKP.2, 2-pole

Description

- Combined RCD/MCB Devices
- Line voltage-independent tripping
- Compatible with standard busbar
- Twin-purpose terminal (lift/open-mouthed) above and below
- Busbar positioning optionally above or below
- Free terminal space despite installed busbar
- Guide for secure terminal connection
- Switching toggle (MCB component) in colour designating the rated current
- Contact position indicator red - green
- Fault current tripping indicator white - blue
- Comprehensive range of accessories can be mounted subsequently
- The test key “T” must be pressed every 6 month. The system operator must be informed of this obligation and his responsibility in a way that can be proven (self-adhesive RCD-label enclosed). The test intervall of 6 month is valid for residential and similar applications. Under all other conditions (e.g. damply or dusty environments), it’s recommended to test in shorter intervalls (e.g. monthly).
- Pressing the test key “T” serves the only purpose of function testing the residual current device (RCD). This test does not make earthing resistance measurement (R_E), or proper checking of the earth conductor condition redundant, which must be performed separately.
- **Type -A**: Protects against special forms of residual pulsating DC which have have not been smoothed

Accessories:

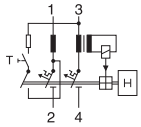
Tripping signal switch for subsequent installation	ZP-IHK	286052
Shunt trip release	ZP-ASA/..	248438, 248439

Technical Data

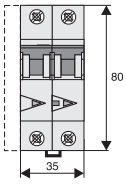
		PKP.2, 2-pole
Electrical		
Design according to		IEC/EN 61009
Current test marks as printed onto the device		
Line voltage-independent tripping		instantaneous 250 A (8/20 µs), surge current proof
Rated voltage	U_e	230 V AC; 50 Hz
Operational voltage range		196-253 V
Rated tripping current	$I_{\Delta n}$	30, 100, 300 mA
Rated non-tripping current	$I_{\Delta no}$	0.5 $I_{\Delta n}$
Sensitivity		AC and pulsating DC
Selectivity class		3
Rated breaking capacity	I_{cn}	
PKPM2		10 kA
PKP62		6 kA
PKP42		4.5 kA
Rated current		6 - 40 A
Rated impulse withstand voltage	U_{imp}	4 kV (1.2/50 µs)
Characteristic		B, C
Maximum back-up fuse (short circuit)		100 A gL (>10 kA)
Endurance		
electrical components		≥ 4,000 switching operations
mechanical components		≥ 20,000 switching operations
Mechanical		
Frame size		45 mm
Device height		80 mm
Device width		35 mm (2MU)
Mounting		3-position DIN rail clip, permits removal from existing busbar system
Degree of protection, switch		IP20
Degree of protection, built-in		IP40
Upper and lower terminals		open mouthed/lift terminals
Terminal protection		finger and hand touch safe, DGUV VS3, EN 50274
Terminal capacity		1 - 25 mm^2
Terminal torque		2 - 2.4 Nm
Busbar thickness		0.8 - 2 mm
Tripping temperature		-25°C to +40°C
Storage- and transport temperature		-35°C to +60°C
Resistance to climatic conditions		according to IEC/EN 61009

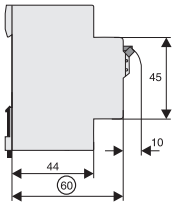
Connection diagram

2-pole



Dimensions (mm)





PKPM2: Influence of ambient temperature on load carrying capacity

- Values = max. allowed current in Ampere at the specific temperature
- Temperature factor (%/K) = 0.5

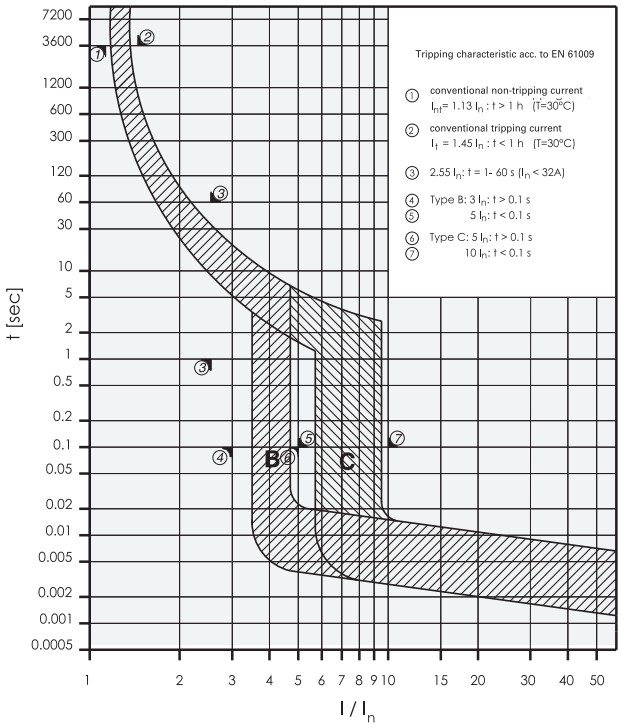
	Ambient temperature / °C									
I_n [A]	**-40**	**-30**	**-25**	**-20**	**-10**	**0**	**10**	**20**	**30**	**40**
6	8.1	7.8	7.7	7.5	7.2	6.9	6.6	6.3	6.0	5.7
10	13.5	13.0	12.8	12.5	12.0	11.5	11.0	10.5	10.0	9.5
13	17.6	16.9	16.6	16.3	15.6	15.0	14.3	13.7	13.0	12.4
16	21.6	20.8	20.4	20.0	19.2	18.4	17.6	16.8	16.0	15.2
20	27.0	26.0	25.5	25.0	24.0	23.0	22.0	21.0	20.0	19.0

PKP62, PKP42: Influence of ambient temperature on load carrying capacity

- Values = max. allowed current in Ampere at the specific temperature
- Temperature factor (%/K) = 0.5

	Ambient temperature / °C									
I_n [A]	**-40**	**-30**	**-25**	**-20**	**-10**	**0**	**10**	**20**	**30**	**40**
6	8.1	7.8	7.7	7.5	7.2	6.9	6.6	6.3	6.0	5.7
10	13.5	13.0	12.8	12.5	12.0	11.5	11.0	10.5	10.0	9.5
13	17.6	16.9	16.6	16.3	15.6	15.0	14.3	13.7	13.0	12.4
16	21.6	20.8	20.4	20.0	19.2	18.4	17.6	16.8	16.0	15.2
20	27.0	26.0	25.5	25.0	24.0	23.0	22.0	21.0	20.0	19.0
25	33.8	32.5	31.9	31.3	30.0	28.8	27.5	26.3	25.0	23.8
32	43.2	41.6	40.8	40.0	38.4	36.8	35.2	33.6	32.0	30.4
40	54.0	52.0	51.0	50.0	48.0	46.0	44.0	42.0	40.0	38.0

Tripping Characteristic PKP.2, Characteristics B and C



Short Circuit Selectivity PKPM2 towards Neozed[1] / Diazed[2] / NH00[3]

Short circuit currents in kA, rated currents of fuses in A

Short circuit selectivity **PKPM2** towards **Neozed** [1]

PKPM2	Neozed [1]									
I_n [A]	16	20	25	32	35	40	50	63	80	100
B10	<0.5	0.5	0.9	2	2.3	3.7	8	10	10	10
B13	<0.5	0.5	0.8	1.7	1.9	3	6	10	10	10
B16		0.5	0.7	1.5	1.7	2.4	4.4	6.8	10	10
B20			0.7	1.4	1.5	2.2	3.9	6	9.2	10
C10	<0.5	0.5	0.8	1.7	1.9	3	6.1	10	10	10
C13	<0.5	0.5	0.7	1.6	1.8	2.8	5.5	9.5	10	10
C16		<0.5	0.7	1.3	1.5	2.2	4	6.2	10	10
C20			0.6	1.3	1.4	2.1	3.7	5.6	8.5	10

Short circuit selectivity **PKPM2** towards **Diazed** [2]

PKPM2	Diazed [2]								
I_n [A]	16	20	25	32	35	50	63	80	100
B10	<0.5	0.5	0.9	1.8	2.9	5.6	10	10	10
B13	<0.5	0.5	0.8	1.5	2.4	4.5	10	10	10
B16		0.5	0.8	1.3	2	3.4	8	10	10
B20			0.7	1.3	1.9	3.1	7.1	10	10
C10	<0.5	0.5	0.8	1.5	2.4	4.4	10	10	10
C13	<0.5	0.5	0.8	1.4	2.3	4.2	10	10	10
C16		<0.5	0.7	1.2	1.9	3.2	7.6	10	10
C20			0.7	1.2	1.8	2.9	6.5	9.7	10

Short circuit selectivity **PKPM2** towards **NH00** [3]

PKPM2	NH00 [3]											
I_n [A]	16	20	25	32	35	40	50	63	80	100	125	160
B10	<0.5	<0.5	0.8	1.5	2.3	3.2	5.7	9.1	10	10	10	10
B13	<0.5	<0.5	0.8	1.3	1.9	2.7	4.4	6.5	10	10	10	10
B16		<0.5	0.7	1.1	1.6	2.2	3.4	4.8	8	10	10	10
B20			0.6	1	1.4	2	3.1	4.3	7	10	10	10
C10	<0.5	<0.5	0.7	1.3	1.9	2.7	4.5	6.9	10	10	10	10
C13	<0.5	<0.5	0.7	1.2	1.8	2.5	4.1	6.1	10	10	10	10
C16		<0.5	0.6	1	1.5	2	3.1	4.4	7.5	10	10	10
C20			0.6	0.9	1.4	1.9	2.9	4.1	6.5	10	10	10

Darker areas: no selectivity

[1] SIEMENS Type 5SE2; Size: D01, D02, D03; Operating class gG; Rated voltage: AC 400 V/DC 250 V

[2] SIEMENS Type 5SB2, 5SB4, 5SC2; Size: DII, DIII, DIV; Operating class gG; Rated voltage: AC 500 V/DC 500 V

[3] SIEMENS Type 3NA3 8, 3NA6 8, 3NA7 8; Size: 000, 00; Operating class gG; Rated voltage: AC 500 V/DC 250 V

Short Circuit Selectivity PKP62 towards Neozed[1] / Diazed[2] / NH00[3]

Short circuit currents in kA, rated currents of fuses in A

Short circuit selectivity **PKP62** towards **Neozed** [1]

PKP62	Neozed [1]									
I_n [A]	16	20	25	32	35	40	50	63	80	100
B10	<0.5	0.5	0.9	2	2.3	3.7	6	6	6	6
B13	<0.5	0.5	0.8	1.7	1.9	3	6	6	6	6
B16		0.5	0.7	1.5	1.7	2.4	4.4	6	6	6
B20			0.7	1.4	1.5	2.2	4	6	6	6
B25				1.2	1.3	1.8	3.1	4.7	6	6
B32					1.2	1.7	2.7	3.8	5.5	6
B40						1.3	1.7	2.2	2.7	4.2
C10	<0.5	0.5	0.8	1.7	1.9	3	6	6	6	6
C13	<0.5	0.5	0.7	1.6	1.8	2.8	5.5	6	6	6
C16		<0.5	0.7	1.3	1.5	2.2	4	6	6	6
C20			0.6	1.3	1.4	2.1	3.7	5.6	6	6
C25				1.1	1.3	1.8	2.8	3.9	5.6	6
C32					1.2	1.7	2.6	3.6	5.1	6
C40						1.3	1.9	3.3	3.2	5.8

Short circuit selectivity **PKP62** towards **Diazed** [1]

PKP62	Diazed [2]								
I_n [A]	16	20	25	32	35	50	63	80	100
B10	<0.5	0.5	0.9	1.8	2.9	5.6	6	6	6
B13	<0.5	0.5	0.8	1.5	2.4	4.5	6	6	6
B16		0.5	0.8	1.3	2	3.4	6	6	6
B20			0.7	1.3	1.9	3.1	6	6	6
B25				1.1	1.5	2.4	5.5	6	6
B32					1.4	2.1	4.3	6	6
B40						1.4	2.4	2.9	5.1
C10	<0.5	0.5	0.8	1.5	2.4	4.4	6	6	6
C13	<0.5	0.5	0.8	1.4	2.3	4.2	6	6	6
C16		<0.5	0.7	1.2	1.9	3.2	6	6	6
C20			0.7	1.2	1.8	2.9	6	6	6
C25				1.1	1.5	2.3	4.4	6	6
C32					1.4	2.2	4.1	5.6	6
C40						1.6	2.8	3.6	6

Short circuit selectivity **PKP62** towards **NH00** [3]

PKP62	NH00 [3]											
I_n [A]	16	20	25	32	35	40	50	63	80	100	125	160
B10	<0.5	<0.5	0.8	1.5	2.3	3.2	5.7	6	6	6	6	6
B13	<0.5	<0.5	0.8	1.3	1.9	2.7	4.4	6	6	6	6	6
B16		<0.5	0.7	1.1	1.6	2.2	3.4	4.8	6	6	6	6
B20			0.6	1	1.4	2	3.1	4.3	6	6	6	6
B25				0.9	1.2	1.6	2.4	3.4	5.5	6	6	6
B32					1.1	1.4	2.1	2.9	4.3	6	6	6
B40							1.4	1.9	2.8	4.1	6	6
C10	<0.5	<0.5	0.7	1.3	1.9	2.7	4.5	6	6	6	6	6
C13	<0.5	<0.5	0.7	1.2	1.8	2.5	4.1	6	6	6	6	6
C16		<0.5	0.6	1	1.5	2	3.1	4.4	6	6	6	6
C20			0.6	0.9	1.4	1.9	2.9	4.1	6	6	6	6
C25				0.9	1.2	1.6	2.3	3	4.6	6	6	6
C32					1.1	1.5	2.1	2.8	4.3	6	6	6
C40							1.5	2.1	3.1	5.4	6	6

Darker areas: no selectivity

[1] SIEMENS Type 5SE2; Size: D01, D02, D03; Operating class gG; Rated voltage: AC 400 V/DC 250 V

[2] SIEMENS Type 5SB2, 5SB4, 5SC2; Size: DII, DIII, DIV; Operating class gG; Rated voltage: AC 500 V/DC 500 V

[3] SIEMENS Type 3NA3 8, 3NA6 8, 3NA7 8; Size: 000, 00; Operating class gG; Rated voltage: AC 500 V/DC 250 V

Short Circuit Selectivity PKP42 towards Neozed[1] / Diazed[2] / NH00[3]

Short circuit currents in kA, rated currents of fuses in A

Short circuit selectivity **PKP42** towards **Neozed** [1]

PKP42	Neozed [1]									
I_n [A]	16	20	25	32	35	40	50	63	80	100
B10	<0.5	0.5	0.9	2	2.3	3.7	4.5	4.5	4.5	4.5
B13	<0.5	0.5	0.8	1.7	1.9	3	4.5	4.5	4.5	4.5
B16		0.5	0.7	1.5	1.7	2.4	4.4	4.5	4.5	4.5
B20			0.7	1.4	1.5	2.2	4	4.5	4.5	4.5
B25				1.2	1.3	1.8	3.1	4.7	4.5	4.5
B32					1.2	1.7	2.7	3.8	4.5	4.5
B40						1.3	1.7	2.2	2.7	4.2
C10	<0.5	0.5	0.8	1.7	1.9	3	4.5	4.5	4.5	4.5
C13	<0.5	0.5	0.7	1.6	1.8	2.8	4.5	4.5	4.5	4.5
C16		<0.5	0.7	1.3	1.5	2.2	4	4.5	4.5	4.5
C20			0.6	1.3	1.4	2.1	3.7	4.5	4.5	4.5
C25				1.1	1.3	1.8	2.8	3.9	4.5	4.5
C32					1.2	1.7	2.6	3.6	4.5	4.5
C40						1.3	1.9	3.3	3.2	4.5

Short circuit selectivity **PKP42** towards **Diazed** [1]

PKP42	Diazed [2]								
I_n [A]	16	20	25	32	35	50	63	80	100
B10	<0.5	0.5	0.9	1.8	2.9	4.5	4.5	4.5	4.5
B13	<0.5	0.5	0.8	1.5	2.4	4.5	4.5	4.5	4.5
B16		0.5	0.8	1.3	2	3.4	4.5	4.5	4.5
B20			0.7	1.3	1.9	3.1	4.5	4.5	4.5
B25				1.1	1.5	2.4	4.5	4.5	4.5
B32					1.4	2.1	4.3	4.5	4.5
B40						1.4	2.4	2.9	4.5
C10	<0.5	0.5	0.8	1.5	2.4	4.4	4.5	4.5	4.5
C13	<0.5	0.5	0.8	1.4	2.3	4.2	4.5	4.5	4.5
C16		<0.5	0.7	1.2	1.9	3.2	4.5	4.5	4.5
C20			0.7	1.2	1.8	2.9	4.5	4.5	4.5
C25				1.1	1.5	2.3	4.4	4.5	4.5
C32					1.4	2.2	4.1	4.5	4.5
C40						1.6	2.8	3.6	4.5

Short circuit selectivity **PKP42** towards **NH00** [3]

PKP42	NH00 [3]											
I_n [A]	16	20	25	32	35	40	50	63	80	100	125	160
B10	<0.5	<0.5	0.8	1.5	2.3	3.2	4.5	4.5	4.5	4.5	4.5	4.5
B13	<0.5	<0.5	0.8	1.3	1.9	2.7	4.4	4.5	4.5	4.5	4.5	4.5
B16		<0.5	0.7	1.1	1.6	2.2	3.4	4.5	4.5	4.5	4.5	4.5
B20			0.6	1	1.4	2	3.1	4.3	4.5	4.5	4.5	4.5
B25				0.9	1.2	1.6	2.4	3.4	4.5	4.5	4.5	4.5
B32					1.1	1.4	2.1	2.9	4.3	4.5	4.5	4.5
B40							1.4	1.9	2.8	4.1	4.5	4.5
C10	<0.5	<0.5	0.7	1.3	1.9	2.7	4.5	4.5	4.5	4.5	4.5	4.5
C13	<0.5	<0.5	0.7	1.2	1.8	2.5	4.1	4.5	4.5	4.5	4.5	4.5
C16		<0.5	0.6	1	1.5	2	3.1	4.4	4.5	4.5	4.5	4.5
C20			0.6	0.9	1.4	1.9	2.9	4.1	4.5	4.5	4.5	4.5

Darker areas: no selectivity

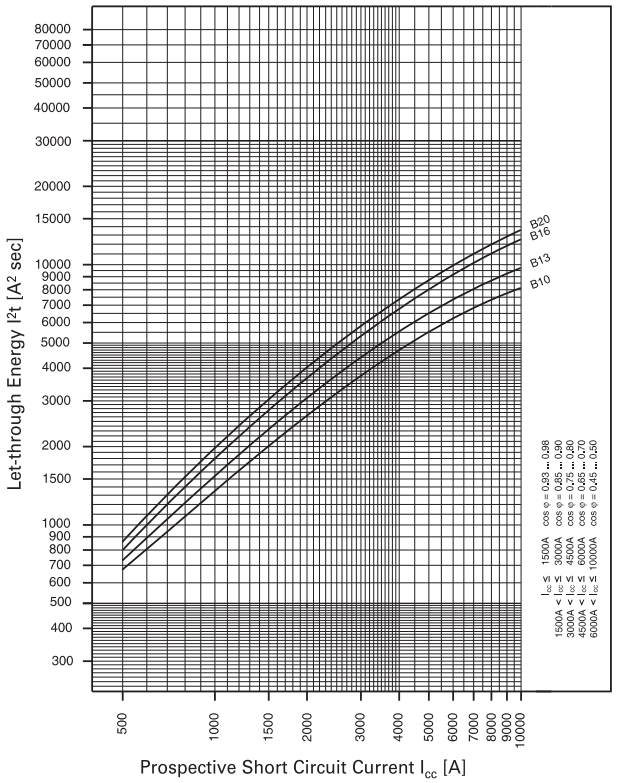
[1] SIEMENS Type 5SE2; Size: D01, D02, D03; Operating class gG; Rated voltage: AC 400 V/DC 250 V

[2] SIEMENS Type 5SB2, 5SB4, 5SC2; Size: DII, DIII, DIV; Operating class gG; Rated voltage: AC 500 V/DC 500 V

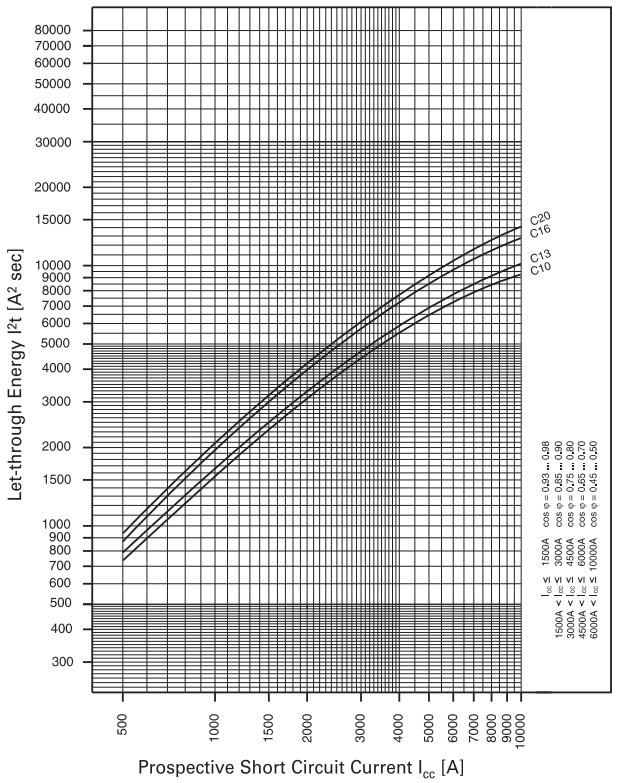
[3] SIEMENS Type 3NA3 8, 3NA6 8, 3NA7 8; Size: 000, 00; Operating class gG; Rated voltage: AC 500 V/DC 250 V

Let-through Energy PKP.2-../2/

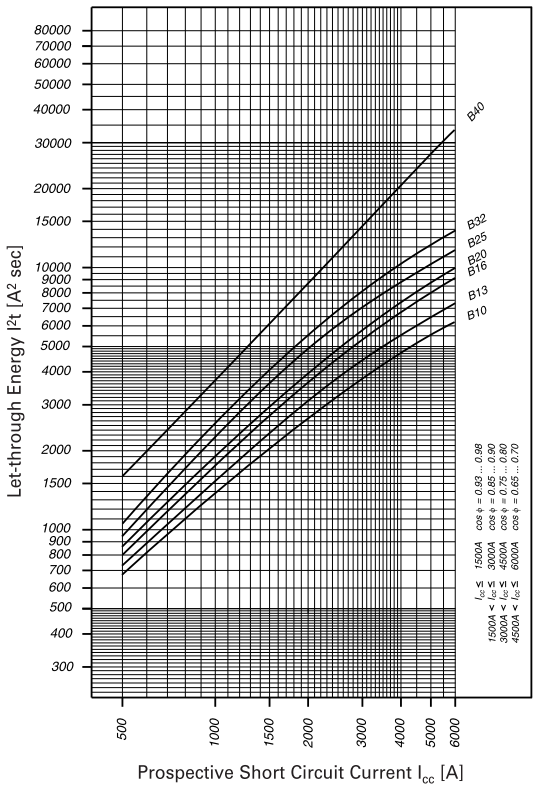
Let-through Energy PKPM2, Characteristic B, 2-pole



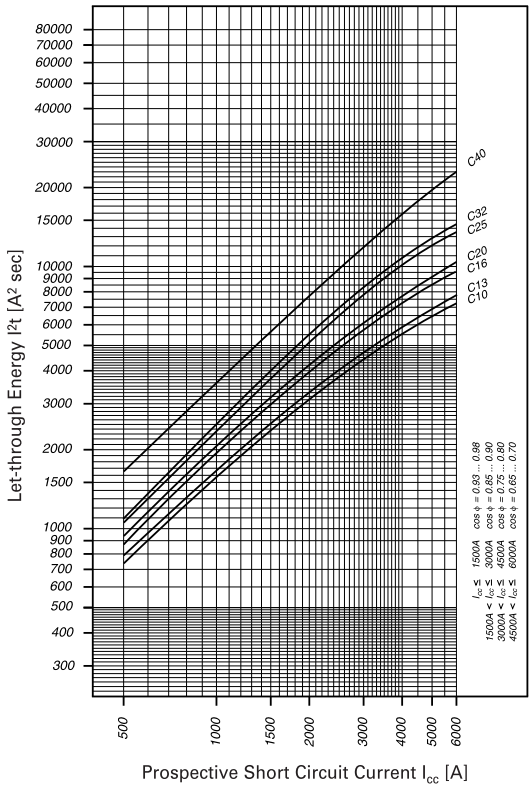
Let-through Energy PKPM2, Characteristic C, 2-pole



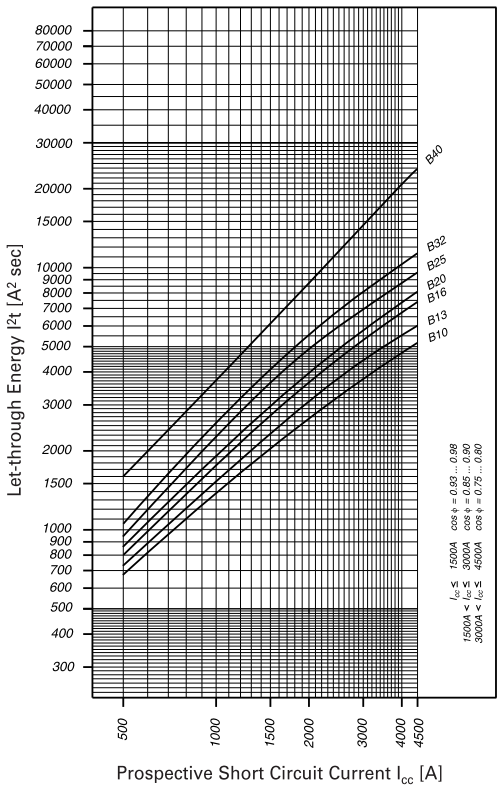
Let-through Energy PKP62, Characteristic B, 2-pole



Let-through Energy PKP62, Characteristic C, 2-pole



Let-through Energy PKP42, Characteristic B, 2-pole



Let-through Energy PKP42, Characteristic C, 2-pole