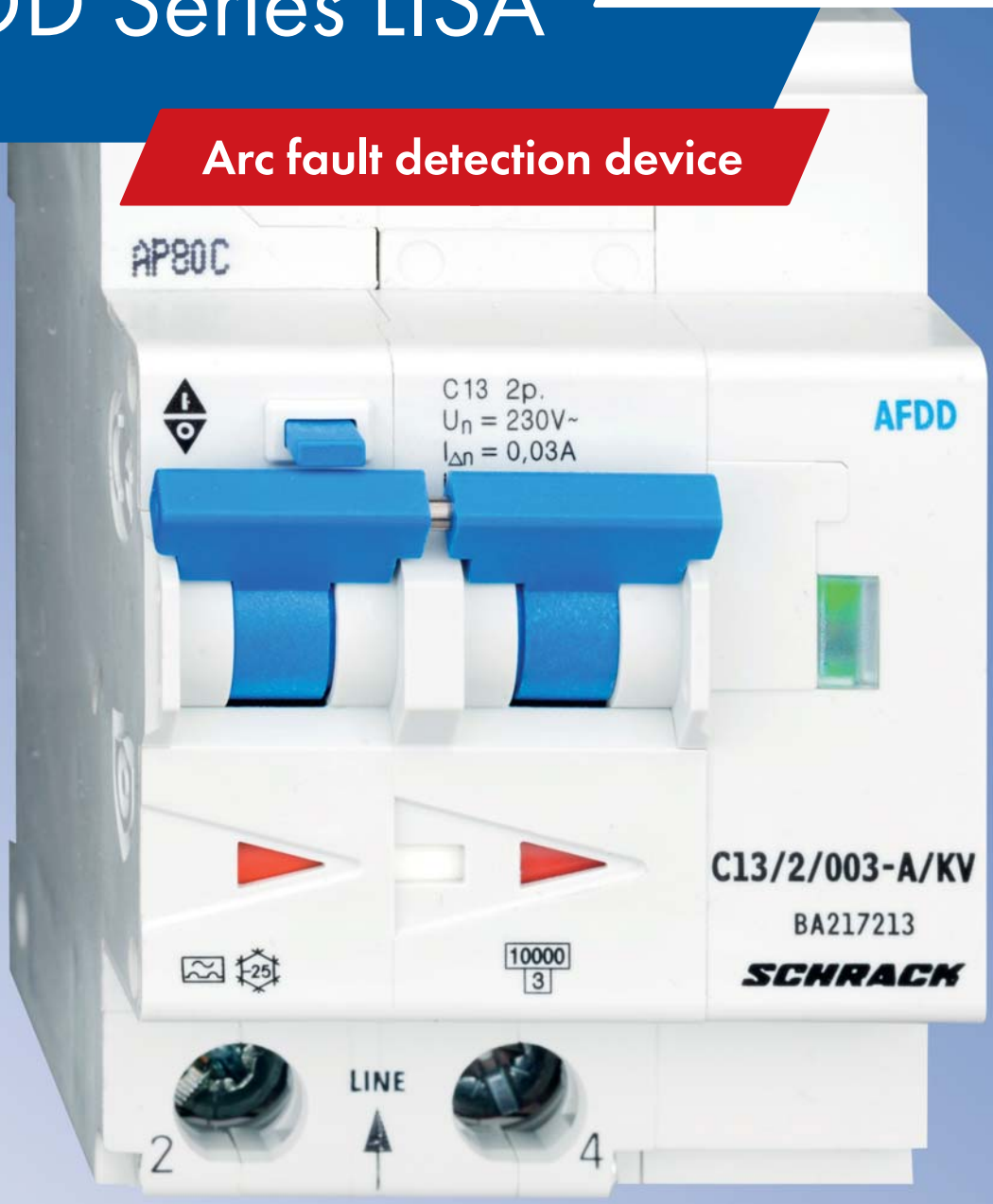
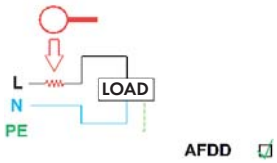
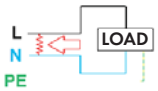
AFDD Series LISA

Arc fault detection device

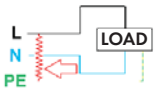




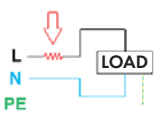
AFDD ☑



FI ☒
LS ☑
LS/FI ☑
AFDD ☑



FI ☑
LS ☒
LS/FI ☑
AFDD ☑



FI ☒
LS ☒
LS/FI ☒
AFDD ☑

ONLINE SHOPPING!

In the office or on the road with the Live Phone App

Arc fault detection devices AFDD, 2-pole – General Informations

Schrack Info

- Arc fault detection device (AFDD)
- Detects arcing faults on the circuit and switch the electric circuit off
- In a device with combinated with a line voltage-independend RCBO
- Tripping- and contact-position-indicator
- Double terminal on the top and on the bottom with guide for secure terminal connection

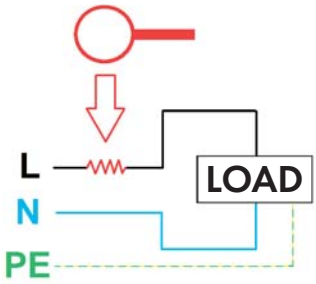
Advantages

These advantages predestined this switch especially for:

- Not easy evacuatable buildings like nursery schools, hospitals or retirement homes
- In establishments with higher fire risk like farms or carpenters
- In homes with wood or ecological materials or leightweight constructions in roof structures
- Historic buildings, museums and libaries

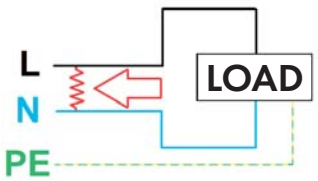
Function

The AFDD monitored if ther is an arcing in the electric circuit.



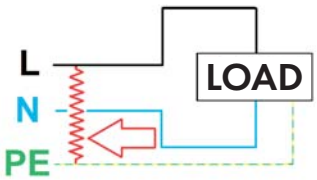
AFDD ☑

If there is a failure between L and N, a MCB , a RCBO and an AFDD can recognized it and switch of.



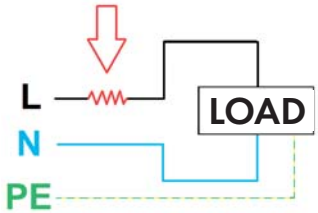
FI ☒
LS ☑
LS/FI ☑
AFDD ☑

If there is a failure between L and PE, a RCCB, a RCBO and an AFDD can recognized it and switch of.



FI ☑
LS ☒
LS/FI ☑
AFDD ☑

If there is a seriel failure (arc), no RCCB, MCB, RCBO can recognized emidiatly. Only an AFDD recognized the failure and switch the circuit of.



FI ☒
LS ☒
LS/FI ☒
AFDD ☑

Arc fault detection devices AFDD, 2-pole

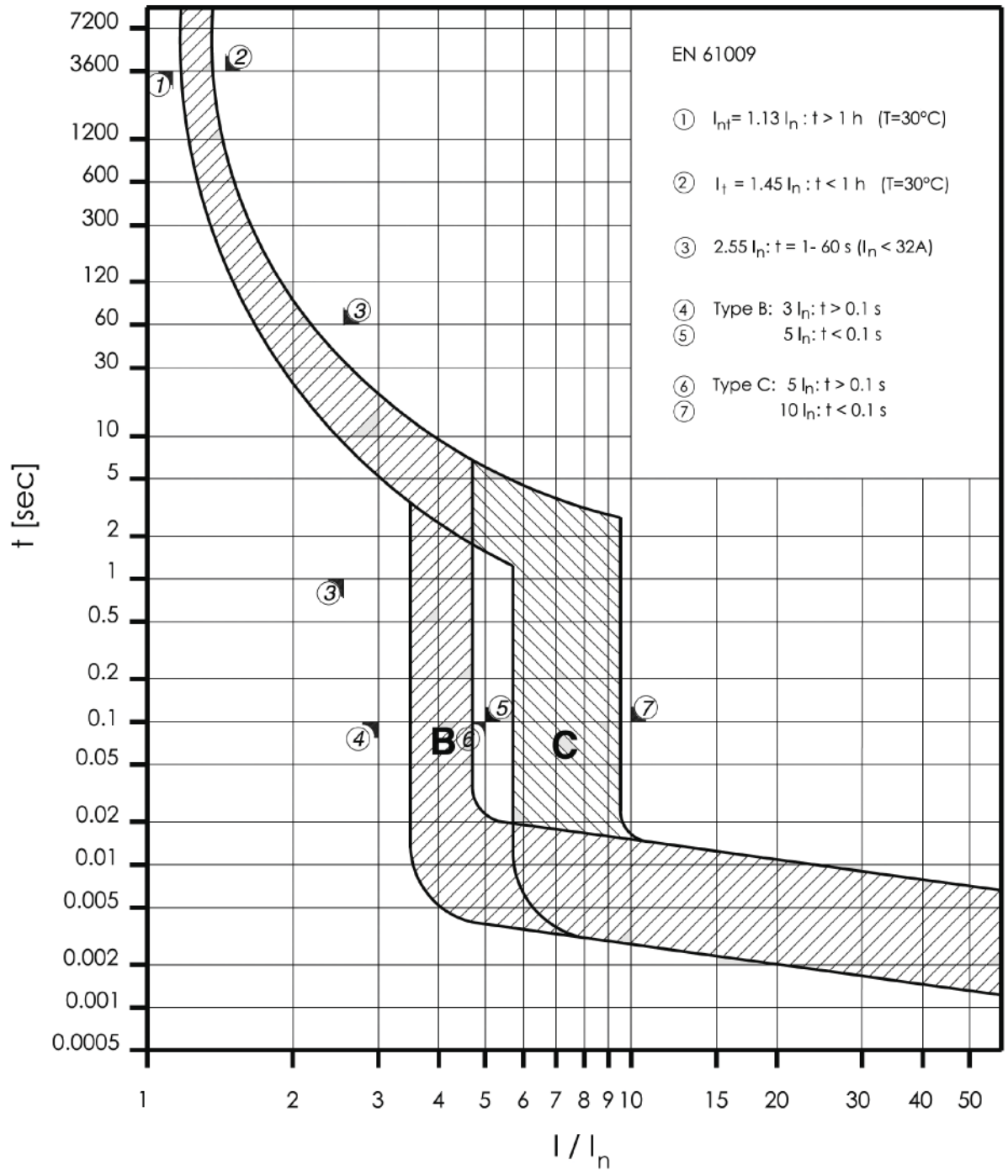
Schrack Info

- Arc fault detection devices according IEC 62606, EN 62606
- Detects and delete fault arcs in the circuit
- Combined in a RCBO
- 2-pole version: both lines are protected
- Variable connection: N on left or right side usable
- Contact position indicator: red - green
- Tripping indicator: MCB, RCD or AFDD
- Permanent selfcheck
- Overvoltage- and Over-temperature-monitoring
- Insulated terminal guide for secure connection
- LED indidcation for AFDD-function
- Testing interval every 6 months

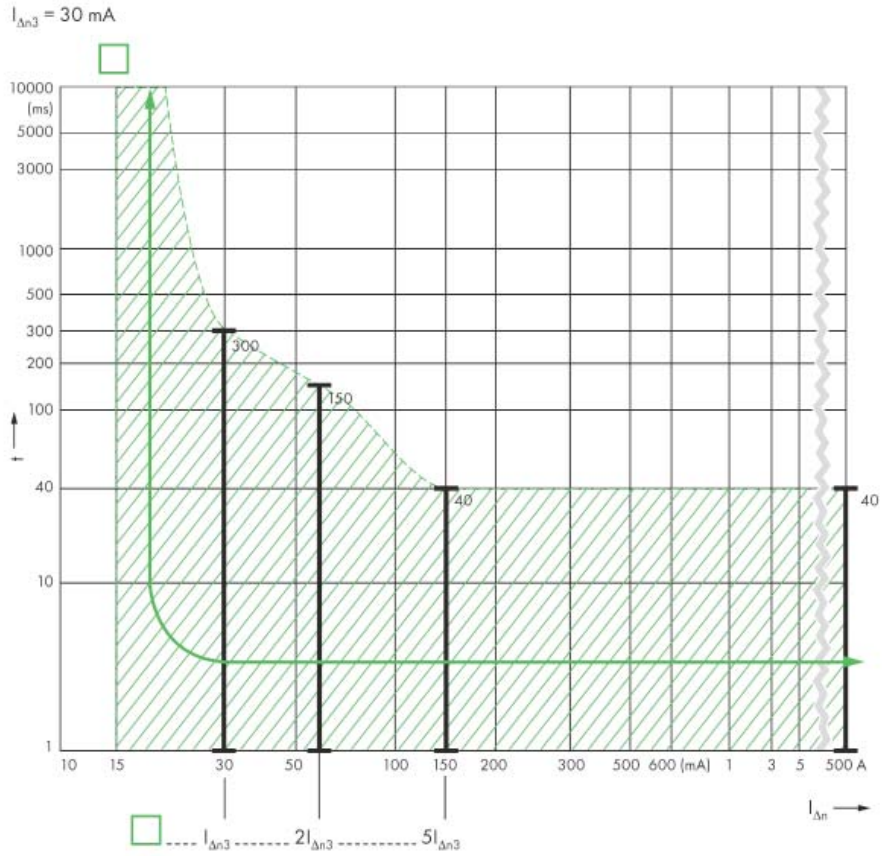
Technical data

Standards:		IEC 62606, EN 62606, IEC 61009, EN 61009
Tripping:		Line voltage independent
Delay-type:	undelayed	undelayed
		surge current proof 250 A (8/20 µs)
	kV	delayed 10 ms
		surge current proof 250 A (8/20 µs)
Rated voltage U_e :		240 V-AC
Rated frequency:		50 Hz
Operating voltage:		170-264 V
Rated residual current I_{dn}:		30 mA
Rated non-trippong current I_{dno}:		0.5 x I_{dn}
Sensitivity:		AC and pulse current sensitive (type A)
Energy limiting class:		3
Rated short-circuit capacity:		
	AFDD 10-25A	10 kA
	AFDD 32-40A	6 kA
Rated impulse withstand voltage U_{imp}:		4 kV (1.2/50 µs)
Arc-tripping-time in relation to load-current		
(according IEC/EN 62606):		
	Load current (A)	Tripping time (s)
	2,5	< 1
	5	< 0.5
	10	< 0.25
	16	< 0.15
	32	< 0.12
	40	< 0.12
Characteristic according EN 60898:		B, C
Rated current:		10 - 40 A
Max. back up fuse:		100 A gG/gL (>10 kA)
Endurance:		
	electrical	> 4000 operating cycles
	mechanical	> 20000 operating cycles
Module wide:		3 MW (54 mm)
Mounting:		on DIN rail by latching snap-on mounting
		no removal of busbar during replacement
Degree of protection:		IP20
Degree of protection, covered:		IP40
Rated tripping temperature:		- 25°C up to + 40°C
Stock temperature:		- 35°C up to + 60°C
Terminals:		Double clamp / lift terminal
Finger and hand touch safe:		acc. to BGV A3
Terminal cross-section:		1 - 25 mm²
Cross section busbar:		0.8 - 2 mm
Torque:		2 - 2.4 Nm

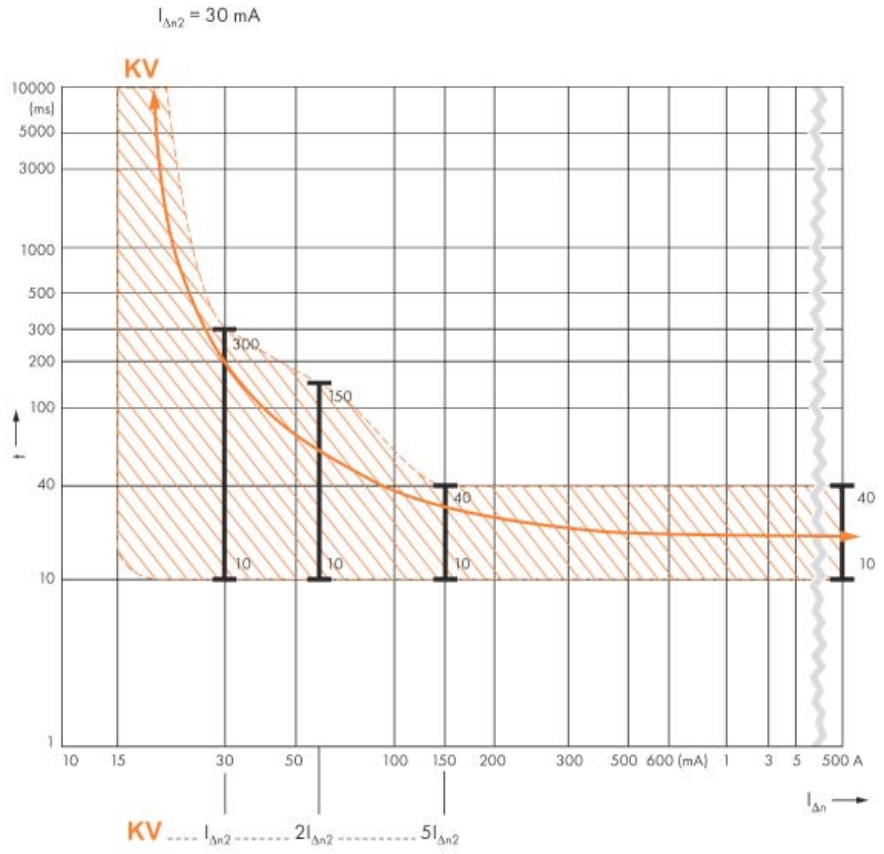
Tripping characteristic



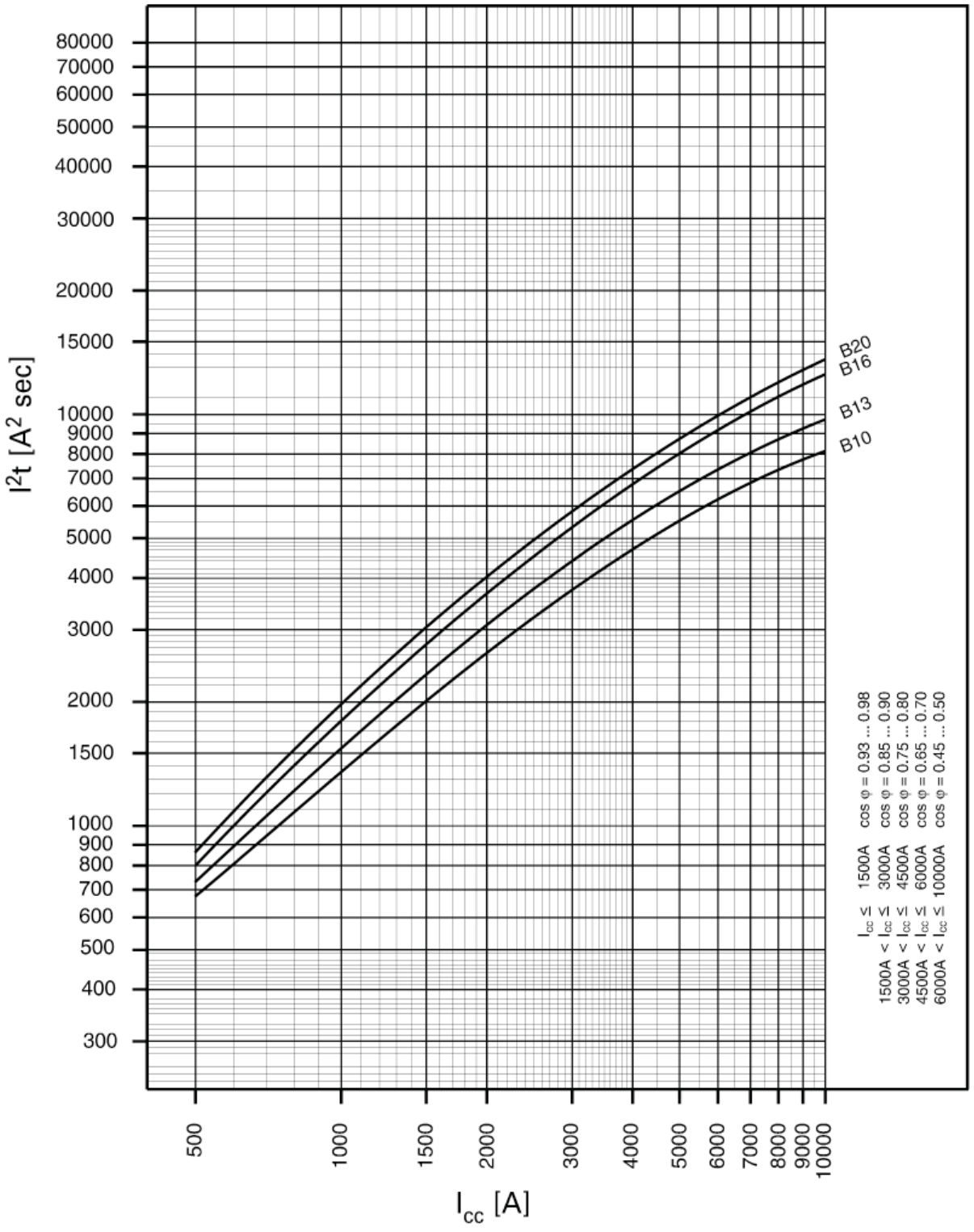
Tripping characteristic undelayed type



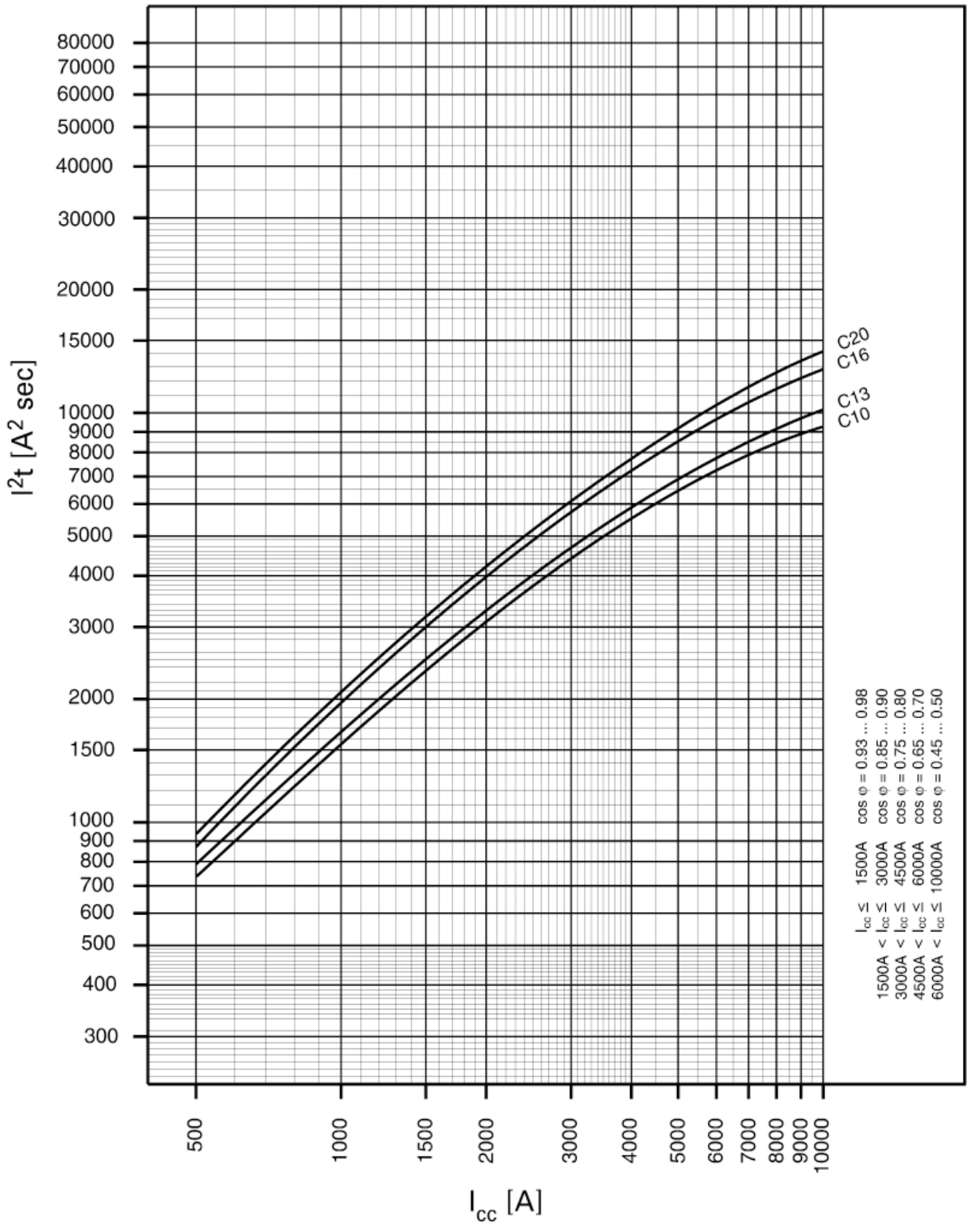
Tripping characteristic delayed type



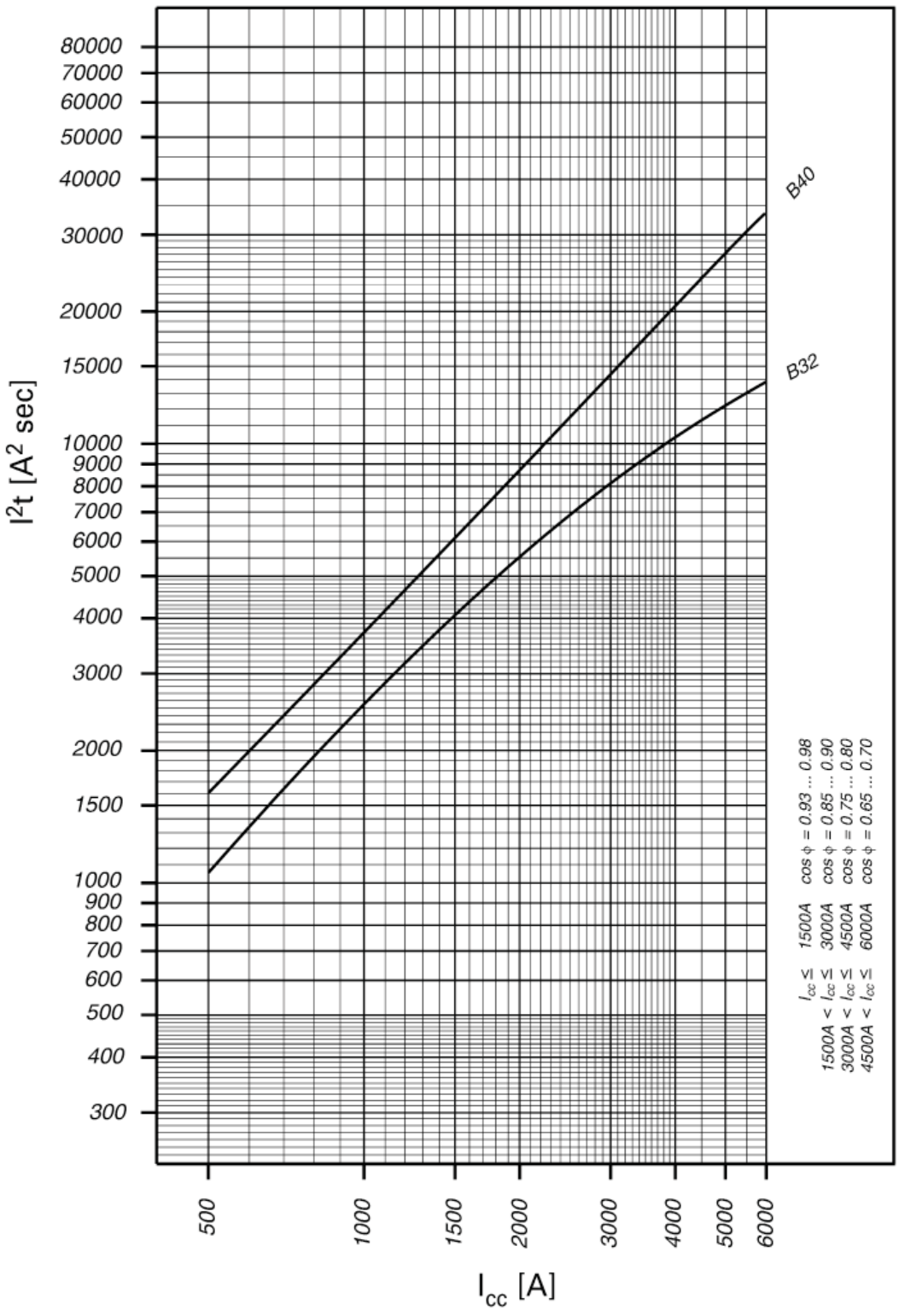
Let-through-energy characteristic B, 10-20 A



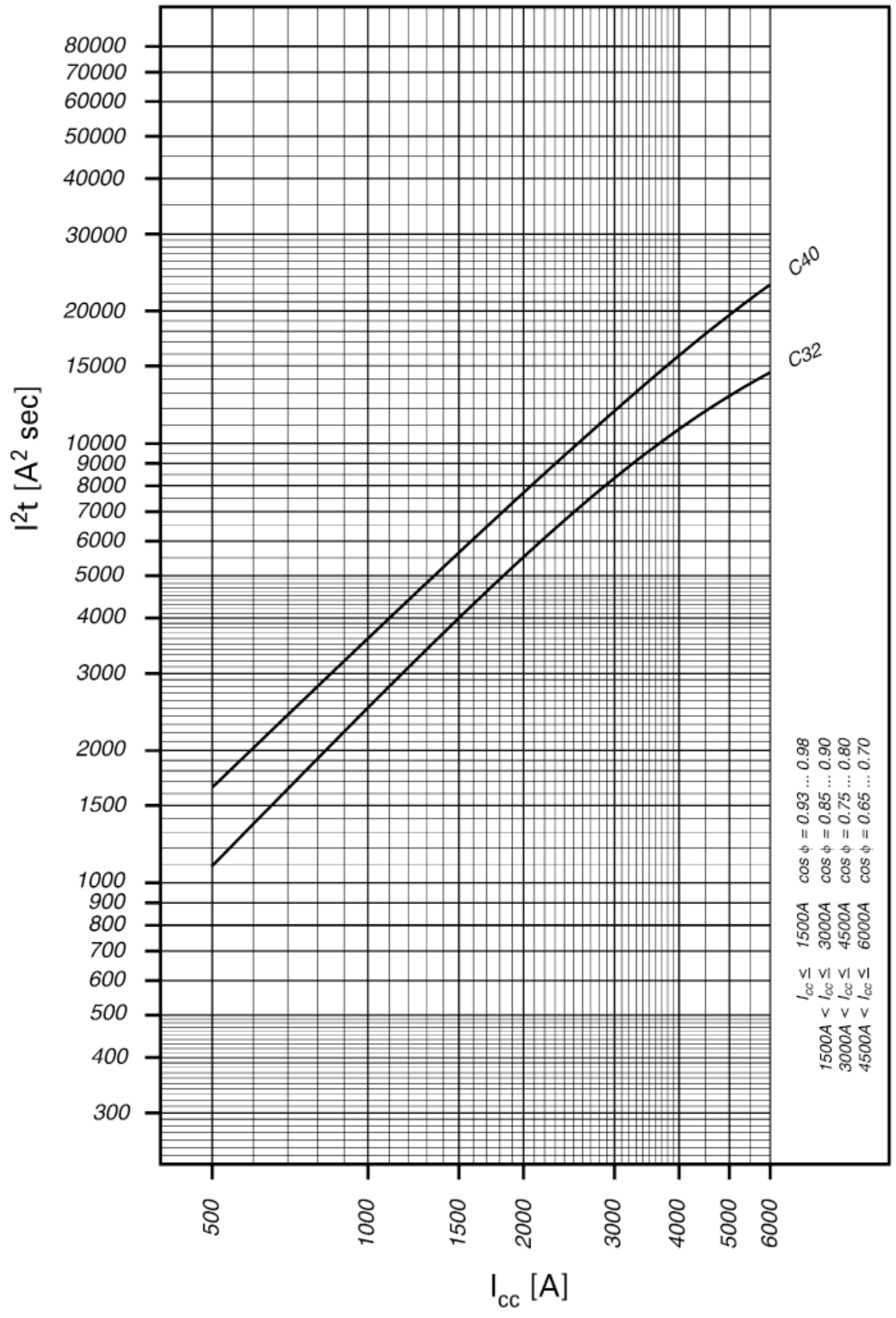
Let-through-energy characteristic C, 10-20 A



Let-through-energy characteristic B, 32-40 A



Let-through-energy characteristic C, 32-40 A



Short circuit selectivity of AFDD 10-25 A for melting fuses

Short circuit in kA, rated current of fuses are in A

Short circuit selectivity to D0-fuse (Neozed) [1]

AFDD	D0-charcteristic gG/gL (Neozed) [1]									
	16	20	25	32	35	40	50	63	80	100
B 10	< 0,5	0,5	0,9	2	2,3	3,7	8	10	10	10
B 13	< 0,5	0,5	0,8	1,7	1,9	3	6	10	10	10
B 16		0,5	0,7	1,5	1,7	2,4	4,4	6,8	10	10
B 20			0,7	1,4	1,5	2,2	3,9	6	9,2	10
B 25				0,9	1,2	1,6	2,4	3,4	5,5	8,7
C 10	< 0,5	0,5	0,8	1,7	1,9	3	6,1	10	10	10
C 13	< 0,5	0,5	0,7	1,6	1,8	2,8	5,5	9,5	10	10
C 16		< 0,5	0,7	1,3	1,5	2,2	4	6,2	10	10
C 20			0,6	1,3	1,4	2,1	3,7	5,6	8,5	10
C 25				1,1	1,3	1,8	2,8	3,9	5,6	7,8

Short circuit selectivity to D-fuse (Diazed) [2]

AFDD	D-charcteristic gG/gL (Diazed) [1]								
	16	20	25	32	35	50	63	80	100
B 10	< 0,5	0,5	0,9	1,8	2,9	5,6	10	10	10
B 13	< 0,5	0,5	0,8	1,5	2,4	4,5	10	10	10
B 16		0,5	0,8	1,3	2	3,4	8	10	10
B 20			0,7	1,3	1,9	3,1	7,1	10	10
B 25				1,1	1,5	2,4	5,5	6	7,3
C 10	< 0,5	0,5	0,8	1,5	2,4	4,4	10	10	10
C 13	< 0,5	0,5	0,8	1,4	2,3	4,2	10	10	10
C 16		< 0,5	0,7	1,2	1,9	3,2	7,6	10	10
C 20			0,7	1,2	1,8	2,9	6,5	9,7	10
C 25				1,1	1,5	2,3	4,4	6	6,5

Short circuit selectivity to NH00-fuse [3]

AFDD	NH00-charcteristic gG/gL [3]											
	16	20	25	32	35	40	50	63	80	100	125	160
B 10	< 0,5	< 0,5	0,8	1,5	2,3	3,2	5,7	9,1	10	10	10	10
B 13	< 0,5	< 0,5	0,8	1,3	1,9	2,7	4,4	6,5	10	10	10	10
B 16		< 0,5	0,7	1,1	1,6	2,2	3,4	4,8	8	10	10	10
B 20			0,6	1	1,4	2	3,1	4,3	7	10	10	10
B 25				0,9	1,2	1,6	2,4	3,4	5,5	6	8	10
C 10	< 0,5	< 0,5	0,7	1,3	1,9	2,7	4,5	6,9	10	10	10	10
C 13	< 0,5	< 0,5	0,7	1,2	1,8	2,5	4,1	6,1	10	10	10	10
C 16		< 0,5	0,6	1	1,5	2	3,1	4,4	7,5	10	10	10
C 20			0,6	0,9	1,4	1,9	2,9	4,1	6,5	10	10	10
C 25				0,9	1,2	1,6	2,3	3	4,6	6	7,3	10

no selectivity

[1] Size: D01, D02, D03; characteristic gG; rated voltage: AC 400 V
[2] Size: DII, DIII, DIV; characteristic gG; rated voltage: AC 500 V
[3] Size: 000, 00; characteristic gG; rated voltage: AC 500 V

Short circuit selectivity of AFDD 32-40 A for melting fuses

Short circuit in kA, rated current of fuses are in A

Short circuit selectivity to D0-fuse (Neozed) [1]

AFDD	D0-charcteristic gG/gL (Neozed) [1]									
	16	20	25	32	35	40	50	63	80	100
B 32					1,2	1,7	2,7	3,8	5,5	6
B 40						1,3	1,7	2,2	2,7	4,2
C 32					1,2	1,7	2,6	3,6	5,1	6
C 40						1,3	1,9	3,3	3,2	5,8

Short circuit selectivity to D-fuse (Diazed) [2]

AFDD	D-charcteristic gG/gL (Diazed) [1]								
	16	20	25	32	35	50	63	80	100
B 32					1,4	2,1	4,3	6	6
B 40						1,4	2,4	2,9	5,1
C 32					1,4	2,2	4,1	5,6	6
C 40						1,6	2,8	3,6	6

Short circuit selectivity to NH00-fuse [3]

AFDD	NH00-charcteristic gG/gL [3]											
	16	20	25	32	35	40	50	63	80	100	125	160
B 32					1,1	1,4	2,1	2,9	4,3	6	6	6
B 40							1,4	1,9	2,8	4,1	6	6
C 32					1,1	1,5	2,1	2,8	4,3	6	6	6
C 40							1,5	2,1	3,1	5,4	6	6

no selectivity

[1] Size: D01, D02, D03; characteristic gG; rated voltage: AC 400 V
[2] Size: DII, DIII, DIV; characteristic gG; rated voltage: AC 500 V
[3] Size: 000, 00; characteristic gG; rated voltage: AC 500 V

Note

- The test key "T" must be pressed every 6 months. The system operator must be informed of this obligation and his responsibility in a way that can be proven. The test interval of 6 months only applies to household and similar applications. Under other conditions (e.g. damply and/or dusty environments, environments with polluting and/or corroding conditions, environments with large temperature fluctuations, installations with a risk of overvoltages due to switching of equipment and/or atmospheric discharges, portable equipment ...), it's recommended to test in monthly intervals.
- 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 (RE), or proper checking of the earth conductor condition redundant, which must be performed separately.

Possible connection

Conductor cross section mm²	Number of single conductors – rigid, single-wire Cu-conductors					
	1	2	3	4	5	6
1,5	+	+	+	+	+	-
2,5	+	+	+	-	-	-
4	+	+	+	-	-	-
6	+	+	+	-	-	-
10	+	+	-	-	-	-
16	+	-	-	-	-	-
25	+	-	-	-	-	-

Conductor cross section mm²	Number of single conductors – rigid, multi-wire Cu-conductors					
	1	2	3	4	5	6
10	+	+	-	-	-	-
16	+	-	-	-	-	-
25	+	-	-	-	-	-

Conductor cross section mm²	Number of single conductors – flexible Cu-conductors without sleeves					
	1*	2*	3*	4*	5*	6*
1,5	-	-	-	+	+	-
2,5	-	-	+	-	-	-
4	-	+	+	-	-	-
6	-	+	+	-	-	-
10	-	+	-	-	-	-
16	-	-	-	-	-	-
25	-	-	-	-	-	-

*) without sleeves

Conductor cross section mm²	Number of single conductors – flexible Cu-conductors with sleeves					
	1**	2	3	4	5	6
1,5	+	-	-	-	-	-
2,5	+	-	-	-	-	-
4	+	-	-	-	-	-
6	+	-	-	-	-	-
10	+	-	-	-	-	-
16	+	-	-	-	-	-
25	+	-	-	-	-	-

**) with sleeves

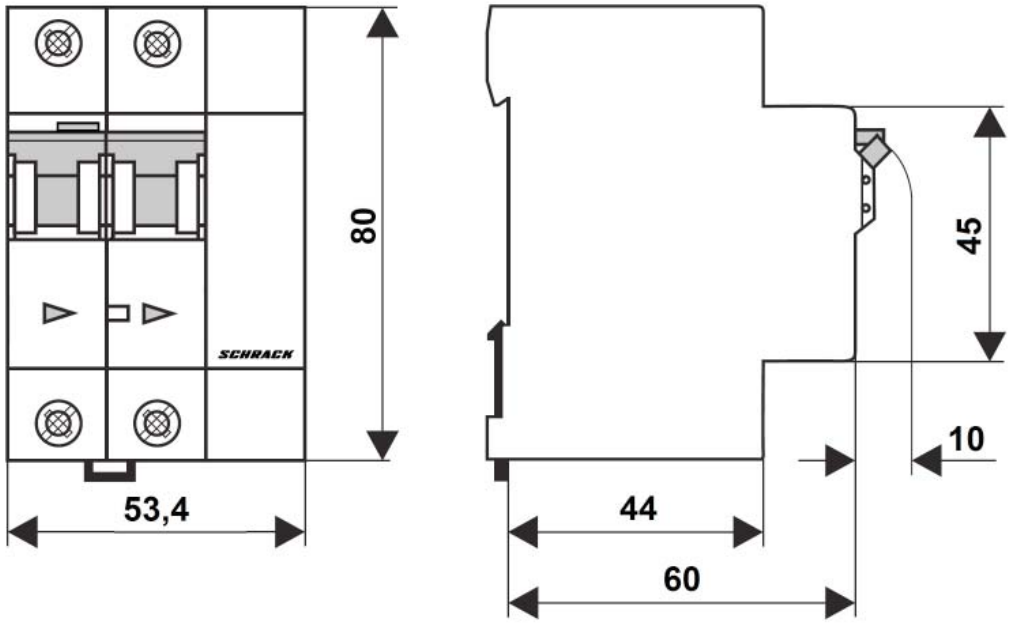
Conductor cross section mm²	Combinations of differnt profiles of flexible Cu-conductors						
	1,5	2,5	4	6	10	16	25
1,5	/	+	-	-	-	-	-
2,5	+	/	-	-	+	-	-
4	-	+	/	-	-	+	-
6	-	-	+	/	+	-	+
10	-	-	-	+	/	+	-
16	-	-	-	-	-	/	+
25	-	-	-	-	-	-	/

without sleeves

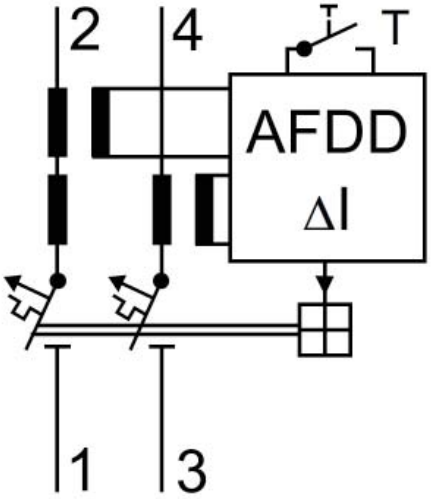
\+ permissible, – not permissible

No combinations are permissible for rigid single- and multi-wire Cu-conductors!

Dimensions



Wiring diagram



AFDD (Arc fault detection device) 1+N, 10kA, type A, 30mA

DESCRIPTION	ORDER NO.
Characteristic B	
10A	BA618210--
13A	BA618213--
16A	BA618216--
20A	BA618220--
25A	BA618225--
Characteristic C	
10A	BA617210--
13A	BA617213--
16A	BA617216--
20A	BA617220--
25A	BA617225--

AFDD (Arc fault detection device) 1+N, 10kA, type A, delayed type, 30mA

DESCRIPTION	ORDER NO.
Characteristic B	
10A	BA218210--
13A	BA218213--
16A	BA218216--
20A	BA218220--
25A	BA218225--
Characteristic C	
10A	BA217210--
13A	BA217213--
16A	BA217216--
20A	BA217220--
25A	BA217225--

AFDD (Arc fault detection device) 1+N, 10kA, type AC, 30mA

DESCRIPTION	ORDER NO.
Characteristic B	
10A	BA618910--
13A	BA618913--
16A	BA618916--
20A	BA618920--
25A	BA618925--
Characteristic C	
10A	BA617910--
13A	BA617913--
16A	BA617916--
20A	BA617920--
25A	BA617925--

AFDD (Arc fault detection device) 1+N, 6kA, type A, 30mA

DESCRIPTION	ORDER NO.
Characteristic B	
32A	BA668232--
40A	BA668240--
Characteristic C	
32A	BA667232--
40A	BA667240--

AFDD (Arc fault detection device) 1+N, 6kA, type A, delayed type, 30mA

DESCRIPTION	ORDER NO.
Characteristic B	
32A	BA268232--
40A	BA268240--
Characteristic C	
32A	BA267232--
40A	BA267240--

AFDD (Arc fault detection device) 1+N, 6kA, type AC, 30mA

DESCRIPTION	ORDER NO.
Characteristic B	
32A	BA668932--
40A	BA668940--
Characteristic C	
32A	BA667932--
40A	BA667940--

THE COMPANY

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