3NJ4 Fuse Switch Disconnectors
Maximum Safety with Minimum Mounting Width

sentron

3NJ4

SIEMENS

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SENTRON 3NJ4 Fuse Switch Disconnectors
Maximum Safety with Minimum Mounting Width

SENTRON: Devices for low-voltage power distribution

Totally Integrated Power by Siemens also stands for superior individual products integrated in a consistent complete system.

A typical example are SENTRON products for low-voltage power distribution.

They cover the entire spectrum from 16 A to 6300 A – from service-proven switch disconnectors to tried and tested circuit breakers.

SENTRON 3NJ4 Fuse Switch Disconnectors

3NJ4 in-line fuse switch disconnectors provide maximum safety with a minimum mounting width.

With their typical compact design and variety of connection methods they can be accommodated in the smallest of spaces.

For use in low-voltage distribution boards, cable distribution cubicles or transformer stations, SENTRON 3NJ4 fuse switch disconnectors can be mounted vertically or horizontally.

The current transformers can be fully integrated in the enclosure contours. 3NJ4 fuse switch disconnectors with or without integrated current transformers can thus be mounted side by side or be subsequently replaced.

Product advantages

3NJ in-line fuse switch disconnectors of the sizes NH00, NH1, NH2 and NH3 offer the following advantages:

- Load switching and isolation in one unit
- Full protection against overload and short circuit
- Compact design
- Variety of connection methods
- Devices without and with integratable current transformers have the same size
- Highest flexibility thanks to a wide choice of current transformers
- Current transformers with primary current from 75 A to 600 A for single-phase or three-phase current measurement
- Tamper-proof due to covered secondary terminals in the operating state
- For use with cable feeder to the top or bottom
- Easy and reliable mounting of the current transformers through clear-cut positioning

Applications

- Low-voltage distribution boards
- Cable distribution cubicles
- Transformer stations

Note:

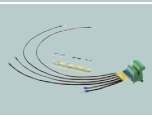
For further information (for example the complete accessories), see catalog LV 1 and LV 1 T.

SENTRON 3NJ4 Fuse Switch Disconnectors
Overview

In-line fuse switch disconnectors for integrated current transformers

	Order No.	Switchable poles	Size	Connections
	3NJ41 03-3BF12	3	NH00	M8 flat connectors
	3NJ41 23-3BF11	3	NH1	M10 flat connectors
	3NJ41 33-3BF11	3	NH2	M10 flat connectors
	3NJ41 43-3BF11	3	NH3	M10 flat connectors
	3NJ41 21-3BF11	1	NH1	M10 flat connectors
	3NJ41 31-3BF11	1	NH2	M10 flat connectors
	3NJ41 41-3BF11	1	NH3	M10 flat connectors

Accessories

	Order No.	Description
	3NJ49 15-1BA00	Spacer, size NH00
	3NJ49 15-2BA00	Spacer, sizes NH1, NH2, NH3
	3NJ49 15-1CA00	Terminal strips, size NH00
	3NJ49 15-2CA00	Terminal strips with cable harness, sizes NH1, NH2, NH3

Current transformers, calibrated

	Order No.	Size	Primary current / A	Secondary current / A	Rated power / VA	Class
	3NJ49 15-1FA11	NH00	150	1	2,5	0,5
	3NJ49 15-2GA11	NH1, NH2, NH3	250	1	2,5	0,5
	3NJ49 15-2HA11	NH1, NH2, NH3	400	1	2,5	0,5
	3NJ49 15-2KA11	NH1, NH2, NH3	600	1	5,0	0,5
	3NJ49 15-1FB11	NH00	150	5	1,5	0,5
	3NJ49 15-2GB11	NH1, NH2, NH3	250	5	2,5	0,5
	3NJ49 15-2HB11	NH1, NH2, NH3	400	5	2,5	0,5
	3NJ49 15-2KB11	NH1, NH2, NH3	600	5	5,0	0,5

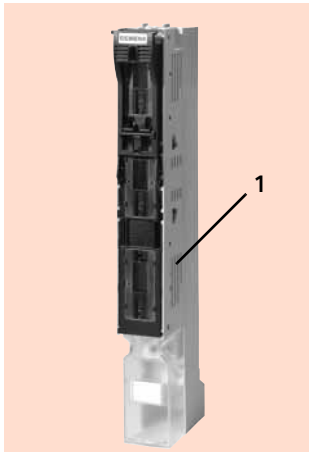
Current transformers

	Order No.	Size	Primary current / A	Secondary current / A	Rated power / VA	Class
	3NJ49 15-1EA10	NH00	100	1	1,5	0,5
	3NJ49 15-1FA10	NH00	150	1	2,5	0,5
	3NJ49 15-1EA20	NH00	100	1	2,0	1
	3NJ49 15-1FA20	NH00	150	1	3,0	1
	3NJ49 15-2DA20	NH1, NH2, NH3	75	1	1,5	1
	3NJ49 15-2EA20	NH1, NH2, NH3	100	1	2,0	1
	3NJ49 15-2EA10	NH1, NH2, NH3	100	1	1,5	0,5
	3NJ49 15-2FA20	NH1, NH2, NH3	150	1	2,5	1
	3NJ49 15-2FA10	NH1, NH2, NH3	150	1	2,5	0,5
	3NJ49 15-2GA20	NH1, NH2, NH3	250	1	5,0	1
	3NJ49 15-2GA10	NH1, NH2, NH3	250	1	2,5	0,5
	3NJ49 15-2HA20	NH1, NH2, NH3	400	1	5,0	1
	3NJ49 15-2HA10	NH1, NH2, NH3	400	1	2,5	0,5
	3NJ49 15-2JA20	NH1, NH2, NH3	500	1	5,0	1
	3NJ49 15-2JA10	NH1, NH2, NH3	500	1	2,5	0,5
	3NJ49 15-2KA20	NH1, NH2, NH3	600	1	5,0	1
	3NJ49 15-2KA10	NH1, NH2, NH3	600	1	2,5	0,5
	3NJ49 15-1EB10	NH00	100	5	1,0	0,5
	3NJ49 15-1FB10	NH00	150	5	1,5	0,5
	3NJ49 15-1EB20	NH00	100	5	1,5	1
	3NJ49 15-1FB20	NH00	150	5	2,5	1
	3NJ49 15-2DB20	NH1, NH2, NH3	75	5	1,5	1
	3NJ49 15-2EB20	NH1, NH2, NH3	100	5	2,0	1
	3NJ49 15-2EB10	NH1, NH2, NH3	100	5	1,0	0,5
	3NJ49 15-2FB20	NH1, NH2, NH3	150	5	2,5	1
	3NJ49 15-2FB10	NH1, NH2, NH3	150	5	1,5	0,5
	3NJ49 15-2GB20	NH1, NH2, NH3	250	5	5,0	1
	3NJ49 15-2GB10	NH1, NH2, NH3	250	5	2,5	0,5
	3NJ49 15-2HB20	NH1, NH2, NH3	400	5	5,0	1
	3NJ49 15-2HB10	NH1, NH2, NH3	400	5	2,5	0,5
	3NJ49 15-2JB20	NH1, NH2, NH3	500	5	5,0	1
	3NJ49 15-2JB10	NH1, NH2, NH3	500	5	2,5	0,5
	3NJ49 15-2KB20	NH1, NH2, NH3	600	5	5,0	1
	3NJ49 15-2KB10	NH1, NH2, NH3	600	5	2,5	0,5

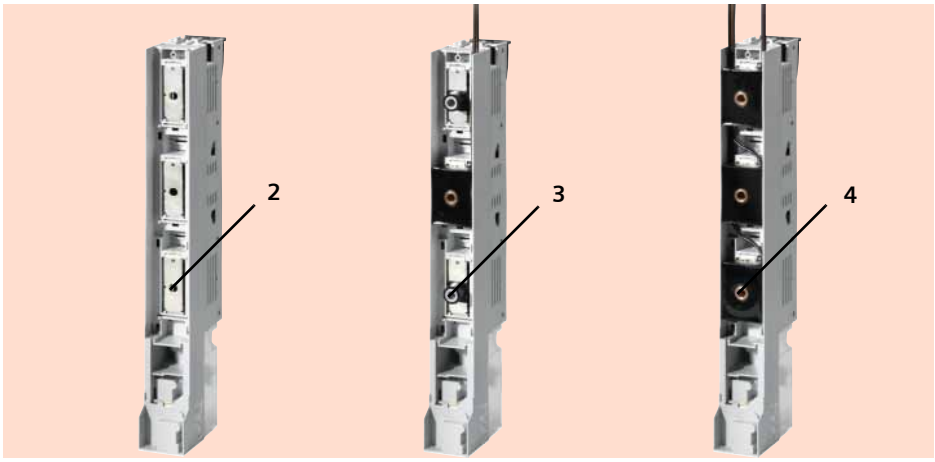
3NJ4 Fuse Switch Disconnectors with Integrated Current Transformers

Size NH00:

Front view

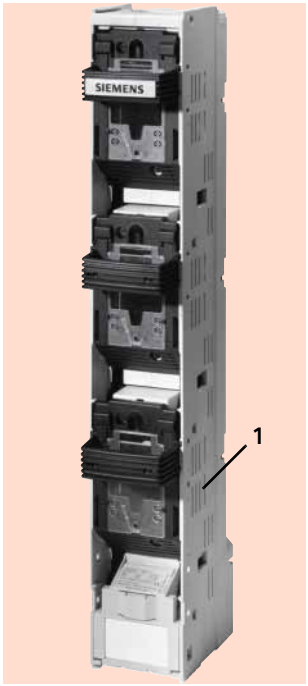


Rear view

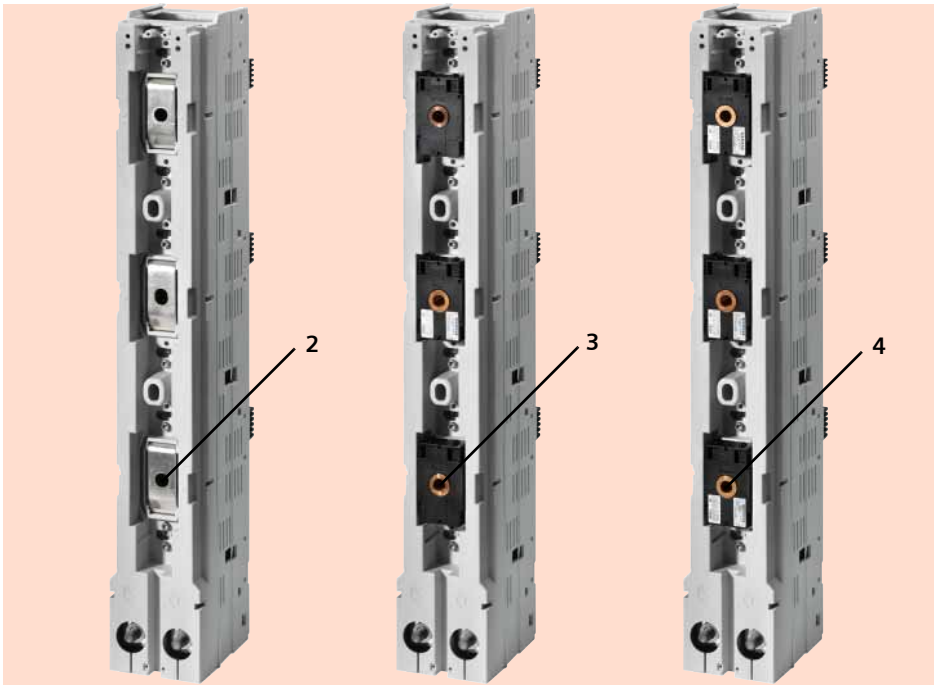


Sizes NH1, NH2, NH3:

Front view



Rear view



1 *Fuse switch disconnectors without and with integrated current transformers have the same front and side dimensions*
2 *Recessed integrated conducting paths*
3 *Spacers*
4 *Current transformers*

3NJ4 Fuse Switch Disconnectors
Technical specifications

Standards		**IEC 60947-1, IEC 60947-3, VDE 0660 Part 107**			
Type		**3NJ41 0**	**3NJ41 2**	**3NJ41 3**	**3NJ41 4**
Conventional thermal current					
Free air I_{th} [1]	A	160	250	400	630
Enclosed I_{the} [2]	A	160	225	360	567
Rated insulation voltage U_i	V	750	1000	1000	1000
Rated operational voltage U_e	AC 40 Hz ...60 Hz V	690	690	690	690
Rated conditional short-circuit current with fuses					
At 40 Hz to 60 Hz 690 V AC	kA (rms value)	50	50	50	50
Max. rated current I_n of the fuses	A	160	250	400	630
Permissible let-through current of the fuses	kA (peak value)	15	28	39	52
For fuse links according to IEC 60269-2-1 or isolating links	Size/A	00/160	1/250	1 and 2/250 and 400	2 and 3/400 and 630
Rated operational current I_e					
At 400 V AC AC-22B	A	160	250	400	630
500 V AC AC-22B	A	160	250	400	630
690 V AC AC-21B	A	160	250	400	630
690 V AC AC-22B	A	100	200	315	500
220 V DC DC-21B	A	160	250	400	630
Rated switching capacity					
At 500 V AC P.f. = 0.65	A	480	750	1200	1890
690 V AC P.f. = 0.65	A	380	600	945	1500
220 V DC L/R = 1 ms	A	240	375	600	945
Capacitive switching capacity	kvar	50 ... 60	105 ... 115	155 ... 185	250 ... 300
Rated short-time current (1 s current)	kA (rms value)	15	20	22	22
Permissible ambient temperature	°C	-25 ... +55			
Mechanical endurance	Operating cycles	1400	1400	800	800
Electrical endurance	Operating cycles	200	200	200	200
Degree of protection					
With closed fuse carrier, With terminal cover and peripheral cover		IP30	IP30	IP30	IP30
With open fuse carrier		IP10	IP10	IP10	IP10
Power loss of the main current paths at I_{th}	W	18	23	49	110
Main conductor connections					
Terminal screws		M8	M10	M12	M12
Flat bars	mm	24	42	42	42
Cable lug, max. conductor cross-section (stranded)	mm^2	95	240	240	240 [3]
Tightening torque	Nm	10 ... 15	30 ... 35	30 ... 35	30 ... 35
Fixing screws		M8	M12	M12	M12
Required tightening torque for mounting on busbars	Nm	16 ... 18	35 ... 40	35 ... 40	35 ... 40

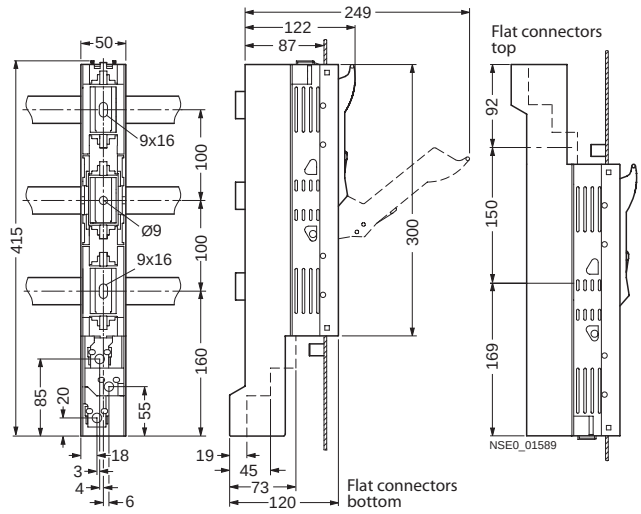
1) When several devices are used next to each other, the load factor according to EN 60439 Part 1/DIN VDE 0660 Part 500, Table 1 must be observed.

2) Required enclosure volume is at least 0.185 m^3.

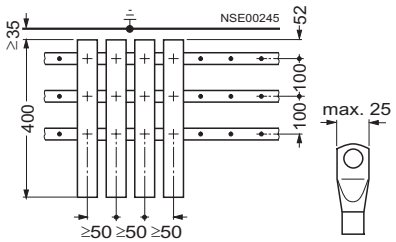
3) A special kit is required for connection of 2 × 240 mm^2; delivery on request.

3NJ4 Fuse Switch Disconnectors
Dimensional drawings

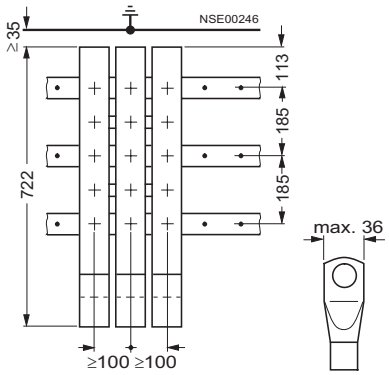
3NJ41 03-3BF02
3-pole switchable



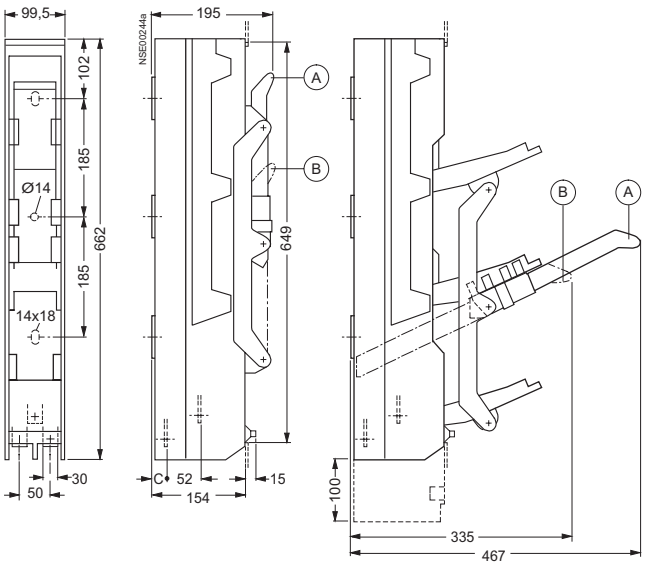
Mounting of the in-line fuse switch disconnectors on busbars for 100 mm



Mounting of the in-line fuse switch disconnectors on busbars for 185 mm center-to-center clearance
Minimum distance between the conductive partsof all bars: 100 mm

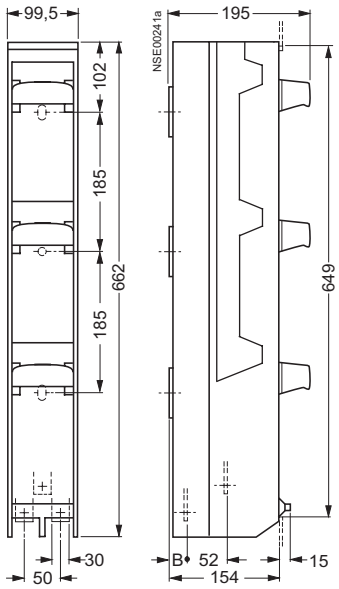


3NJ41 .3-3,
250 to 630 A
3-pole switchable



Type	C
3NJ41 23	23
3NJ41 33	24
3NJ41 43	25

3NJ41 .1-3,
250 to 630 A
1-pole switchable



Type	B
3NJ41 21	23
3NJ41 31	24
3NJ41 41	25

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