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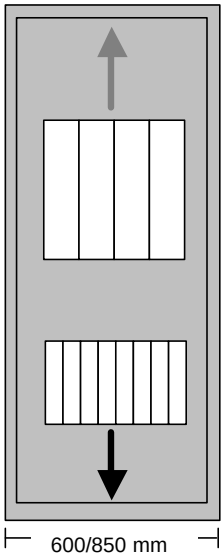
General

The cubicle for outgoing feeders in fixed-mounted design are intended for installation of switch disconnector fuses 3NJ4. The in-line fuse-switch disconnectors make for optimum packing density due to their compact design and their modular structure.

Structure and Functions

The 1600 mm high switching device compartment can be equipped with in-line fuse-switch disconnectors 3NJ4 in vertical design.

Cable feed from bottom or top *
* Consider cable flange plates!

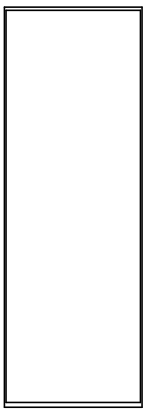


max. 8 and 14 x 160 A
max. 4 and 7 x 250 A
max. 4 and 7 x 400 A
max. 4 and 7 x 630 A

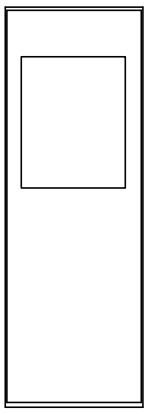
Optional mounting
Apply only for bus connection in opposite direction!
max. 10 x 160 A (operation behind door)
or
Auxiliary compartments (mounting depth = 285 mm)
or
rapid assembly kits

OFFD
Switch disconnector fuses
for outgoing feeders from 160 A to 630 A

Internal separation/doors

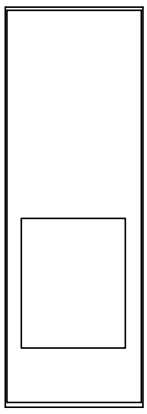


Non-ventilated IP54
Ventilated ≤ IP41



Main busbars at top

Door with cutout
ventilated ≤ IP31



Main busbars at bottom

Installation of Instruments

For current metering the measuring instruments can be installed into the cubicle door. The belonging current transformer is mounted in incoming circuit. **For in-line fuse-switch disconnector 160 A, the installation of transformer is possible only with optimal design.**

Vertical Distribution Bus (3-pole)

The in-line fuse switch disconnectors are connected with copper-fish-plates directly to main busbar system.
PE-, PEN- and N-conductor bars are located below or above in the cubicle.

A vertical busbar system is necessary only for the assembly of a second device line (optional).
The cubicle bus system with the phase conductors L1, L2, L3 is located at the rear of the cubicle. This cubicle bus system is connected by cables to the main busbar system.

Rated current vertical distribution bus (optional)

Cross-section	Rated current I_n as a function of ambient temperature [A]						
	20°	25°	30°	**35°**	40°	45°	50°
	non-ventilated						
1x60x10	1540	1500	1470	**1430**	1335	1360	1300
	ventilated						
1x60x10	1680	1640	1600	**1560**	1520	1480	1430

Cross-section at single direction mounting:
PE-cross-section 1x60x10
PEN-, N-cross-section 2x60x10
At opposite direction mounting:
Connection directly to the horizontal bars PE, PEN and N

Cable connection compartment

The cable connection compartment is optionally located below or at top. The cable connection is connected directly to the switching device. The maximal connecting cross-sections are seen in the device catalogues.

Rated current switch disconnector fuses 3NJ41

3NJ41 Type	Rated current [A]	Rated current I_n as a function of ambient temperature [A]						
		20°	25°	30°	**35°**	40°	45°	50°
non-ventilated								
3NJ410	160	126	123	120	**117**	114	110	107
3NJ412	250	215	210	205	**200**	195	189	184
3NJ413	400	315	305	300	**290**	285	275	270
3NJ414	630	405	395	390	**380**	370	360	345
ventilated								
3NJ410	160	146	143	140	**136**	132	129	125
3NJ412	250	237	231	226	**220**	214	208	202
3NJ413	400	365	355	350	**340**	330	320	310
3NJ414	630	495	485	470	**460**	450	435	420

Space requirement

Type 3NJ4	Rated current [A]	Space requirem. [mm]	max. number pro cubicle cubicle width [mm] 600	850
3NJ410	160	50	8 (+6)*	14 (+10)*
3NJ412	250	100	4	7
3NJ413	400	100	4	7
3NJ414	630	100	4	7

) When installing optionally an extra line in the cubicle, additional 6 or 10 fuse switch disconnectors 3NJ410 (160A) can be assembled depending on the cubicle width.
Attention! This applies only for connection in opposite direction
i.e.
main busbars at top and external connection from top respectively
main busbars below and external connection from bottom

Projecting rule

Configuration of the in-line fuse switch disconnectors inside the cubicle
Sizes of 3NJ4 disconnectors decreasing either from the left to the right or from the right to the left.

Admissible utilisation of feeders
The specified rated currents for 3NJ4 are valid for the placement with maximum sized fuse links in 3NJ4 disconnectors. With the use of smaller fuse links the same percental utilisation is admissible.

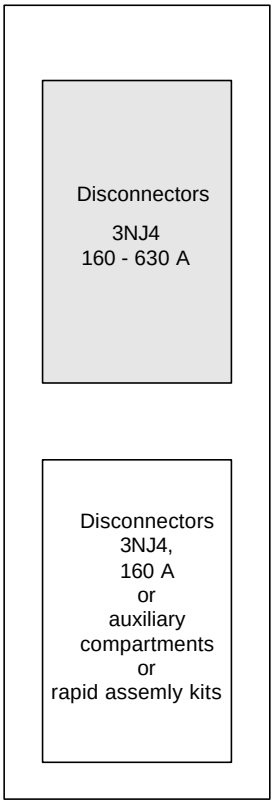
Example: 3NJ414 disconnector in non-ventilated cubicle, mounted with fuse links 500 A, ambient temperature ≤ 40 °C:

max. admissible continuous load current
= (370 A/630 A) x 500 A = 290 A

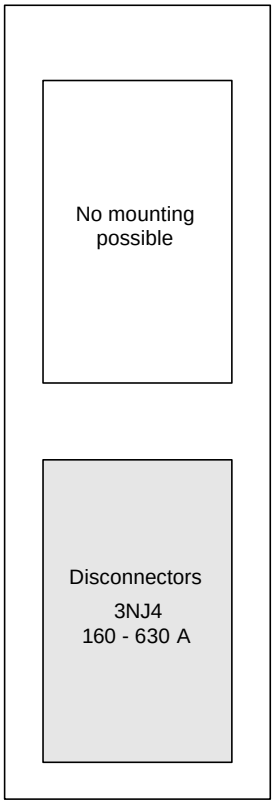
Options of cubicle assembling

Cable from top

Busbar location **rear, top (in opposite direction)**

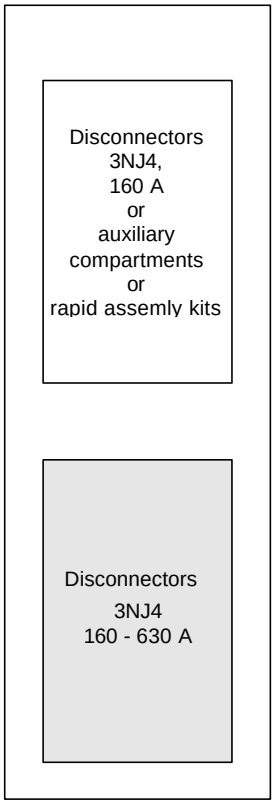


busbar location rear**, bottom** **(single direction)**

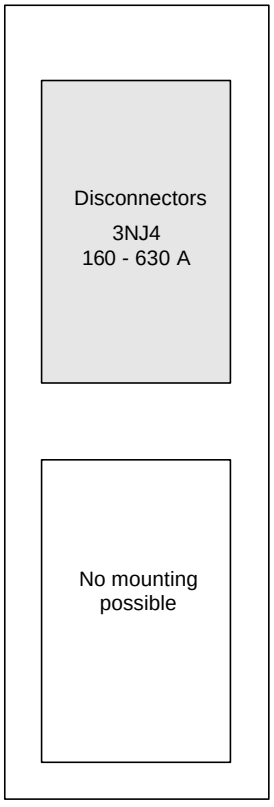


Cable from bottom

Busbar location rear, **bottom (in opposite direction)**



Busbar location rear, **top** **(single direction)**



Height requirement

Disconnectors 3NJ4, 160 – 630 A	=	700 mm
Disconnectors 3NJ4, 160 A	=	500 mm
Auxiliary compartments	=	350 mm
Rapid assembly kits	=	600 mm