Modular Combi build instruction

This instruction gives guidance how to build devices to comply with Standards IEC 61 439-1, -2.

If it is required to comply with Standard IEC 60 364-4-41 §411.3.3, sockets with rated current up to and including 32A must be protected by a RCD or a RCBO.

Definitions
- Bottom Section
- Top Section
- Middle Section
- Front
- Cover plate
- Socket

Design

Housing

The housing is built up of a bottom part and a top part, the housing can be extended placing middle sections between them. There are different variants of front parts, either for mounting of sockets, with a slot for 13 DIN-modules or as a blank cover front. The bottom and each middle section needs to be covered with a front.

Fronts with mechanical interlock
No DIN-rail required for mounting.

Sockets that fit Fronts with mechanical interlock
The most common types are listed below
(Other RAUxW types can be found in IPS main catalogue)

ABB ID:
- 216RAU6W  2CMA166996R1000
- 316RAU6W  2CMA167012R1000
- 416RAU6W  2CMA167030R1000
- 232RAU6W  2CMA166948R1000
- 332RAU6W  2CMA166964R1000
- 432RAU6W  2CMA166982R1000
Sockets IP44

For domestic sockets FMCE50. These can be mounted 3 side by side in a FMCE47 front.

Schuko (without mounting frame) ABB ID: 2CL0328807 with fixing holes c-c = 37,5 mm and other domestic sockets with the same hole pattern will also fit.

For IEC 60309-2 sockets 16A and 32A type RU shall be used. These can be mounted 3 side by side in a FMCE47 front. The most common types are listed below (other RU types can be found in IPS main catalogue)

ABB ID:
216RU6   2CMA193170R1000
316RU6   2CMA193178R1000
416RU6   2CMA193187R1000
232RU6   2CMA193242R1000
332RU6   2CMA193250R1000
432RU6   2CMA193259R1000

For IEC 60309-2 sockets 63A type RAU shall be used. These can be mounted 2 side by side in a FMCE46- front. The most common types are listed below (other RAU types can be found in IPS main catalogue)

ABB ID:
263RAU6   2CMA167408R1000
363RAU6   2CMA167418R1000
463RAU6   2CMA167430R1000

FMCE54 Cover flange for FMCE47 (Domestic, IEC 16A and 32A)
FMCE53 Cover flange for FMCE46 (IEC 63A)
FMCE52 Front plate with lid and DIN-rail
FMCE42 Cover plate

Sockets for mechanical interlock

DIN-slot components
ABB Modular Combi has been tested and approved with components from ABB:s assortment.
ABB RCD:s
Both versions with Neutral Left and Neutral Right can be used. This will have an impact on how to connect a bus bar.

Terminal Blocks for mounting on DIN-rail FMCE71 max. Height: = 60mm
Terminal Blocks for mounting under IEC Sockets 16A and 32A on fixing plate FMCE72 max. Height: = 40mm

Cable areas: Tested and approved with 10/16A = 2,5mm², 32A = 6mm², 63A = 16mm²

Bus bars
Area = 16mm² with pin connections which fit ABB DIN-rail components.
Make sure that the by standard required creepage distances are maintained if a bus bar is cut.
Boundaries and limitations: Max. load current = 100A. Permissive total power loss =15W per / row.

Test on 100% produced items: An insulation measuring device with a voltage of at least 500VDC shall be used. Accepted insulation resistance = 1000Ω/V.
Conduit opening knock-out diameters: Ø= 40,5 mm and Ø= 47,5 mm
Rating: Max 500VAC, Rated Diversity Factor (rdf) = 0,9.
Annex assembly instruction