



MODULO

Ultra-lightweight
Electric City Bus





Ultra-lightweight

- Full composite, self-supporting body.
- Structural composite material.
- No chassis. No steel frame.

Ultra-low Consumption

Lightweight composite body requires smaller main units. Combined with a state-of-the-art synchronous electrical driveline, average consumption is between 0.55-0.65 kWh/km (SORT2), providing an average autonomy between 200-240 km.



Composite

- Lifetime corrosion resistance.
- Structural properties equal or better compared to traditional concepts.
- Very low body maintenance costs.
- Reduced lifetime costs compared to buses with metal body.
- Environmentally friendly construction: high ratio of recycled materials.
- Reduced axle load on road.



Modular Platform System

Variation of 4 types of modules offering various bus categories.

1. REAR MODULE

9 seats

Powertrain

Rear axle

Battery pack

2. WINDOW MODULE

6/8 passenger seats

(perpendicular/parallel to driving direction)

Full low floor

Further battery pack as an option



3. DOOR MODULES

1200 mm double door

Options: 4 seats/wheelchair/baby carriage position

Options: folded ramps installation for wheelchair access

Full low floor

4. FRONT MODULE

Driver seat

Front axle

Customer specific area/wheelchair position

Full low floor

Flexible type series based on the Modular Platform System.

Innovative Interior Design & Ergonomic Passenger Area

- Low passenger floor construction rate minimum 70%.
- Wide aisles and doors allow rapid passenger flow.
- Spacious interior results high comfort for passengers.
- Kneeling function.
- Handicapped areas with semiautomatic door ramp.
- Saving space: front door behind the front axle, wheel arches outside the passenger area.
- Easy cleanable and maintainable passenger area.



Battery Pack

CHARGE TIMES

5 Battery packs (144 kWh)	4 hours (3h charge + 1h battery equalizing)
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3 Battery packs (86 kWh)	3 hours (2h charge + 1h battery equalizing)
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Overnight Charging*

CHARGER SPECIFICATIONS

Input voltage	3x400V (-15%..+10%) 50 Hz
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Output power	60kW
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Output current	Max. 90A
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* Optional opportunity charging

Main Technical Data



MODULO	C48 E	C68 E	C88 E
Seated passenger	19-22	21-26	27-35
Total passenger capability	max 48	max 68	max 88
Vehicle dimensions			
Length (mm)	6507	7982	9457
Width (mm)	2550		
Height (with AC) (mm)	2940		
Wheel base (mm)	4026	5501	6976
Vehicle maneuverability			
Turning radius (mm)	7100	8834	10585
Rear sweep (mm)	174	132	111
Approach angle (degrees)	10		
Departure angle (degrees)	15		
Covered floor height			
In drive position (mm)	340		
In station kneel position (mm)	250		
Curb weight CW (kg)	4750	6700	7550
Door arrangements	0-2-0 with 1200mm wide entrance	0-2x2-0 with 1200mm wide entrance	0-2x2-0 with 1200mm wide entrance
Electric motor	Siemens 1DB2016 (Water cooled system)		
Max power (kW)	125/160		
Max torque (Nm)	1019/2500		
Brake system	Dual circuit, pressurized air brake with safety brake		
Wheel brake	Wabco PAN17 or Knorr-Bremse SN5600		
Cooling and heating system	Eberspacher M12		
AC systems cooling / heating capacity (kW)	Sütrak-Carrier AC520-I 15/30	Sütrak-Carrier AC520-II 20/30	Sütrak-Carrier AC520-III 24/30



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