



## LOW-FLOOR BATTERY-EMU

FAL, Italy

In February 2023, Stadler and FAL (Ferrovie Appulo Lucane, Italy) signed an agreement for the supply of five 950 mm gauge Battery-electric multiple units (BEMUs), designed in compliance with the latest safety and environmental standards. In August 2024, two additional vehicles were ordered, bringing the total number of units to seven.

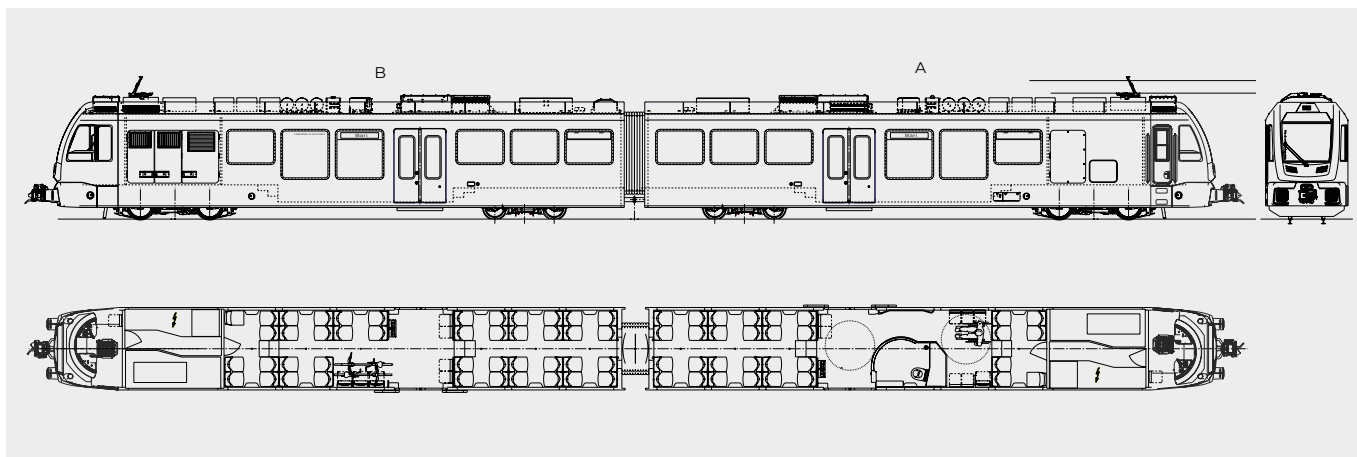
Each BEMU consists of two passenger cars, each equipped with a motor and a trailer bogie, with very low axle load. To allow a safe operation, the BEMUs are equipped with SCMT automatic train protection. The high performance battery-powered propulsion equipment is located above the motor bogie to ensure excellent adhesion in all weather and operating conditions. A dedicated pantograph allows the recharging of the batteries at the end station and the depot. All main components are easily accessible for routine maintenance.

Two doors per car and low-floor vestibules enable easy access on board for all passengers including those with reduced mobility. Dedicated sliding steps allow as well a comfortable boarding from 250mm height platforms. One car is equipped with a universal PRM toilet and special areas for E-bikes or strollers. The air conditioning system features a set of air purifiers, aimed to increase air quality. Comfortable seats, wide panoramic windows, energy-saving LED lighting, 220V and USB sockets at each seat, a modern Wi-Fi and an integrated passenger information system complete the set of features to ensure a pleasant travel experience for all passengers.

**Stadler Rail Group**  
Ernst-Stadler-Strasse 1  
CH-9565 Bussnang  
+41 71 626 21 20  
[stadler.rail@stadlerrail.com](mailto:stadler.rail@stadlerrail.com)

[stadlerrail.com](https://stadlerrail.com)

**STADLER**



## Technical features

### Tecnology

- Battery-powered multiple units with modern, functional, bright interior ambience, and lightweight aluminum alloy carbodies
- Embedded multiple-unit control (up to three units)
- SCMT automatic train protection

### Comfort

- Spacious vestibules on both sides with low-floor access ensure easy boarding for passengers with reduced mobility and elderly travelers
- 1 PRM Toilet in the low floor section
- Independent HVAC systems in passenger carriages and driver cabs
- Air suspension for bogies to ensure maximum running quality and optimum comfort for passengers
- Efficient energy-saving LED lighting
- Passenger information system and CCTV
- Connection to on board Wi-Fi network
- 220V and USB power outlets at seats

### Personnel

- Ergonomically designed, functional driver's cab complies with new EN 15227 crash standards and has independent access doors for the train drivers

### Reliability/Availability/Maintainability/Safety

- Two independent traction chains, each with a Diesel-electric generator module, water-cooled electronic converter and high efficiency asynchronous traction motors
- High power, high capacity traction lithium battery for a safe and reliable operation
- Traction unit according to EN 45545 and UNI 11565 for fire detection and firefighting

## Vehicle data

<b>Rail operator</b>	FAL, Italy	
<b>Operated line</b>	Matera – Altamura	
<b>Gauge</b>	950 mm	
<b>Drive system</b>	Battery-electric	
<b>Axle arrangement</b>	Bo' 2' + 2' Bo'	
<b>Number of vehicles</b>	7	
<b>Delivery</b>	2026	
<b>Total seats</b>	87	
<b>Flip-up seats</b>	12	
<b>Standing capacity</b>	77 (4 pers./m²)	
<b>Floor height</b>	Low-floor at entrance	519 mm
	High-floor	945/1039 mm
<b>Door width</b>	1300 mm	
<b>Length over buffers</b>	36 476 mm	
<b>Vehicle width</b>	2500 mm	
<b>Vehicle height</b>	3880 mm	
<b>Bogie wheelbase</b>	Motor bogie	2100 mm
	Trailer bogie	1800 mm
<b>Wheel diameter (motor bogie)</b>	810 mm (new)	
<b>Wheel diameter (trailer bogie)</b>	685 mm (new)	
<b>Traction battery capacity (approx.)</b>	636 kWh (new)	
<b>Max. traction power to wheels</b>	800 kW	
<b>Tractive effort at start-up</b>	120 kN	
<b>Acceleration at start-up</b>	0.9 m/s²	
<b>Design speed</b>	120 km/h	
<b>Operational speed</b>	100 km/h	