In June 2016, RBS ordered 14 four-part suburban rail for the S7 line from Stadler. The four-part metre-gauge trains have two power heads at the end and three Jacobs trailer bogies as a connection between the four car bodies. The trains are designed for a maximum speed of 100 km/h. Passengers can walk along the entire length of 60 metres, which improves distribution of travellers in the train and increases the feeling of safety. The multiple units are air-conditioned and fully comply with the requirements of the Swiss disability equality act. Low-floor entrances and sliding steps between the train and the platform make entry easier. State-of-the-art technology used in the fully redundant traction system, including redundant control and communication systems, guarantees high operational availability and low life-cycle costs.
Technical features

Vehicle data

Customer | Regionalverkehr Bern-Solothurn RBS, Switzerland

Lines serviced | RBS network

Gauge | 1000 mm

Supply voltage | 1250 V DC

Axle arrangement | Bo’2’2’2’Bo’

Number of vehicles | 14

Commissioned | 2018/2019

Second class seats | 102

Tip-up seats + tip-up seats for the disabled | 28

Standing capacity (6 pers./m²) | 380

Floor height |
- Low-floor at entrance | 400 mm
- High-floor | 1000 mm

Entrance width | 1400 mm

Axial thrust | 800 kN

Length over coupling | 60 000 mm

Vehicle width | 2650 mm

Vehicle height | 3980 mm

Bogie wheelbase |
- Motor bogie | 2000 mm
- Trailer bogie | 2150 mm

Driving wheel diameter, new | 770 mm

Carrying wheel diameter, new | 770 mm

Max. output at wheel | 4 x 350 kW

Starting tractive effort | 120 kN (140 kN possible)

Starting acceleration, gross | 1.0 m/s² (1.2 m/s² possible)

Maximum speed | 100 km/h

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Technical features

Technology

- Lightweight aluminium low-floor carriages
- Motor bogies and Jacobs trailer bogies with pneumatic suspension
- Optimised engine performance for use as suburban rail multiple unit for operation on short routes
- Redundant drive equipment (traction converter) in end carriages for increased fail-safety

Comfort

- Eight entrance doors on each side for a very rapid exchange of passengers
- Generous entrance areas
- Large windows for bright passenger compartments
- Transparent, open interior design
- Air-conditioned passenger compartments and driver’s cabs
- Modern infotainment system

Personnel

- Ergonomically designed driver’s cab with optimum visibility, thanks to special design of the front
- Clear vehicle design ensures fast exchange of passengers and prompt departures
- Driver’s cab for operation with driver and assistant

Reliability/Availability/Maintainability/Safety

- Selectron vehicle control and communication system with redundant train bus and diagnostic system
- Monitoring of train preparation and travel safety through intercom systems
- Clear passenger compartments for passenger orientation and safety