



ELECTRICAL LOW-FLOOR MULTIPLE-UNIT FLIRT

BLS AG, Switzerland

BLS ordered 52 new trains from Stadler in 2018. Six vehicles were added to the order while it was being processed in 2020, and the first trains were put into commercial operation in May 2021. The new vehicles are replacing old existing vehicles as well as extending the existing fleet. The six-car, single-decker multiple units, which are about 105 meters long, are the latest generation FLIRTs. The new BLS trains boast all the classic features of the FLIRT: car body with a lightweight aluminum design, the low-floor entrances with a sliding step, and a spacious interior design with multi-functional zones in the entrance areas. The new roof-mounted power converters means that there is more space for passengers areas. Thanks to the Jacobs motor bogies, developed for the first time for low-floor vehicles, the new FLIRT generation accelerates quickly and is particularly suitable for suburban rail operation. Stadler's new GUARDIA train protection system enhances safety for the fleet of BLS FLIRTs. The regional express (30x) and the suburban trains (28x) with two different interior layouts have been designed to suit the different groups of passengers that use them, for example commuters, travel groups, tourists and weekend trippers. Please see the details overleaf about the regional express.

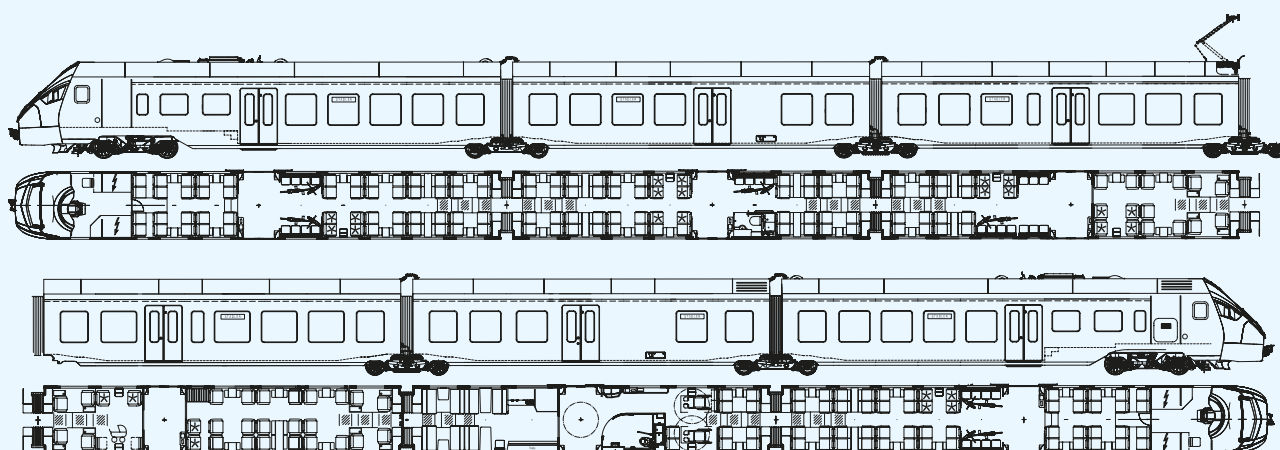
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Technical features

Technology

- Car body made of extruded aluminium profiles
- Roof-mounted power converter (IGBT) and dry transformer
- Modern Ethernet vehicle control system
- Multiple unit control with a maximum of 4 trains
- Glass reinforced plastic front cab
- Autocoupler
- Air-suspended motor and trailer bogies

Comfort

- Bright interior, individually configurable
- Low-floor area between all entrance areas
- Spacious multifunctional zones
- 6 two-wing passenger doors on each side for quick passenger boarding and alighting
- Air conditioning for passenger compartments and driver's cab
- Panorama window within the entire low-floor area
- Vacuum toilet system with wheelchair access
- Bistro area with food dispenser

Personnel

- Ergonomically designed driver's cab

Reliability / Availability / Maintainability / Safety

- Redundant propulsion equipment
- Ergonomic vehicle diagnostics with remote reading option
- Passenger information system and video surveillance
- Fire alarm and firefighting system
- Train protection ETCS BL 3
- Fulfills TSI PRM, TSI LOC&PAS, TSI Noise, TSI SRT and TSI CCS

Vehicle data

| | Regional express |
|--|----------------------|
| Customer | BLS AG |
| Track gauge | 1435 mm |
| Designation | FLIRT |
| Operating voltage | 15 kV AC, 16.7 Hz |
| Axle arrangement | Bo'Bo'2'2'2'Bo'Bo |
| Number of vehicles | 30 |
| Startup | 2021-2023 |
| Seats | 275 |
| First class | 46 |
| Second class | 196 |
| Tip-up seats | 33 |
| Wheelchair bays | 2 |
| Standing capacity (4 passengers/m2) | 200 |
| Floor height | |
| Low-floor area | 600 mm |
| High-floor area | 1 145 mm |
| Door width | 1 300 mm |
| Axial thrust | 1 500 kN |
| Overall length | 104 900 mm |
| Vehicle width | 2 880 mm |
| Vehicle height | 4260 mm |
| Bogie wheelbase | |
| Motor bogie | 2700 mm |
| Jacobs bogie | 2 700 mm |
| Driving wheel diameter | |
| Motor bogie | 870 mm (new) |
| Jacobs motor bogie | 760 mm (new) |
| Carrying wheel diameter | |
| Trailer bogie | 760 mm (new) |
| Continuous power at wheel | 2 000 kW |
| Max. power on the wheel | 3 500 kW |
| Max. tractive effort | 300 kN |
| Starting acceleration | 1.3 m/s ² |
| Maximum speed | 160 km/h |