



# ELECTRIC LOW-FLOOR MULTIPLE UNIT FLIRT

Alpha Trains, Germany

Alpha Trains has ordered, for operation on the Hellweg network line, five 5-part FLIRT trains to supplement the current fleet. Keolis Deutschland currently already operates the lines of the Hellweg network with FLIRT trains – and in December 2018 the RB lines 50, RB 59, RB 69 as well as RB 89 will be supplemented with the new vehicles. The new vehicles belong to the 3rd generation. They have 256 seats, of which 16 seats are found in 1st class. The 91 metre long vehicles can carry a total of 549 passengers. Video surveillance in the passenger compartment will add a new feeling of comfort and safety. For comfort during the journey, coat hooks for all seats, sockets as well as foldable tables on the front seats are provided amongst other things. With a maximum power of four times 680 kW, a top speed of up to 160 km/h can be reached.

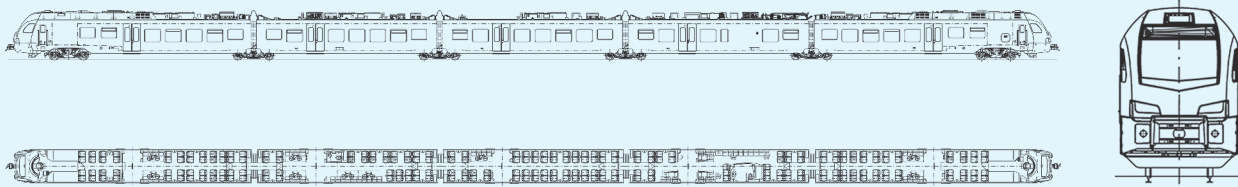
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## Technical features

### Technology

- Designed for multiple-unit operation of up to 3 vehicles
- Automatic central buffer couplings
- Lightweight aluminium construction
- Redundant drive equipment consisting of 2 vehicle drive trains, each with a transformer, IGBT inverter and 2 asynchronous traction motors
- Air-sprung chassis ensure the required smoothness
- Bi-directional vehicle designed for one-person operation

### Comfort

- Space for a ticket machine in the vehicle
- 27 bicycle stands
- Validator machine in each boarding area
- Generously sized multifunctional compartments in all boarding areas
- Air-conditioned passenger compartment and driver's compartment
- Sliding steps and gap bridging on all doors
- 2 self-contained toilet systems per vehicle
- Boarding height 780 mm
- Modern passenger information system

### Staff

- Ergonomically designed driver's cab

### Reliability / Availability / Maintainability / Safety

- Meets the requirements of DIN EN 15227 (Crash Standard)

## Vehicle data

<b>Customer</b>	Alpha Trains
<b>Operator</b>	Keolis Deutschland GmbH & Co. KG
<b>Lines operated</b>	RB 50: Dortmund-Lünen-Münster
<b>Gauge</b>	1,435 mm
<b>Vehicle type</b>	ET FLIRT EMU5
<b>Supply voltage</b>	15 kV; 16.7Hz
<b>Axle arrangement</b>	Bo'2'2'2'2'Bo'
<b>Number of trains</b>	5
<b>Start of operation</b>	December 2018
<b>Seats</b>	256
1st class	16
2nd class	240
<b>Standing capacity</b>	335
<b>Floor height</b>	
Low floor	780 mm
High floor	1,150 mm
<b>Door width</b>	1,300 mm
<b>Longitudinal strength</b>	1,500 kN
<b>Length overall</b>	90,800 mm
<b>Vehicle width</b>	2,880 mm
<b>Vehicle height</b>	4,120 mm
<b>Bogie wheelbase</b>	
Traction bogie	2,500 mm
Running bogie	2,700 mm
<b>Drive wheel diameter, new</b>	920 mm
<b>Trailer wheel diameter, new</b>	760 mm
<b>Maximum speed</b>	160 km/h
<b>Maximum acceleration</b>	0.87 m/s <sup>2</sup>
<b>Drive</b>	4 x 680 kW = 2,720 kW