HYBRID MULTIPLE UNITS

Mireo Plus B, Mireo Plus H

Rail transport is playing an increasingly important role. By 2030, up to ten million people will be travelling by rail every day in Germany alone. A large percentage of the European railway network is not electrified. A majority of these sections are covered by diesel multiple units (DMUs). Due to rising fuel prices and stricter emissions regulations, these existing DMUs will have to be replaced with more environmentally friendly electric multiple units (EMUs) that operate without an overhead contact line.

For these applications, Mireo can be equipped with batteries and fuel cells.

Mireo® is already providing answers to tomorrow's challenges in regional transport. With Mireo, the engineers at Siemens have created a powerful platform for premium-class commuter and regional transport that is energy-efficient, flexible, available for quick delivery, and profitable.

Mireo Plus combines all the benefits of Mireo on a hybrid platform. Mireo Plus B is supplemented with a modular, high-performance battery system. Mireo Plus H stands out with its long ranges, thanks to its modular fuel cell battery system.

Mireo Plus – the next generation of hybrid multiple units.

Energy savings

Mireo Plus is designed to be especially energy-efficient and optimized in terms of lifecycle costs, based on the vehicle's improved aerodynamics and light-weight integral aluminum monocoque construction, the energy efficiency and optimization of all its components, and the use of SiC technology. The drive components in particular operate at the optimal degree of efficiency. Energy management also helps reduce energy consumption and noise, thanks to predictive driving.

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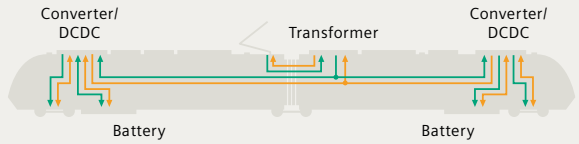
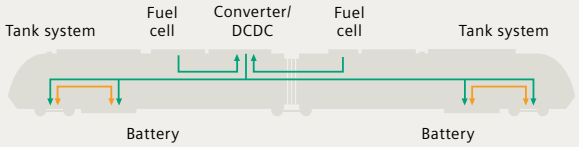
Mireo Plus – schematic energy flow diagram

Mireo Plus B



— Discharge mode and recuperation via hybrid system
— Charging mode hybrid system

Mireo Plus H



— Discharge / recuperation (brakes) in dynamic battery
— Charging mode dynamic battery via fuel cell and operation of train

Details

- Configuration as 2- or 3-part trainset possible
- EMU performance
- Coupling options within Mireo and Desiro® HC platforms
- Short refueling time, thanks to fast refueling
- Short charging time, thanks to fast charging via the overhead contact line
- Passenger area with a modern, forward-looking design
- Jacobs and standard bogies with inside bearings from the SF7500 family

Technical data

	Mireo Plus B	Mireo Plus H
Wheel arrangement	Bo' 2 Bo' (2-part), Bo' 2' 2' Bo' (3-part)	
Track gauge	1,435 mm	
Maximum speed	160 km/h	
Traction power	1,700 kW	
Starting acceleration	1.1 m/s^2	
Power supply	15 kV AC / 25 kV AC	H_2
Length (over coupling)	Approx. 47 m (2-part), Approx. 63 m (3-part)	
Entrance height	600 mm or 800 mm	
Passenger capacity	Approx. 120 seats (2-part), Approx. 160 seats (3-part)	
Range	Up to 80 km (2-part), Up to 120 km (3-part)	Up to 600 km (2-part), Up to 1,000 km (3-part)

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