SIEMENS

SD460 High-Floor Light Rail Vehicle

St. Louis, Missouri

Rail Systems

Construction on the initial MetroLink alignment from Lambert-St. Louis International Airport to the 5th & Missouri station in East St. Louis began in 1990. The initial system opened in 1993 with a base fleet of 31 SD400 Siemens vehicles. MetroLink exceeded pre-opening ridership estimates and the system slowly expanded over the years to include 46 miles of track and operate a total of 87 Siemens light rail vehicles (LRV).

A steel carbody construction; fully bi-directional; single articulated; pneumatic suspension; high-floor vehicle, ideal for high platform operation and assembled in North America. Each six-axle SD460 light rail vehicle is equipped with two power trucks (one under each end) and a non-powered center truck.

The interior of this SD460 LRV has been designed to maximize passenger space, incorporating longitudinal seating. Each SD460 is equipped with eight platform-level, bi-folding doors, with four to each side of the vehicle to allow easier passenger access. Two low-level bi-folding doors are provided to serve as emergency exits. An added feature is the large windows that provide excellent visibility for passengers.

Performance and Capacity

Maximum operational speed	55 mph	88.5 km/h
Maximum allowable speed	65 mph	105 km/h
Service acceleration and deceleration	3.0 mphps	1.34 m/s²
Emergency braking rate	5.7 mphps	2.55 m/s²
Passenger capacity	72 seats	
	Approx. 106 total passengers @ 6 p/m²	
Maximum operational gradient	7%	
Motor power rating	188 hp x 4	140 kW x 4
Catenary supply voltage	750 Vdc	

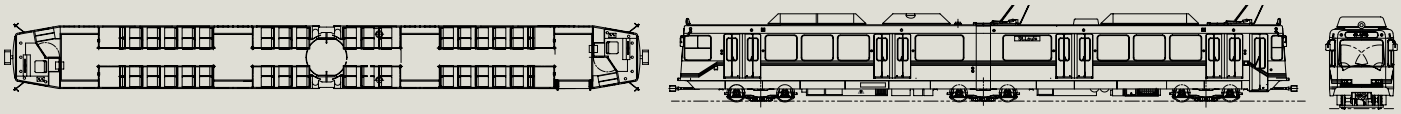
The SD460 utilizes a passenger information system consisting of public address, passenger-operator intercom and roller curtain destination signs. Each vehicle is also equipped with train-wayside communication (TWC) equipment and automatic train protection (ATP) equipment for increased passenger safety.

The SD460 LRV is electrically powered from an overhead wire system (catenary) and for St. Louis operates at speeds up to 55 mph, carrying close to 110 passengers in each vehicle with the ability to operate in multiple vehicle consists (up to four) as the maximum operational length.

In 2013 Americans took 10.7 billion trips on public transportation, which is the highest annual public transit ridership number in 57 years, according to a report released by America Public Transportation (APTA) in March 2014.

Vehicle Dimensions and Weight

Length over coupler	89.4 ft	27264 mm
Width	8.7 ft	2650 mm
Height with pantograph (locked down)	12.5 ft	3810 mm
Maximum pantograph height	up to 22.5 ft	6858 mm
Vehicle empty weight	92500 lbs (AW0)	41950 kg
High-floor section above TOR	3.3 ft	1006 mm
Low-floor section above TOR	n/a	n/a
Minimum turning radius	82 ft	25 m
Vertical curve, crest	750 ft	230 m
Vertical curve, sag	750 ft	230 m
Track gauge	4.7 ft	1435 mm
Wheel base	6.9 ft	2100 mm



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