



# The Class 195 Diesel Multiple Unit

# Specification of the vehicle

The Class 195 DMUs are composed of two or three vehicles, formed as follows:

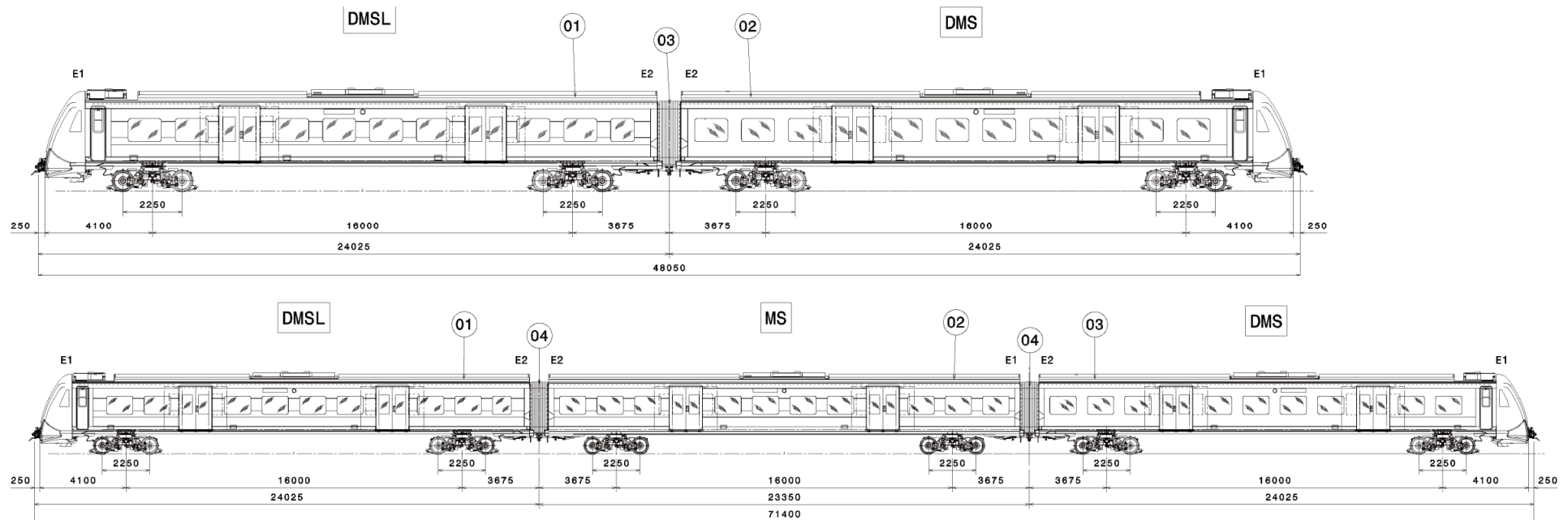
## Two car configuration:

- Car DMSL: End motor car fitted with one compact traction powerpack with alternator
- Car DMS: End motor car fitted with one compact traction powerpack with alternator

## Three car configuration:

- Car DMSL: End motor car fitted with one compact traction powerpack with alternator
- Car MS: Intermediate motor car fitted with one compact traction powerpack with alternator
- Car DMS: End motor car fitted with one compact traction powerpack with alternator

The layouts of the two configurations are depicted below.



# Summary of Vehicle Technical Features



A summary of the key technical characteristics of the Class 195 DMU is provided below.

Category/System	Class 195 DMU Details
Traction Power Source	Diesel Engine
Transmission Type	Hydraulic/Mechanical
RSL Registration	Class 195
Maximum Speed	100 mph
Type of Brake	Wheel Mounted Disc
Braking Capability	GM/RT2045 Iss.4 - Compatibility Requirements for Braking Systems of Rail Vehicles (Supersedes GM/RT2040, GM/RT2041 and GM/RT2044)
Braking System	Knorr Bremse EP2002 electro-pneumatic brake control system
<b>Length of Vehicle</b>	
DMSL	24.026 m
MS	23.350 m
DMS	24.026 m
Width	2.712 m
Height	3.850 m
<b>Axle Load (Tare) *</b>	
DMSL	10.91 t
MS	10.24 t
DMS	10.94 t
Coupling	Dellner Auto Couplers between units. Semi-permanent bar couplers between vehicles within unit.
Route Availability	RA2 - To be reviewed after completion of factory testing
Doors	Electrically-powered double leaf sliding plug doors
Toilets	1 PRM compliant toilet
Multiple Working	Within Class

\*Axle Loads are derived from current design stage data i.e. calculated weights. This data will need to be revised using actual 'weighed weights' once the build of the vehicles is complete.

# Supplier Matrix



Component	Supplier	Remarks
Body shell	CAF	Aluminium construction
Bogie Supply	CAF	
Wheelsets and final drive	CAF/ZF	Final drives are ZF manufacture
Wheel Bearings	FAG	Inboard design with temperature monitoring
Powerpack	MTU	Daimler ICE 390KW rating with SCR provision
Transmission	ZF	6 speed eco life
Pneumatic system including brake control and sanding	Knorr Bremse	
HVAC	Merak	Saloon and cab supply independent
Exterior doors	IFE	I4 installation
Saloon seating	Fainsa	Comrail design. Bespoke
PRM Toilet	ALTE	Located in DMSL
AWS/TPWS MK4	Unipart	
ERTMS	CAF Signalling	
OTDR	Hasler	
ASDO	EKE	
CCTV	R2P	
WIFI	Icomera	
Seat reservation system	Dilax	
Passenger counting system	Dilax	