

MCEM91 Point machine

Point machine in its simplest form, robust and well-proven all over the world



Light, robust and reliable, the MCEM91 point machine is suitable to drive switches of any rail guided transport

The electromechanical point machine provides the electrical drive of the switch, its locking, and detection in end positions.

These configurations have well-proven record in more than 30 countries: on High Speed, conventional, subway/metro lines with heavy traffic and heavy load lines.



integrated

detection

This MCEM91 point machine with a single rod provides the drive function. This rod can be integrated into a bearer and thus allowing mechanised tamping.



France: SNCF Reseau (conventional and high speed lines) Montenvers, RATP - Paris Metro, Eurotunnel, Lyon Metro, RTM Marseille Metro, Transpole - Lille Metro

Belgium: Infrabel

Single rod, integrated

into the bearer

Great Britain: Network Rail (high speed line)

Turkey: TCDD (Turkish State Railways), Ankara - Konya

(high speed lines), Mersin - Toprakkale Line

Tunisia: SNCFT

Algeria: ANESRIF/SNTF

Morocco: ONCF Canada: STM - Montreal Metro

Brazil: Metro of Rio de Janeiro

South Korea: KR (National Railways) Singapore: SMRT, Metro of SBST

Hong Kong: Metro of MTR, KCRC (conventional line)

India: Various metros in India Dubai: Dubai Metro

Australia: ARTC

China: Chinese high speed line

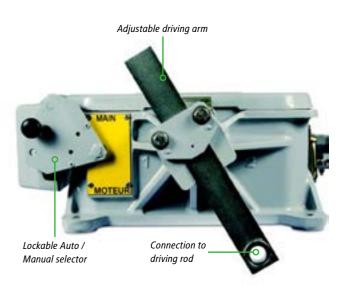
Guinea: Boké

Taiwan: Metro of Taichung (Metro)

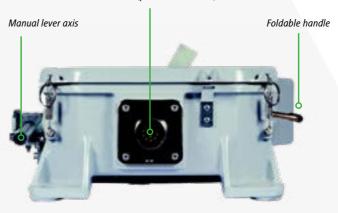
Description

MECM91 point machine is made up of various components:

- An electric motor (voltage as required AC or DC)
- An internal torque limiter device
- A gear box
- > A locking mechanism in end positions
- A driving arm connected to the driving arm head
- A switch equipped with control and power contacts
- A manual emergency command with lever or cranck
- An electrical watertight connector (optional)
- A locked cover



Connector (nower + detection



Installation and application

In terms of application, the MCEM91 point machine offers unequalled flexibility:

- Adaptable to any type of railway and to metro tracks with steel or rubber tyres
- **)** Compatible with all bearers including timber and concrete bearers, metallic bearers, concrete slab track, etc.
- Accepts all types of fixations: coachscrews, bolting, etc.
- **)** Designed for mixed traffic, high speed and heavy loads
- > Stroke can be adjusted simply by moving the driving arm
- Reduced maintenance

Technical characteristics

- > Protection index: IP55 or IP67 (option)
- **>** Weigh: < 100 kg
- Adjustable stroke: 100 to 260 mm
- Maximum load during drive: 400 to 1 040 daN
- > Switch time: 3.5 to 4.8 s
- Anti-vandalism protection: included
- MTBF: over 30 years
- > MTTR: 0,61 hours

Operation

MCEM91 point machine belongs to the family of locked electromechanical switch mechanisms. Due to its pendular movement, the throw is given by the driving arm length. While throwing, the point machine driving arm moves on a 60° angle with locking in end positions.

In addition to the internal locking and to ensure safety, the point machine is equipped with an internal "anti-veering" device designed to counter vibration effect caused by passing rolling stock. Simple and robust, the point machine can be easily adapted to any network or interlocking.



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