Switchguard® Series 84M MkIII Point Machine
Universal Point Machine

Benefits
Points held closed by spring-activated brake—resists vibration-induced movement
Detector and throw bars can be grouped for in-bearer applications
Improved access and maintenance of clutch
RSA or spring clamp cable termination
Trailable and non-trailable, normal and reverse operation
Dual controls for emergency operation
Low maintenance
Low profile
Thruster for derail or clamplock
Upgrade kit for 84M machines

Improved Operation
The Series 84M MkIII Point Machine builds on the features of the 84M—and now has improved end-of-stroke locking, an improved clutch, and options for detection bar location and terminal type.

Standardise spares, knowledge and procedures with a single series of point machine.

Exceptional Reliability
40 years of evolution and development ensure the Series 84M MkIII provides the safety and reliability required from railway signalling equipment.

Application
Main line or yard operation with options for trailable and dual control.

<table>
<thead>
<tr>
<th>Compare point machines:</th>
<th>SIEMENS Series 84M</th>
<th>INTEGRA KCA</th>
<th>US&amp;S M23</th>
<th>GRS Model 1</th>
<th>EB JEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trailable</td>
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<tr>
<td>Non-trailable</td>
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<tr>
<td>Dual control</td>
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<td>Low profile (&lt;260 mm)</td>
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<tr>
<td>Modular</td>
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<td>Sleeper mounting</td>
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<td>Thruster</td>
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<tr>
<td>Rail head locking</td>
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<tr>
<td>Integral lever stands</td>
<td>✔</td>
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Description

The Series 84M MkIII Point Machine can be used for main line or yard operation of:
- single switch;
- double slip switches;
- catch points;
- crossovers.

It is readily configured for trailable or non-trailable switch operation with rail head locking, and incorporates dual detection within the point machine.

The Series 84M MkIII has compact overall dimensions and can be conveniently handled in the field. It mounts on two sleepers.

Drive and Lock Bar

A clawlock drive combined with lock mechanism provides positive drive and rail head locking; readily visible for confirmation of locking.

Detection Mechanisms

Detection and operating bar switches provide independent blade and lock detection. The contacts are designed to give a positive wiping action, enable visual inspection, and are easily replaced.

The 84M MkIII has alternative locations for the detection bars—conventionally at the end of the machine, or adjacent to the throw bar for use with in-bearer point drives.

Detection Bars

The 84M MkIII incorporates dual detection. The detection bars have connection lugs at one end and are reversible.

Main Case

The case is an integral casting and incorporates replaceable wear surfaces for operating and detection rods. The sheet steel cover is fully removable for ease of maintenance and is lockable with a standard padlock.

Options

- Trailable
- Non-trailable
- Dual control hand throw lever
- Emergency hand crank
- Low, standard or high trail force
- See Specifications for motor options

Specifications

<table>
<thead>
<tr>
<th>Electrical performance</th>
<th>Motor voltage</th>
<th>Nominal current @ 3.5 kN thrust</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 Vdc (permanent magnet)</td>
<td>10 A</td>
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</tr>
<tr>
<td>110 Vdc (split field)</td>
<td>4.5 A</td>
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<tr>
<td>110/120 Vac (single phase)</td>
<td>7 A</td>
<td></td>
</tr>
<tr>
<td>220/240 Vac (single phase)</td>
<td>4 A</td>
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<tr>
<td>415/380 Vac (three phase)</td>
<td>2.3 A</td>
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</table>

Operation

Points operation takes 4-7 seconds (depends on load)

Stroke

180 mm

Drive force

Up to 9 kN

Weight

255–275 kg (includes 50 kg shipping crate)

Operating temperature

–20° to +70°C

New Features

Electric Brake

The end-of-stroke detent and anti-backdrive clutch has been replaced with an electric brake (powered to release brake).

Benefits: Higher detent force and improved performance under high vibration, higher available drive force and lower drive current.

Improved Clutch

A new removable clutch capsule for easy servicing and with protection against contamination from excessive lubrication.

Detection Bar Location

Simplified operation when used as part of an in-bearer solution. Now all the throw bar and rodding can be fully protected within the bearer—or conventional points use unchanged layouts.

Terminals

Simplify termination with Wago spring-action cage terminals, or use conventional RSA terminals.

Upgrade Kit

Fit a changeover gearbox kit to upgrade existing 84M machines to the drive and hold features of the 84M MkIII.

Ordering

Please specify:
- drop lugs
- options (see Options)

Contact Siemens for more information.