



GM4000A Switch Machine

Freight, Transit, and Mainline Applications

The GM4000A is engineered for reliability and precision in demanding rail environments, including interlockings, de-rails, and crossovers with single slip-switch applications. Designed to meet today's complex layout requirements, it delivers all essential features in a proven, high-performance package. The GM4000A also serves as a direct, drop-in replacement for existing main line or transit switch machines – minimizing installation time while maximizing operational continuity.

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Key Benefits

Maximum application flexibility with universal design features.

- Operates using either 20 vDC, 110 vAC or vDC voltages
- Accepts all Control Wiring applications (2, 3, 4, & 5 wire)
- Fits both GRS & M23 layout mounting holes
- Offers a low height profile for tight clearance locations (8-3/4") with dual control option
- Protects against shaved lock rod notches with the split cam bar
- Reduces inventory through the use of modular subcomponents



General Description

The GM4000A is the industry benchmark for freight and transit switch machines. Its universal application capabilities and modular design make it one of the most advanced switch machines in the industry. Reduced maintenance, faster field testing, and more control options make the GM4000A a must-have for all rail properties.

Customer Benefits

Mechanical Flexibility

The GM4000A is available in single or dual control and can be configured for right or left-hand operation. Its universal footprint matches all industry standard hole patterns, so no extra drilling is required for installation. The integral machine-mounted latch stands reduce installation variability.

The GM4000A uses 50% fewer parts than other traditional switch machines, thereby reducing the cost of maintaining parts inventories.

Powerful

This switch machine can deliver more than 4,000 lbs. of thrust, which exceeds AREMA guidelines. The GM4000A is an ideal solution for long turnouts, heavy rail profiles, and locations with substandard track conditions.

Electrical Flexibility

Minimal field re-wiring is needed when upgrading to the GM4000A. Its solid-state controller accepts universal power connections and offers field-configurable control. The controller has integrated five-second overload protection (electronic clutch) to eliminate the need for a mechanical clutch with an external overload relay.

Its local control feature facilitates ease of maintenance and enables electrical operation at the trackside when performing testing. A maintenance-free, brushless servo motor eliminates the need for worn brush maintenance and provides ample torque.

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Specifications

Power Voltage	20 VDC, 110 VDC, & 110 VAC (all using one motor) 50Hz, 60Hz & 100Hz AC
Control Wiring	2, 3, 4 & 5-wire
Control Voltage	8-36 VDC
Overload Protection	Internal current management (no mechanical clutch, overload relays not required)
Current Draw	2-5 Amps nominal
Layout Footprint	Fits GRS & M23 Layout hole patterns
Operating Time	≈ 4 seconds at 110VAC/VDC ≈ 15 seconds at 20VDC
Throw Force	Up to 4,000 lbs.
Weight	1,000 lbs.
Operating Temperature	-40°C to 70°C
Dimensions	Length: 67" x Width: 41" x Height: 8.75" (low profile)
Throw Bar Stroke	6.5"
Heaters	Included (24 & 110 VAC/VDC)
Latch out	Yes
Design Architecture	Electromechanical (No Hydraulics)
Manual Operation	Hand crank, hand throw lever option
Hand Throw	Left-hand or right-hand location of hand throw lever (field-configurable)
Covers	Lightweight aluminum
Motor	Maintenance-free brushless



To obtain the GM4000A Configuration Key used to specify the part number, please either contact KB Signaling Customer Service or refer to manual P2496.

Contact your KB Signaling Business Development Manager
Call 1-800-825-7090, or Email us at aso.techsupport-kb@alstomgroup.com for more information today.

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