

SPECIFICATION



BG857 SPRING-FREE BARRIER GATE PRO



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Description

The **BG857 “PRO” Spring-Free Barrier Gate** offers a reliable and efficient solution for vehicle access control, engineered for simplified operation and minimal maintenance. Its innovative spring-free design allows for swift left-right arm conversion and easy adaptation to various arm lengths, reducing complexity and inventory needs.

With enhanced RedSpeed motor and gearbox, **BG857 PRO** supports telescopic arm or straight arm with LED rubber lining, with pass-through speed below 1s. MAG BG857 Spring-Free Barrier Gate series is your ideal choice for entrance security automation.

Features

Spring-Free Design: Allows maximum flexibility and the best user experience. Left-right facing conversion is achievable within 1 minute without spring constraints.

RedSpeed Motor: Engineered specifically for spring-free operation. Featuring an oversized, all-metal dual-reduction industrial-grade gearbox, this over-sized architecture provides superior shock-load resistance and handles high-speed inertia with ease, ensuring long-term resilience where standard gearboxes fail. An integrated sensor enables precise, smooth motion control for high-traffic demands.

Multi-Speed Drive: ensures smooth arm motion at the end of a swift opening/closing.

Smart Preset: simplifies setup by automatically configuring speed settings based on arm length selection, saving time and eliminating manual adjustments for optimal performance.

Smart Memory function can be enabled to streamline access control integration, minimizing unnecessary arm movements during peak hours. This ensure smoother, faster throughput, preventing bottlenecks.

Versatile Integration: Easily integrate with any access controller, vehicle sensor and push button with dry contact input; or use the included remote controller.

Status Indicator LED provides clear, intuitive visual feedback on gate status, enhancing user experience and improving nighttime visibility for safer traffic flow.

Obstacle Detection automatically reverses the arm upon detecting an obstruction, preventing accidents and minimizing potential damage to vehicles or injury to pedestrians.

Arm Swing-Out upon accidental vehicle impact, the arm detaches, significantly reducing damage to both the vehicle and the barrier gate, minimizing repair costs and downtime.

One Touch Release enables quick and effortless manual arm operation during power failure, unlike slower, hand-wheel systems, providing flexible traffic and security management.

Advanced Controller offers features like Error Display, Delay Auto Closing, Motorcade and more, providing exceptional adaptability to specific project requirements and optimizing efficiency.

Technical Parameter

Motor	MAG RedSpeed PRO DC Brushless Motor
Max. Torque (arm shaft)	360 Nm
Max. Speed (motor)	400 rpm
Max. Power	400W
Operating Temperature	-35° to 70 °C
Power Supply Input	220V ± 10% AC, 50/60Hz DC Power Supply 24V 20A
Relative Humidity	< 80 %, non-condensing
Pass Through Time	0.6 to 3s, adjustable
Arm Type and Length	Telescopic arm up to 4.0m LED straight arm up to 3.5m
IP Rating	IP54
Mean Time Before Failure (MTBF)	5 million times

Performance Characteristics

1. Industrial Motor Engagement

The BG857 is equipped with an oversized all-metal helical-worm direct drive transmission designed for high-speed, continuous operation. Large precision gears manage the high torque required for rapid arm movement. The characteristic normal mechanical sound during start and stop reflects the firm engagement of this industrial-grade motor.

2. Dynamic Energy Control

A built-in dynamic braking resistor safely dissipates kinetic energy generated during the closing cycle, protecting the motor and minimizing mechanical stress during high-speed operation.

3. Precision Position Tolerance

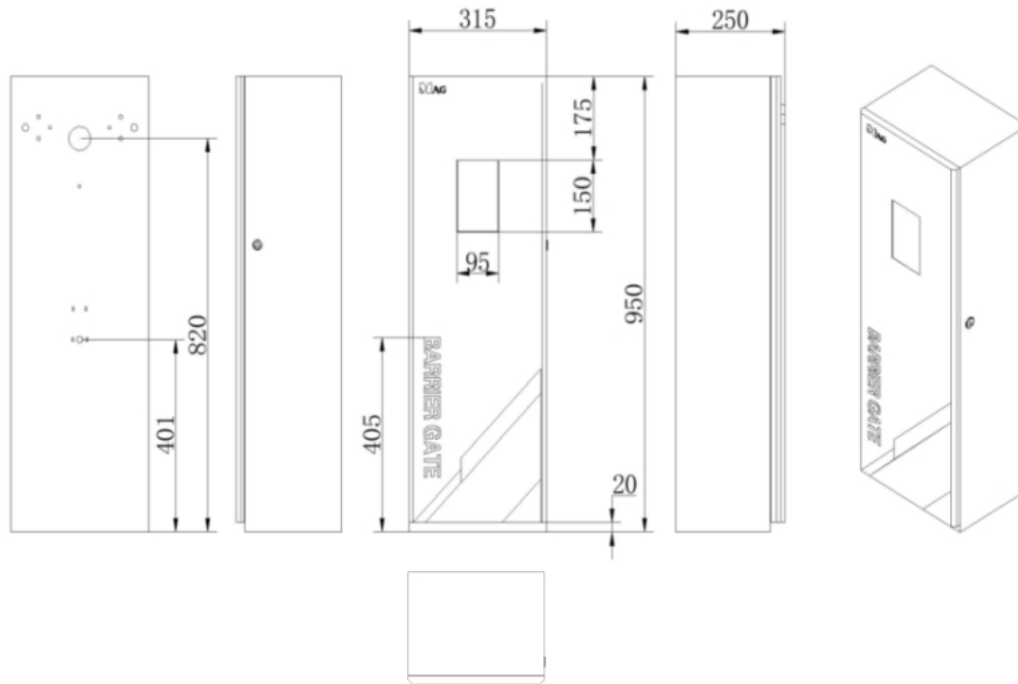
To support high-speed performance and drive-train longevity, the arm resting position operates within a standard tolerance of <math><1^\circ</math>. This tolerance is typical for high-speed mechanical systems and does not affect operational reliability.

4. Arm Load Compliance

The system is calibrated for specific arm lengths and weights that support the target high

speed. Unauthorized arm extensions or additional loads (such as signage) may increase mechanical wear, affect performance, and void the motor warranty.

Housing

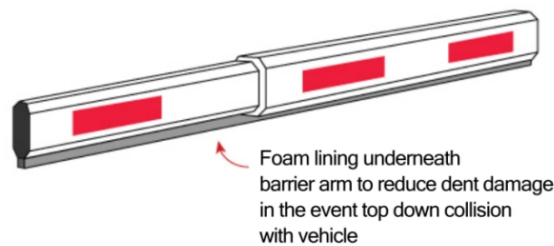


Front Door: RAL7016
Body: RAL7024

Barrier Arm (Telescopic)

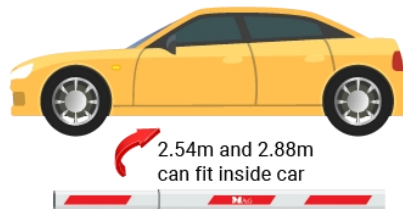
Telescopic arm

The arm is constructed from octagonal hollow aluminum. Red reflective adhesive is applied alternately on the arm for improved visibility at night.



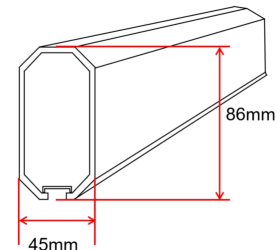
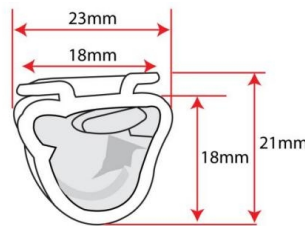
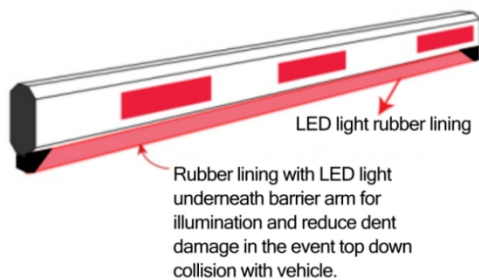
Following is the approximate length of the telescopic arm after retraction.

Full length	Retracted
4.0 meter arm	2.68 m



LED straight arm (non-telescopic)

The arm is made of octagonal hollow aluminum. A rubber-lined LED light can be easily installed beneath the straight barrier arm. The LED light can be trimmed to shorter lengths to meet customer requirements.



Arm Length and Speed

BG857 PRO can be configured quickly to have optimum speed matching the corresponding arm length through the preset menu. The optimum pass through time is as below:

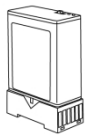
Arm Type	Arm Length	Pass Through Time (s)
Telescopic Arm	4.0m and below	~1.3s
LED Straight Arm	3.5m and below	~0.9s

Ordering Information

Model	Arm Type	Arm Swing Out
BG857	Telescopic Arm, up to 4.0m	Yes
BG857 LED Arm	LED Straight Arm, up to 3.5m	Yes

Estimated gross shipping weight for BG857 excluding arm: 50kg.

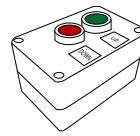
Optional Accessories



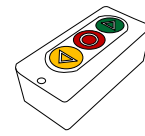
MAG BRD05
Single channel loop
detector.
 Detect presence of vehicle with Extra Wide Inductance (EWI).



MAG BRD03
DualRay and LED Display
Vehicle traffic detector.
 Detect presence of vehicle and pedestrian.



BR_PB2
 Push button for manual open and close.

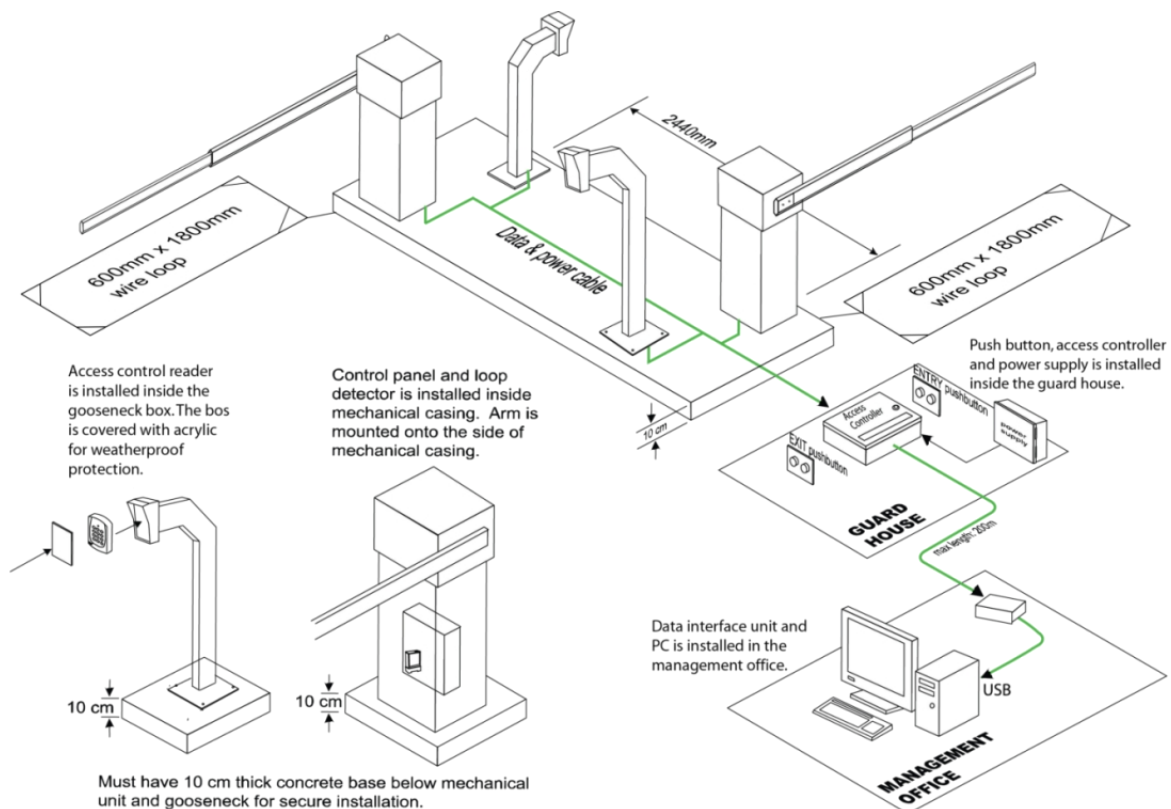


BR_PB3
 Push button for manual open, stop and close.

Typical Installation for Entrance Management*

**Diagram is for illustration only and does NOT reflect actual installation. Actual installation dimension varies depending on site.*

With access control system:



SPECIFICATION



***Product performance is based on testing in a controlled environment. Your result may vary due to several external and environmental factors.**

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