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S60 Level Crossing Barrier Machine

An electrical direct drive Level Crossing Barrier, designed for high reliability and low ownership costs

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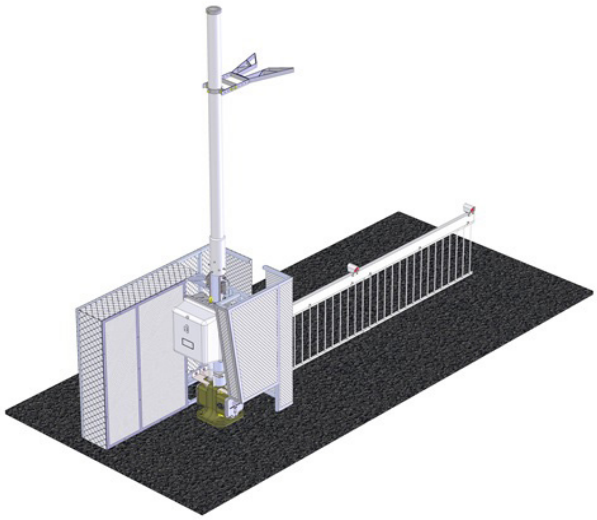
Features
Lightweight Barrier / Boom
Small footprint
Low ownership costs
Fully electrical machine

S60 unit shown without Boom



S60 unit shown with Boom

The S60 is the latest version of Barrier Machine from Siemens Industry Inc. (North America) and is a rugged field proven unit with in excess of 11,000 worldwide installations. S60 is now enhanced for the UK and European markets. The Barrier Machine is UK factory configured and can be deployed either on new green field sites or as a replacement for existing installations.

Benefits

Barrier Machine

- Electrical driven Barrier Machine – 12 or 24 Vdc
- Small Barrier Machine footprint
- Electrical Machine providing low power consumption ownership costs.

Installation

- Barrier is factory pre-assembled to the mounting post prior to shipment
- Boom manufactured to any required length and fine tuned on site to achieve required gaps
- Electrical supply– no hydraulics.

Site Setup

- Built in diagnostic LEDs for ease of set up and maintenance
- Work is carried out at eye level
- Lock bar available to secure boom during set up and maintenance.

Availability

S60 is designed for ease of repair to minimise down-time and routine maintenance. PCBs are plug coupled and have on-board diagnostic LEDs. This significantly reduces set up times. PCBs are coated to protect from moisture. The motor is easily accessible and the brushes can be replaced in a few minutes. Brushes are rated for 400,000 operations before replacement. The motor can have 3 sets of replacement brushes giving a life of 1.2million operations. Boom lights are plug coupled and the boom deflection mechanism is a rugged assembly.

Maintainability

S60 is a simple electric machine and not complex to work with. The major housing is at eye level and has a swing down door for easy access to components. Routine maintenance is easily performed. Major bearing are sealed for life. Spare parts stock mainly consists of motor brushes, PCBs and switches. Boom skirt service kits are available to replace any broken rods - reducing the need for complete boom replacement.

Low cost of ownership

When a S60 is installed it only needs electrical power. (No hydraulics are required). Power consumption is 15 amps at 12V or 8amps at 24V. These are relatively low currents that can offer saving on cable core size and the number of batteries required for the back-up supply. Further saving may be realised in the design of the interface circuitry by using fewer components than traditional systems.

Installation

The size of foundations required will depend on the ground conditions, proximity to the railway and the boom length. The application designer should design appropriate foundations based on these factors, taking into account both static and dynamic loads from barrier movement in addition to external factors such as wind loading. Before installing please check the following:

- 4-off M24 foundation studs are firmly located within the ground
- Height of the M24 foundation studs is in accordance with the Ground Plans.
- The Boom lengths are in accordance with the designations on the Ground Plans

Application

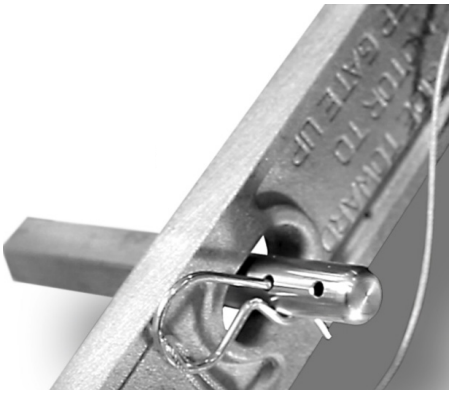
S60 can be deployed on manned and automatic crossings. Current variants are MCB and AHB configurations.

Boom lengths;

- Without skirts between 2 to 12 metres
- With skirt between 2 to 8 metres.

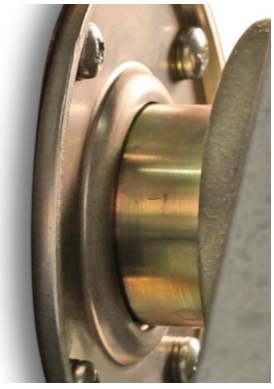
Specification

Item	Description / Value
Housing and Cover	Permanent mould alloy 356 aluminium castings. Precision CNC machining of all gear, shaft and motor surfaces.
Gear Train	240:1 Reduction (Gear motor output to main shaft)
Bearings	Maintenance-free sealed (both main and gear shaft)
Gear motor	12V DC, Permanent Magnet
Brake	165mA @ 12V DC 83mA @ 24V DC
Operating Voltage	11V to 16V DC – 12V Mechanism 18V to 28V DC – 24V Mechanism
Operating Current	6A to 15A @ 12V DC 3A to 8A @ 24V DC
Circuit Breaker	50A Electronic Auto Restore (timed reset), software programmed 24A Normal operation, 41.5A with maintenance button pushed
Weight	100Kg (mechanism only)
Operating Temperature	-40C to +70C
Acoustic Noise Emission	<70db(A)
Approvals	PADS Approval Certificate PA05/03568 CE marked/Approved EMC directive 2004/108/EC Machine directive 2006/42/EC



Locking bar to lock mechanism

Easy access to motor and brushes. Brush life 500,000 operations

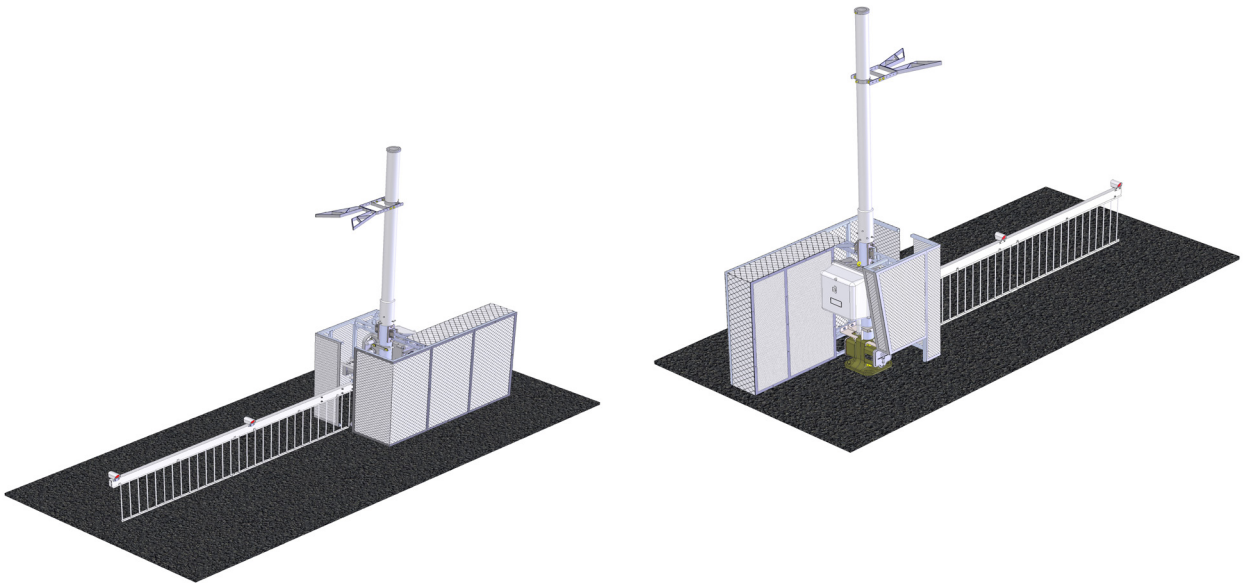


Maintenance-free sealed bearings

Ordering particulars

Siemens Part No.	Description	Variant
E26298/-	S60 complete 24V MCB Machine	Including boom, skirt and boom lights
E26358/-	S60 complete 12V MCB Machine	Including boom, skirt and boom lights
E26360/-	S60 complete 24V MCB Machine	Including boom and boom lights (no skirt)
E26361/-	S60 complete 12V MCB Machine	Including boom and boom lights (no skirt)
E26335/-	S60 complete 24V AHB Machine	Including boom and boom lights (no skirt)
E26359/-	S60 complete 12V AHB Machine	Including boom and boom lights (no skirt)

Siemens Part No.	Description
E26420/1	S60 Guard Complete



S60 Guarding

References

- Network Rail: Crewe / Shrewsbury: 18 off (2012)
- Network Rail: GNGE: 70 off (2012 - 2014)

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DOC00000001346 Revision 01

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