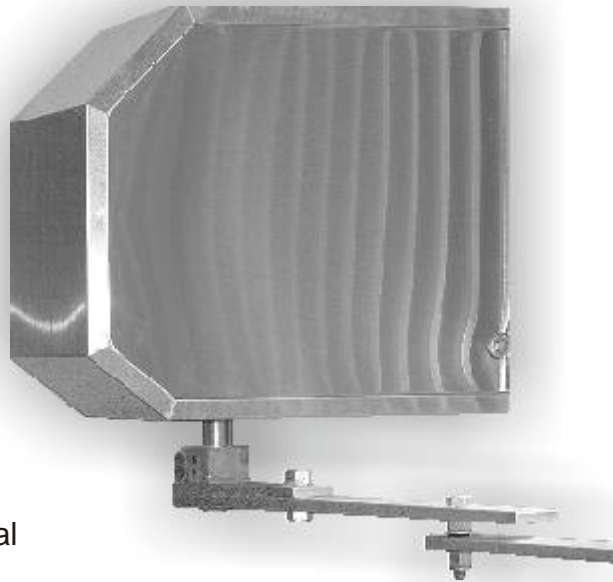


LIFTMASTER®

MAGIC BUTTON PK25 & PK50 FAST SWING

OPERATORS MANUAL



FEATURES

- ✓ High speed continuously rated motor with mechanical slow down
- ✓ Suitable for gates up to 6 metres with optional frequency inverter
- ✓ Corrosion resistant – hot dip galvanised base with stainless steel cover
- ✓ Speed flexibility – capable of slow start / slow stop with fast open – slow close with optional frequency inverter
- ✓ Safety – the PK50 in-built clutch offers excellent “last resort” safety
- ✓ Voltage – 240V supply
- ✓ Exclusive use of Magic Button logic control for superior operation and functionality
- ✓ Emergency use – Simple motor disconnect for power fail situations

WARNING

This equipment requires installation by persons with appropriate electrical qualifications and training and must be wired in accordance to AS3000 wiring rules



Fast Swing Gate Motor Operators Manual

Magic Button Performance PK25 & PK50 Motors

BEFORE MOTORISATION

All gates must have appropriately engineered gate stops fitted by the supplier of the gate. Before commencement of any installation, the gate must be carefully operated manually, taking into account wind loading that could be acting upon the gate leaf. The gate leaf MUST have a smooth operation and be of adequate gate frame manufacture with hinges appropriate for the application of drive motors.

As a minimum, the appropriate photo electric safety devices MUST be fitted as well as any other safety devices necessary to comply with a prudent risk assessment of the operation.

OPERATOR RATING

Each drive unit has a production serial number which is required for all enquiries regarding service, spare parts or claims. A motor rating plate shows information according to the VDE-norm and manufactured year and month.

The PK25 has a 100% duty cycle and is suitable for reliable high use on gate leaves to 3.2 metres and an opening time of approximately 9 seconds, in calm weather conditions. Motor draw on start up is 10A and 1.6A under full load.

The PK50 has a 100% duty cycle and is suitable for intensive use on gate leaves up to 6 metres and an opening time of approximately 8-10 seconds, in calm weather conditions. For a gate leaf over 4 metres an optional slow motor is available as is a frequency inverter for variable speed control and soft start and stop. Motor draw in single phase configuration on start up 4.5A and 2.0A under full load. Motor draw in three phase configuration on start up 4.0 amps and 1.0 amp under full load.

Prevailing wind loadings or exceptional weather conditions can alter these recommended swing gate leaf sizes and may necessitate the use of a PK50 three phase or an optional frequency inverter. In some cases a suitably engineered sliding gate with associated gate end stops may have to be substituted for the swing gate.

INSTALLATION

The operators can be mounted on a gate pillar, wall or separate pillar. The position of the mount plate and the associated length of gate push arm is of paramount importance to provide a smooth harmonic operation.

The drive motor arm must be attached to a suitably engineered gate structure suitable for attachment and if a lock is fitted, the arm attachment should be at the same level of the lock.

Use drawing #1041 for the PK25 and drawing # 1006 for the PK50 to select mount and arm measurement. Select the primary drive arm pivot hole to suit the on site geometry and the length of the primary drive arm.

When closed the total arm should be nearly straight to provide positive locking with some small angle retained to prevent the locking of the gate arm in the event of over travel. The PK50 motor has an adjustable arm stop to prevent potential over travel but is **NOT TO BE USED** to provide the stop for the arm travel. When the gate arms are in the open position the both arms should form a tight angle.

For the PK50, fine arm adjustment can be achieved by extending the threaded rod of the arm and then locking the arm in position with the lock nuts. An optional heavy duty arm with a ball and socket attachment to the primary arm is available for PK50 installations that require above average movement of the gate leaf.

If no lock is fitted then excessive external forces on the gate leaf may damage the motor. All gate leaves over 2.5 metres require a gate lock for security and to prevent motor damage from attempted opening of the gate leaf by external forces.

MANUAL OPERATION

The operator should be isolated from the power source. The operator drive arm is fitted with a release bolt that can be released to provide manual operation. Refer PK25 drawing #1044 and for PK50 drawing # 1003 and 1004. The PK50 torque spanner is matched to the PK50 manual release bolt. The gate arm must be bent before manual operation can be achieved.

Once disconnected, care must be exercised to keep clear of the drive shaft extension shaft fitted to the motor and the arm extension fitted to the gate.

When the gate is operated manually, operational precautions must take into account wind loading that could affect the gate leaf so as to prevent personal, property and third party injury.

ELECTRIC CONNECTIONS

Micro switches are rated 250V 10A. Limit switch connections must conform to the appropriate wiring diagrams for the PK25 refer drawing # 1044 and for the PK50 refer

drawing # 1003 single phase and # 1004 three phase.
Limit switches **MUST BE ADJUSTED TO STOP THE MOTOR** at both ends of travel otherwise serious damage, which is outside of warranty, will occur.

SLIPPING CLUTCH ADJUSTMENT

The PK50 has a slipping clutch that is a last resort safety device. The PK25 has no slipping clutch and utilises the Magic Button MB106 control logic to provide precise electronic torque control that will stall the motor upon obstruction.

The clutch adjustment of the PK50 motor is achieved by tightening a ring onto the clutch pads and then securing the desired pressure by four bolts and then adjusting the lock nut to suit. Refer diagram # 1007 figure 1. The clutch must not slip in normal travel including appropriate settings for any wind loading.

Wind loading on any gate, especially solid panel designs, can place extraordinary loads on the gate leaf and the PK50 clutch settings are not designed to overcome such events.

Regardless of the setting of the clutch or electronic torque control, as a minimum, the appropriate photo electric safety devices MUST be fitted, as well as any other safety devices necessary to comply with a prudent risk assessment of the operation.

LIMIT SWITCH ADJUSTMENT

The limit switch must stop the motor at the end of travel in both directions. Adjustment is by way of a rotating cam on the drive shaft. Once the cam is moved to the appropriate location to engage the limit switch at the end of travel it **MUST** be locked into position by the cam locating screw.

Drawing #'s	Specifications PK25 with mounting and arm length matrix
	1041 PK25 mount and arm angle details
	1043 PK25 parts list
	1044 PK25 single phase wiring
	1045 PK25 mount hole template
	or
	Specifications PK50 with mounting and arm length matrix
	1003 PK50 single phase wiring
	1004 PK50 three phase wiring
	1007 PK50 general description
	1016 PK50 mount hole template
	1017 PK50 parts list