



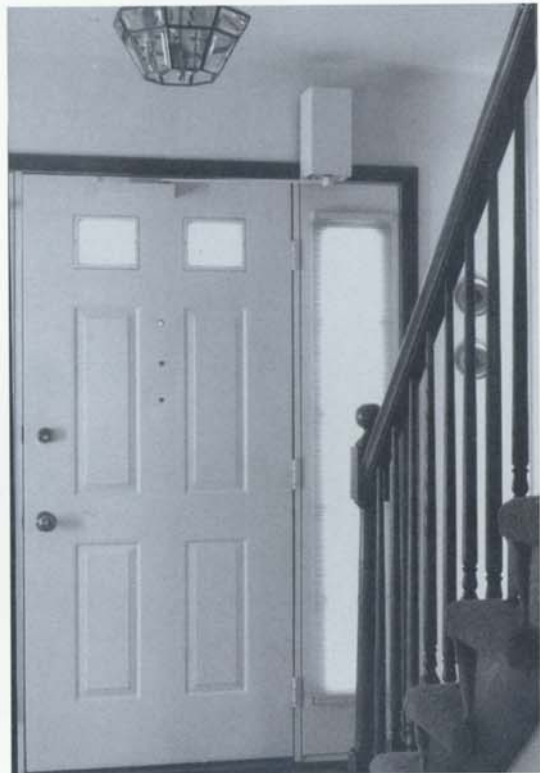
Door Motion Technologies<sup>®</sup>, Inc.

## DuraSwing<sup>™</sup> MK 4R

*Power Open/Power Close  
High Performance  
Low Energy  
Door Operator*

*Ideal For:*

- *Interior commercial doors and hatches*
- *Residential exterior & interior doors*



**ADA** Product

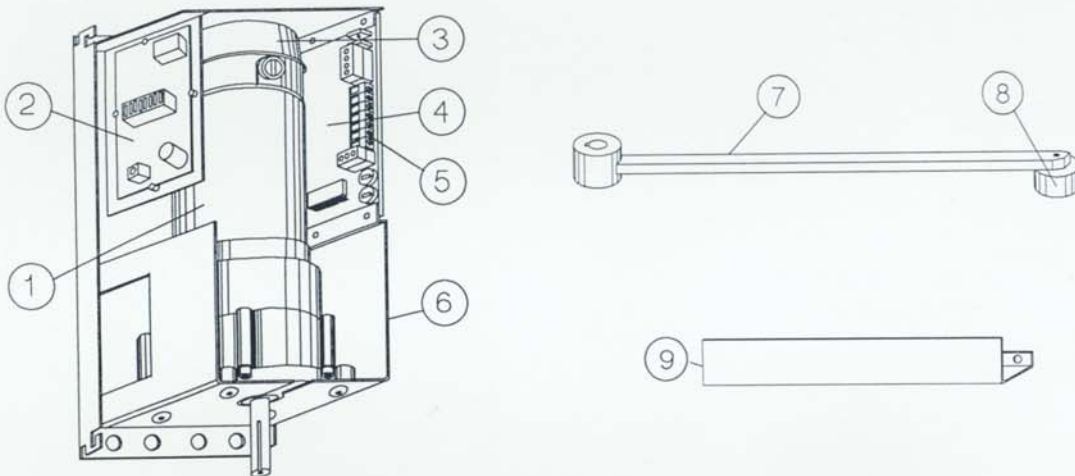
*Elegant Door Control Solutions*

DMT Tel: 800 291 1561 Fax: 616 327 6158

# DMT DuraSwing™ MK 4R Door Operator

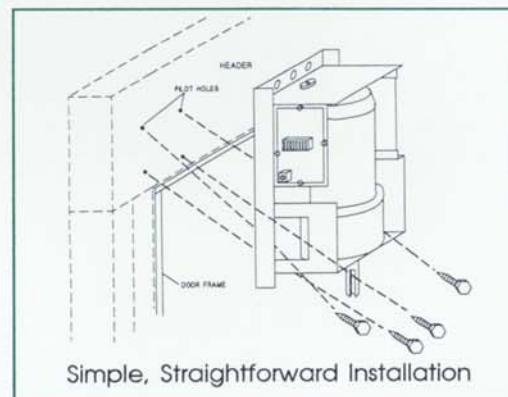
## DuraSwing™ MK 4R DOOR OPERATOR: GENERAL DESCRIPTION

This swing door operator is ideal for *interior and exterior doors that latch when closed*, and will automate all exterior or interior swing doors up to 4.0' in width, in an inswing or outswing configuration. This system will unlock, power-open, hold open, power close and relock the door to be automated. This header mount door operator consists of three modular components for easy installation and service: **A:** a micro-processor based motor and accessory control board, **B:** a drive assembly consisting of a 3" diameter DC motor with a *permanently lubricated and sealed gear box*, and **C:** a *wireless control receiver* for easy and convenient remote button actuation. The MK 4R will also allow the door normal manual operation. This operator is equipped with an accessory module which provides a terminal strip for control and power supply for an electric lockstrike, and contacts for security system integration. Factory programmed micro-processor chips are available for special needs. A typical installation of the operator and the electric lockstrike should be completed in two hours by one person. This operator complies with ADA/BHMA low-energy door operator requirements and also has been tested to exceed **1 MILLION** full-load cycles.



### CALL-OUT LEGEND

1. Gearhead Motor
2. Wireless Receiver
3. Motor Encoder (Rev Monitor)
4. Motor Control Board
5. Access Control Module
6. Rigid, All-Steel Construction
7. Door Control Arm (C.R. Steel)
8. Urethane Roller
9. Roller Track
10. Durable Powder Coat Finish



# • Residential Doors • Elevator Doors •



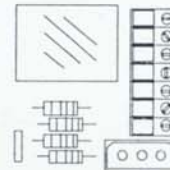
### Microprocessor Based Motor Control System.

This state-of-the-art motor control system is the heart of the DS MK 4R. It uses a computer chip to monitor door position continuously by processing motor position data transmitted from the encoder attached to the motor. This data (or feedback) includes speed, resistance and time. The SafeTek™ algorithm then processes this information to detect obstructions and environmental variables (such as wind & door system characteristics). The control program is self-adjusting, so there are few set-up controls: Door Open Angle (60 to 120 degrees); Hold Open Time (5 to 45 seconds) and Force Limit, which adjusts the operator to initial door system characteristics. The SafeTek™ program can distinguish a human "obstruction" from a gust of wind, which means the door will stop when encountering a 15 lb. resistance yet will open through windy conditions. Additionally, if a person causes the door to stop, the door will stall and the program will wait 3.5 seconds, then continues its opening cycle to full open. If the person is still obstructing the door, the program will sense the 2nd stall, then it will close the door. In the close part of the cycle, the door will reopen if it encounters an obstruction, and will repeat the Hold Open cycle, then it will continue to try to close until the path is clear. **Option: Open and hold, retrigger to close program.** This optional processor will open the door, which will stay open indefinitely. It will close only when a new signal is transmitted.

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### Access Control Module.

Integrated with the motor control system is a complete sensor and access control terminal block and relay module, designed to make easy work of combining various types of sensor triggers for full automatic operation. Included are various inputs, outputs and delay to facilitate operation of electric lockstrikes, and other types of security/access control systems. Additionally, there is a 24VDC power take-off sufficient to power these accessories. It is also ready to interface with ECU's (Environmental Control Units) necessary to provide accessibility for severely disabled individuals.



### Integral Heavy-Duty Gearhead Motor.

The large 3" DC motor is coupled to an *all-steel geartrain* (no plastic gears) which is permanently lubricated and sealed in an aluminum casting. This provides a long, maintenance-free life of smooth operation. Tested beyond *1 Million Cycles*, it carries a 3 year limited warranty. The High-torque DC motor requires a lower gear ratio than most and only adds a minimal 2 lbs. of internal resistance when the door is operating manually. Also, violent door abuse is less likely to damage the gear train. The enclosed gearbox has the added benefit of permanent lubrication and quiet operation and no routine maintenance is required. Should repair become necessary, the compact, clean drive system takes 10 minutes to remove or replace.

### Easy Installation with Maximum Applications Flexibility.

Field experience has shown that all too frequently, the application at hand has unexpected variables. The DuraSwing™ MK 4R is unique in that its design allows for **12 distinctly different installation types**, with multiple variations of each type, which allows for virtually universal installation capability. The operator is not handed (left or right swing), can be inverted if there is no ceiling clearance, can swing the door out or in (inswing or outswing capable), can be weather proofed if outdoor operation is necessary. A typical installation will take **1 person 2 hours** to complete, with only a modest requirement of mechanical experience with common tools.

**PULL TO OPEN OR PUSH TO OPEN • SWING LEFT OR SWING RIGHT • EXTERIOR\* OR INTERIOR MOUNT**

(\*weatherproofing option required)

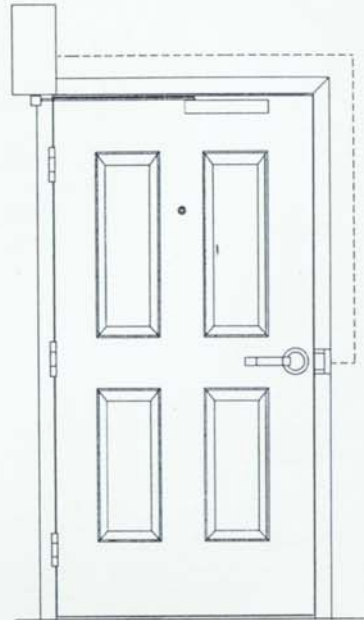
# • Wheelchair Lift Gates • Office Doors •

## MK 4R Operator Features & Benefits

- Small, attractive and affordable.
- Wireless transmitter operation standard.
- Easy to interface with ECU's & security systems.
- Non-Handed.
- Push-open or pull-open ready.
- No maintenance required.
- Ideal for wheelchair lift gates & elevator swing doors.
- Rugged, all-steel construction.
- Quiet, smooth & efficient.
- Exclusive SafeTek™ safety control program.
- True microprocessor motor control.
- Choice of automatic close or on-demand close
- Available in standard and custom powder coated finishes.
- One person, two hour installation (typ.).
- CSA/NRTL listed.
- Meets ADA / ANSI 156.19 code requirements.
- Three Year limited warranty.

For full specifications, phone or fax request to  
DMT for prompt reply.

PH: 800 291 1561 FX: 616 327 6158



### LIMITED WARRANTY:

3 YEARS on motor, geartrain and chassis components.  
1 YEAR on all electronics. (Call for full details)

### COMMONLY USED ACCESSORIES



**DM-KP**  
WIRELESS KEYPAD

**DM-WT**  
WHEELCHAIR JOYSITCK  
TRANSMITTER



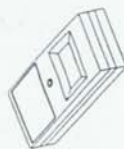
**DM-P5**  
KEYCHAIN  
TRANSMITTER

**DM-A3**  
EXTENDED OFFSET ARM  
APPLICATION: PUSH TO OPEN



**DM-LS7002**  
ELECTRIC LOCKSTRIKE

**DM-P4**  
HANDHELD  
TRANSMITTER



**DM-P42**  
2-CHANNEL HANDHELD  
TRANSMITTER

**DM-P44**  
4-CHANNEL HANDHELD  
TRANSMITTER



**DM-ECU**  
WIRELESS TRANSMITTER  
(ECU AND SPECIAL TRIGGERS)