

## Pedestrian High Door Gate for Low to Medium Security Access Applications

### MPH 112

Technical Data	Type	MPH 112 Standard Lane	MPH 112 Wide Lane
Motor Drive		MHTM®	MHTM®
Voltage	V	110-240	110-240
Frequency	Hz	50-60	50-60
Power consumption	W	maximum peak 100	maximum peak 300
Power consumption	W	typical 90	typical 160
Power consumption	W	stand-by 80	stand-by 60
Gate opening/closing time	s	typical 0.8-1.2	typical 1.0-1.4
Retractable panel height	in	approximately 48", 60", 72"	approximately 48", 60", 72"
Weight for one lane <sup>1</sup>	lb	approximately 450	approximately 600
Housing length	in	approximately 51"	approximately 51"
Protection class	IP	32	32
Throughput	per minute	Up to 40	Up to 40
Operating temperature	°F	-13 to +104	-13 to +104
Passage width	in	approximately 20.5"	approximately 36"

#### Product description

The pedestrian barrier series type MPH (Magnetic Pedestrian High Door = a horizontally sliding access control and locking mechanism) is designed to control pedestrians entering or exiting restricted areas in low to medium security applications, usually under surveillance. It closes immediately after passage or after an adjustable time-out. The opening and closing times of the gate can be programmed differently, dependent on the size of the obstacles. The gates can be operated in normally closed mode for either single or bi-directional control.

#### Typical Fields of Applications

- Commercial buildings
- Sports stadiums
- Museums
- Corporate entries
- Public facilities

<sup>1</sup> without obstacle / glass panel

#### Housing

The housing consists of several sheet metal modules that can be extended with intermediate parts to a user-defined line configuration. Various optional access control devices (such as card readers, etc.) can be easily accommodated on a stainless steel face panel located at each end segment of the pedestrian barrier. Gate End Displays (GED) consisting of a red cross and green arrow to indicate traffic direction are located at both ends of the barrier. The gate is finished in powder coated steel or in stainless steel and comes with protection class IP32 (others available upon request).

#### Motor Drive

The Magnetic High Torque Motor MHTM® is the key component of the patented direct drive system. No additional gear-box is required. It offers numerous benefits including nearly noise-free operation, small dynamic forces, impact

detection, lowest abrasion and fastest opening / closing times. Low power is applied to the motor in the home position, therefore the heat dissipated prevents condensation and prolongs the lifetime of the motor. In combination with the MBC-110 logic controller, the system provides functional features that meet almost any application.

#### Fraud and Safety

Patrons travelling inside the gate are observed by 8 PE beams. Intrusion, wrong-way and tailgating detection is possible but limited <sup>2</sup>. In combination with the low impact forces, the PE beams provide a high safety level for patrons. To prevent attempts to force the doors open, they are mechanically blocked in the closed position. In case of power failure or emergency mode the doors are pulled open by springs.

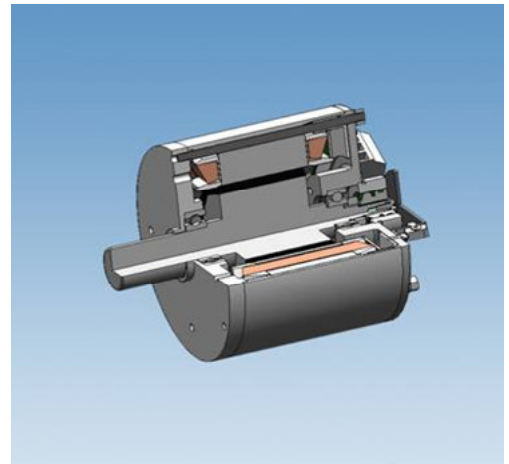
<sup>2</sup> For a more sophisticated passenger detection system we recommend to use the MPH 122 gates.

## Motor Technology

**MHTM®** Pat. No. DE 103 53 366

The reliable maintenance free direct drive is virtually noise-free and consists of a MHTM® - “Magnetic High Torque Motor” with integrated resolver for precise positioning feedback. High output torque for fast acceleration and fast deceleration are one of the main features of this newly designed motor. With no power, the motor shaft can be freely rotated. As no gearbox or mechanical gear parts are necessary, there is no backlash and no wear.

The design lifetime of the MHTM® is in excess of 30 million cycles or a minimum of 10 years in a pedestrian gate application.



## The Motor Controller MMC-120

The MMC-120 motor controller, using the latest DSP technology, allows very accurate control of the torque, speed, acceleration and deceleration parameters of the motor in any position. In combination with the resolver feedback, this results in a highly dynamic operation of the drive system. Thus, the system can react very fast in abnormal situations like detected impacts or attempts to force the retractable panels open.

### Main features of the controller:

- CAN Bus interface for networking and software download
- 3 phase servo drive power end-stage
- Closed loop operation for precise positioning
- Ramping up and down configuration
- Fully adjustable speed
- Resolver input for position feedback
- LED indicators for operation and error diagnostics
- Dimensions: 8.7in (L) x 5.6in (W) x 2.4in (H)



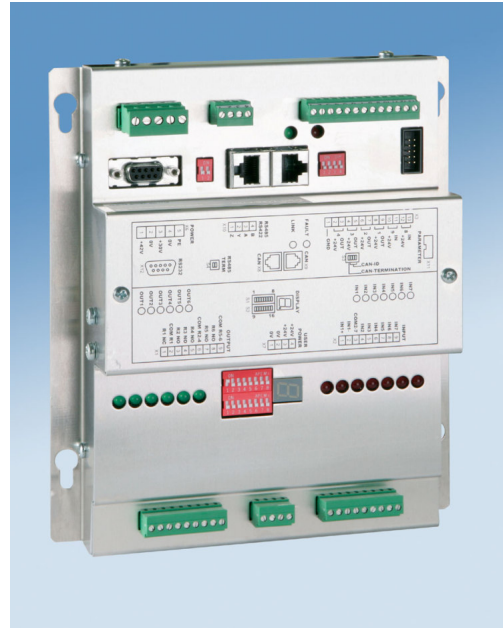
### The Logic Controller MBC-110

The MBC-110 provides a high level of flexibility to fulfill customers requirements. It is able to control the operation of the gate either by commands received from one of the serial communication ports or by digital inputs and outputs.

The MBC-110 operates in stand-alone mode. It is in full control of processing a passage through the gate. Opening commands are received from external access control devices such as card readers, fingerprint readers, etc.

#### Main features of the controller:

- CAN Bus or serial interface for networking and download
- System can be extended via RS232 / RS422 / RS485 / CAN-Bus / I<sup>2</sup>C-Bus
- 9 digital inputs, 6 relay outputs, 4 MOSFET outputs
- LEDs and display for operation / error diagnostics
- DIP switches to select parameter settings
- Dimensions: 8.7in (L) x 7.3in (W) x 2.4in (H)



### The Power Supply

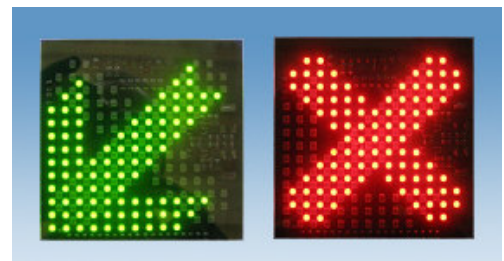
The 110 - 240 V / 50 - 60 Hz power supply provides power for the motors and gate controllers.



### Gate End Displays

The Gate End Displays are used to indicate independently for each direction whether a lane is open or closed for passengers. Two symbols can be displayed:

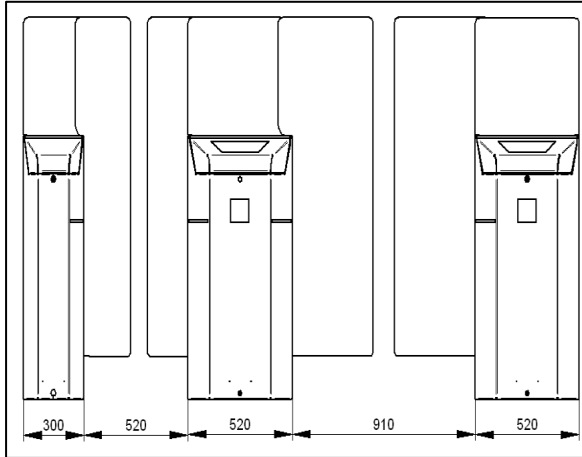
- Green arrow
- Red cross



### Declaration of Conformity

The gate and controllers comply with the CE regulations. The gate can be supplied with UL certification and others on request.

## Mechanical Dimensions and Configurations:



The MPH 112 High Door gates are available with three different retractable panel heights of approximately 48", 60" and 72" depending on the security requirements.

Magnetic recommends 48" retractable panels only for low security applications.

For medium security applications retractable panel heights of 60" or 72" are recommended.

