

Operating Instructions

Pedestrian Pivot Barrier MPP-112 / MPP-122 / MPP-132 / MPP-212 / MPP-222



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Translation of the original operating instructions

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1 General

1.1 Information regarding the operating instructions

These operating instructions provide important information on how to deal with the MAGNETIC pedestrian pivot barriers MPP. Prerequisite for safe working is the observance of all specified safety notes and instructions.

In addition, the local accident prevention regulations valid at the pedestrian barrier's area of application and general safety regulations have to be complied with.

Carefully read the operating instructions before starting any work! They are a product component and must be kept in direct proximity of the pedestrian barrier, well accessible to the personnel at all times.

When passing the pedestrian barrier on to third parties, the operating instructions must also be handed over.

Components from other suppliers may have their own safety regulations and instructions for use. These must also be observed.

General



1.2 Pictogram explanation

Warning notes

Warning notes are characterised by pictograms in these operating instructions. The warning notes are followed by signal words expressing the scale of the hazard.

It is absolutely essential to observe the notes and to proceed with caution in order to prevent accidents as well as bodily injuries and property damage.

A DANGER

The s dange

The signal word DANGER points to an immediately dangerous situation, which leads to death or severe injuries if it is not avoided.

WARNING



The signal word WARNING points to a potentially dangerous situation, which can lead to death or severe injuries if it is not avoided.

A CAUTION



The signal word CAUTION points to a potentially dangerous situation, which can lead to minor injuries if it is not avoided.



NOTICE

The signal word NOTICE points to a potentially harmful situation, which can lead to property damage if it is not avoided.

Hints and recommendations



NOTE!

... highlights useful hints and recommendations as well as information for an efficient and trouble-free operation.



1.3 Limitation of liability

All specifications and notes in these operating instructions were compiled with consideration to the valid standards and regulations, the state of the art as well as to our long-standing knowledge and experience.

The manufacturer is not liable for damages caused by:

- Non-observance of the operating instructions
- Improper use
- Deployment of non-trained personnel
- Arbitrary modifications
- Technical changes
- Use of non-approved spare and wear parts.

The actual scope of supply may differ from the explanations and illustrations described in this manual in case of special designs, if additional order options are made use of, or due to latest technical changes.

Incidentally, the responsibilities agreed upon in the delivery contract, the general terms and conditions as well as the manufacturer's conditions of delivery and the statutory provisions valid at the time of contract conclusion shall apply.

Warranty

The manufacturer guarantees the correct function of the applied process technology and the performance parameters identified.

The warranty period commences on the date the pedestrian barrier is delivered to the customer.

1.4 Copyright protection

Surrendering the operating instructions to third parties without written permission of the manufacturer is not permitted.

Content details, texts, drawings, pictures and other illustrations are protected by copyright and are subject to industrial property rights. Any improper use shall be liable to prosecution.

Any type and form of duplication – also of extracts – as well as the exploitation and/or communication of the contents are not permitted without the manufacturer's written declaration of consent.

General



1.5 Scope of delivery

The scope of delivery comprises:

- 1 Pedestrian pivot barrier
- 2 Foundation anchors complete with U-profile
- 2 Keys for the cover.

Supplied documentation per pedestrian barrier:

- these Operating instructions
- electric circuit diagram.

1.6 Spare parts



Procure spare parts from authorised dealers or directly from the manufacturer. Refer to page 2 for address.

Spare part lists can be obtained on request.

1.7 Warranty conditions

Subject to the condition that the operating instructions are observed, and that no inadmissible operations are carried out on the technical equipment, and that the installation has suffered no mechanical damage, MAGNETIC grants a warranty on all mechanical and electrical components of the product to the extent as stated in its standard terms of sales and delivery or as contractually agreed in writing.

1.8 Disclaimer

MAGNETIC expressly disclaims all implied and statutory warranties, including but not limited to, the implied warranties of merchantability and fitness for a particular purpose with respect to the product and the statutory warranty of non-infringement of third party rights set forth in section 2312(3) of the uniform commercial code.



1.9 Customer service

Our customer service can be contacted for any technical advice.

Information about the responsible contact person can be retrieved by telephone, fax, E-mail or via the Internet at any time, refer to manufacturer's address on page 2.



NOTE!

In order to enable fast handling note the data of the type plate such as type, serial number, version etc. before calling.

1.10 EC Declaration of Conformity

For the "EC Declaration of conformity" (pursuant to EC Machinery Directive 2006/42/EC, Annex II) refer to page 83.

1.11 Environmental protection

| NOTE | | | | | | | |
|------|---|--|--|--|--|--|--|
| | Danger for the environment by improper disposal of components or the pedestrian barrier! | | | | | | |
| | In case of improper disposal of components or the pedestrian barrier, damage to the environment may result. | | | | | | |
| | Observe the local and national laws and directives. | | | | | | |
| | Disassemble pedestrian barrier according to resources. Sort resources and supply them to recycling. | | | | | | |

Safety



2 Safety

2.1 Intended use

The MAGNETIC pedestrian pivot barriers MPP are exclusively intended for pedestrians who wish to access or leave areas with restricted access.

The MAGNETIC universal controller MBC and MMC are exclusively intended for controlling the MAGNETIC pedestrian barrier MPP.



Non-intended use is dangerous!

A WARNING

Any use of the pedestrian barriers other than intended and/or in a different manner can cause hazardous situations.

- Only use pedestrian barrier as intended.
- All specifications in these operating instructions have to be strictly complied with.

Any types of claims due to damage arising from improper use are excluded. The operator alone shall be responsible for any damage arising from improper use.

2.2 Changes and modifications

Changes, modifications and re-builds of the pedestrian barrier or installation can cause unforeseen danger.

A written authorisation of the manufacturer is absolutely required before executing any technical changes and modifications at the pedestrian barrier.



2.3 Specialists and operating personnel

2.3.1 Requirements



A WARNING

Risk of injury in case of inadequate qualification!

Improper handling can lead to considerable bodily injuries and property damage.

 Have any activities only carried out by the individuals designated for that purpose.

The operating instructions specify the following qualification requirements for the different fields of activity:

Instructed people

have been instructed during instructions provided by the operator with regard to the work assigned to them and possible hazards arising from improper conduct.

Specialised staff

are able, due to their technical training, knowledge and experience as well as their knowledge of the pertinent regulations are able to carry out work assigned to them independently and to recognise potential hazards.

Electrical specialists

are able, due to their technical training, knowledge and experiences as well as knowledge of the relevant standards and regulations, to execute tasks on electrical systems and to independently recognise possible hazards.

In Germany, the electrical specialist must comply with the provisions of accident prevention regulation BGV A3 (e.g. master electrical fitter). Appropriate regulations apply in other countries. The regulations valid there must be observed.

It must be expected that only those people are deployed who carry out their work reliably. People, whose ability to respond is affected, e.g. by drugs, alcohol or medicines, may not be assigned. Furthermore, the age and profession-specific regulations valid at the operating location must be observed when selecting personnel.

Safety



2.4 Personal protective equipment

It is necessary to wear personal protective equipment when dealing with the pedestrian barrier so as to minimise health hazards.

Before carrying out any work, properly dress in the necessary protective equipment such as work clothes, protective gloves, safety shoes and wear during work.

2.5 Occupational safety and special dangers

The remaining risks resulting from the risk analysis are specified in the following section.

Observe the safety notes listed here and the warning notes mentioned in the other chapters of these instructions to reduce health hazards and to avoid dangerous situations.

2.5.1 Danger pictograms on the pedestrian pivot barrier

The relevant dangerous areas on the pedestrian pivot barrier can be identified by the following pictograms:

| 4 | Mortal danger by electric voltage! indicates life threatening situations caused by electric voltage. Non-observance of the safety instructions causes severe injuries or death. Necessary work may only be carried out by an electrical specialist. |
|---|--|
| | This pictogram is fixed on the following components: |
| | mounting plate in the appennousing. |

Danger of crushing

Electric voltage

A CAUTION



Danger of crushing!

... indicates the presence of components and items moving towards each other. Non-observance of the safety instructions can lead to minor injuries.

This pictogram is fixed on the following component:

Drive unit.



2.5.2 Hazard notes and occupational safety

For your own safety and for the protection of the pedestrian barrier, the following information must be observed and complied with:

Electric voltage



Mortal danger by electric voltage!

A DANGER

Touching live parts can be lethal.

Damage to the insulation or to individual components can be lethal.

- Switch off the power supply immediately in case of damage to the insulation and arrange repair.
- Only electrical specialists may carry out work on the electrical system.
- Switch off voltage supply and secure against reactivation before performing any work. Test for absence of voltage.
- Never bypass or deactivate fuses.
- When replacing fuses observe the correct amperage specification.
- Keep moisture and dust away from live parts. Moisture or dust may cause a short circuit.

A DANGER



The safety installations that are required according to regional and local regulations must be provided by the customer. Usually these are:

- Residual current device (RCD)
- Circuit-breaker
 - Lockable 2-pole main switch according to EN 60947-3.

Electrical voltage – missing safety installations

Safety



Improper transport



A WARNING

Danger from improper transport of the pedestrian barrier!

The weight of the pedestrian barrier can severely injure a person!

- Have all transport work performed by trained personnel.
- Use lifting gear or forklift with a suitable pallet.
- Use suitable lifting gear (loops, etc.) for lifting the pedestrian barrier. The lifting gear must be designed for the respective weights.
- Lifting and carrying the pedestrian barrier from the pallet should be done by a minimum of two people.

WARNING



Risk of injury when lifting heavy objects alone! The weight of heavy objects can severely injure a person!

 Lifting and carrying the pedestrian barrier from the pallet should be done by a minimum of two people.

A WARNING



Risk of injury at insufficient fixing!

Insufficient fixing at the pedestrian barrier or any single component at e.g. the turnstile arms can severely injure a person!

- Only qualified and skilled personnel are allowed to assemble the pedestrian barrier and the appropriate components.
- Check the foundation anchors fit tightly before starting the pedestrian barrier.
- Check the firm fixing of all screws according to maintenance schedule.

Heavy weight

Insufficient fixing



Signposting

Safety

Inadmissible operation



A WARNING

Risk of injury at inadmissible operation!

An inadmissible operation can cause severe or lethal injuries.

- Before operating the pedestrian barrier check all electrical and mechanical functions.
- Only qualified and skilled personnel are allowed to operate the pedestrian barrier.

Sharp edges and spiky corners

A WARNING



Risk of injury on edges and corners!

Sharp edges and spiky corners can cause skin abrasions and cuts.

- Work carefully near to sharp edges and spiky corners.
- In case of doubt wear protective gloves.

A CAUTION



Identification



3 Identification

3.1 Type plate

The pedestrian pivot barriers MPP-112, MPP-132 and MPP-212 have the type plate at the rear wall in the lower housing.

The pedestrian pivot barriers MPP-12 and MPP-222 have the type plate in the upper housing part below the right hinge.



Fig. 1: Type plate

- 1 Type code
- 2 Serial number
- 3 Power supply, Frequency
- 4 Current consumption
- 5 Power consumption
- 6 Protection class
- 7 Duty cycle
- 8 Year of manufacture
- 9 Bar code for type code
- 10 Bar code for serial number



Identification

3.2 Type code

| М | Р | Р | _ | 2 | 1 | 2 | - | А | D | 1 | 1 | 0 | _ | Х | Х | Х | Х | Х |
|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |

| Position | Description |
|----------|---|
| 1 – 3 | Product MPP = Magnetic Pedestrian Pivot barrier |
| 4 | - |
| 5 | Generation 1 = Cover with hinge (1st generation) 2 = Cover with 3 locks and hinges (2nd Generation) |
| 6 | Size 1 = Short pedestrian pivot barrier 2 = Long pedestrian pivot barrier 3 = Short pedestrian pivot barrier with attachment housing |
| 7 | Type 2 = Drive motor 3 = Electromechanic |
| 8 | - |
| 9 | Voltage A = 230 V 50 Hz B = 115 V 60 Hz |
| 10 | Version C = Bidirectional without Drop arm D = Bidirectional with Drop arm |
| 11 | Protection class 1 = IP 32 2 = IP 44 |
| 12 | Material 1 = V2A (IP 44) 2 = V4A (IP 44) 3 = Chrome steel (IP 32), for MPP-112, MPP-122 and MPP-132 only |
| 13 | Cover / End housing 0 = Standard door, Cover without front plate 1 = Standard door, Cover with cut-out for front plate, for MPP-122 / MPP-222 2 = Plug door, Cover without front plate, cut-out for GED, for MPP-122 / MPP-222 3 = Plug door, Cover with front plate, cut-out for GED, for MPP-122 / MPP-222 4 = as 1 and 2 x housing in the front with cut-out for GED, for MPP-122 / MPP-222 5 = as 0 and 2 x housing in the front with cut-out for GED, for MPP-122 / MPP-222 6 = as 0 and 1 x housing in the front right with cut-out for GED, for MPP-122 / MPP-222 7 = as 0 and 1 x housing in the front left with cut-out for GED, for MPP-122 / MPP-222 |
| 14 | - |
| 15 – 19 | Options XXXXX = Customer or project code |



4 Technical data

4.1 Dimensions

4.1.1 MPP-112 and MPP-212





4.1.2 MPP-132







Fig. 3: Dimensions MPP-132 (dimensions in mm)

- 1 Rear
- 2 Right
- 3 Front
- 4 Left

Mag00535



4.1.3 MPP-122 and MPP-222



- 4 Front
- 5 Left



4.2 Electrical connection

| Designation | Unit | Value |
|--------------------------|-----------|-----------------------|
| Power supply / Frequency | V AC / Hz | 115 to 240 / 50 to 60 |
| Min. current | A | 0.2 |
| Max. current | A | 0.85 |
| Max. power consumption | W | 140 |
| Duty Cycle | % | 100 |

All current values refer to a mains voltage of 240 V AC.

Table 1: Electrical connection

4.3 Operating conditions

| Designation | Unit | Value |
|----------------------------|------|--|
| Ambience temperature range | °C | –25 to +50 |
| Storage temperature range | °C | -10 to +60 |
| Relative humidity | % | max. 95 %, non-condensing |
| Protection class | - | IP44: Special version for outdoor installation, polishes steel plate |
| | | IP32: Standard type for indoor installation, polished steel plate |
| | | \rightarrow See page 19, chapter 3.2, position 11 and 12. |

Table 2: Operating conditions

4.4 Weight

| Designation | Unit | MPP-112 MPP-212 | MPP-122 MPP-222 | MPP-132 |
|-------------|------|--------------------|--------------------|---------|
| Weight | kg | 45 | 65 | 50 |

Information without accessories

Table 3: Weight

Design and function



5 Design and function

- 5.1 Design
- 5.1.1 MPP-122 and MPP-212



Fig. 5: Design pedestrian pivot barriers MPP-112 and MPP-212

- 1 Cover, on hinges and lockable, removable for MPP-212
- 2 Upper housing for drive unit
- 3 Blocking element, consisting of 3 turnstile arms
- 4 Lower housing for control unit



Design and function

5.1.2 MPP-132



Fig. 6: Design pedestrian pivot barriers MPP-132

- 1 Attachment housing for installation of access-control devices
- 2 Upper housing for drive unit
- 3 Blocking element, consisting of 3 turnstile arms
- 4 Lower housing for control unit

Design and function



5.1.3 MPP-122 and MPP-222



Fig. 7: Design pedestrian pivot barriers MPP-122 and MPP-222

- 1 Cover, on hinges and lockable, removable for MPP-222; suitable for the installation of optional access-control devices
- 2 Upper housing for control and drive unit
- 3 Blocking element, consisting of 3 turnstile arms
- 4 Side elements, suitable for installation of optional display units such as a GED

5.2 Function

The MAGNETIC pedestrian pivot barriers MPP separate and control pedestrians who wish to access or leave areas with restricted access.

There is the option of either walking through the pedestrian pivot barrier in one or both directions after release. Furthermore, the barrier can be used in free entry or exit mode.

MAGNETIC developed and patented the "drop arm" for emergencies, e.g. in case of fire or power outage. The top turnstile arm folds downwards after opening of a contact or in case of power outage and thus clears the way. After closing of the contact or when the voltage returns, the turnstile arm is automatically returned and the basic state is recovered.



5.3 Control system

One motor controller MMC-120 are connected by a CAN bus to the MBC-110 logic controller.

Digital inputs are provided by the customer to open the pedestrian barrier, e.g. for a card reader and an emergency input. Various feedback messages from relay outputs are available for the customer.

The power supply for the controllers is provided by a transformer power supply with two output voltages, 30 V DC and 42 V DC.



Fig. 8: Block diagram control system

Mag00123a

Transport and storage



6 Transport and storage

6.1 Safety notes for transport

Improper transport



WARNING

Danger from improper transport of the pedestrian barrier!

The weight of the pedestrian barrier can severely injure a person!

- Have all transport work performed by trained personnel.
- Use lifting gear or forklift with a suitable pallet.
- Use suitable lifting gear (loops, etc.) for lifting the pedestrian barrier. The lifting gear must be designed for the respective weights.
- Lifting and carrying the pedestrian barrier from the pallet should be done by a minimum of two people.

Heavy weight

Improper transport

WARNING

Risk of injury when lifting heavy objects alone! The weight of heavy objects can severely injure a person!

 Lifting and carrying the pedestrian barrier from the pallet should be done by a minimum of two people.

NOTICE

The pedestrian barrier can be damaged by improper transport!

Substantial material damages can result from improper transport.

- Have all transport work performed by trained personnel.
- When unloading the packages and during inplant transportation always proceed with greatest care and caution.
- Observe the symbols on the packaging.
- Observe the dimensions of the unit.
- Loading, unloading as well as moving the machine must take place with greatest care.
- Only remove packaging directly before assembly.



Transport and storage

| Personal protective equipment | The following must be worn during all transport work: Work clothes Protective gloves Safety shoes. |
|-------------------------------|---|
| 6.2 Transport inspection | |

Immediately check the delivery after receipt for completeness and transport damages.

Proceed as follows in the case of outwardly recognisable transport damage:

- Do not accept the delivery or only under reserve.
- Note the extent of damage on the transport documents or on the delivery note of the forwarder.
- Lodge complaint.

NOTE!



Lodge a complaint for each defect, as soon as it is recognised. Compensation claims can only be submitted within the valid complaint periods.

6.3 Transport

The pedestrian barriers arrive finally assembled.

The lifting gear must be designed for the weight of the pedestrian barrier.

For transport pedestrian barrier consider the safety notes on page 28, chapter 6.1.

For future transports:

- Secure loose cables.
- Secure against vibrations.
- Securely fasten the pedestrian barrier prior to transport (e.g. screw it onto a pallet).
- Transport and put down pedestrian barrier with a forklift and lift with suitable lifting gear.

Transport and storage



6.4 Storage

Store the pedestrian barrier or packages under the following conditions:

- Do not store outdoors.
- Store dry and dust free.
- Do not expose to aggressive media.
- Protect against solar irradiation.
- Avoid mechanical vibrations.
- Storage temperature: –10 to +60 °C
- Relative humidity: max. 95 %, non-condensing
- Regularly check the general condition of all parts and packaging, if stored for longer than 3 months.



7.1 Safety

General

| Danger by inappropriate installation! |
|---|
| Inappropriate installation can cause severe injuries! |
| Only qualified personnel, authorised by the operator and instructed appropriately, may carry out installation tasks. |
| Before beginning work, ensure that there is sufficient assembly space. |
| Pay attention to tidiness and cleanness at the assembly site! Loosely stacked or discarded components and tools are accident sources. |
| Ensure specification for foundation anchors. |
| Ensure correct arrangement and correct fit on the components. |
| Install all fastening elements correctly. |

Improper transport

Heavy weight

Danger from improper transport of the pedestrian barrier!

WARNING

The weight of the pedestrian barrier can severely injure a person!

- Have all transport work performed by trained personnel.
- Use lifting gear or forklift with a suitable pallet.
- Use suitable lifting gear (loops, etc.) for lifting the pedestrian barrier. The lifting gear must be designed for the respective weights.
- Lifting and carrying the pedestrian barrier from _ the pallet should be done by a minimum of two people.

A WARNING



Risk of injury when lifting heavy objects alone! The weight of heavy objects can severely injure a person!

_ Lifting and carrying the pedestrian barrier from the pallet should be done by a minimum of two people.



Improper transport

| ! | |
|---|--|
| ~ | |
| | |
| | |

NOTICE

The pedestrian barrier can be damaged by improper transport!

Substantial material damages can result from improper transport.

- Have all transport work performed by trained personnel.
- When unloading the packages and during inplant transportation always proceed with greatest care and caution.
- Observe the symbols on the packaging.
- Observe the dimensions of the pedestrian barrier.
- Loading, unloading as well as moving the pedestrian barrier must take place with greatest care.
- Only remove packaging directly before assembly.

Personal protective equipment

The following must be worn during all assembly and installation work:

- Work clothes
- Protective gloves
- Safety shoes.

Special tool

Following special tool is required for assembly and installation works:

Torque wrench (18 Nm).

7.2 Required steps

The following procedures are to be completed prior to assembly and installation:

- Laying the foundation.
- Installing the empty conduits.

The following procedures have to be observed during assembly and installation:

- Unpacking the pedestrian barrier.
- Mounting the pedestrian barrier on the foundation.
- Connect pedestrian barrier electrically.
 → See page 50, chapter 8.



7.3 Foundation and empty conduits

Before assembling the pedestrian barrier a foundation has to be laid and empty conduits have to be installed.



NOTE!

To provide a trouble-free operation use separate conduits for data cables and mains cables.

| Foundation | The foundation must meet the following requirements: have sufficient load-carrying capacity. have a skid-proof surface. be level and horizontal have sufficient thickness for the fastenings. |
|----------------|---|
| Empty conduits | Observe the following during planning and installing of the empty conduits: |
| | Install empty conduits according to the foundation plan. |
| | ■ → MPP-112, MPP-132 and MPP-212: See page 34, Fig. 9. |
| | ■ \rightarrow MPP-122 and MPP-222: See page 35, Fig. 10. |
| | Additional cabling for access control and other peripheral equipment is the customer's responsibility. |

Conduits have to be planned to a sufficient length.



7.3.1 Foundation plan MPP-112, MPP-132 and MPP-212



- 1 Foundation level and horizontal
- 2 Foundation depth: at least 800 mm, frost-protected foundation depth to be adjusted to the local situation.
- 3 Concrete (C25/30) or corresponding continuous industrial floor. In case of flagging make sure that the foundation anchors are secured firmly in the foundation. If necessary, use longer anchors.
- 4 Foundation anchors M12x145, tightening torque: 50 Nm, Diameter drilling hole 12 mm, drilling hole depth 90 mm
- 5 Have cables overlapping for approx. 2 m of the conduits
- 6 Empty conduits for mains supply and control line Inner diameter 20 mm each





7.3.2 Foundation plan MPP-122 and MPP-222

Fig. 10: Foundation plan MPP-122 and MPP-222, here illustrated MPP-122 (dimensions in mm) For indoor applications, reinforcement is not required.

- 1 Foundation level and horizontal
- 2 Foundation depth: at least 800 mm, frost-protected foundation depth to be adjusted to the local situation.
- 3 Concrete (C25/30) or corresponding continuous industrial floor. In case of flagging make sure that the foundation anchors are secured firmly in the foundation. If necessary, use longer anchors.
- 4 Foundation anchors M12x145, tightening torque: 50 Nm, Diameter drilling hole 12 mm, drilling hole depth 90 mm
- 5 Have cables overlapping for approx. 2 m of the conduits
- 6 Passage
- 7 Empty conduits for mains supply and control line Inner diameter 20 mm each



7.4 Unpacking

The individual packages are packed according to the expected transport conditions. Only environment-friendly materials have been used for the packaging.

The packaging should protect the individual components against transport damages, corrosion, etc. up to the assembly. Therefore do not destroy the packaging and remove only directly before assembly.

- 1. Unpack the pedestrian barrier.
- 2. Align pedestrian barrier upright.
- 3. Separate material according to type and size and continue to use them after recycling.

7.5 Mounting pedestrian barrier right to a wall – MPP-212 and MPP-222

The pedestrian pivot barriers MPP-212 and MPP-222 can be installed directly at a wall. For this, you need to move the cover attached via hinges as removable cover.

- 1. Open cover (3 locks).
- 2. The cover is earth-protected with a protective earth conductor (yellow-green wire). Undo the protective earth from the cover.
- 3. Remove the hinge screws. Hold on to the cover.
- 4. Remove the cover.
- 5. Mount the rubber buffers. The rubber buffers are included in delivery.
- 6. Earth cover by the protective earth. Mount the protective earth at the cover.



DANGER!

Danger to life when the protective earth conductor is not connected to the cover.

- 7. Attach cover.
- 8. Close cover.


Assembly and installation

7.6 Mounting pedestrian barrier on the foundation

7.6.1 MPP-112, MPP-132 and MPP-212

- 1. The foundation has been set to the adequate hardness.
- 2. Drill holes for the foundation anchors according to the foundation plan. \rightarrow Refer to page 34, Fig. 9.
- 3. Install cover.
- 4. Align pedestrian pivot barrier on the foundation.
- 5. Pedestrian pivot barrier attached to the foundation with foundation anchors and U-profiles. Tighten nuts slightly. The mounting material is included in delivery.
- 6. Align pedestrian pivot barrier.
- 7. Tighten nuts firmly with a torque of 50 Nm.





Fig. 11: Mounting pedestrian barrier on the foundation – MPP-112, MPP-132 and MPP-132

- 1 Pedestrian barrier housing
- 2 Foundation
- 3 U-profile
- 4 Foundation anchor
- 5 Nut, split washer, plain washer

Assembly and installation



7.6.2 MPP-122 and MPP-222

- 1. The foundation has been set to the adequate hardness.
- 2. Drill holes for the foundation anchors according to the foundation plan. \rightarrow Refer to page 35, Fig. 10.
- 3. Install cover.
- 4. Align pedestrian pivot barrier on the foundation.
- 5. Pedestrian pivot barrier attached to the foundation with foundation anchors and U-profiles. Tighten nuts slightly. The mounting material is included in delivery.
- 6. Align pedestrian pivot barrier.
- 7. Tighten nuts firmly with a torque of 50 Nm.





- Fig. 12: Mounting pedestrian barrier on the foundation MPP-122 and MPP-222
- 1 Pedestrian barrier housing
- 2 Covers
- 3 Foundation
- 4 U-profile
- 5 Foundation anchor
- 6 Nut, split washer, plain washer



7.7 Mounting the turnstile arms

The three turnstile arms are mounted to the capstan with each one hexagon socket screw (DIN912 M8x45). Tighten them with 36 Nm.

After a short operating time (approx. 1 week), tighten the hexagon socket screws again.



Fig. 13: Mounting the turnstile arms, here illustrated for MPP-222

7.8 Check assembly and installation

The following points must be checked after assembly and installation of the pedestrian barrier:

- Are all foundation anchors firmly installed?
- Are all screws firmly tightened?
- Have all pedestrian barrier housing covers been properly assembled?
- Is the protective earth conductor properly connected to the cover?



8 Electrical connection

8.1 Safety

Electric voltage

General



WARNING

Danger by inappropriate installation!

Inappropriate installation can cause severe or lethal injuries.

- Only electrical specialists must perform any electrical installation tasks.
- Pay attention to tidiness and cleanness at the assembly site! Loosely stacked or lying around components and tools are accident sources.
- Tighten all fastening elements correctly.

A DANGER



Mortal danger by electric voltage!

Touching live parts can be lethal.

Damage to the insulation or to individual components can be lethal.

- Switch off the power supply immediately in case of damage to the insulation and arrange repair.
- Only electrical specialists may carry out work on the electrical system.
- Switch off voltage supply and secure against reactivation before performing any work. Test for absence of voltage.
- Never bypass or deactivate fuses.
- When replacing fuses observe the correct amperage specification.
- Keep moisture and dust away from live parts. Moisture or dust may cause a short circuit.

The safety installations that are required according to regional and local regulations must be provided

Lockable 2-pole main switch according to

Electric voltage – missing safety installations

A DANGER

Mortal danger by electric voltage!

by the customer. Usually these are:Residual current device (RCD)

- Circuit-breaker

EN 60947-3.





Electromagnetic interference



Electromagnetic interferences may cause malfunctions of the pedestrian barrier or adjacent devices!

NOTICE

The pedestrian barrier is approved for industrial, residential, commercial a business use. Operation in other electro-magnetic environmental conditions may cause interferences or malfunctions.

- Place control lines and mains cables into separate conduits
- Use cables according to the electrical circuit plan.
- Only install and apply additional parts approved by MAGNETIC.

 The electrical and electronically additional parts must be EMC verified and must not exceed the indicated EMC limit values.

Personal protective equipment

The following must be worn during all installation work:

- Work clothes
- Protective gloves
- Safety shoes.

8.2 Installing electrical protective devices

The safety installations that are required according to regional and local regulations must be provided by the customer. Usually these are:

- Residual current device (RCD)
- Circuit-breaker
- Lockable 2-pole main switch acc. to EN 60947-3.



8.3 Electrical connection

8.3.1 MPP-112, MPP-132 and MPP-212



Fig. 14: Electrical connection – MPP-112, MPP-132 and MPP-212

- 1 Motor controller MMC-120
- 2 Logic controller MBC-110
- 3 Main switch
- 4 Terminal block for mains supply
- 1. Open cover.
- 2. Lead the incoming cables through the housing and the access properly.
- 3. Connect cables according to electric circuit diagram.



MPP-122 and MPP-222 8.3.2

Open the top cover by the key. The key is included in delivery. 5 3 6 4 Ο HAH Mag00091a

Fig. 15: Access to the connection, drive unit and controller

- 1 Heater (option)
- Cover 2

1.

- Electrical connection 3
- 4 Drive unit
- Logic controller MBC-110 5
- Motor controller MMC-120 6
- 2. Lead the incoming cables through the housing and the access properly.



Fig. 16: Electrical connection

- Terminal block for mains supply 1
- Access of mains supply and controller connection 2
- 3 Heater (option)
- Connect cables according to electric circuit diagram. 3.



8.4 Connecting customer's control wiring (MBC-110)

The following connections are available for control and feedback on customer's side:

- 7 Digital inputs to control the pedestrian barrier
- 6 Relays outputs to feedback information.



Fig. 17: Customer connections to MBC-110

- 1 Connection relay outputs, plug X1
- 2 24 V DC output, max. 300 mA, plug X7
- 3 Connection digital inputs, plug X2



NOTE!

The maximum output current at connector X7 is limited to 300 mA by a self-resetting fuse.



8.4.1 Digital inputs

- All inputs galvanically isolated by optocouplers
- Input voltage: 24 V DC ± 10%
- Input current: 10 mA per input
- Impulse length for inputs: 100 ms to 300 ms

The inputs can be operated either with 24 V DC or with 0 V DC (high active or low active).

| Input | Function | Description |
|-------|---|---|
| IN1 | ASB signal for servo- controller (hard-coded) (Emergency input) | The input "IN1" is used to clear the servo controller. The logic is inverted (broken wire detection), i.e. the controller is powered only if a permanent signal is present. When the signal disappears, the motor dies immediately and the lock is released. For "drop arm" mechanism pedestrian pivot barriers, the top turnstile arm (drop arm) is released. |
| IN2 | Opening pulse passage left | Opening pulse for left hand passage. In the event of the signal is activated more than 5 seconds, a permanent contact is set. |
| IN3 | Opening pulse passage right | Opening pulse for right hand passage. In the event of the signal is activated more than 5 seconds, a permanent contact is set. |
| IN4 | Emergency | Clearance of access in both directions in emergency situations. The logic is inverted (broken wire detection), i.e. the controller is powered only if a permanent signal is present. If the signal is lost, the holder magnet for the "drop arm" is released at once. The motor starts up briefly so that the "drop arm" can be released. Then the motor powers down and the lock is opened. |
| IN5 | Monitoring left / anti-climb panel | Connection of a monitoring facility for recognition of attempted climbing. |
| IN6 | Monitoring right / anti-crawl panel | Connection of a monitoring facility for recognition of attempted crawling. |
| IN7 | Locking of the pedestrian pivot barrier | Input for locking the two access directions. No opening signals are accepted anymore. The input IN1 (emergency input) remains superordinate. I.e. even if the pedestrian pivot barrier is locked, complete opening of the pedestrian pivot barrier is possible. |
| IN8 | End Stop of drop arm disabled | For internal use. |
| IN9 | Recognition power failure (of main power) | For internal use. |

Table 4: Digital inputs



8.4.2 Relay outputs

- Isolated relay contacts, wired in groups
- Switched voltage: 5 to 24 V DC
- Switched current: 10 mA to 1 A

| Relay output | Function | Description |
|--------------|---|--|
| 1 | Collective fault / Power failure | When certain errors occur, an alarm is given at this output; it continues as long as the error persists. Refer also to the following note. Possible errors are: Obstruction detected Emergency input is interrupted CAN communication with end stage is impaired Hardware fault in end stage Software error in end stage Power failure Wire breakage in alarm line |
| 2 | Pedestrian pivot barrier in home position | When the blocking element is in one of the end positions, a permanent signal is output. |
| 3 | Display "passage free" left | At free passage left, a permanent signal is output here. You can also use this output to lock an impulse generator for passage to the right if passage to the left is cleared. |
| 4 | Display "passage free" right | At free passage right, a permanent signal is output above this exit. You can also use this output to lock an impulse generator for passage to the left if passage to the right is cleared. |
| 5 | Counter pulse left | A counter pulse is given via this output when the end position is reached after passing in left hand direction. This is also true for permanent open mode. |
| 6 | Counter pulse right | A counter pulse is given via this output when the end position is reached after passing in right hand direction. This is also true for permanent open mode. |

Table 5: Relay outputs



NOTE!

Relay 1 operation is fail-safe, i.e. a power failure or a wire breakage at the relay output is also indicated at the global error output. This means that the relay contact pair is closed as long as there is no error. As soon as the global error described above occurs, the relay contacts open.



8.4.3 MOSFet outputs

- Not isolated
- Switched voltage: 5 to 24 V DC
- Switched current: 500 mA

| MOSFet output | Function | Description |
|------------------|---------------------------------------|---|
| 1 | Controlling holding solenoid drop arm | For internal use. |
| 2 | Controlling holding solenoid drop arm | For internal use. |
| 3 | Heartbeat | Pulse generator for special applications. |
| 4 | Reserve | - |

Table 6: MOSFet outputs



8.5 Installing access-control devices MPP-122 and MPP-222

For pedestrian pivot barriers MPP-122 and MPP-222, you can install access-control devices at either end of the pedestrian pivot barrier.

Attach the access-control device to the cover with screws. Observe the installation sizes according to the following figure.

A special cover with removable facia panels for a more comfortable installation of any access-control devices is available on demand.



Fig. 18: Installing access-control devices below: max. depth for installation

1 Maximum installation volume

Connect access control devices as e.g. card readers to both inputs IN2 and IN3 according to page 45, chapter 8.4.1.



8.6 Post-installation check

The following have to be checked after the electrical installation of the pedestrian barrier:

- Does the supply voltage match the specification on the type plate?
- Are the following electrical protective devices installed: lockable 2-pole main switch, circuit breaker and leakage current fault interrupter?
- Are the pedestrian barriers connected according to electric circuit diagram?
- Are all screws firmly fixed?
- Have all covers been properly assembled?
- Is the protective earth conductor properly connected to the cover?



9 Configuration of pedestrian barrier

9.1 Safety

General



A WARNING

Risk of injury due to inappropriate configuration!

Inappropriate configuration can cause severe or lethal injuries.

- Only sufficiently qualified personnel authorized and instructed by the user are allowed for the configuration of the pedestrian barrier.
- Execute all operating steps according to the instructions in this operating instruction manual.

Electric voltage



Mortal danger by electric voltage!

Touching live parts can be lethal.

Damage to the insulation or to individual components can be lethal.

- Switch off the power supply immediately in case of damage to the insulation and arrange repair.
- Only electrical specialists may carry out work on the electrical system.
- Before starting work ensure that the electrical system is dead!
- Always turn the power supply off and safeguard against unintentional restarting before maintenance, cleaning, and repair work.
- Never bypass or deactivate fuses.
- When replacing fuses observe the correct amperage specification.
- Keep moisture and dust away from live parts.
 Moisture or dust may cause a short circuit.



9.2 Configuring the pedestrian barrier

The control unit MBC was specifically developed by MAGNETIC for use in own products. Control of the pedestrian pivot barrier MPP is only possible using the MAGNETIC servo controller MMC-120.

Motor (MHTM) and sensor are directly wired to the MMC. The connection between the MMC and MBC is established by CAN BUS. Also see electrical circuit diagram.

Some functions and parameters of the pedestrian barrier can be adjusted with the 8 DIP switches.

The connection side on the customer's site comprises:

- 3 DIP switch blocks: DIP S1, DIP S2 and DIP S3 → See following figure.
- 7-segment display
- 6 green LEDs for outputs
- 7 red LEDs for inputs
- 3 pluggable coded terminal strips for connection of in- and outputs



NOTE!

Changes to DIP switch settings only become effective after the power supply to the pedestrian barrier has been switched off and then on again.



Fig. 19: DIP switch block S1, S2 and S3

- 1 DIP switch block S1
- 2 DIP switch block S2
- 3 DIP switch block S3



9.2.1 DIP switch block S1

| DIP S1.x | Function | Description |
|----------|--------------------------|---|
| 1 | Opening pulse storage | When pulse storage is switched off, the pedestrian pivot barrier can be opened by a pulse at one of the two opening inputs. If further opening pulses are received while the pedestrian pivot barrier is still open, they are ignored. With opening pulse storage activated, several opening pulses can be stored. The pedestrian pivot barrier then remains open until the number of stored pulses is again zero. With each passage, the number of stored pulses is reduced by one. |
| | | Options |
| | | OFF: No pulse stored |
| | | ON: Up to 5 opening pulses can be stored |
| 2 | Buzzer | Switching the buzzer on and off. When the buzzer is switched on and the control recognises a valid request for passage, the control outputs an acoustic signal. |
| | | Options |
| | | OFF: Buzzer switched offON: Buzzer switched on |
| 3 | Drop arm | Select version of the pedestrian pivot barrier. This indication influences the progress during the reference drive (homing). |
| | | Options |
| | | OFF: Pedestrian pivot barrier without "drop arm"ON: Pedestrian pivot barrier with "drop arm" |
| 4 | Safety level | The safety level determines the locking behaviour of the pedestrian pivot barrier if several attempts at walking in the wrong direction are made in sequence. |
| | | Low safety level: At low safety levels, it is possible to achieve a complete passage in the wrong direction in several steps. At this safety level, the lock of the blocking element is only briefly activated and immediately released again when passage in the wrong direction is recognised. When the lock is released again, the blocking element can be moved a bit. The locking of the blocking element is activated again briefly and immediately released again. I.e. if the blocking element is pushed repeatedly while releasing the lock, a complete passage can be achieved. When the lock is no longer pushed on when released, the motor returns to the original end position. |



| DIP S1.x | Function | Descrip | otion | | |
|----------|----------------------------------|---|--|---|--------------------------------|
| 4 | Safety level (continued) | High safety level: At a high safety level, an additional lead time is active to make complete passage in the wrong direction more difficult. The lead time is the time between activation and release of the lock. The lead time increases with the angle. When the lock is no longer pushed on when released, the motor returns to the original and position. Options OFF: Low safety level ON: High safety level | | | |
| 5 and 6 | Hold-open time | The hold-open time is the maximum time for which the lane remains open after an opening signal if there is no one in the lane. On expiry of the hold-open time, the pedestrian barrier closes if no one has passed through. Optionen | | | |
| | | DIP S3.2 | DIP S1.5 | DIP S1.6 | Hold-open time |
| | | OFF | OFF | OFF | 10 s |
| | | | OFF | ON | 20 s |
| | | | ON | OFF | 30 s |
| | | | ON | ON | Endless |
| | | ON | OFF | OFF | 5 s |
| | | | OFF | ON | 7 s |
| | | | ON | OFF | 9 s |
| | | | ON | ON | 15 s |
| | | The sett requeste | ing "unlimited" kee ed direction until th | eps the passage one passage bas be | open in the een completed. |
| 7 | Query software version status | If this fu status o 7-segme Options OFF | nction is activated f the software is d ent display. s Normal operating Version status of s | during operation, splayed cyclically display software is display | the version on the ved |
| 8 | Home position | At initial the moto element | commissioning of or controller, the "I has to be set first | the controller or v Home position" of | when replacing the blocking |
| | | Options | 6 | | |
| | | OFF: | Normal operating |) mode | |
| | | ON: | Dispose to learn | | |

Table 7: DIP switch block S1



9.2.2 DIP switch block S2

| DIP S2.x | Function | Description |
|----------|-------------------------|---|
| 1 | Continuous turning | Switch function "Continuous turning" on and off. By default, the blocking element is moved to its next end position after every passage (home position). When the function "Continuous turning" is switched on, the blocking element is not moved to the next end position after a passage. This permits passages without break according to the saved clearance impulses. |
| | | Options |
| | | OFF: Continuous turning of the blocking element is not possible |
| | | ON: Continuous turning of the blocking element is possible |
| 2 | No vandalism before 20° | Set the time as of which the error "E07 vandalism recognised" is displayed. |
| | | Options |
| | | OFF: The error "E07 Vandalism recognised" is displayed at once when the blocking element is moved in the wrong direction. |
| | | ON: The error "E07 Vandalism recognised" is displayed only when the blocking element is moved in the wrong direction away from the "Home position" by more than 20°. Depending on how fast and with what force it is pushed, 20° will correspond to approx. 2 to 3 latches. The brake will otherwise be activated before. Note: The buzzer is only active in case of vandalism if the blocking element "latches" or the brake is active. I.e. the buzzer goes out even though error E07 is still pending. |
| 3 | Vandalism forever | Set duration for display of the error "E07 Vandalism recognised". OFF: The error "E07 Vandalism recognised" is displayed until inspection has taken place or the time has elapsed. ON: The error "E07 vandalism recognised" is displayed after the third grating and until reset by de- and reactivation of the voltage supply. The brake remains tightened and the buzzer remains activate. |



| DIP S2.x | Function | Description | | |
|----------|--|---|---|---|
| 4 | Extended brake time at the third vandalism attempt | Switch the function "Extended brake time at the third vandalism attempt" on and off. The function corresponds to the function for DIP switch S2.7. The DIP switch S2.7 takes priority over the DIP switch S2.4. When the function is switched on, the "Extended brake time" is active from the third vandalism attempt. The "Extended brake time" is set via DIP switches S2.5 and S2.6. When the blocking element is pushed longer than the set "Extended brake time" in the third vandalism attempt, the pedestrian pivot barrier behaves according to the description for DIP-switch S1.4. The "Extended brake time" is no longer effective. → For the description "DIP-switch S1.4", see page 53. Observe that this function refers to the third vandalism attempt rather than the third grating. Options OFF: The "Extended brake time" is not effective at the third vandalism attempt. ON: The "Extended brake time" is effective at the third | | |
| 5 and 6 | Set extended brake time | The "Extended brake time" is set via DIP switches S2.5 at S2.6. The "Extended brake time" is effective at the third vandalism attempt. The DIP switch S2.4 must be set to O | | P switches S2.5 and ctive at the third must be set to ON. |
| | | Options | | |
| | | DIP S2.5 | DIP S2.6 | Extended brake time |
| | | OFF | OFF | 5 s |
| | | ON | OFF | 10 s |
| | | OFF | ON | 15 s |
| | | ON | ON | 30 s |
| | | | | |
| 7 | Extended brake time at the first vandalism attempt | Switch the function vandalism attempt" the function for DIP priority over the DIF When the function it time" is active from "Extended brake tim S2.6. If more than one va brake time" continu Options OFF: The "Exten- vandalism attem ON: The "Exten- | "Extended brake time on and off. The funct switch S2.4. The DIF switch S2.4. s switched on, the "E the first vandalism at ne" is set via DIP swi indalism attempt occu es to be active. | e at the first tion corresponds to switch S2.7 takes extended brake ttempt. The tches S2.5 and urs, the "Extended ot effective for a |



| DIP S2.x | Function | Description |
|----------|---------------------|---|
| 8 | Multiply brake time | Multiply brake time with the factor 5. The regular brake time is 10×50 ms (0.5 s). The setting of the DIP-switch S2.8 does not influence the "Extended brake time" that is set using the DIP switches |
| | | S2.5 and S2.6. For this function to become effective, the pedestrian pivot |
| | | \rightarrow See page 60, chapter 10.3.1. |
| | | Options |
| | | OFF: The regular brake time is set to 10 x 50 ms (0.5 s). ON: The extended brake time is set to 50 x 50 ms (2.5 s). |

Table 8: DIP switch block S2

Example for DIP-switches S1.4 and S2.4 to S2.8

DIP-switches S1.4 and S2.4 to S2.8 are set as follows:

- DIP S1.4: ON
- DIP S2.4: ON
- DIP S2.5: ON
- DIP S2.6: ON
- DIP S2.7: ON

Since DIP-switch S2.7 takes priority over DIP-switch S2.4, the "Extended brake time" is effective at every vandalism attempt.

The "Extended brake time" of 30 seconds is set via DIP switches S2.5 and S2.6.

DIP-switch S1.4 activates "High safety level" and therefore progressive braking time.

At the first vandalism attempt, the brake remains tightened for 30 seconds. If the blocking element is pushed for more than 30 seconds, the blocking element latches in the second grating and the DIP switch S1.4 setting "High safety level" becomes effective.



9.2.3 DIP switch block S3

| DIP S3.x | Function | Description |
|--------------------------|-----------------------------|---|
| 1 | CAN termination | For the pedestrian pivot barriers MPP, the CAN-bus comprises the logic control unit MBC-110 and the motor control unit MMC-120. For both control units, CAN termination must be activated. → See page 76, chapter 12.4. OFF: CAN termination deactivated ON: CAN termination activated |
| 2 (DIP S1.5 and S1.6) | Hold-open time | The hold-open time is set via DIP switches S3.2, S1.5 and S1.6. \rightarrow For more information, see page 53, DIP-switch S1.5 and S1.6. |
| 3 | Brake in "Home position" | Adjust brake function. |
| | | Options |
| | | OFF: When the blocking element is in the home position, the brake is not engaged (unlocked). |
| | | ON: When the blocking element is in the home position, the brake is engaged (locked). Once a pulse for a valid passage is pending, the brake is disengaged. |
| 4 | - | - |

Table 9: DIP switch block S3



9.2.4 Setting the "home position"

At initial commissioning of the controller or when replacing the motor controller, the "Home position" of the blocking element has to be set first.

- 1. Switch of the voltage supply.
- 2. Set the DIP-switch S1.8 to "ON" at the MBC-110.
- 3. Switch on voltage supply.
- 4. The control is in the mode "Teaching home position". The screen displays the message "H".
- 5. Put the blocking element in the desired position manually. Observe that all turnstile arms are connected in case of pedestrian pivot barriers with a "drop arm" function.
- 6. Set the DIP-switch S1.8 to "OFF". The current position is stored as "home position". During storage, the buzzer emits a permanent signal and the "H" in the display flickers.
- 7. When the message "H" goes out on the display, the new "home position" is stored.
- 8. Switch of power supply and switch it on again after 10 seconds.



Mag00511

Fig. 20: DIP switch S1.8 on the logic controller MBC-110

1 DIP switch S1.8



10.1 Safety

Electric voltage

General



A WARNING

Danger by inappropriate start-up and operation! Inappropriate start-up and operation can cause severe or lethal injuries.

 Commissioning and operation must be performed by specialists or electronics specialists

 Prior to start of works ensure that all housing covers and the cover are correctly mounted.

A DANGER

| | Mortal danger by electric voltage! |
|---|---|
| 4 | Touching live parts can be lethal. |
| | Damage to the insulation or to indivi components can be lethal. |

- Damage to the insulation or to individual components can be lethal.Switch off the power supply immediately in case
- of damage to the insulation and arrange repair.Only electrical specialists may carry out work on
- the electrical system.
- Before starting work ensure that the electrical system is dead!
- Always turn the power supply off and safeguard against unintentional restarting before maintenance, cleaning, and repair work.
- Never bypass or deactivate fuses.
- When replacing fuses observe the correct amperage specification.
- Keep moisture and dust away from live parts. Moisture or dust may cause a short circuit.

Personal protective equipment

The following must be worn during start-up:

- Work clothes
- Protective gloves
- Safety shoes.



10.2 Start-up

| The following inspections must be performed prior to initial start-up: Check wiring emergency input IN1 and IN4. → See page 45, chapter 8.4.1. |
|--|
| ■ Check connection of digital inputs IN2 and IN3. → See page 45, chapter 8.4.1. |
| Check connection of relays outputs 1 to 6. → See page 46, chapter 8.4.2. |
| |

10.3 Operation

10.3.1 Switching on and off the pedestrian barrier

| Switching on | Switch on pedestrian barrier by the mains switch in the upper housing part. \rightarrow See also page 43, Fig. 16. |
|---------------|---|
| Switching off | Switch off pedestrian barrier by the mains switch in the upper housing part. \rightarrow See also page 43, Fig. 16. |



10.4 Function sequence



Mag00573



Fig. 21: Function sequence

10.5 Functional description

10.5.1 Power-off state

In power-off state, the lock is released and allows free rotation of the capstan containing the three turnstile arms. For "drop arm" mechanism pedestrian pivot barriers, the top turnstile arm (drop arm) folds away downwards to enable free access.

10.5.2 Teaching in the "home position"

At initial commissioning of the controller, when replacing the motor or the controller, the "Home position" of the blocking element has to be set first. \rightarrow See page 58, chapter 9.2.4.

10.5.3 Start-up routine without "drop arm"

After activation of the voltage, the blocking element performs a reference run (homing). I.e. the blocking element turns to one of the end positions on the shortest path.

10.5.4 Start-up routine with "drop arm"

For pedestrian pivot barriers with "drop arm", the top turnstile arm (drop arm) is first connected fully automatically when the voltage is switched on.

10.5.5 Regular movement sequence 120°

After receipt of the release impulse in one direction, the pedestrian pivot barrier is released in the passage direction, but the motor will keep the blocking element in the end position with a low torque. The control now expects that the user deflects the blocking element by at least 1° to 2° in the passage direction. Then the motor is applied with regular current and will move to the next end position (120°).



10.5.6 Impulse operation in both directions without impulse storage

The two inputs IN2 "opening impulse passage left" and IN3 "opening impulse passage right" are used to clear passage in the corresponding direction for one passage each. The impulse must be present between 0.2 and 1 sec.

When one of the two impulse inputs was activated by a requesting impulse, the hold-open time starts to run off. Within this hold-open time, passage must be commenced. After the hold-open time has expired, the passage is blocked again in this direction.

When the blocking element is moved by more than approx. 3° in the cleared direction, the hold-open time is deleted immediately. Then it is no longer possible to return the blocking element in the other direction.

In this operating type, a request for a passage in the opposite direction is ignored while the pedestrian pivot barrier is still cleared in the other direction. Only when the blocking element is back in one of the end positions and the hold-open time has expired can a new opening pulse be processed.

The relay outputs 3 "Display passage clear left" and 4 "display passage clear right" serve to control signal lamps to signal free and locked passage directions. Additionally, these outputs enable mutual locking of the request generators, such as card readers. The request generator must be equipped with a lock input for this. The request impulses from both directions must not occur at the same time or within approx 0.1 s.



10.5.7 Impulse operation in both directions with impulse storage

This operating type works similarly to impulse operation without impulse storage. The impulse must be present between 0.2 and 1 sec.

In this operating type, up to 5 opening pulses for both passage directions can be stored and processed in sequence.

If request pulses were stored for both directions, both directions are cleared at first. The hold-open time starts running for both directions immediately.

Processing the stored pulses works independently of the order in which the pulses were received. This means that when pulses for both passage directions are present, passage is possible in either direction. When a passage has been completed, the control verifies again for which directions pulses are still stored. If pulses are still stored, the hold-open time starts running again.

The relay outputs "3" and "4" "Display passage" serve to control signal lamps to signal free and locked passage directions.

10.5.8 Permanent clearance operation in both directions

When a permanent signal is applied to both inputs IN2 "opening pulse passage left" and IN3 "opening pulse passage right", control for both directions is in permanent clearance operation. This means that the passage is cleared in both directions and no opening pulse must be given.

After removal of the permanent signal, the corresponding direction is locked at once without completion of the hold-open time. The end position lock is not activated in permanent clearance operation.

If a permanent clearance signal is applied during impulse operation, the stored opening pulses for this passage direction are deleted.



10.5.9 Impulse operation in one direction / Permanent clearance in the other direction

When a permanent signal is only present on one of the two inputs IN2 "opening impulse passage left" and IN3 "opening impulse passage right", passage is cleared in the corresponding direction. Impulse operation remains active in the other direction.

When the other direction is cleared in impulse operation, the passage direction is locked at once in permanent clearance operation. Only when the hold-open time has elapsed will the passage direction be cleared again in permanent clearance operation.

If a permanent clearance signal is applied during impulse operation, the stored opening pulses for this passage direction are deleted.

The end position lock is not activated in permanent clearance operation in one direction.

10.6 Special cases during 120° operation

10.6.1 Stopping in mid-movement

If the blocking element is stopped in mid-movement, e.g. from the user not moving on, the motor will continue to turn at minimum torque. At the same time, the alarm output is activated.

10.6.2 Turning back in mid-movement

If there is an attempt to turn back the blocking element in the wrong direction during passage, the locking is activated at once.

10.6.3 Turning contrary to the released direction

If a user turns the blocking element in the wrong direction from standstill after release, the locking is activated at once. After a pause the brake will be released and the misalignment of the arm adjusted.

10.6.4 Adaptive speed adjustment

The rotary lock is equipped with two speed levels. A pass starts when a person moves the blocking element by more than 15°. The rotating speed of the blocking element is measured during these 15°. At a rotating speed of more than 2 rad/s, the control works with increased running parameters. At a rotating speed of 2 rad/s or less, the control works with standard parameters.



10.6.5 Attempted vandalism

When the DIP switch 3.3 is in the position OFF, the blocking element is unlocked in the home position. When a user tries to get through the pedestrian pivot barrier without authorisation, the lock is activated.

When the DIP switch 3.3 is in the position ON, the blocking element is locked in the home position. When a user tries to get through the pedestrian pivot barrier without authorisation, this is prevented by the activated lock.

When the blocking element is moved in one direction with a force larger than the maximum holding force of the lock, the blocking element gives. The lock remains active and the motor tries to hold against it at maximum force. From an angle of approx. 60°, the lock is deactivated, so that passage is possible. This prevents unnecessary wear of the lock.

10.6.6 Emergency

If the input IN4 "Emergency situation" is interrupted during operation, the pedestrian pivot barrier enters a safe state. The motor and lock power down at once.

The capstan with the three turnstile arms can be turned freely. For "drop arm" mechanism pedestrian pivot barriers, the top turnstile arm (drop arm) folds away downwards to enable free access.

The control returns to operation when voltage returns at input "IN4 emergency situation".



A WARNING

Maintenance

11 Maintenance

11.1 Safety

Electric voltage

General



| | Danger by inappropriate maintenance! Inappropriate maintenance can cause severe or lethal injuries. | | | | |
|--|--|--|--|--|--|
| | All maintenance work must be performed by specialists or electronics specialists. Prior to work, ensure that there is sufficient assembly space. Pay attention to tidiness and cleanness at the assembly site! Loosely stacked or lying around components and tools are accident sources. Before reactivation, ensure that all panels are installed and the cover closed. | | | | |
| | | | | | |
| | | | | | |
| | Mortal danger by electric voltage! Touching live parts can be lethal. Damage to the insulation or to individual components can be lethal. | | | | |
| | Switch off the power supply immediately in case | | | | |

- Switch off the power supply immediately in case of damage to the insulation and arrange repair.
- Only electrical specialists may carry out work on the electrical system.
- Before starting work ensure that the electrical system is dead!
- Always turn the power supply off and safeguard against unintentional restarting before maintenance, cleaning, and repair work.
- Never bypass or deactivate fuses.
- When replacing fuses observe the correct amperage specification.
- Keep moisture and dust away from live parts. Moisture or dust may cause a short circuit.

Personal protective equipment

The following must be worn during maintenance work:

- Work clothes
- Protective gloves
- Safety shoes.

Maintenance



11.2 Cleaning

Aggressive cleaning aids and substances



NOTICE

Unit damage possible!

Aggressive cleaning agents and substances can damage or destroy electrical cables and components.

- Do not use cleaning agents with aggressive ingredients.

Carrying out cleaning work:

- 1. Switch off power supply and secure against restarting.
- 2. Remove soiling appropriately.
 - Use a water-in-oil emulsion spray as cleaning agent. We recommend the stainless steel care spray of the company 3M.
 - If necessary, pre-clean surface with a damp cloth and dry carefully.
 - Spray surface evenly and thinly with stainless steel care.
 - Clean surfaces with a dry and clean one way cloth. Never use wet cloth.
- 3. Absorb lubrication and grease deposits with absorbing materials.
- 4. Remove dust inside the cabinets with a vacuum cleaner.
- 5. After cleaning work, check that all previously opened covers are closed again and that all safety equipment function correctly.



Maintenance

11.3 Maintenance schedule

The following describes the maintenance work that is necessary for optimal, trouble-free operation. Maintenance intervals must be observed.

If increased wear of individual components or functional groups is revealed during regular inspections, the operator must reduce the required maintenance intervals on the basis of the actual signs of wear.

In case of queries regarding the maintenance work and intervals: contact the manufacturer (for service address, refer to page 2).

| Interval | Maintenance work | To be carried out by |
|-----------------|---|------------------------|
| Monthly | Check all parts for damages and sharp edges. | Operator |
| | Check drop arm function. | Operator |
| | Visual inspection of the housing in and outside for damage. If necessary, clean housing and correct defect in paint work. | Specialist |
| Every 6 months | Check fixing of the turnstile arms. | Operator |
| | Check function of the residual current operated device. | Electrical specialists |
| Every 12 months | Check electric cables for damages. Observe the local regulations. | Electrical specialists |
| | Check if all electrical connections are firm. | Electrical specialists |
| | Check and, if required, replace rubber sleeve for pedestrian pivot barrier support. | Specialist |
| | Check signs and labels for legibility. | Operator |
| | Check foundation fastening. | Specialist |

Table 10: Maintenance schedule

Malfunctions



12 Malfunctions

12.1 Safety

General

This chapter describes possible causes of malfunctions and troubleshooting tasks.

Contact the manufacturer in case of malfunctions that cannot be repaired by means of the following information. (For service address, refer to page 2)



A WARNING

Danger of injury from inappropriate troubleshooting!

Inappropriate troubleshooting can cause severe or lethal injuries.

- All troubleshooting work must be performed by specialists or electronics specialists.
- Prior to work, ensure that there is sufficient assembly space.
- Pay attention to tidiness and cleanness at the assembly site! Loosely stacked or lying around components and tools are accident sources.
- Only use original spare parts or spare parts approved of by MAGNETIC. Procure spare parts from authorised dealers or directly from the manufacturer. Refer to page 2 for address.
- If components have been replaced: Pay attention to correct installation of the spare parts. Reinstall all fastening elements correctly.
- Before reactivation, ensure that all panels are installed and the cover closed.



Malfunctions

12.2 Malfunction table – pedestrian barriers

| Malfunction | Possible cause | Corrective action | To be carried out by |
|---|---|--|--|
| The blocking | Motor is overheated. | As soon as the motor has cooled down, | - |
| element moves too slowly. | I ² t surveillance has reduced speed to protect the motor. | the speed will return to normal. | _ |
| | A mechanical obstruction disables the movement. | Remove obstruction. | Operator |
| The blocking element does not move. | Cabling inaccurate or defective. Green LEDs must be permanently illuminated at the MMC- | Green LED is switched off: Check that there is +42V between terminals DC+ and DC–. If not, check the wiring and power supply. | Electrical specialist |
| | → See Fig. 24. | Green LED blinks: Safety input signal is missing: Check that there is 24 V at input IN1 of MBC-110 (red LED on IN1 must be illuminated). \rightarrow See Fig. 22. Check that the CAN cables between the controllers are not damaged. Check that the CAN addresses on all controllers are correctly set. \rightarrow See Fig. 23. Check that the CAN termination resistors on all controllers are correctly set. \rightarrow See Fig. 23. | Electrical specialist |
| | Check if the MMC-120 is showing an error. The red LED shows the error code. \rightarrow See Fig. 24. | Count the number of blink impulses and look up the error code. \rightarrow See page 78, Table 15. | Specialist / Electrical specialist |
| | Check if the MBC-110 display is showing an error. | Read the error code in the display. Look up the error code. \rightarrow See page 75, Table 12. | Specialist / Electrical specialist |
| | Emergency input IN1 or IN4 of the MBC-110 has possibly been interrupted. Red LED must be illuminated. | If the red LED is not illuminated, check the emergency input. | Specialist |
| Barrier End Display does not work. | Incorrect connection of the Barrier End Display. | Check wiring and connection of the Barrier End Display. | Electrical specialist |

Table 11: Malfunction table – pedestrian barrier

Malfunctions





NOTE!

Additionally, dispose of the diagnostic program MBC Diag for further diagnostics. Use this program to read-out each error status from the MBC-110 and the associated MMC-120. For further information contact your authorised dealer or MAGNETIC directly.

12.3 Malfunction – logic controller MBC-110



Fig. 22: LEDs on the logic controller MBC-110

- 1 Green LEDs indicate the switching status of the customer interface outputs
- 2 One-digit display
- 3 Red LEDs indicate the switching status of the customer interface inputs

The customer interface inputs and outputs of the MBC-110 indicate their switching status through LEDs.

- Red LED is switched on: Input is activated.
- Red LED is switched off: Input is not activated.


12.3.1 Display of the error codes at the MBC-110

If the DIP switch S1.7 is OFF (factory setting), the display shows an error code in case of an error.

 \rightarrow See also page 52, Table 7.

During normal operation mode the point continuously flashes at 0.5 Hz.

Error codes are shown in the one-digit display of the MBC-110. The characters of the error codes are displayed one after another.

Example

The error code E05 is displayed as follows:

- 1. E (Error)
- 2. Pause
- 3. 0
- 4. Pause
- 5. 5
- 6 Pause
- 7 Step 1 to 6 is repeated.

12.3.2 Display of the software version of the MBC-110

If the DIP switch S1.7 is ON the display shows the current software. \rightarrow See also page 52, Table 7.

The characters of the error code are displayed one after another. The characters are displayed for 2 seconds.

Example

The software version 1.4 is displayed as follows:

- 1. u
- 2. 1. (first character with point)
- 3. 4 (second character)
- 4. Pause
- 5. Step 1 to 4 is repeated.



12.3.3 Error codes

| Error code | Description | Possible cause and corrective action |
|------------|--|---|
| E01 | Motion process impaired | This message appears if passage has been started after a pulse, but the blocking element is blocked or the pedestrian barrier is hard to move. When the error appears without outside effect, check smooth operation of the mechanism. |
| E02 | Emergency input not present | The emergency input(s) (IN4 and/or IN1) are not set. |
| E03 | Climbing detected | No clearance impulse is detected, but input IN5 was set for anti- climbing protection. |
| E04 | Crawling detected | No clearance impulse is detected, but input IN6 was set for anti- crawling protection. |
| E07 | Vandalism detected | The blocking element has been moved too far without clearance. You can increase the safety level via the DIP-switch 2.2. |
| E10 | Watchdog error | Unknown software fault. Contact service. |
| E20 | FLASH checksum error | Corrupt program memory. Contact service. |
| E21 | Wrong MMC software | The MMC is not loaded with the correct firmware. Please perform a MMC firmware update. \rightarrow See page 81, chapter 13.4. |
| E22 | Wrong MMC software version | The MMC is not loaded with the correct firmware. Please perform a MMC firmware update. \rightarrow See page 81, chapter 13.4. |
| E30 | MMC FLASH erase error | The programme storage of the MMC could not be deleted. Retry update process. \rightarrow See page 81, chapter 13.4. If the error remains, contact service. |
| E31 | MMC bootloader error | The MMC's bootloader does not respond. Retry the update procedure. \rightarrow See page 81, chapter 13.4. If the error remains, contact service. |
| E32 | MMC update error | The MMC's program memory could not be reprogrammed. Retry the update procedure. \rightarrow See page 81, chapter 13.4. If the error remains, contact service. |
| E33 | MMC programme activating error | The updated MMC programme could not be activated. Retry the update procedure. \rightarrow See page 81, chapter 13.4. If the error remains, contact service. |
| E40 | Homing error | The turnstile arms could not be driven to the home position. Check for any mechanical blockade. |
| E41 | Drop arm feedback error | The drop arm feedback input is not set. Check the switch below the solenoid which holds the drop arm. |
| E42 | Motor power stage error (occurs directly after power on) | Check the 42 V power supply of the MMC. Check the resolver feedback cable and the motor wiring. If necessary, replace the MMC. |
| E43 | Motor power stage error (occurs during normal operation) | Please check the 42 V power supply of the MMC. Please also check the resolver feedback cable and the motor wiring. If necessary, replace the MMC. |
| E60 | Internal CANopen error | Contact service. |



| Error code | Description | Possible cause and corrective action |
|------------|-------------------------------|--|
| E61 | CANopen bus error | Check the CAN cable wiring and the DIP switch settings (bus termination). If necessary, replace the patch cable (standard CAT5). |
| E62 | Wrong MMC address | Set the MMC-120 DIP switches for the CAN bus address as follows: 1: ON, 2: OFF, 3: OFF, 4: OFF. |
| E64 | Connection to MMC lost | Check the patch cable. If necessary, exchanges patch cable. |
| E65 | EEPROM I ² C error | Internal EEPROM communication error, contact service. |
| E66 | EEPROM checksum error | A communications error to the internal EEPROM appeared. When the error appears several times, contact service. |

All those status and error codes that are with automatic reset function will be displayed during a period of max. 10 minutes after the error is rectified but however, as long as the failure is existing.

All other errors will cause pedestrian pivot barriers to be set out of operation. The error code will be displayed permanently until new start of the controller after rectification of the fault.

Table 12: Error codes of the MBC-110



Mag00013

12.4 CAN bus addressing and termination

The MBC-110 logic controller and the MMC-120 motor controller exchange data via a CAN bus.

Each of the controllers must have a fixed CAN address assigned to it. Additionally, a termination resistor must be activated at both ends of the bus to prevent interference.

Each controller is equipped with a DIP switch block. The termination is activated or deactivated using DIP switch 1. The CAN addresses are set using the DIP switches 2 to 4 of each controller.



Fig. 23: DIP switches for CAN bus addresses and termination

- 1 DIP switch of MMC-120
- 2 DIP switch of MBC-110

The DIP switches must be set according to the following table:

| Function | DIP switch | MBC-110 | MMC-120 |
|-------------|------------|---------|---------|
| Termination | 1 | ON | ON |
| | 2 | OFF | OFF |
| CAN address | 3 | OFF | OFF |
| | 4 | OFF | OFF |

Table 13: Setting of the DIP switches



12.5 Malfunction – motor controller MMC-120



Fig. 24: LEDs on MMC-120

- 1 Green LED for indication of the power supply state and the safety input state
- 2 Red LED for error diagnosis

| LED | Description | Possible cause / Corrective action | To be carried out by |
|-----------------------------|--|---|-----------------------|
| Green LED is OFF. | No power supply | Check power supply. | Electrical specialist |
| Green LED is flashing. | Power supply is present. Safety input signal is missing. | Missing signal at emergency input IN1 of the MBC-110. CAN connection between MBC-110 and MMC-120 defective. | Electrical specialist |
| Green LED is ON. | Normal operation | - | _ |
| Red LED is OFF. | No error code | - | _ |
| Red LED is ON. | External error with emergency stop | Check for error in MBC-110 or other MMC-120. | Electrical specialist |
| Red LED is flashing | Error Number of blink impulses indicates the error code. | \rightarrow See page 78, Table 15. | Electrical specialist |
| Red and green LED are ON | Application programme has been erased. Boot loader is waiting for down- loading the application programme. | Download software from the MBC-110 to the MMC-120. | Electrical specialist |

Table 14: Description of the LEDs on the MMC-120



| Error code | Description | Possible cause |
|------------|-------------------------------------|---|
| 2 | Resolver error | Plug not properly inserted, short circuit |
| 4 | Motor phase error | Motor cable not connected. Wiring defective. |
| 5 | Lifeguarding CAN | CAN communication with MBC-110 interrupted |
| 6 | Short circuit to ground | Short circuit between motor phase and ground |
| 7 | Motor phases shorted | Short circuit between two motor phases |
| 8 | DC bus Over-voltage | DC bus voltage too high (> 56 V) |
| 9 | DC bus Under-voltage | DC bus voltage too low (< 17 V) |
| 11 | Over-temperature end-stage | Heat sink temperature too high (> 80 °C) |
| 20 | I ² t surveillance motor | Motor overloaded |

Table 15: Error codes of the MMC-120



Repair

13 Repair

13.1 Safety

General



| | Danger by inappropriate repair! |
|----|---|
| !\ | Inappropriate repair can cause severe or lethal injuries. |
| | All repair work must be performed by specialists or electronics specialists. |
| | Prior to work, ensure that there is sufficient assembly space. |
| | Pay attention to tidiness and cleanness at the assembly site! Loosely stacked or lying around components and tools are accident sources. |
| | Only use original spare parts or spare parts approved of by MAGNETIC. Procure spare parts from authorised dealers or directly from the manufacturer. Refer to page 2 for address. |
| | If components have been replaced: Pay attention to correct installation of the spare parts. Reinstall all fastening elements correctly. |
| | Before reactivation, ensure that all panels are installed and the cover closed. |

WARNING

Electric voltage

A DANGER



Mortal danger by electric voltage! Touching live parts can be lethal.

Damage to the insulation or to individual components can be lethal.

- Switch off the power supply immediately in case of damage to the insulation and arrange repair.
- Only electrical specialists may carry out work on the electrical system.
- Before starting work ensure that the electrical system is dead!
- Always turn the power supply off and safeguard against unintentional restarting before maintenance, cleaning, and repair work.
- Never bypass or deactivate fuses.
- When replacing fuses observe the correct amperage specification.
- Keep moisture and dust away from live parts. — Moisture or dust may cause a short circuit.



Repair

Personal protective equipment

The following must be worn during all repair work:

- Work clothes
- Protective gloves
- Safety shoes.

13.2 Changing motor controller MMC-120

- 1. Switch off power supply.
- 2. Switch off pedestrian barrier via the mains switch on the mounting plate.
- 3. Disconnect cables from the motor controller MMC-120.
- 4. Replace motor controller MMC-120.
- 5. Re-connect cables.
- 6. Set DIP switches for the CAN bus address: 1: ON, 2: OFF, 3: OFF, 4: OFF.

13.3 Changing logic controller MBC-110

- 1. Switch off power supply.
- 2. Switch off pedestrian barrier via the mains switch on the mounting plate.
- Note position of DIP switches. The DIP switches set the CANaddress and the termination resistance is activated or deactivated.
- 4. Disconnect cables.
- 5. Replace logic controller MBC-110.
- 6. Re-connect cables.
- 7. Set DIP switches to previous setting. See your notes.



Repair

13.4 Downloading new software to the motor controllers MMC-120



NOTE!

Before a download, the position of the DIP switch on the MBC-110 must be noted so that the unit can be restored to its previous operating state following the download.

- 1. Switch off power supply of the pedestrian barrier. Wait a few seconds until the capacitors in the power pack have discharged.
- 2. Note switch position of the 16 DIP switches (2 x 8) on the MBC-110.
- 3. Set all 16 DIP switches (2 x 8) on the MBC-110 to the ON position.
- 4. Switch on power supply of the pedestrian barrier.
- 5. The MBC-110 detects from the position of the DIP switch that a download is to be executed.
- 6. The MBC-110 assumes the waiting state. The display shows "L" and a flashing stop. At this point in time, the download can be cancelled by switching off the power supply.
- 7. Set all 16 DIP switches (2 x 8) to the OFF position.



NOTE!

The download (step 9) may take several seconds. Completion of the download procedure is indicated with a rotating bar in the display.

- 8. The download to the MMC-120 motor controller is executing:
 - The program memory of the logic controller is erased. The display on the MBC-110 shows "c" (clear) and a flashing stop.
 - The new software is being downloaded. The display shows "d" (download) and a flashing stop.
 - The display shows "b" (rebooting) and a flashing stop.
 - The new software is activated by booting the logic controller. A rotating bar appears in the display.
- 9. Switch off power supply again.
- 10. Reset the DIP switches on the MBC-110 to the old position you noted down earlier.
- 11. Switch on power supply. The pedestrian barrier starts to operate.

Decommissioning, disassembly and disposal





NOTE! If the download failed, run another download. Contact MAGNETIC if necessary.

14 Decommissioning, disassembly and disposal

A pedestrian barrier that is no longer usable should not be recycled as a complete unit, but disassembled into individual components and recycled according to material types. Non-recyclable materials have to be disposed of in an environmental-friendly manner.

Prior to decommissioning and disposal of the pedestrian barrier, it must be completely separated from the surrounding units.

- Decommissioning, disassembly and disposal of the pedestrian barrier may only be carried out by specialised staff.
- Disassemble the pedestrian barrier in reverse order from assembly.
- The pedestrian barrier has to be disposed of in accordance with the respective country-specific regulations.



NOTE!

For expert information regarding disposal of electric equipment contact MAGNETIC or competent electricians.



EC Declaration of Conformity

15 EC Declaration of Conformity

Der Hersteller/ manufacturer

MAGNETIC Autocontrol GmbH

Grienmatt 20 – 28

D-79650 Schopfheim

Dokumentationsbevollmächtigter/ Documentation Engineer

Herr Stefan Wellinger

+49 (0) 7622 / 695-5 Telefon Telefax +49 (0) 7622 / 695-602

Telefon +49 (0) 7622 / 695-719

erklärt hiermit für das von ihm gelieferte Produkt/ this is to certify that the delivered product

| Bezeichnung / designation | Drehsperre / pedestrian pivot barrier |
|--------------------------------|---------------------------------------|
| Typ/ type | MPP-112 |
| | MPP-122 |
| | MPP-132 |
| | MPP-212 |
| | MPP-222 |
| Ab Serien-Nr./ from serial no. | F05392073 |
| | |

die Konformität nach/ corresponds to the conformity of

Richtlinie/ directive 2006/42/EG (Machinenrichtlinie/ machine directive) Richtlinie/ directive 2004/108/EG (EMV-Richtlinie/ EMC directive)

Angewandte harmonisierte Normen (oder Teile daraus)/ Realized harmonized norms (or parts of them):

EN ISO 12100-2:2010

Sicherheit von Maschinen – Grundbegriffe, allgemeine Gestaltungsleitsätze – Teil 2: Technische Leitsätze/ Safety of machinery – basic concepts, general principles for design – Part 2: Technical principles

EN 60204-1:2006 / AC:2010

Sicherheit von Maschinen – Elektrische Ausrüstung von Maschinen – Teil 1: Allgemeine Anforderungen/ Safety of Machinery – Electrical Equipment of Machines – Part 1: Specifications for General Requirements

EN 61000-6-2:2005 / AC:2005

Elektromagnetische Verträglichkeit (EMV) – Teil 6-2: Fachgrundnormen – Störfestigkeit für Industriebereich/ Electromagnetic compatibility (EMC) - Part 6-2: Generic standards - Immunity for industrial environments

EN 61000-6-3:2007 / A1:2011 / AC:2012

Elektromagnetische Verträglichkeit (EMV) – Teil 6-3: Fachgrundnormen – Störaussendung für Wohnbereich, Geschäfts- u. Gewerbebereich sowie Kleinbetriebe/ Electromagnetic compatibility (EMC) - Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments

Diese Erklärung ist keine Zusicherung von Eigenschaften im Sinne des Produkthaftungsgesetzes. Die Sicherheitshinweise der Betriebsanleitung sind zu beachten./ This declaration is not a guarantee of characteristics in the sense of product liability law. The safety regulations of the operating instructions/maintenance instructions have to be observed.

1. V. Willinge

Schopfheim, 26.06.2014 Ort und Datum/ place and date

Unterschrift/ signature

Appendix



16 Appendix

16.1 Electric circuit diagram

The electric circuit diagram is supplied as a separate document.



Appendix

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