



# *MHTM™ MicroDrive Data sheets*

*MHTM™ MicroDrive barriers  
MGC control modules  
Accessories for the barrier boom  
MHTM™ MicroDrive Accessories  
Standard colour*



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ACCESSORIES FOR THE BARRIER BOOM

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MHTM™ MICRODRIVE ACCESSORIES

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STANDARD COLOUR

A

AP

AS

AL

APL

ASL

- » High functionality
- » Safe control unit according to EN 13849
- » 80% more connectivity (I/O, TCP/IP, RS-485, etc.)
- » High ease of use / maximum accessibility
- » Only 25 W of power consumption (Magnetic.Access)
- » 10 million opening and closing cycles

Magnetic.Access barriers were specifically designed for the use in low to high frequented sites, e.g. industrial sites, residential buildings or small parking areas. Additionally, access roads with a lane width of up to 6.0m can be efficiently and reliably secured.

The Magnetic.Access range does not only offer long-life cycle, great reliability and quality but impresses with sophisticated and enduring design, extremely low operational costs, high ease of use

and almost maintenance-free technology.

Depending on your demand, you may choose between 3 different barrier models: While the Magnetic.Access models are the all-round barriers, the Pro models offer more functionality and options. The Select models offer all customising options at favourable prices.

## Design and quality

MHTM™ MicroDrive barriers impress with sophisticated and enduring design. The modularly designed housing made of extruded aluminium profiles and a base frame made of stainless steel (both powder-coated) offers best protection against corrosion.

The MHTM™ product line is winner of the red dot award: product design 2012 and German Design Award 2014.

## Control unit

The control unit MGC / MGC Pro is compliant with EN 13849. It is located directly underneath the top cover and can be accessed from all sides. Configuring the barrier is easily accomplished via the LCD's intuitive user interface that can be navigated with just 4 push-buttons.

The functionality may be easily extended via optionally available modules (Pro and Select models).

## Drive unit

The drive unit of MHTM™ MicroDrive is not only astonishing because of its small dimensions. You also get a high torque with an extremely minimized power consumption. The high torque guarantees best operation even under severe weather conditions (heavy winds, snow, etc.).

The motor, motor control and gearing are all combined in one compact drive unit.

## VarioBoom

The VarioBoom concept enhances the visibility of the barrier boom which may be even more increased installing optionally available accessories. It comes equipped with a foamed edge protection which offers best protection against damages and harm to people.

Thanks to the modular design of the barrier boom single elements can be replaced in case of damage.

Technical data	Magnetic.Access / -L	Magnetic.Access Pro / -L	Magnetic.Access Select / -L
Lane width max.	3.5 m / 5.0 m	3.5 m / 6.0 m	3.5 m / 6.0 m
Opening / closing time	2.2 s / 4.0 s	1.3 s / 4.0 s	1.3 s / 4.0 s
Power consumption max.	25 W / 30 W	95 W / 25 W	95 W / 25 W
Duty cycle	100%		
Supply voltage	Wide voltage range 85 - 264 V AC (also available as 24V DC version)		
Frequency	50 - 60 Hz		
Housing dimensions (W x D x H)	315 x 360 x 915 mm		
Weight (without boom)	40 kg		
Housing design	Powder-coated aluminium		
Base frame	Powder-coated stainless steel		
Protection class	IP 54		
Compliant with	2004/108/EG, 2006/42/EG, 305/2011, CE, UL 325		
Temperature range	-30 to +55 °C		

Features	Magnetic.Access / -L	Magnetic.Access Pro / -L	Magnetic.Access Select / -L
Standard colour	RAL 2000	3 variants	freely selectable
Special painting	○	○	●
VarioBoom	●	●	●
Extension Set VarioBoom	-	○	○
Control unit	MGC	MGC Pro	MGC Pro
Integrated 2-channel loop detector	●	●	●
Control unit modularly extendable	Radio control and additional loop detector only	●	●
Variable I/O assignment	-	●	●
Number of digital inputs	8	8	8
Number of relay / digital outputs	6/4	6/4	6/4
Closing times selectable	●	●	●
Opening times selectable	-	●	●
Solar / battery option	○	○	○
Extended accessories	-	○	○
Specified number of cycles	10 Mio	10 Mio	10 Mio
Warranty	2 years	2 years	2 years

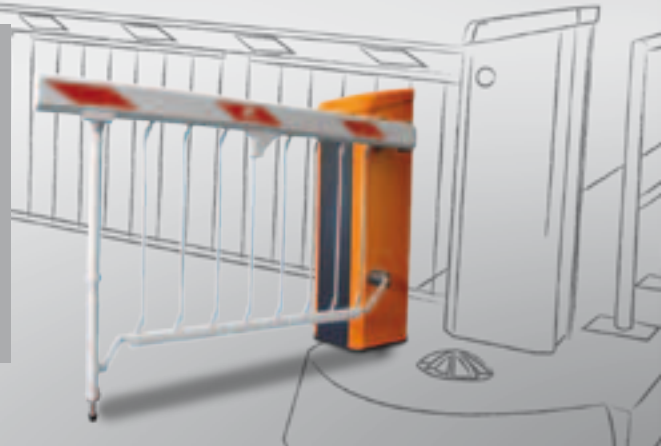
- Standard
- Optionally available
- Not available for this model

# Magnetic.Access Pro-H

MHTM™ MicroDrive / Access applications for company premises

APH

- » For access applications with boom skirt
- » Tall housing with straight barrier boom
- » Safe control unit MGC Pro according to EN 13849
- » High basic functionality
- » 80% more connectivity (I/O, TCP/IP, RS-485, etc.)
- » 10 Mio opening and closing movements



The Magnetic.Access Pro-H model is part of the Magnetic. Access product range and is especially designed for access applications with a boom skirt.

Magnetic.Access Pro-H models contain the same components as Magnetic.Access Pro-L barriers but the housing is adjusted in height and it comes with a MicroBoom (straight boom) instead of a VarioBoom. Optionally available are pluggable modules to

extend the functionality of the barrier as well as comprehensive accessories.

The Magnetic.Access range does not only offer long-life cycle, great reliability and quality but impresses with sophisticated and enduring design, extremely low operational costs, high ease of use and almost maintenance-free technology.

## Design and quality

MHTM™ MicroDrive barriers impress with sophisticated and enduring design. The modularly designed housing made of extruded aluminium profiles and a base frame made of stainless steel (both powder-coated) offers best protection against corrosion.

The MHTM™ product line is winner of the red dot award: product design 2012 and German Design Awards 2014.

## Control unit

The control unit MGC Pro is compliant with EN 13849. It is located directly underneath the top cover and can be accessed from all sides. Configuring the barrier is easily accomplished via the LCD's intuitive user interface that can be navigated with just 4 push-buttons.

The functionality may be easily extended via optionally available modules.

## Drive unit

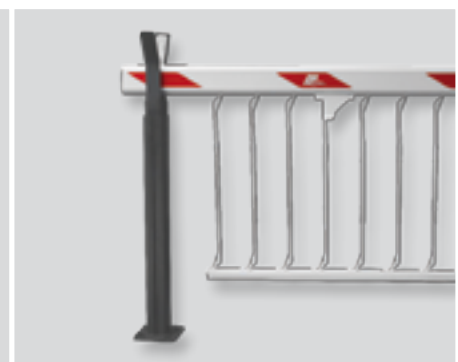
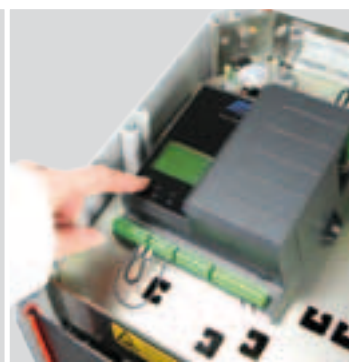
The drive unit of MHTM™ MicroDrive is not only astonishing because of its small dimensions. You also get a high torque with an extremely minimized power consumption. The high torque guarantees best operation even under severe weather conditions (heavy winds, snow, etc.).

The motor, motor control and gearing are all combined in one compact drive unit.

## MicroBoom and boom skirt

The straight barrier boom MicroBoom is only available for Magnetic.Access Pro-H models and serves as guidance for the boom skirt.

Depending on the model of the boom skirt (with or without over-climb protection), it is fixed underneath or at the side of the boom as well as at the housing. A bottom rail profile with a foamed edge protection offers stability and safety. For additional stability, a pendulum support or a support post is used.



## Technical data

## Magnetic.Access Pro-H

Lane width max.	6.0 m
Opening / closing time	4.0 s
Power consumption max.	25 W
Duty cycle	100%
Supply voltage	Wide voltage range 85 - 264 V AC (also available as 24V DC version)
Frequency	50 - 60 Hz
Housing dimensions (W x D x H)	315 x 360 x 1115 mm
Drive system	MHTM™ MicroDrive
Weight (without boom)	44 kg
Housing design	Powder-coated aluminium
Base frame	Powder-coated stainless steel
Protection class	IP 54
Compliant with	2004/108/EG, 2006/42/EG, 305/2011, CE, UL 325
Temperature range	-30 to +55 °C

## Features

## Magnetic.Access Pro-H

Standard colour	3 variants
Special painting	○
Barrier boom	MicroBoom
Boom skirt / over-climb protection	○ / ○
Control unit	MGC Pro
Integrated 2-channel loop detector	●
Control unit modularly extendable	●
Variable I/O assignment	●
Number of digital inputs	8
Anzahl Relais-/digital outputs	6/4
Closing times selectable	●
Opening times selectable	●
Solar / battery option	○
Extended accessories	○
Specified number of cycles	10 Mio
Warranty	2 years

- Standard
- Optionally available



# Magnetic.Access XL / XXL

MHTM™ MicroDrive / Access applications for company premises

**XL** **XXL**

- » Tall housing with straight barrier boom
- » For lane widths up to 10.0 m
- » Safe control unit MGC Pro according to EN 13849
- » 80% more connectivity (I/O, TCP/IP, RS-485, etc.)
- » Power consumption max. 30 W
- » High ease of use

You are looking for a reliable barrier to control vehicle access to an access road or industry facility with a lane width of more than 6.0 m? Here you go: Magnetic.Access XL or Magnetic. Access XXL.

Magnetic.Access XL barriers were developed for lane widths between 6.0 m and 8.5 m, Magnetic.Access XXL for lane widths between 6.0 m and 10.0 m. Compared to other models of the award-winning MHTM™ MicroDrive series, these barriers come with an inner support frame that guarantees a very high stability.

## Design and quality

Magnetic.Access XL / XXL barriers impress with sophisticated and enduring design. The modularly designed housing made of extruded aluminium profiles and the inner steel frame with surface protection offer best protection against corrosion.

The MHTM™ product line is winner of the red dot award: product design 2012 and German Design Awards 2014.

## Control unit

The control unit MGC Pro is compliant with EN 13849. It is located directly underneath the top cover and can be accessed from all sides. Configuring the barrier is easily accomplished via the LCD's intuitive user interface that can be navigated with just 4 push-buttons.

The functionality may be easily extended via optionally available modules.

Magnetic.Access XL and Magnetic.Access XXL barriers contain the complete barrier including the MGC Pro control unit, a MicroBoom XL barrier boom and an integrated 2-channel loop detector. The functionality of the barrier can be easily extended via pluggable modules (optional).

## Drive unit

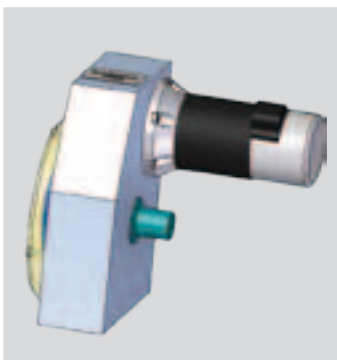
The MHTM™ XL drive unit is not only astonishing because of its small dimensions. You also get a high torque with an extremely minimized power consumption. The high torque guarantees best operation even under severe weather conditions (heavy winds, snow, etc.).

The motor, motor control and gearing are all combined in one compact drive unit.

## MicroBoom XL

MicroBoom XL barrier booms are straight booms designed especially for Magnetic.Access XL/XXL barriers. Up to 6.0 m the boom is made of one solid boom profile, longer booms have an additional connector and a smaller boom profile as extension.

MicroBoom XL booms are equipped with a foamed edge protection which offers best protection against damages and harm to people.





Technical data	Magnetic.Access XL	Magnetic.Access XXL
Lane width max.	8.5 m	10.0 m
Opening / closing time	6.0 s	8.0 s
Power consumption max.	17 W	30 W
Duty cycle	100%	
Supply voltage	Wide voltage range 85 - 264 V AC (also available as 24V DC version)	
Frequency	50 - 60 Hz	
Drive system	MHTM™ MicroDrive	
Housing dimensions (W x D x H)	315 x 360 x 1169 mm	435 x 360 x 1169 mm
Weight (without boom)	93 kg	112 kg
Housing design	Powder-coated aluminium	
Inner support frame	Surface zinc phosphate plus cathodic electrophoresis	
Protection class	IP 54	
Compliant with	2004/108/EG, 2006/42/EG, 305/2011, CE, UL 325	
Temperature range	-30 to +55 °C	

Features	Magnetic.Access XL	Magnetic.Access XXL
Standard colour	RAL 2000	RAL 2000
Special painting	○	○
Barrier boom	MicroBoom XL	MicroBoom XL
Control unit	MGC Pro	MGC Pro
Integrated 2-channel loop detector	●	●
Control unit modularly extendable	●	●
Variable I/O assignment	●	●
Number of digital inputs	8	8
Number of relay / digital outputs	6/4	6/4
Safety light barrier input with test	●	●
Opening / closing times selectable	● / ●	● / ●
Extended accessories (e.g. boom skirt)	○	○
Warranty	2 years	2 years

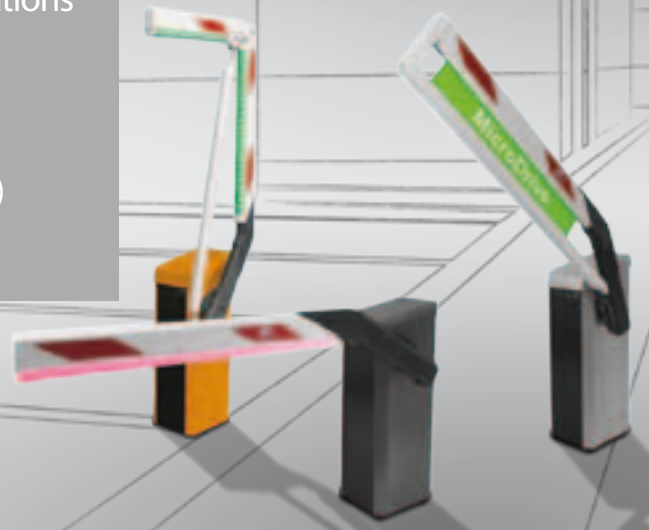
- Standard
- Optionally available
- Not available for this model

P

PP

PS

- » Specifically designed for high volume parking applications
- » High functionality
- » Safe control unit according to EN 13849
- » High ease of use / maximum accessibility
- » Only 35W power consumption (Magnetic.Parking)
- » 10 million opening and closing cycles



Whether we are talking about a parking garage, an underground parking or a parking area - the barrier is and remains the key element. Magnetic.Parking barriers were specifically designed for highly frequented applications.

The Magnetic.Parking product range does not only offer fast opening times, long-life cycle, reliability and quality. Furthermore, they

amaze with extraordinary design, extremely low operational costs, easy handling and almost maintenance-free technology.

In a nutshell: Magnetic.Parking barriers are the first choice for car park operators and solutions providers (OEM) that need to establish an easy and reliable vehicle access control.

## Design and quality

MHTM™ MicroDrive barriers impress with sophisticated and enduring design. The modularly designed housing made of extruded aluminium profiles and a base frame made of stainless steel (both powder-coated) offers best protection against corrosion.

The MHTM™ product line is winner of the red dot award: product design 2012 and German Design Awards 2014.

## Control unit

The control unit MGC / MGC Pro is compliant with EN 13849. It is located directly underneath the top cover and can be accessed from all sides. Configuring the barrier is easily accomplished via the LCD's intuitive user interface that can be navigated with just 4 push-buttons.

The functionality may be easily extended via optionally available modules (Pro and Select models).

## Drive unit

The drive unit of MHTM™ MicroDrive is not only astonishing because of its small dimensions. You also get a high torque with an extremely minimized power consumption. The high torque guarantees best operation even under severe weather conditions (heavy winds, snow, etc.).

The motor, motor control and gearing are all combined in one compact drive unit.

## VarioBoom and break-away flange

The VarioBoom concept enhances the visibility of the barrier boom which may be even more increased installing optionally available accessories. It comes equipped with a foamed edge protection which offers best protection against damages and harm to people. The optionally available break-away flange may be used to drop the whole barrier boom in case of an unwanted or forced drive-through. The boom may be fixed afterwards without any adverse effect on the functionality.

Technical data	Magnetic.Parking	Magnetic.Parking Pro	Magnetic.Parking Select
Lane width max.	3.5 m	3.5 m	3.5 m
Opening / closing time	1.8 s	1.3 s	1.3 s
Power consumption max.	35 W	95 W	95 W
Duty cycle	100%		
Supply voltage	Wide voltage range 85 - 264 V AC		
Frequency	50 - 60 Hz		
Drive system	MHTM™ MicroDrive		
Housing dimensions (W x D x H)	315 x 360 x 915 mm		
Weight (without boom)	40 kg		
Housing design	Powder-coated aluminium		
Base frame	Powder-coated stainless steel		
Protection class	IP 54		
Compliant with	2004/108/EG, 2006/42/EG, 305/2011, CE, UL 325		
Temperature range	-30 to +55 °C		

Features	Magnetic.Parking	Magnetic.Parking Pro	Magnetic.Parking Select
Standard colour	RAL 2000	3 variants	freely selectable
Special painting	○	○	●
VarioBoom	●	●	●
Extension Set VarioBoom	-	○	○
Control unit	MGC	MGC Pro	MGC Pro
Integrated 2-channel loop detector	●	●	●
Control unit modularly extendable	Radio control and additional loop detector only	●	●
Variable I/O assignment	-	●	●
Number of digital inputs	8	8	8
Number of relay / digital outputs	6/4	6/4	6/4
Closing times selectable	●	●	●
Opening times selectable	-	●	●
Solar / battery option	○	○	○
Extended accessories	-	○	○
Specified number of cycles	10 Mio	10 Mio	10 Mio
Warranty	2 years	2 years	2 years

- Standard
- Optionally available
- Not available for this model

T

TP

THS

- » Tall housing with round boom
- » High basic functionality
- » Safe control unit (EN 13849)
- » 80% more connectivity (I/O, TCP/IP, RS-485, etc.)
- » High ease of use
- » Only 55W power consumption (Magnetic.Toll)
- » 10 Mio opening and closing movements

Modern toll stations are complex systems which have a crucial demand for speed and reliability.

Magnetic.Toll barriers were especially designed for this application and offer maximum reliability at fast speeds, high quality and maximum ease of use. The integration of different payment methods (electronically, manually, etc.) may be easily accomplished due to the huge number of inputs and outputs.

Additionally, the Magnetic.Toll product range impresses with sophisticated and enduring design, extremely low operational costs and almost maintenance-free technology.

In a nutshell: Magnetic.Toll barriers define the new standard for toll barriers.

## Design and quality

MHTM™ MicroDrive barriers impress with sophisticated and enduring design. The modularly designed housing made of extruded aluminium profiles and a base frame made of stainless steel (both powder-coated) offers best protection against corrosion.

The MHTM™ product line is winner of the red dot award: product design 2012 and German Design Awards 2014.

## Control unit

The control unit MGC is compliant with EN 13849. It is located directly underneath the top cover and can be accessed from all sides. Configuring the barrier is easily accomplished via the LCD's intuitive user interface that can be navigated with just 4 push-buttons.

The functionality may be easily extended via optionally available modules (only in combination with MGC Pro control unit).

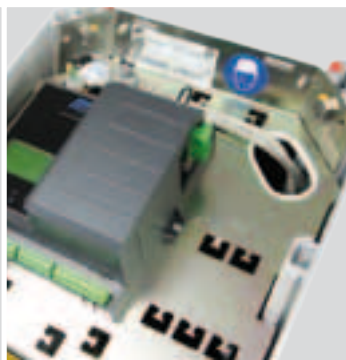
## Drive unit

The drive unit of MHTM™ MicroDrive is not only astonishing because of its small dimensions. You also get a high torque with an extremely minimized power consumption. The high torque guarantees best operation even under severe weather conditions (heavy winds, snow, etc.).

The motor, motor control and gearing are all combined in one compact drive unit.

## Swing-Away

All Magnetic.Toll models are shipped with either a MicroBoom-T (roundboom) or a MicroBoom-S (octagonal boom). Both variants are equipped with a swing-away flange to prevent damages to the barrier / vehicle in case of an unpermitted or forced drive-through. Optionally, a boom contact is available which gives feedback when the boom is missing or swung away.

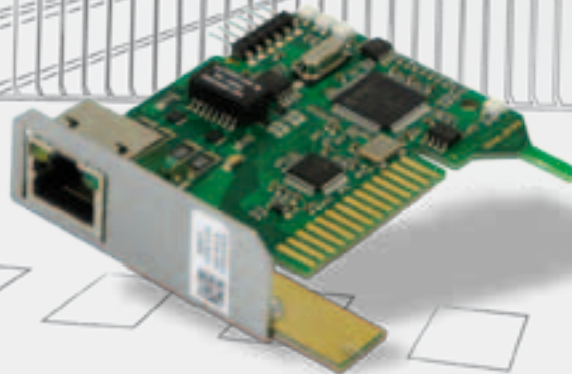


Technical data	Magnetic.Toll	Magnetic.Toll Pro	Magnetic.Toll HighSpeed
Lane width max.	3.0 m	3.0 m	3.0 m
Opening / closing time	1.3 s	0.9 s	0.6 s
Power consumption max.	55 W	95 W	320 W
Duty cycle	100%		
Supply voltage	Wide voltage range 85 - 264 V AC		
Frequency	50 - 60 Hz		
Drive system	MHTM™ MicroDrive		
Housing dimensions (W x D x H)	315 x 360 x 1115 mm		
Weight (without boom)	42 kg		
Housing design	Powder-coated aluminium		
Base frame	Powder-coated stainless steel		
Protection class	IP 54		
Compliant with	2004/108/EG, 2006/42/EG, 305/2011, CE, UL 325	CE, 2006/42/EG, 2004/108/EG	
Temperature range	-30 to +55 °C		

Features	Magnetic.Toll	Magnetic.Toll Pro	Magnetic.Toll HighSpeed
Standard colour	RAL 2000	RAL 2000	RAL 2000
Special painting	○	○	○
Control unit	MGC	MGC	MGC
MGC Pro Control unit	○	○	○
Control unit modularly extendable	●	●	●
MicroBoom-T (Ø 75 mm)	●	●	●
MicroBoom-S (100 x 55 mm)	○	○	○
MicroBoom AT	○	○	○
Swing-Away Flansch	●	●	●
Auto-Swing-Away Flansch	○	○	○
Number of digital inputs	8	8	8
Number of relay / digital outputs	6/4	6/4	6/4
Closing times selectable	●	●	●
Extended accessories	○	○	○
Specified number of cycles	10 Mio	10 Mio	10 Mio
Warranty	2 years	2 years	2 years

- Standard
- Optionally available

- » Plug-in module for MGC Pro control units
- » For controlling the barrier and getting feedback
- » Integrated web server



The Ethernet module is an add-on interface for MHTM™ MicroDrive barriers. It can be plugged directly into the control unit (Plug & Play).

The module allows controlling the barrier and getting feedback via serial ModBus TCP protocol.

An integrated web server allows easy configuration of the module by using an internet browser and additionally provides routines for testing the barrier. Opening and closing the barrier is also possible via browser.

#### Technical data

<b>Current consumption</b>	50 mA
<b>Baud rate</b>	10 / 100 MBit/s
<b>Max. cable length</b>	30 m
<b>Cable type</b>	Cat-5, Twisted-Pair
<b>Connector type</b>	RJ-45
<b>Default IP-Adress</b>	192.168.1.2
<b>Supported protocols</b>	HTTP (Webserver) ICMP (Ping) TCP/IP (ModBus) DHCP Client NetBios





# RS-485

MGC Control Module



- » Plug-in module for MGC Pro control units
- » For controlling the barrier and getting feedback
- » Up to 247 barriers can be networked

The RS-485 module is an add-on interface for MHTM™ MicroDrive barriers. It can be plugged directly into the control unit (Plug & Play).

The module allows controlling the barrier and getting feedback via serial ModBus protocol.

Up to 247 barriers can be connected to a network.

The interface is galvanically isolated. It can be operated in a 2-wire (half duplex) or 4-wire configuration (full duplex).

All interface parameters can be selected via menus of the MGC control unit.

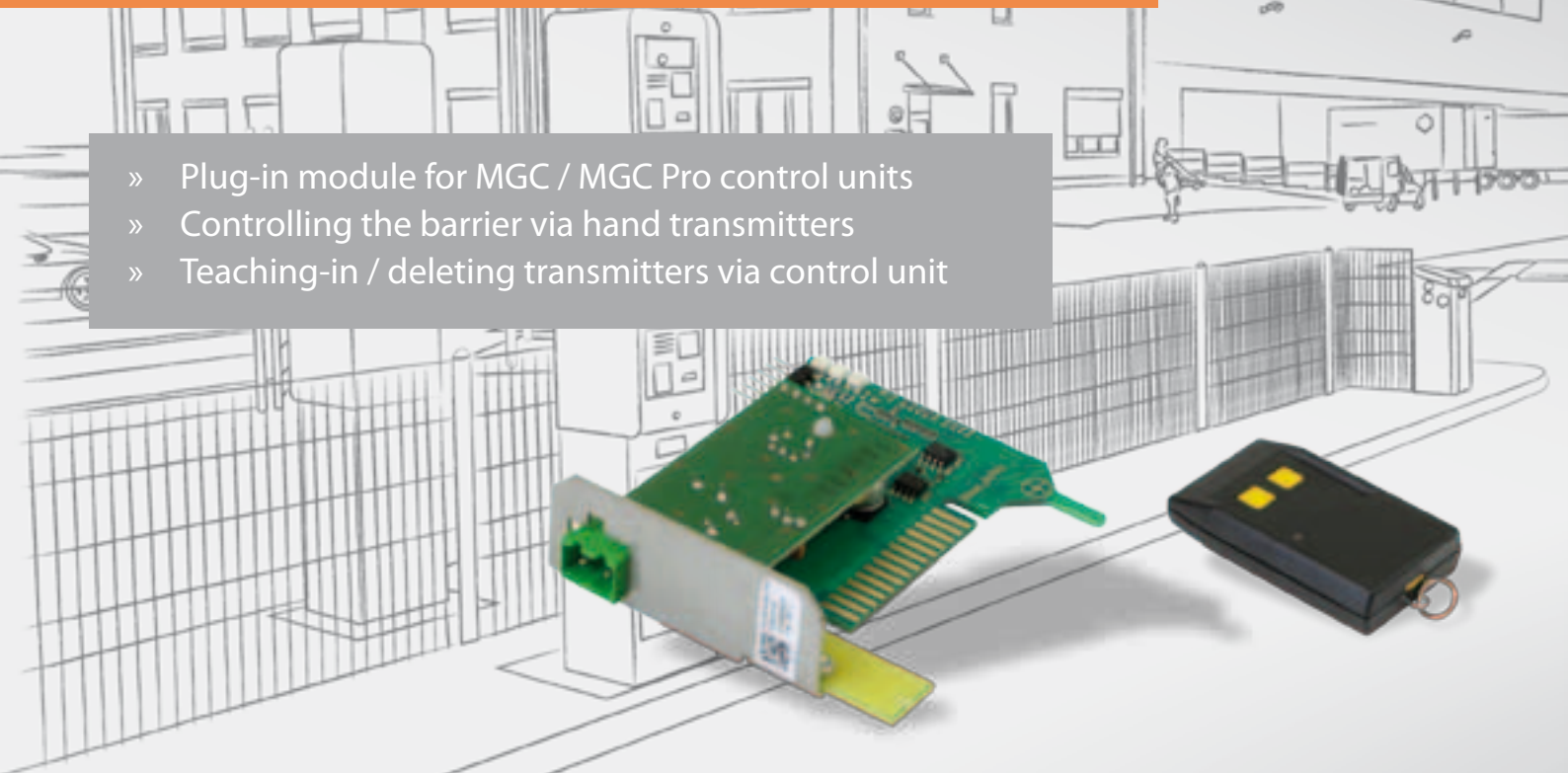
Termination and bias resistors can also be switched on and off via separate menus.

## Technical data

<b>Current consumption</b>	50 mA
<b>Selectable interface parameters</b>	Baud rate, parity, slave address, 2-/4-wire operation, termination and bias resistors
<b>Baud rate</b>	9.600 / 19.200 Baud
<b>Parity</b>	Even, odd, no
<b>Slave address</b>	1 - 247
<b>2- / 4-wire operation</b>	2-wire (half duplex), 4-wire (full duplex)
<b>Cable type</b>	Twisted-Pair
<b>Connector type</b>	Screw terminals
<b>Maximum cable length</b>	1000 m



- » Plug-in module for MGC / MGC Pro control units
- » Controlling the barrier via hand transmitters
- » Teaching-in / deleting transmitters via control unit



The Radio Control Module is a 433 MHz radio receiver for MHTM™ MicroDrive barriers. It can be plugged directly into the control unit (Plug & Play).

The module allows, depending on the selected operating mode, the opening, the opening with high priority and the closing of the barrier via hand transmitters.

Two buttons of a 2-channel or 4-channel hand transmitter can be assigned to a radio control module. For example, the first button can be allocated to the function „open“, the second button to the function „close“.

Teaching in the hand transmitters can be done easily via a menu of the MGC control unit. Deleting individual hand transmitters from the system can be achieved without the hand transmitter being present. Therefore, e. g. lost or stolen hand transmitters can be easily deactivated.

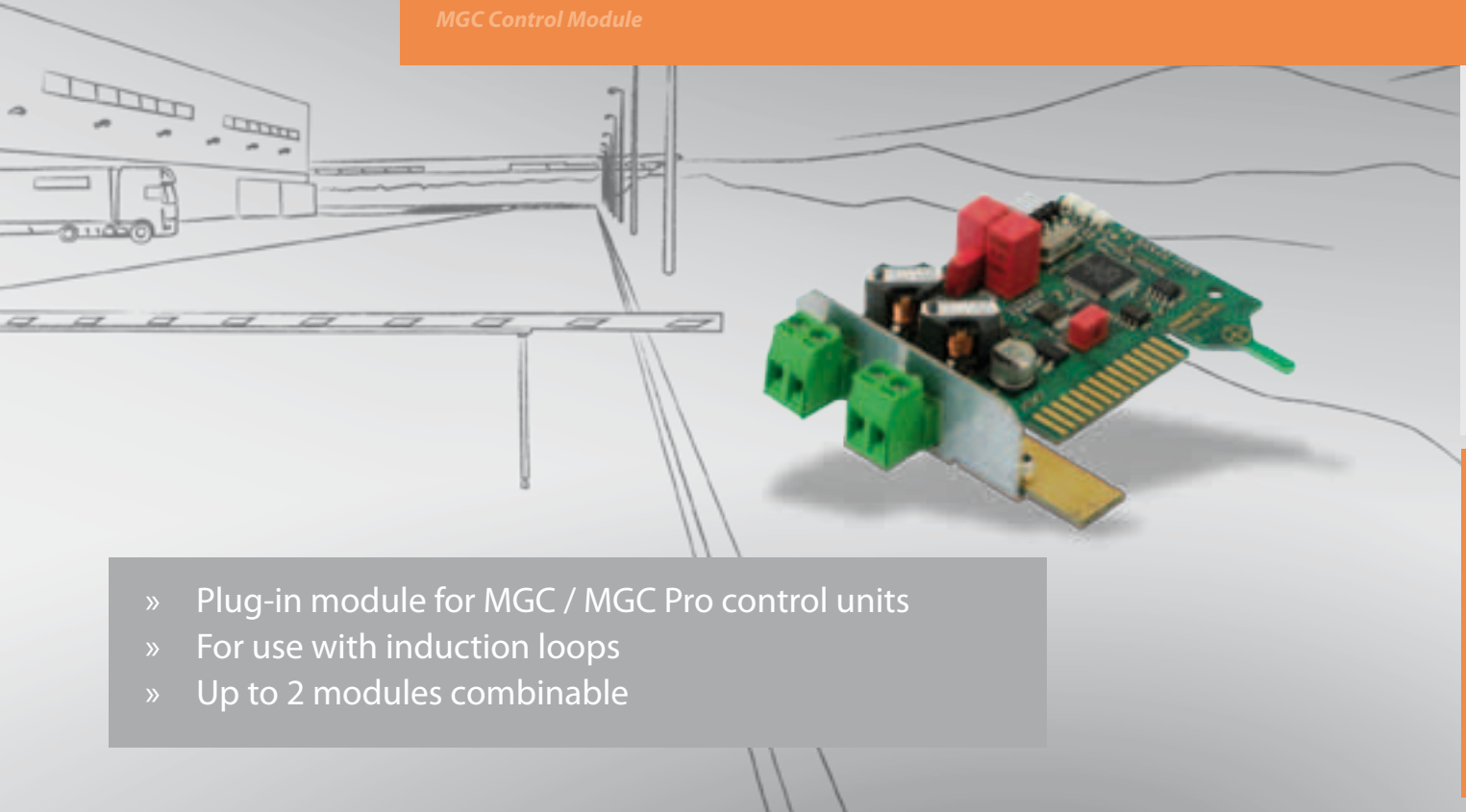
#### Technical data

<b>Current consumption</b>	20 mA
<b>Frequency</b>	433 MHz
<b>HF modulation</b>	FM
<b>Number of storable transmitters</b>	100
<b>Connector antenna</b>	Pluggable screw terminals
<b>Dimensions mini hand transmitter</b>	63 x 38 x 14 mm
<b>Dimensions hand transmitter</b>	95 x 60 x 23 mm



# 2-channel Loop Detector

MGC Control Module



- » Plug-in module for MGC / MGC Pro control units
- » For use with induction loops
- » Up to 2 modules combinable

The loop detector module is a 2-channel inductive loop detector for MHTM™ MicroDrive barriers. It can be plugged directly into the control unit (Plug & Play).

The two loop channels are multiplexed, which means they are powered on in alternation and therefore cross-talk between the loops is prevented. Two detector modules DM02 can be used in a MGC control unit which increases the number of channels to four. Also the multiplex is extended to all channels in this case, so there is no cross-talk between all four loops.

All loop channels (up to 4) can be set up as safety loop, opening loop or presence loop. Also several channels can be assigned to the same functionality.

Parameter settings for all channels can be easily adjusted via menu of the MGC control unit.

The loop frequency of each channel and the frequency change caused by vehicles can be prompted on the display.

### Technical data

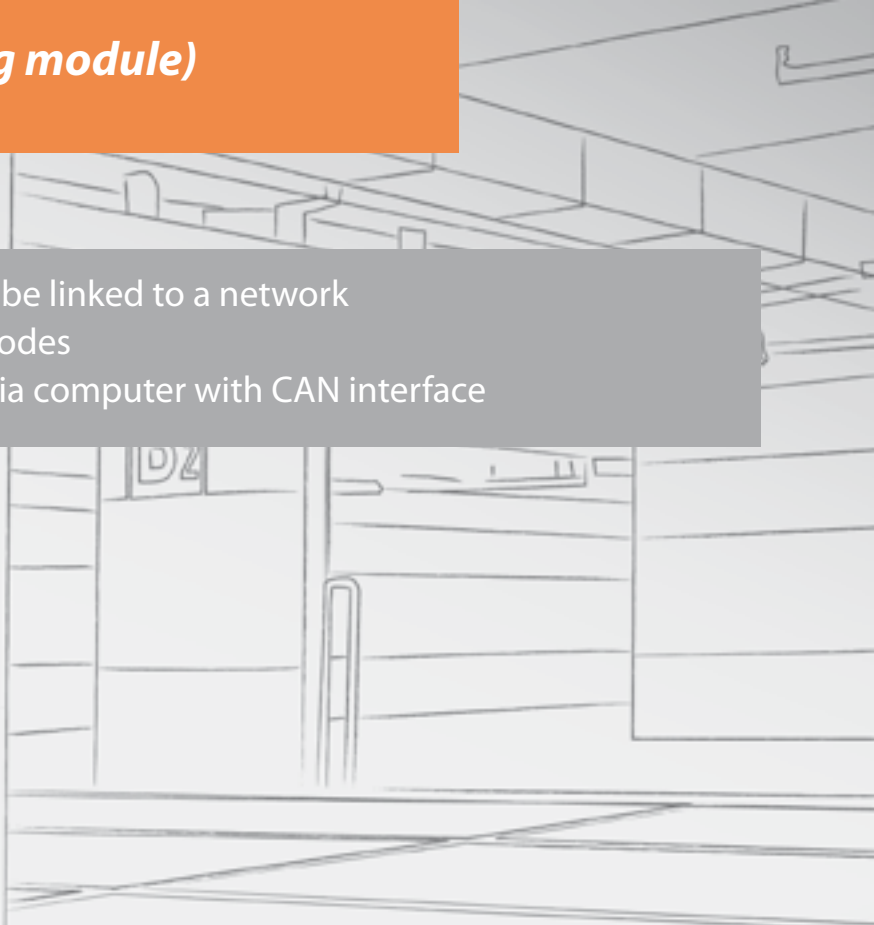
Current consumption	50 mA
Number of channels	2
Inductance range	70 to 500 $\mu$ H
Sensitivity levels per channel	10
Sensitivity range	from 0.01 to 2.0 % $\Delta$ f/f
Frequency ranges per channel	2 (high/low)
Connector type	Screw terminals



# External CAN module (Counting module)

MGC Control Module

- » Up to 32 barriers can be linked to a network
- » Different counting modes
- » Controlling barriers via computer with CAN interface



The external CAN module allows connecting up to 32 barriers via CAN network.

The module is primarily designed for counting vehicles. Therefore, a network is established to exchange the number of vehicles that enter or exit among the barriers.

One barrier is configured as master. It manages the counter values of all barriers that are connected and also controls the "lot full" outputs.

Different counting modes are available which can be easily configured via menus of the control unit:

- » 1 direction counting
- » 2 direction counting
- » Selective counting
- » 1 or 2 zone counting
- » Hysteresis

The vehicle counters can also be set and corrected via a menu. They can also be reset to the defined initial value via an input of the MGC Pro control unit.

The CAN module can also be used to control and to query up to 32 barriers via a computer with CAN interface.

In this case, the counting functionality may be either deactivated or continued in parallel operation.

## Technical data

<b>Current consumption</b>	50 mA
<b>Maximum cable length</b>	1000 m
<b>Interface type</b>	CAN
<b>Termination</b>	via menu
<b>Cable type</b>	1 x 2 Twisted-Pair, screened, 0.75 mm <sup>2</sup>
<b>Connector type</b>	Pluggable screw terminals, max. 2.5 mm <sup>2</sup>
<b>Number of modules in a network</b>	32
<b>Digital output 24V</b>	1



# LED illumination strips

Accessories for the barrier boom

- » Enhanced visibility of the barrier boom
- » Alternative to traffic signal heads

The LED strips illuminate the closing edge of the barrier boom on both sides. They are securely installed underneath the foamed edge protection.

The LED strips vastly enhance the visibility of the barrier boom. Even under poor conditions or at night, the barrier boom may be recognized from a long distance. Compared to an unlit barrier boom, the perceptibility is yet enhanced in broad daylight.

The LED boom lights glow in two colours: In closed condition, the barrier boom shows a steady red light. During the opening and closing process, the LED strips are flashing red, while the open barrier is indicated via a steady green light. With this functionality, an additional traffic signal head is in many cases obsolete.

The whole set includes an additional mounting plate including a supply unit and electrical components (not for Magnetic.Access XXL models).

## Technical data

<b>Protection class</b>	IP 67
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## Variants

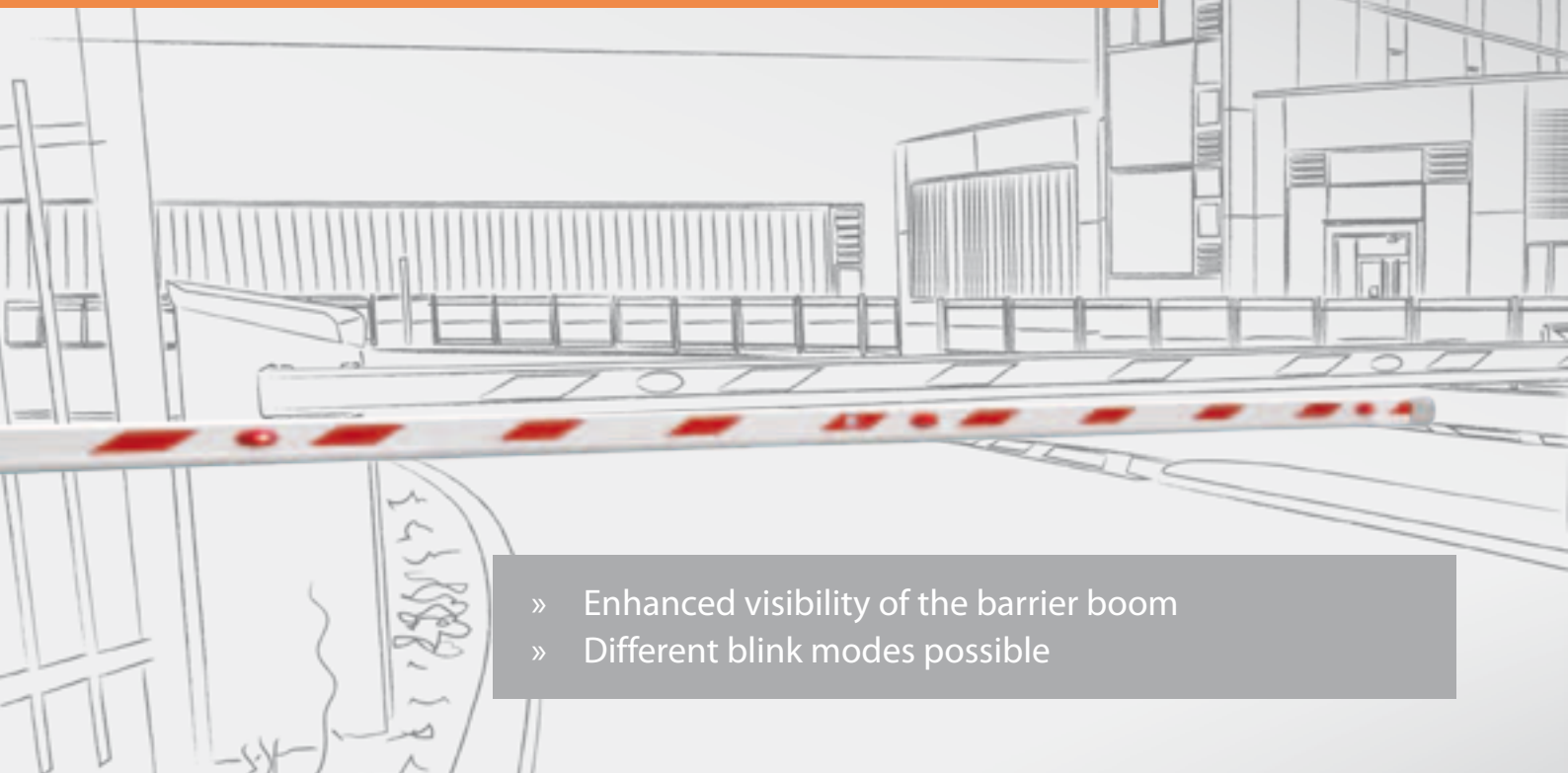
<b>VarioBoom</b>	max. 3.5 m	LEDS11
	max. 6.0 m	LEDS12
<b>Articulated boom</b>	max. 4.5 m	LEDS13
<b>Magnetic.Access XL</b>	max. 6.0 m	LEDS51
	max. 10.0 m	LEDS50
<b>Magnetic.Access XXL</b>	max. 6.0 m	LEDS61
	max. 10.0 m	LEDS60





# Boom lighting

Accessories for the barrier boom



- » Enhanced visibility of the barrier boom
- » Different blink modes possible

These boom lighting sets are red LED lamps that are fixed to both sides of the barrier boom.

The LED lamps vastly enhance the visibility of the barrier boom. Even under poor conditions or at night, the barrier boom may be recognized from a long distance. Compared to an unlit barrier boom, the perceptibility is yet enhanced in broad daylight.

This boom lighting is available in sets of 2, 4, 6 or 10 lamps.

To operate the boom lighting, you can either use the power supply of an existing boom locking set or the separately available supply unit LEDVE24. With this unit, the LED lamps can be operated as continuous lights.

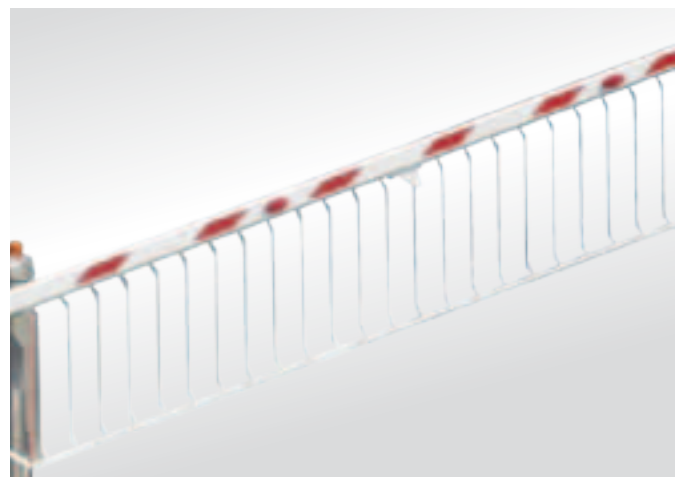
If you prefer to drive the boom lighting via the control unit MGC / MGC Pro, the extension set ESBF01 is required. With this you can use the following functions:

- » Continuous light prior and during the closing movement
- » Flashing light during barrier boom movement
- » Flashing light in closed state and during barrier boom movement

Compared to LED02 to LED10 (all Magnetic.Access and Magnetic.Parking models), the variants LEDX02 to LEDX10 (for Magnetic.Access XL and XXL) provide an enhanced cable set.

## Technical data

<b>Number of LED lights</b>	2 (LED02/LED02X) 4 (LED04/LED04X) 6 (LED06/LED06X) 10 (LED10/LED10X)
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# Extension Set VarioBoom

Accessories for the barrier boom

- » Enhanced visibility and cognition of the barrier boom
- » Easily integrate inlays or warning signs



The Extension Set VarioBoom is designed to increase the visibility and cognition of the barrier boom. Furthermore, it is meant for easy installation of optional available accessories, e.g. inlays or warnings signs.

The set is available in two versions with a clear height of 100 mm respectively 175 mm between the barrier boom profile and the lower profile rail.

The Extension Set is available for all MHTM™ MicroDrive Pro- and Select models with VarioBoom and a maximum lane width of 5.0 m. Please note that installing a support post for barriers with a lane width greater than 3.5 m is mandatory.

The set contains a profile rail with edge protection, an end piece and fixing elements. The combination with a pendulum support or a boom locking unit is not possible.

Optionally available inlay signs made of aluminium may be directly installed between the boom profile and the extension set. This set, comprising two signs and fixing elements, allows individual messages or graphics to be very easily applied using adhesive film, screen printing or other methods.

For individual inlays or attachments, please contact your Magnetic Autocontrol distribution partner before realising your project.

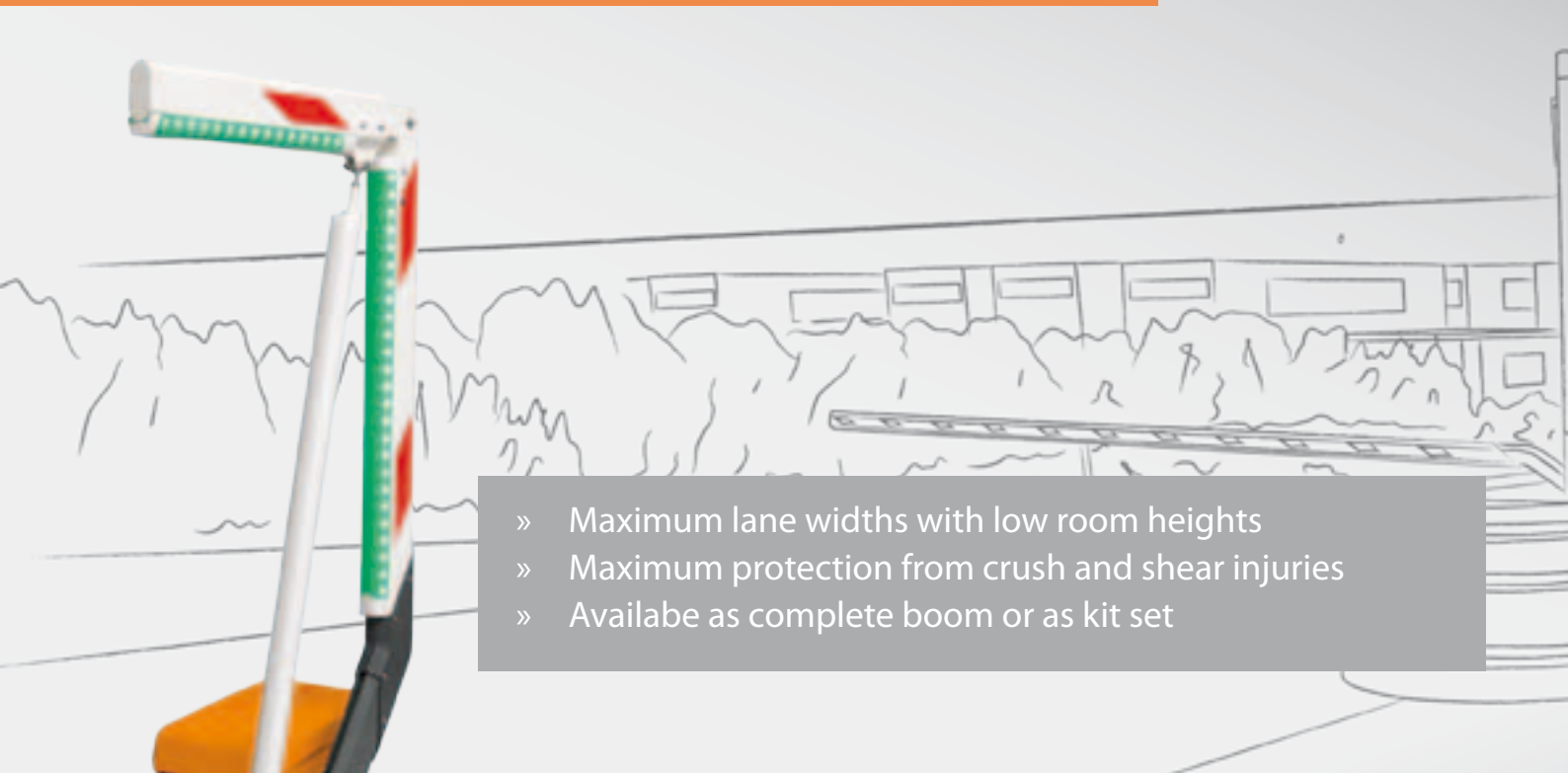
## Technical Data

<b>Clear height between barrier boom and lower profile rail</b>	100 mm respectively 175 mm
<b>Lane width max.</b>	5.0 m
<b>Profile rail</b>	Aluminium, powder-coated in white (RAL9010) with groove for edge protection
<b>End piece</b>	UV-resistant plastic
<b>Inlay signs (optionally available)</b>	Aluminium, powder-coated in white (RAL9010), Height 95 respectively 170 mm, width 750 mm
<b>Fixing elements for inlay signs</b>	Stainless steel



# Articulated boom

Accessories for the barrier boom



- » Maximum lane widths with low room heights
- » Maximum protection from crush and shear injuries
- » Available as complete boom or as kit set

The articulated booms allow a maximum lane width of 4.5 m even with low room heights. The push rod retains the front section of the barrier boom in a horizontal position when the barrier is opened.

The articulated boom is designed for high-frequented use in the parking industry and ensures a hassle-free operation for many years. During the development process of the articulated boom, considerable emphasis was placed on protection from crush and shear injury.

The KBS articulated booms and KBB kit sets are based on the MHTM™ MicroDrive barrier boom VarioBoom.

When ordering an articulated boom KBS, the barrier boom is completely prepared for installation including a built-in hinge and a fixed bracket for the push rod. The barrier housing is supplied pre-drilled for fixing the push rod.

When ordering an articulated boom kit set KBB, the barrier boom needs to be cut to size on site, the hinge fitted and the barrier housing drilled.

KBS and KBB articulated booms are available in different versions for diverse lane widths and room heights.

## Technical data

Lane width max.	4.5 m
Room height max. (depending on model)	2.5 m respectively 3.5 m

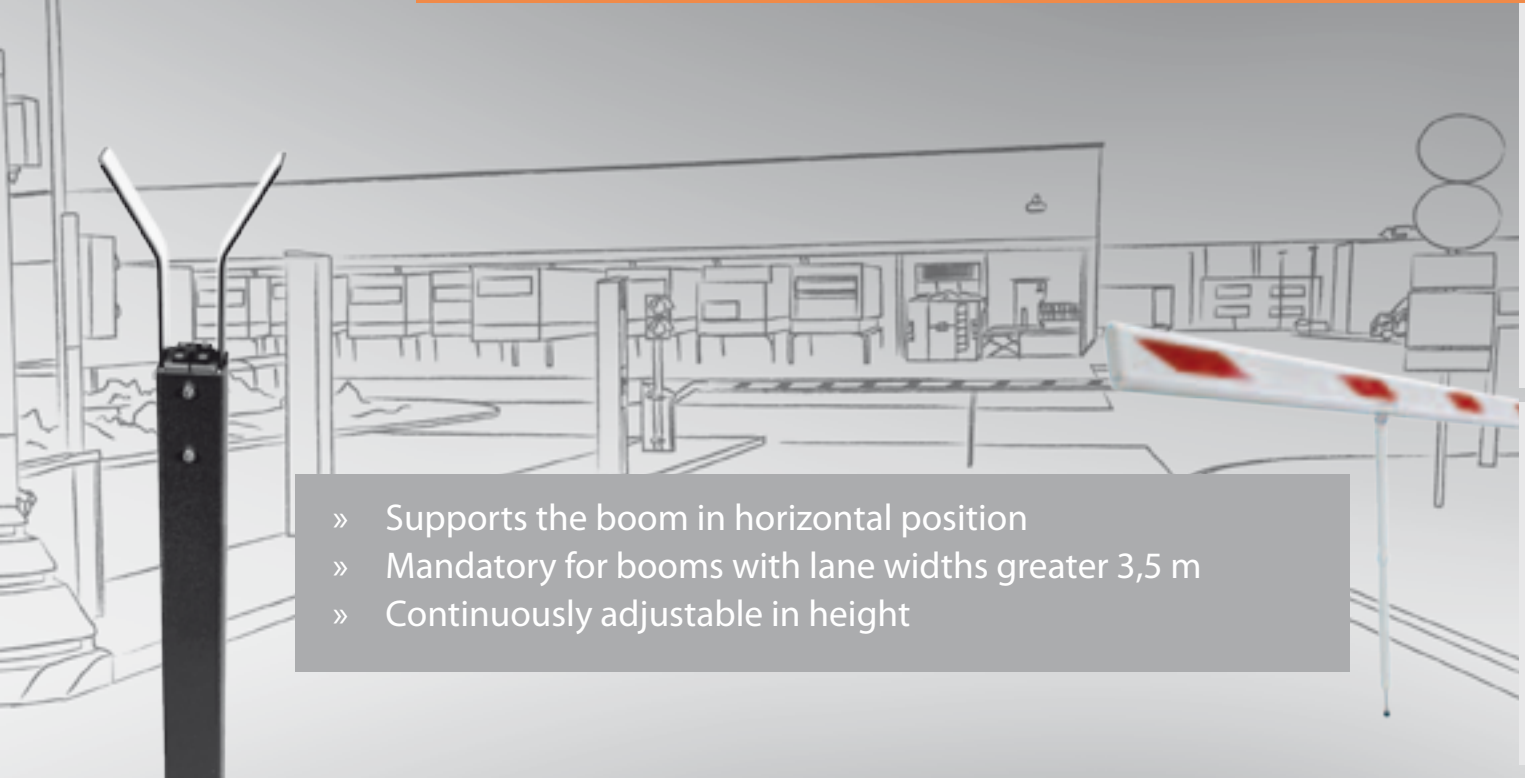
## Models

KBS (complete boom)	Ready-made boom, hinge and bracket assembled, barrier housing prepared
KBB (kit set)	Supplied without preparation of barrier boom and housing



# Pendulum support / Support post

Accessories for the barrier boom



- » Supports the boom in horizontal position
- » Mandatory for booms with lane widths greater 3,5 m
- » Continuously adjustable in height

For lane widths greater than 3.5 m, either a pendulum support or a support post is required.

**The pendulum support** with a built-in suspension mechanism, is designed to cushion the barrier boom when closing and supports the boom in the horizontal position.

The height of the pendulum support is continuously adjustable and may be therefore optimally adjusted to uneven driving surfaces or different installation heights of the barrier and the support post.

The pendulum support PS01 is available for all Magnetic. Access and Magnetic.Parking barriers. In combination with a VarioBoom and the extension set EVBxx or EVBxxL, the shorter version PS02 must be used.

**The support post** is designed to support the barrier boom in the horizontal position. It is protected against corrosion by galvanisation and powder-coating (colour RAL 7043).

Like the pendulum support, the support post is continuously adjustable in height, allowing to be optimally adapted to uneven driving surfaces or different installation heights of the barrier and the support post.

The AP01 support post is available for all Magnetic.Access and Magnetic.Parking barriers. The AP51 support post is required only for Magnetic.Access XL / XXL barriers with a boom length of up to 6.0 m.

The support post can be securely fixed to the ground using the optional available anchor set (BSAP01), containing glue cartridges and screws.



# Boom locking set

Accessories for the barrier boom



- » Protection against forceful opening
- » Integrated into barrier boom
- » Unlocks automatically in case of a power failure

The boom locking set, comprising a support post, locking unit, electrical components and supply unit, offers best protection against forceful opening of the barrier boom.

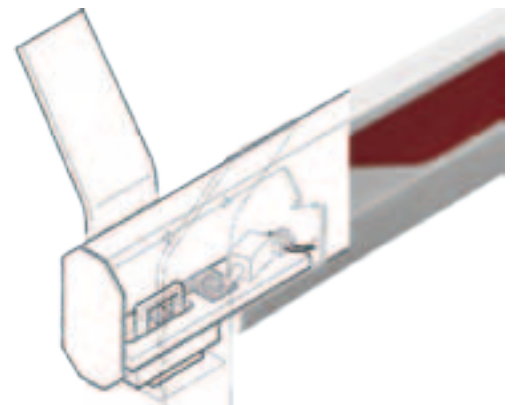
The complete unit and cables are installed in the barrier boom and are led into the barrier housing. This ensures best protection against corrosion, manipulation and vandalism.

In a closed state, current flows through the boom locking. The quantity of heat of the solenoid prevents condensation and corrosion, thus ensuring reliable operation particularly in wintery conditions.

In case of a power failure, the boom locking opens automatically and the barrier boom can be opened manually.

The boom locking set **BV01** is used with all Magnetic.Access barriers except for Magnetic.Access XL and Magnetic.Access XXL models.

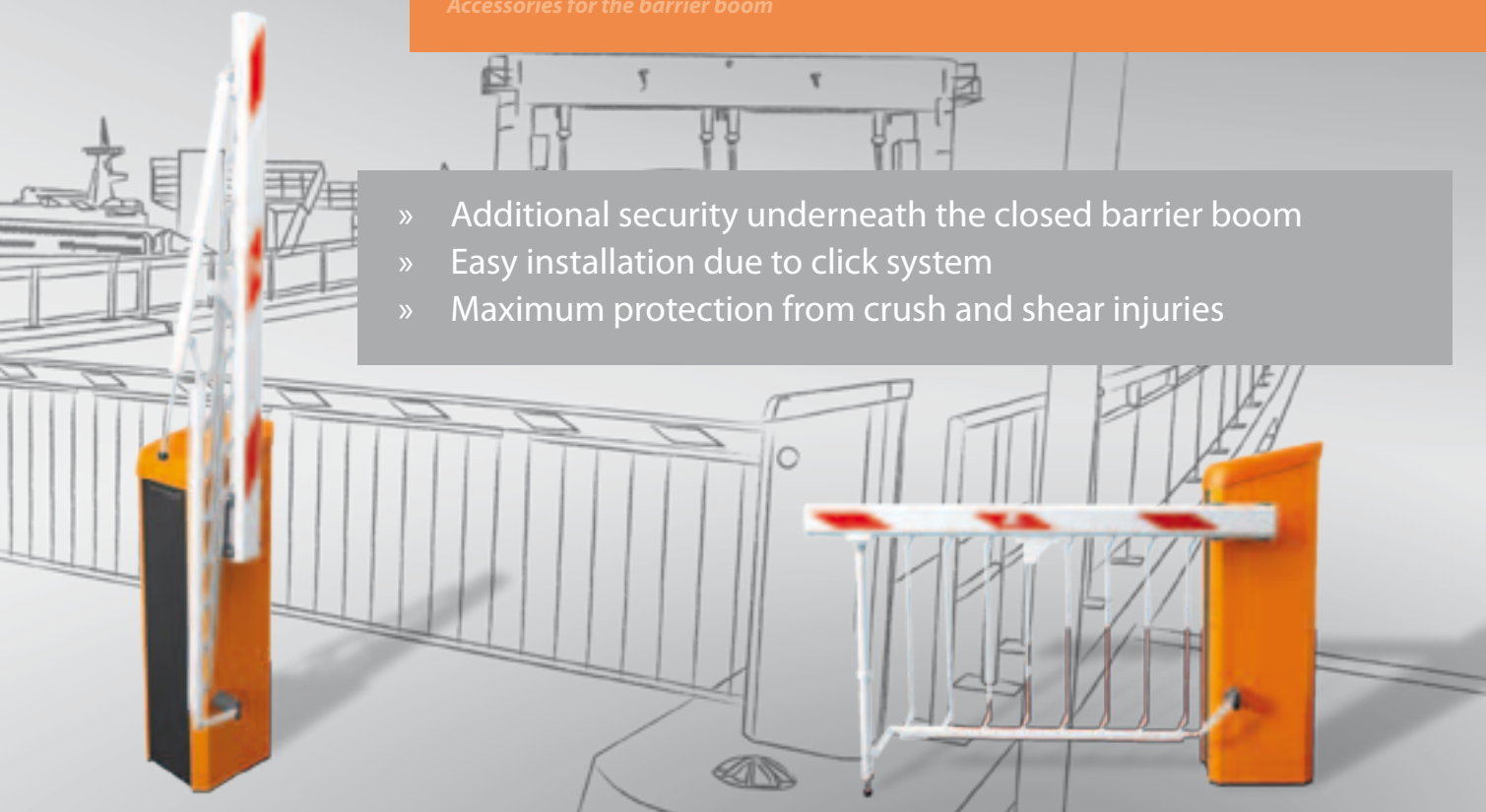
For Magnetic.Access XL / XXL barriers with a lane width greater than 6.0 m, the boom locking set **BV50** is required. The boom locking set **BV51** is required for Magnetic.Access XL and Magnetic.Access XXL barriers with lane widths up to 6.0 m. The BV51 includes a special support post with a bigger support fork to accept the boom profile used for lane widths up to 6.0 m.



## Boom skirt

Accessories for the barrier boom

- » Additional security underneath the closed barrier boom
- » Easy installation due to click system
- » Maximum protection from crush and shear injuries



The boom skirt GS01 provides additional security underneath the closed barrier boom. It is available as an option for MHTM™ MicroDrive.Access Pro-H barriers, Magnetic.Access XL, Magnetic.Access XXL.

The skirt elements made of plastic and aluminium can be installed on-site without tools due to a simple click system. Single skirt elements can be easily replaced using a provided tool.

The boom skirt has a robust guiding rod and operates smoothly and almost silently.

When opening the barrier, the boom skirt folds up to lie parallel to the barrier housing. Due to the folding mechanism almost the entire lane width is available.

During the development process of the boom skirt, considerable emphasis was placed on protection from crush and shear points. As a result of the S-shape and elasticity of the boom skirt elements, the risk of injury during operation is reduced to a minimum regardless of the barrier position. The bottom rail profile is also provided with foamed edge protection, further enhancing the safety.

A pendulum support or support post is mandatory for barrier booms with a boom skirt. The maximum lane width with a pendulum support is 5.0 m, with a support post it is 5.5 m for Magnetic.Access Pro-H models.

The maximum lane width of Magnetic.Access XL models with a skirt is 8.5 m, for Magnetic.Access XXL models it is 10.0 m.

The boom skirt is a registered design.

### Technical data

Floor clearance (where barrier is fitted at lane height)	175 mm *
Height of upper edge of barrier boom	925 mm
Distance between boom skirt elements	113 mm
Maximum lane width with pendulum support	5.5 m
Maximum lane width with support post	6.0 m
Static load-bearing capacity, vertical	150 kg/m
Protrusion in lane area when open without a pendulum support	108 mm
Protrusion in lane area when open with a pendulum support	275 mm

\* When installing the barrier, please ensure a minimum distance of 275 mm is maintained between the road surface and the boom edge protection. This can be achieved by installing the barrier on a plinth or traffic island with a minimum height of 100 mm.

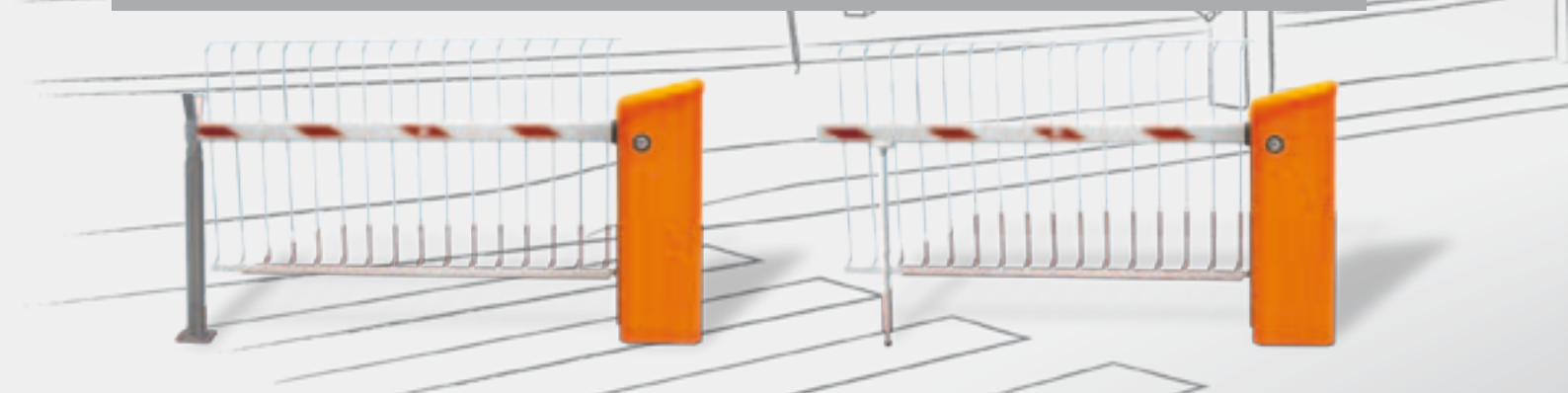




# Boom skirt with over-climb protection

Accessories for the barrier boom

- » Additional security above and underneath the closed barrier boom
- » Easy installation due to click system
- » Maximum protection from crush and shear injuries



The boom skirt with over-climb protection provides additional security above and underneath the closed barrier boom. It is available in two variants with a height of 1.3 m and 1.8 m.

The boom skirt with over-climb protection is available as an option for Magnetic.Access Pro-H, Magnetic.Access XL and Magnetic.Access XXL barriers.

The skirt elements made of plastic and aluminium can be installed on-site without tools due to a simple click system. Single skirt elements can be easily replaced using a provided tool.

The boom skirt has a robust guiding rod and operates smoothly and almost silently.

When opening the barrier, the boom skirt folds up to lie parallel to the barrier housing. Due to the folding mechanism, almost the entire lane width is available.

During the development process of the boom skirt, considerable emphasis was placed on protection from crush and shear points. As a result of the S-shape and elasticity of the boom skirt elements, the risk of injury during operation is reduced to a minimum regardless of the boom position. The bottom rail profile is also provided with a foamed edge protection, further enhancing safety.

A pendulum support or a support post is required for barrier booms with a boom skirt. The maximum lane width for Magnetic.Access Pro-H barriers with a pendulum support is 4.3 m, with a support post it is 4.7 m (GUE01). The maximum lane width for GUE02 with a pendulum support is 4.0 m, with a support post it is 4.5 m. For Magnetic.Access XL and XXL models, the maximum lane width is 6.0 m (GUE50 / GUE 51).

The boom skirt is a registered design.

Dimensions	GUE01	GUE02	GUE50	GUE51
<b>Floor clearance (where barrier is fitted at lane height)</b>	175 mm*	175 mm*	175 mm*	175 mm*
<b>Height of upper edge of barrier boom</b>	1.3 m	1.8 m	1.3 m	1.8 m
<b>Distance between boom skirt elements</b>	113 mm	113 mm	113 mm	113 mm
<b>Maximum lane width with pendulum support</b>	4.3 m	4.0 m	6.0 m	6.0 m
<b>Maximum lane width with support post</b>	4.7 m	4.5 m	6.0 m	6.0 m
<b>Static load-bearing capacity, vertical</b>	150 kg/m	150 kg/m	150 kg/m	150 kg/m
<b>Protrusion in lane area when barrier is open</b>	82 mm	82 mm	82 mm	82 mm

\*When installing the barrier, please ensure a minimum distance of 275 mm is maintained between the road surface and the edge protection. This can be achieved by installing the barrier on a plinth or traffic island with a minimum height of 100 mm.





## Break-away flange

Accessories for the barrier boom

- » Protection from damages of the barrier boom
- » Easy re-installation of the barrier boom upon accident

The flange set FLVB02 is designed especially for the parking industry. It enables the ejection of the whole barrier boom after it was hit by a vehicle.

Afterwards, the barrier boom can be simply re-installed without no subsequent impairment of function.



- » Easily update the software of the control unit
- » Read-out and save barrier configurations



The Service module is a multifunctional tool for MHTM™ MicroDrive barriers. It is being connected to the service port of the MGC-/MGC Pro controller by means of a cable.

It is primarily being used to download software packages to MGC-/MGC Pro controllers. Additionally, it is possible to read out and save parameters and transfer them to other controllers. Plus, saved error messages can be read-out from the MGC/MGC Pro control units.

Due to a data logger functionality, the internal communication within a time frame of several day can be recorded. This data may be used to localize sporadically occurring errors.

Software updates for MGC-/MGC PRO controllers can easily be transferred from a PC to the Service Module via USB. The Service module is recognized under Windows as a removable disk drive. No special hardware drivers need to be installed.

The Service module is either powered by the service port of the MGC-/MGC Pro controller or via USB. Thus, no additional power supply is necessary.

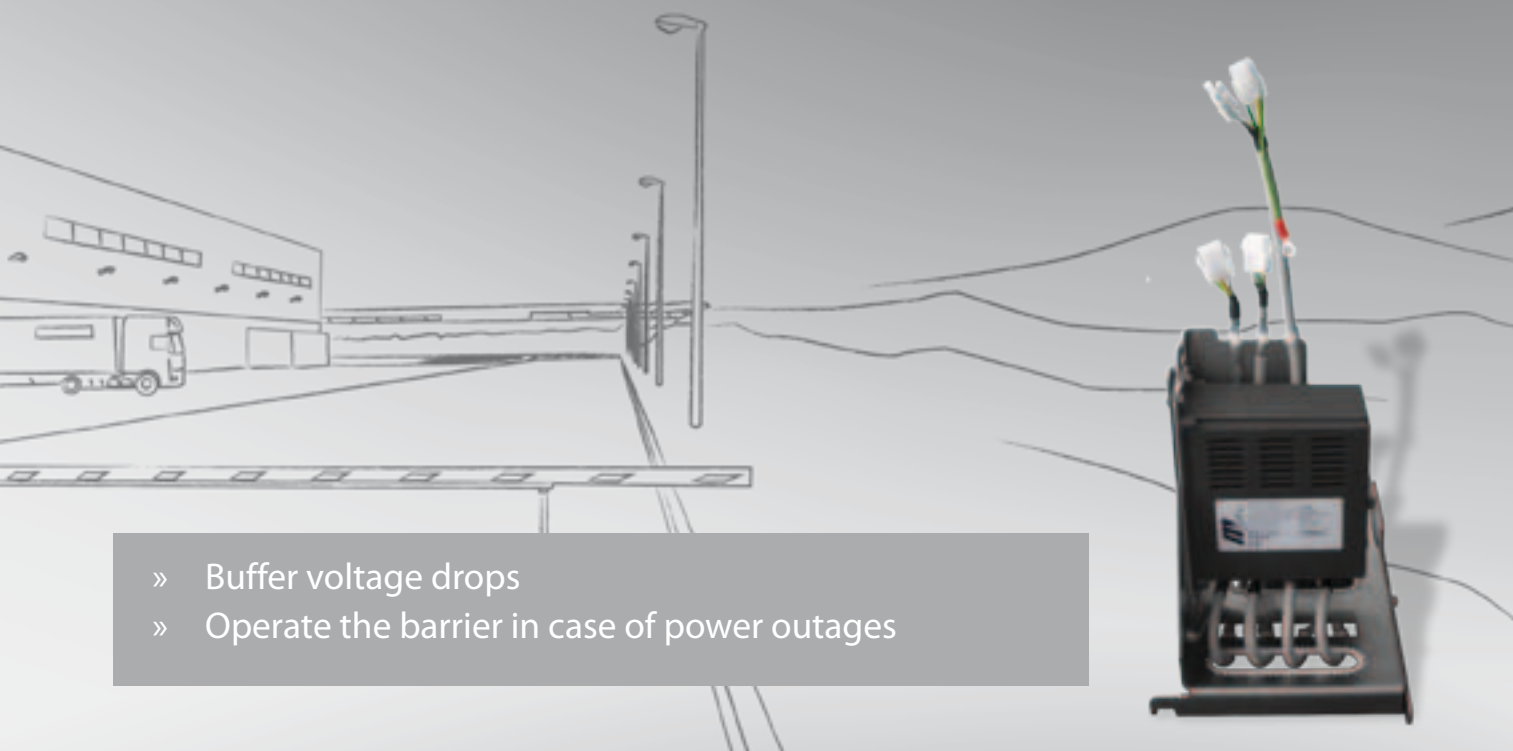
#### Technical data

<b>Power supply</b>	via USB or CAN
<b>Interface ports</b>	USB, CAN (service interface port MGC)
<b>Electrical separation</b>	CAN-interface, galvanically isolated
<b>Operating controls</b>	1 push-button, 3 status LEDs
<b>CAN termination</b>	sliding switch



# Battery Backup

MHTM™ MicroDrive accessories



- » Buffer voltage drops
- » Operate the barrier in case of power outages

The battery backup is a battery buffering system for MHTM™ MicroDrive barriers.

It allows buffering voltage drops so that the barrier stays operational. In case of longer power outages the MHTM™ MicroDrive barriers can be operated over a time period of several hours with a large number of barrier cycles.

The BAT is a complete kit set comprising an additional power supply, a battery support frame and a set of cables. It is installed in the secondary circuit of the barrier's supply between the standard barrier power supply and the logic controller respectively the motor.

The battery supply is realized by two maintenance-free lead batteries. These are separately available as kit set BAT-AK010.

The charging circuit for the lead batteries is temperature controlled by an external sensor.

The system is protected against over voltage, short circuit and open circuit.

The Battery Backup BAT010 can be used with all MHTM™ MicroDrive barriers with VarioBoom in the lower barrier housing. For barrier types with MicroBoom in the tall housing, e.g. Magnetic Access Pro-H, an adjusted variant BAT011 has to be used.

## Technical data

<b>Input voltage</b>	21 - 26 V DC
<b>Input voltage batteries</b>	18 - 30 V DC
<b>Output voltage</b>	24 V DC ± 10%
<b>Output power nominal</b>	24W + 30 W
<b>Output power maximum</b>	24 W + 240 W
<b>Efficiency</b>	~ 82 %
<b>Charging current batteries</b>	limited to 200 mA
<b>Ambient temperature power supply</b>	-30 bis +70°C
<b>Ambient temperature batteries</b>	-15 to +50°C charge -20 to +60°C discharge



# Traffic signal heads

MHTM™ MicroDrive accessories



- » Enhanced visibility of open/closed barrier booms
- » Available with filament lamps or with LED technology

The traffic signal heads are mainly used to increase the visibility of closed or opened barrier booms, particularly when combined with a preceding red signal when closing. They can also be used as two-way traffic light, e.g. with rolling shutters.

The traffic signal head SIGNAL1 offers one aspect, the SIGNAL2 has two aspects.

Both types of traffic signal heads are available either with filament lamps or with LED technology. Filament lamps are available in 40 W and 75 W versions.

Available accessories include a mounting kit for installation at the barrier housing and two different mounting posts with different heights as stand-alone solution.

When controlling the signal heads via the control unit of the barrier, the additional relay set is required.

The traffic signal heads can be used in combination with all MHTM™ MicroDrive barriers.

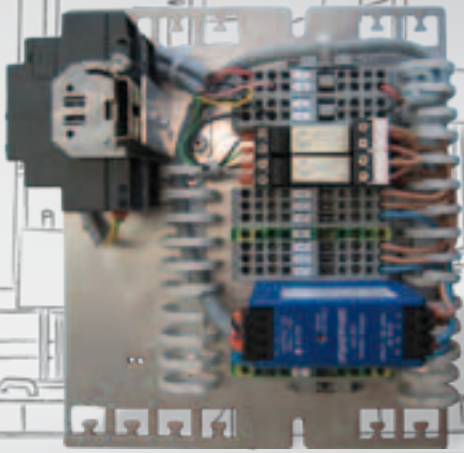
## Technical data

<b>Diameter of aspects</b>	210 mm
<b>Material</b>	UV-stabilised polycarbonate
<b>Front colour</b>	black
<b>Housing colour</b>	RAL 7023



# Two-Way Traffic Light Control

Accessories for the barrier boom



- » Traffic control for single lanes
- » Autonomous control unit

The two-way traffic light control enables traffic to be controlled on a single lane with two traffic signal heads (red / green).

The use is only permitted in non-public road traffic.

The two-way traffic light control is an autonomous control unit that is not linked to the operation of the MHTM™ MicroDrive barrier.

The PLC-based control unit can be configured to set the lengths of the red and green phases as well as a specified delay time for both sides.

The requests of the green phases for both directions are handled via two digital inputs. Three additional digital inputs enable the selection of different operating modes. Thus, it is for example possible to define a preferential direction for entry or exit.

The two traffic signal heads are interlocked via two external relays so that a green phase on both sides is impossible.

The control unit is pre-wired on an additional mounting plate including a supply unit for installation in an MHTM™ MicroDrive barrier. The only things to be done are connecting the traffic signal heads and the five digital inputs.

## Technical data

<b>Power supply</b>	85-264 V, 50-60 Hz
<b>Power consumption max. (without traffic signal heads)</b>	max. 2 W
<b>Digital inputs</b>	Quantity: 5 Voltage: 24 V DC Current: < 1.5 mA
<b>Outputs for traffic signal heads</b>	Quantity: 4 Switching voltage: 250 V AC Switching current: max. 8 A





# Desk panels

MHTM™ MicroDrive accessories



- » Control MHTM™ MicroDrive barriers
- » Ideally suited for front desk operation

The desk panels are designed to control all MHTM™ MicroDrive barriers.

The barrier boom can be opened or closed via two push buttons. An additional switch enables users to put the barrier into the “permanently open” position.

Built-in LEDs indicate the status of the barrier boom: green indicates an open barrier boom, red stands for closed.

The desk panels can be used in all operating modes of the barrier.

There are four different versions of the desk panel available: for controlling one barrier (PG01), two barriers (PG02), three barriers (PG03) or four barriers (PG04).

The desk panels provide a dedicated 3 m connection cable for each barrier. Thus, the connection with existing sockets can be easily accomplished.

If required, multiple desk panels from different locations can be simultaneously connected connected to the control unit of the barrier.

## Technical data

Dimensions (LxWxH)	190 x 138 x 53 mm
Weight	approx 200g
Cable length	3 m each
Control elements per barrier	2 push buttons, 1 switch
Display elements per barrier	1 LED green, 1 LED red
Protection class	IP 40





# GSM Gate Controller

MGC Control Module



- » Remotely control the barrier over GSM network
- » Get status feedback via SMS
- » Control access according to schedules

The GSM Gate Controller GSM10 for MHTM™ MicroDrive barriers is a micro-controller based relay device intended to remotely open/close barriers over GSM network:

- » Control of traffic barrier, e.g. for residential or hotel parking lots.
- » Automated feedback of e.g. barrier boom position, barrier faults, etc.

When a call is made to the number of the SIM card inserted in GSM10, it checks if the number of the caller is recorded in the memory. If it is one of five administrator numbers or the number exists in the user database, the system rejects the call and turns on the output for the preset period. For this action, no expenses are incurred. If the number is not recognised, GSM10 will not respond.

The GSM switch can also operate automatically according to a scheduled time or by sending a text message from administrator's phone number.

There are two ways of configuration: SMS messages and/or with PC configuration tool over USB cable.

## Technical data

Supply voltage	24V DC
Current used in standby mode	less than 50 mA
GSM modem frequency	850/900/1800/1900 MHz
Number of outputs	1
Output type	NO (relay)
Number of "low" level (negative) inputs	2
Number of "high" level (positive) inputs	1
Relay output maximum commutating values	24V DC, 1 A
Dimensions (WxHxD)	70 x 85 x 57 mm
Operating temperature range	-20 to +55 °C
Number of administrators	5
Number of users	500

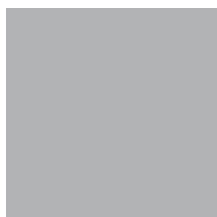
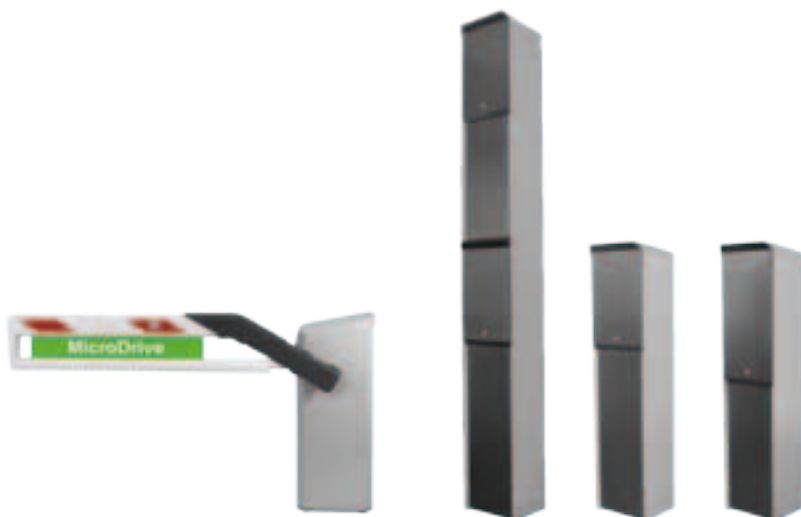


# Standard colour

MHTMTM MicroDrive and TERMINAL



<b>Colour description</b>	Orange (RAL 2000)
<b>Finishing</b>	Powder-coating
<b>Powder manufacturer</b>	IGP Pulvertechnik AG
<b>Standard colour for</b>	All MHTM™ MicroDrive barriers and Terminal control columns



<b>Colour description</b>	White aluminium (similar to RAL 9006)
<b>Finishing</b>	Powder-coating
<b>Powder manufacturer</b>	IGP Pulvertechnik AG
<b>Standard colour for</b>	All MHTM™ Microdrive Pro and Select models and Terminal control columns



<b>Colour description</b>	Grey aluminium (similar to RAL 9007)
<b>Finishing</b>	Powder-coating
<b>Powder manufacturer</b>	IGP Pulvertechnik AG
<b>Standard colour for</b>	All MHTM™ Microdrive Pro and Select models and Terminal control columns



<b>Colour description</b>	Anthracite (similar to RAL 7021)
<b>Finishing</b>	Powder-coating
<b>Powder manufacturer</b>	IGP Pulvertechnik AG
<b>Standard colour for</b>	All front and back doors of MHTM™ MicroDrive barriers and Terminal control columns
<b>Note</b>	The colour of the extractible front panel of the control columns is generally anthracite (similar to RAL 7021).



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