Info magnetic AUTOCONTROL

Control Units MAGTRONIC

MLC

Technical data:	Unit	MLC 10	MLC 11*
Voltage (+/- 10%)	Volt	100 – 240	100 – 240
Frequency	Hertz	50 – 60	50 – 60
Max. Power consumption	Watt	20	20
Fuse	Value	F4A H	F6.3AH
Input	Amount	5	5
Output, open collector	Amount	2	2
Relay, centre-zero	Amount	2	2
Internal extension bus	Type	I² C	I² C
Display	Characters	16	16
Display	Languages	D-E-F	D-E-F
Detectors	max. number	2	2
Inductivity range	mH	70 – 500	70 – 500
Sensitivity	Steps	10	10
Selectable reaction sensitivity	%	0.01 – 2	0.01 – 2
Temperature range	° C	0 – 55	0 – 55
Protection type	IP	20	20
Weight	Gram	950	1.050
Weight	L-W-H	200 x 75 x 118	200 x 75 x 118

* The barrier model MIB 20 can only be driven with the MLC 11 (exposed heat sink)

The MLC Control device

The MLC (Magnetic Lane Controller) was especially developed as a dedicated control device for the new generation of barriers MIB 20-30-40 and is based on the most modern microprocessor technology. Many years of experience have come together to form the design of the hardware and software.
Tried and tested functions have been borrowed from the well-known MCU and MUB control devices, which have been extended by the addition of 16 digit display, two loop detectors and a PC bus interface.
This interface permits communication with the new Magnetic I/O box and with other interface modules (RS485).
The barrier motor itself is driven by triac end stages, contact-free and completely free of wear.
The integrated universal electronic power supply is of particular advantage as it offers a voltage range of 100–240 V at 50-60 Hz.
A special barrier angle sensor is mounted on the driven shaft of the barrier motor, which communicates the exact boom position to the MLC control device. This removes the need for the limit switches which are normally necessary to communicate the angle of the barrier boom and for the switches which normally activate the electronic braking mechanism. The combination of the sensor and braking parameters programmed into the MLC guarantee the optimum braking characteristics every time for all types of barrier.
It is especially important in the case of rapid barrier movements that the centrifugal mass is braked before the end position is reached. This results in substantially less wear to the gears which guarantees a high mechanical service life. Any bouncing of the barrier boom in the end position is also excluded.
When the current returns, the control device recognises the position that the barrier currently has. Depending on the parameters which have been loaded, the control device reacts in one of three ways: open, retain position, or close.
A large number of customer suggestions have been integrated in the basic software PLC 100S-xxxxx.

- max. 2 loop detectors
- direction recognition, park difference calculation
- reset function upon current return
- safety loop cut-out
- traffic light control
- feedback info whether OPEN or CLOSED
- service hour counter
- barrier opening cycle counter

Technical System

The control unit is built into a plastic box. The two removable terminal strips allow a simple and quick mounting or disassembly of the unit. The housing is clipped directly onto a normed rail.
The 16 digit display is clear and easy to read. With the rotary switch and two input keys, the control unit can be easily reprogrammed.

Software

The basic software package with the PLC 100S-X0000 parameter set offers a great range of programming possibilities. The following functions and variables can be selected and changed very simply using the rotary switch and the two keys:

- language
- barrier type
- MUB only function (spare)
- self-learning mode – reference swing
- operating mode 1–8
- loop disconnection via the boom angle (safety)
- duration of open phase
- torque period
- loop active yes/no
- loop function
- loop sensitivity
- relay switching function
- default set

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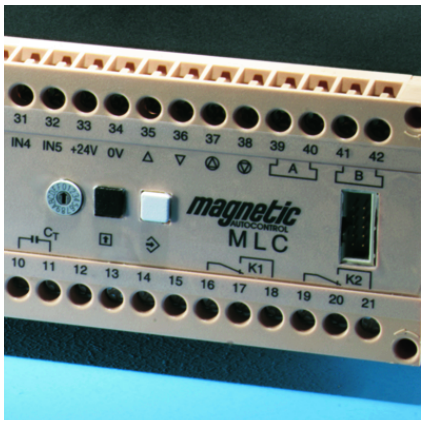
User instructions are given in the display in the desired language.

To aid servicing, the following information can be displayed:
- number of barrier opening cycles
- service hour counter
- error diagnosis

Extended functions are available from us. These parameter sets are either supplied factory-programmed or as compact parameter 'smart cards'. The new parameters can be loaded into the MLC control unit via the PC bus without having to open the device. The great advantage of this is that only one control unit equipped with the basic software is needed for all functions. This keeps the costs arising from keeping spare parts to a minimum.



Detector

Depending on the parameter set in use, up to two induction loops can be connected to the MLC control unit. The loop sensitivity is adjustable over ten steps per detector channel.
The loop frequency of the selected channel is shown in the display in Hz. The loop functions can be selected from:
- off
- safety
- presence
- open
- impulse service
- constant service

If the MLC is to be used as a replacement for an MUB, this can be selected via the main menu. The MLC will then be 100% compatible with the original MUB-100.

Inputs

The 5 opto-decoupled inputs fulfil the following functions using the standard parameter set:
Input 1 = external open
Input 2 = open high-ranked
Input 3 = external close
Input 4 = no function
Input 5 = photoelectric barrier

Outputs

Two open collector outputs (24V DC) for open/closed status information have the purpose of controlling the external Magnetic control panel.
Output 1 = barrier open
Output 2 = barrier closed

Center-zero multifunctional relay

Maximum load = 250V AC / 3A.
Relay 1 = open sliding door or detector function channel A
Relay 2 = counting impulse or detector function channel B

Further functions are available for all inputs and outputs from additional PLC1005-xxxxx parameter sets.

Parameter Set

The desired basic parameters are activated within the parameter set, which at the same time determines the function of the control unit. The parameter sets can also be supplied in smart cards.

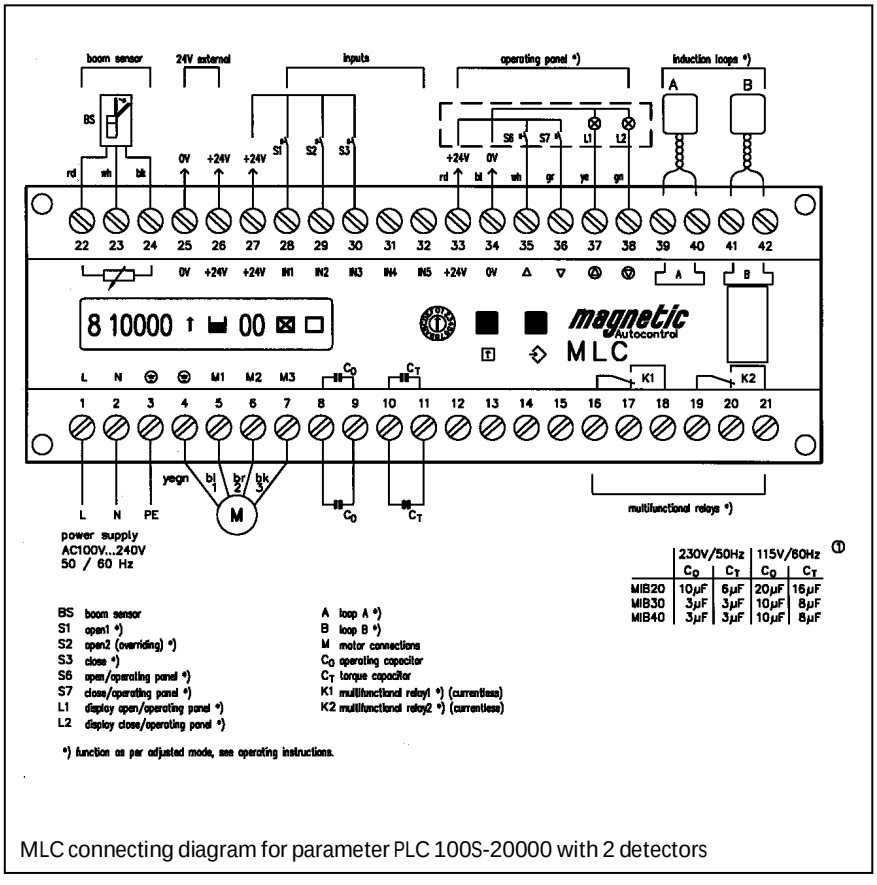
Extensions

If the number of inputs and outputs is insufficient for complex applications, the Magnetic I/O box can be connected via a flat band cable. This box is always needed for the park difference counting function.
The external Magnetic control panel with manual control and the open/closed status display can also be connected to the MLC.

PLC 100 S - 2 9 000
- consecutive numbering
- country specific programme USA
- two active detectors
- Schopfheim
- programme 100
- parameter lane controller

Certification:

In accordance with requirements for the CE symbol
DIN guidelines including EN 50 204, EN 292, EMV
Magnetic is certified to ISO 9001.



MLC connecting diagram for parameter PLC 100S-20000 with 2 detectors

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