MAC 340

The fixed mounted Data Matrix ECC 200 and Pharmacode Reader for product identification or online data recording

High speed reading – in the most compact way

The MAC 340 has been developed to read at very high transport speeds.
The following performance data is achieved, through a Data Matrix code with a symbol size of 16 x 16 and a minimum modul size of 0,35 mm:

- 25 evaluations per second
- 6 m/s transport speed of object
- omnidirectional reading
- progressive scanning
- processing of 256 grey values; adaptive grey value threshold

Data Matrix ECC 200
26 x 26 Module

DSP for higher performance

The digital signal processor works in real time. This means, a processing rate of approximately 150 million instructions per second.
Decoding and Data supply-takes place in the reader. Extensive external processor performances are not necessary.

Omnidirectional reading

The MAC 340 reads Data Matrix code omnidirectionally. The fixing of cylindrical objects e.g. bottles, vials, cans etc. with codes on the lids is no longer necessary. The code will always be read as long as the image area is sighted. The Finder Pattern, a special feature in the Data Matrix code, allows the MAC 340 reader to determine the position and arrangement of the code

Glossy surfaces? -the solution is built in!

High gloss surfaces reflect the emitted light back to the receiver. The usual reading at an angle compensated this but the loss of depth of field and symbol distortion, reduced the functional capacity.
The MAC 340 has a built-in optical anti-mirror system making these measures unnecessary.

Ambient light ? - no problem !

The high-energy flash of the MAC 340 is exactly synchronised with the camera functions and the trigger signal.
Only 27 microseconds are sufficient to “freeze” the picture. This short flash period also reduces light pollution and therefore prevents negative effects to the human eye.
The solid state light source is not subject to deterioration. Heat generation and power consumption are reduced to a minimum.

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DATA SHEET

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Flexible interface – speedy data transfer

Fast production requires even faster data transmission.
The MAC 340 reader makes not only the physical interface RS 232 available and allows for the adaptation of different protocols, but also achieves transfer rates of 115 kbaud under real conditions.

Adjustment and so on...

A VGA-monitor output is provided to connect a standard PC-monitor.
The image of the MAC 340 can be displayed continuously and in real time. Besides the optical adjustment aid of the MAC 340, the quality of the picture taken by the device can be exactly evaluated.

Optical module - 90° turnable

The mechanincal adjustment of the MAC 340 is very simple. The optical module, consisting of light source, optic and CCD-chip, can be turned 90° by simply loosening two screws.
By choosing the side window, the mounting height can be reduced and the cables installed parallel to the scanning surface.

OMNICONTROL – software for the user

OMNICONTROL for Windows (up to Windows 95) serves to alter the configuration.
The programme has been user-friendly designed also offering various functions for error diagnosis. Once a dedicated set of parameters is chosen, this specific configuration may be stored in the PC or downloaded to the MAC 340. This stays permanently until a different configuration is transmitted.

Two operating modes as a choice

The MAC 340 can transmit the acquired data via the serial interface. As an alternative, the Matchcode Mode can be chosen. This mode offers the possibility to store reference data which will be compared with the actually read data.
Depending on the result, respective Good/Fail outputs are activated.

Technical Data

MAC 340

Scan distance:	90mm
Depth of field:	+/-7mm
Scan area:	20 x 15mm
Resolution:	
modul size min.	0,17mm
Light source:	
integrated LED-Flash (red)	
Evaluation rate:	25 Hz
Transport speed max.:	6 m/s
Symbologies:	
Pharmacode	
Data Matrix ECC 200	
Symbol sizes, Data Matrix:	
square max.	48 x 48 module
rectangular max.	16 x 48 module
Data format, Data Matrix:	
ASCII, C40, Text, X12, Edifact, Base 256, all ISO 646	
Orientation for Data Matrix:	
omnidirekctional	
Max. Data capacity:	
348 numerical, 259 ASCII, 172 Bytes	
Inputs:	1 Trigger 24V DC
optional:	up to 4 inputs
Outputs:	2 x opto-coupled
optional:	up to 4 outputs
Interfaces:	1 x RS232
optional:	2 x RS232
Transmission:	
from 9.600 to 115.200 baud	
LED Display:	Trigger, Good, Fail
Connectors:	Socket for VGA-Monitor, 15pin-D-sub. 0,5 m cable
Power supply:	24V DC, 5W
Ambient temperature:	0°C to 45°C
Housing:	anodized aluminium
Protection class:	IP 65
Dimensions:	65 x 84 x 132mm
Weight:	730g

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