

# OUTPUT VALIDATION MODULE



OUTPUT VALIDATION MODULE

Kalmar MailPro can provide your new or existing mail-inserting machine with the additional control-function of our Output Validation Module. This module can greatly enhance your production quality by eliminating output errors like faulty enveloping or missing inserts.

## The Output Validation Module in different modes of operation:

- The unit reads numbers – sequences (increasing or decreasing) on the contents of an envelope and controls that there are no "interruptions" in the read string of numbers. If there is an interruption in the string, the machine will stop and the operator is alerted.
- The unit matches read numbers/strings/addresses with information in a downloaded database. This function can be used to "tick off" that numbers in the database really passed the reading head, and in the correct order in accordance with the database.
- Pure logging of read results.

In all the cases the read information is saved (logged) in the memory of the controlling PC and may be retrieved, printed out (printer not included) etc. There is also a possibility to read a BAR-code (2/5 interleave, Code 39 etc.), and handle it the same way.

This stand-alone module is designed to fit almost any inserter or plastic wrapper on the market. The system has a dynamic CCD-camera for reading on the documents or through envelope windows. The PC does not contain any moving parts such as hard drive, floppy or CD-rom and utilizes "flash memory" to store data. Exchange of data is done via standard network connection.

## FEATURES:

- ICR/BCR/OMR-reading, face up or face down
- Sequence check (increase/decrease)
- Databasematching (fileformat: flat or separators)
- Realtime read information: three previous reads, current read and three expected reads.
- Save settings in different jobs.
- System logs all readings to a file for subsequent analysis.
- System creates an audit-file after a database run - even with operator confirmation on misreads.
- Two-wire stopsignal to the inserter.
- Adjustable bandspeed and two control positions with automatic reset.



OPERATOR CONTROL INTERFACE

## SPECIFICATIONS:

**Speed:** up to 15 000 documents/hour **Max(min) size:** 270 x 360(90x150) mm **Input height:** 825-880 mm as standard (others on request)  
**Dimensions (HxWxD):** 940 x 500 x 920 mm **Supply voltage:** 230 V AC, 50 Hz

# READING SYSTEMS (ICR/OCR/BCR/OMR)

I III II  
OMR

BCR

2-D CODES

1 2 3 4  
NUMERIC

APCO62  
ICR

Kalmar MailPro can provide reading-systems for all common codes or text for controlling mail-handling machines.

Use our systems to read a code string (number), 2D-code, BCR-code etc. and find the data for controlling the machine in a database (file driven insertion). Use another camera for matching the first one; or another database and a third camera for matching the first one, or another database or a third camera to match with a pre-printed envelope at the same time without reducing the speed. Cameras can be integrated with any of the insert stations, the envelope station or the channels. Everything read will be stored for control and reprint purpose.



OPERATOR CONTROL INTERFACE

Kalmar Mailpro can also supply scanners for simpler applications such as handling OMR/BCR codes.

**Kalmar Mailpro utilizes 2 versions of camera-systems for different purposes:**

- Basic system: Compact, custom built rack housing small footprint motherboard. Capable of one or two camera input, with remote camera setup functionality
- Dynamic reads at up to 4 per second, utilising realtime noise removal. Simple set-up, ideal for entry-level inserter control.
- Advanced system: Industrial PC rack housing dedicated processing boards for each camera. Scaleable up to 7 cameras, for both static and dynamic reads. Capable of asynchronous operation: each camera can be triggered independently, at up to 6 reads per second. Ideal for large multi-camera applications.

**Core functionality offered by both types of systems:**

- OMR, Barcode and OCR readings. OCR can be trained to read your own custom fonts.
- Match against other stations, or against multiple formats of database.
- Triggering via opto isolated inputs or serial RS232/RS485
- Output control information via digital I/O or customisable serial strings.
- Network interface for integration to existing IT infrastructure.
- Job management functionality to allow storage of commonly used setups.

SPECIFICATIONS:

	BASIC SYSTEM	ADVANCED SYSTEM
PROCESSING	<ul style="list-style-type: none"> <li>• Single Embedded NT Motherboard (256MB Flash Disk)</li> <li>• Up to 2 cameras per unit. • OCR/OMR up to 4 reads/sec</li> <li>• BCR up to 6 reads/sec. • Can chain two units together to provide 4 camera matching.</li> </ul>	<ul style="list-style-type: none"> <li>• Windows control station. • 1 DOS camera station per camera</li> <li>4 stations per rack unit, chained upto a maximum of 7 camera stations. • OCR/OMR up to 6 reads/sec. • BCR up to 10 reads/sec.</li> <li>• Each station can be triggered independently and asynchronously</li> </ul>
FEATURES	<ul style="list-style-type: none"> <li>• Compares barcodes, numeric and alphanumeric codes or names and addresses between any number of read stations in realtime.</li> <li>• Compares reads against database (fixed field, and field delimited formats). • Sequence number checking. • Font training functionality.</li> <li>• Noise removal functionality. • Logs all reads to file</li> </ul>	<ul style="list-style-type: none"> <li>• Compares barcodes, numeric and alphanumeric codes or names and addresses between any numbers of read stations in realtime.</li> <li>• Compares reads against database (fixed field, and field delimited formats). • Font training functionality. • Logs all reads to file.</li> </ul>

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