APPLICATION REPORT

Page by Page to the Correct Recipient

Optical Identification for Letter Distribution Facilities

OPC120P code reader with polarization filter

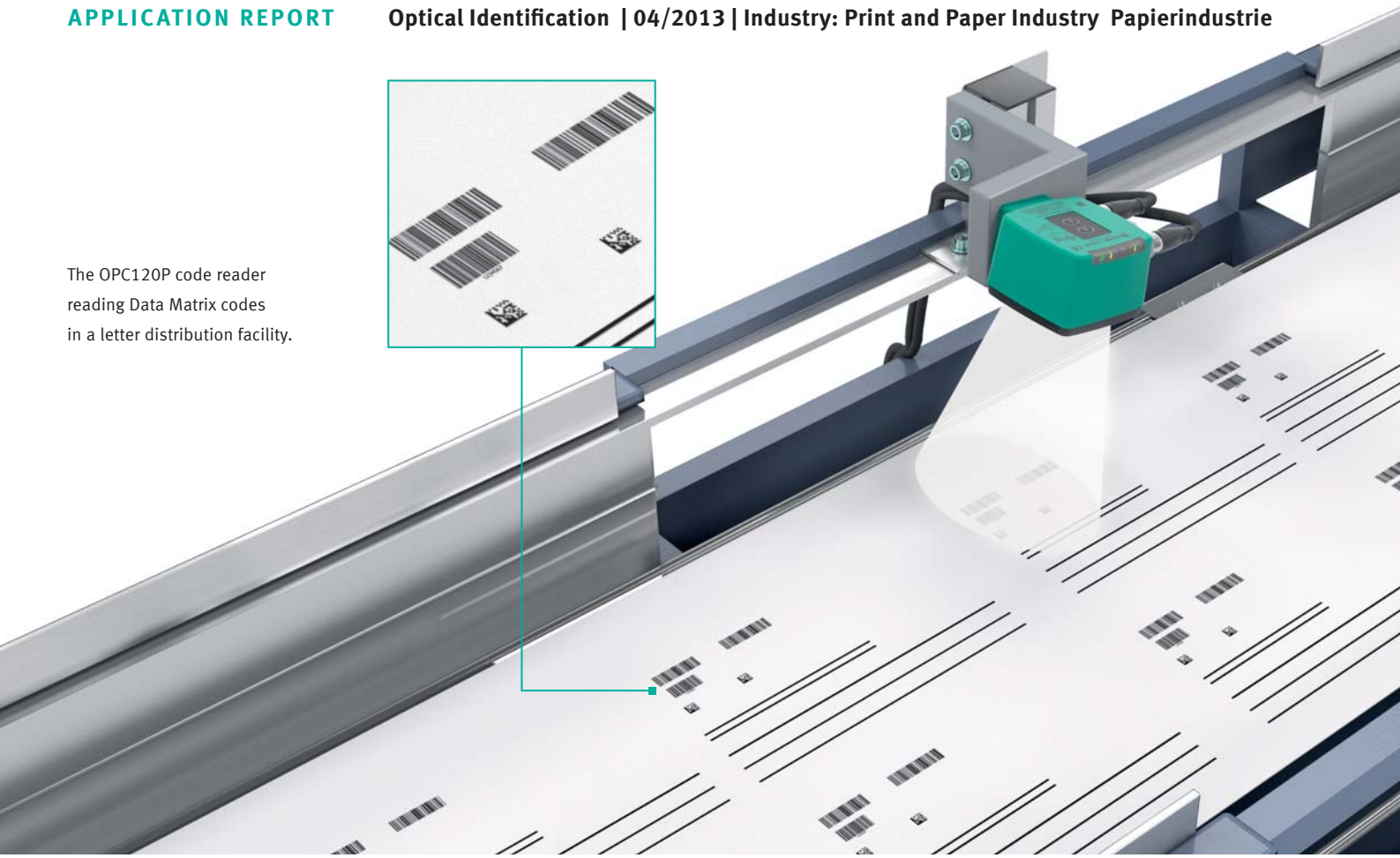
In the field of digital printing, there are classic mass-market applications like those used in the letter distribution centers of large banks, insurance companies, and telecommunications companies. These also include customized postal items, such as invoices or account statements.

These documents must be individually identified so that they can be bundled together correctly before being inserted into envelopes. To do this, each individual sheet is given a Data Matrix code that contains a unique data record. Every sheet can then be accurately assigned in each subsequent processing step in the letter distribution facility.

SPEED AROUND THE CLOCK

Manufacturing processes run 24/7 in letter distribution facilities. And they run fast. Not only a long service life is important for a code reader to maintain consistent machine uptime, extremely high rates up to 50,000 pages per hour demand the best reading rates and availability.

Since the cycle times are very short, high-speed data transmission speed is required. The interval between the trigger point and data acquisition is typically less than 30 ms.



The OPC120P code reader reading Data Matrix codes in a letter distribution facility.

FROM SEPARATING THE DOCUMENTS TO INSERTING THEM INTO ENVELOPES

The documents are printed on rolls, given a unique Data Matrix code, and cut into individual sheets. All the sheets that belong to a single recipient are collected. Additional information, such as promotional leaflets, is then added, and everything is inserted into an envelope.

To identify each individual page and to properly route each sheet, code readers are positioned along the machine throughout the process, and the Data Matrix code is read again and again by each of these readers.

The code readers send signals to the PLC and immediately trigger the appropriate control processes. As short cycle times must be maintained during these processes, extremely fast analysis algorithms and deterministic response are vital. The ability to read the codes at exceptionally high speeds without changing the parameters for different paper types is also necessary: It must be possible to read the codes reliably even on reflective surfaces, such as advertising brochures.

BENEFITS OF THE OPC120P CODE READER AT A GLANCE

- Reliable 1-D/2-D code reading even on highly reflective surfaces
- High-speed code reading of up to 10 m/s and 100 readings/s
- Large depth of focus ensures reliable operation at different distances, off-sets, and code sizes
- Powerful functions, including reading of long barcodes, print presence detection, multi-window, and logo comparison
- Trigger delay using rotary encoder input