



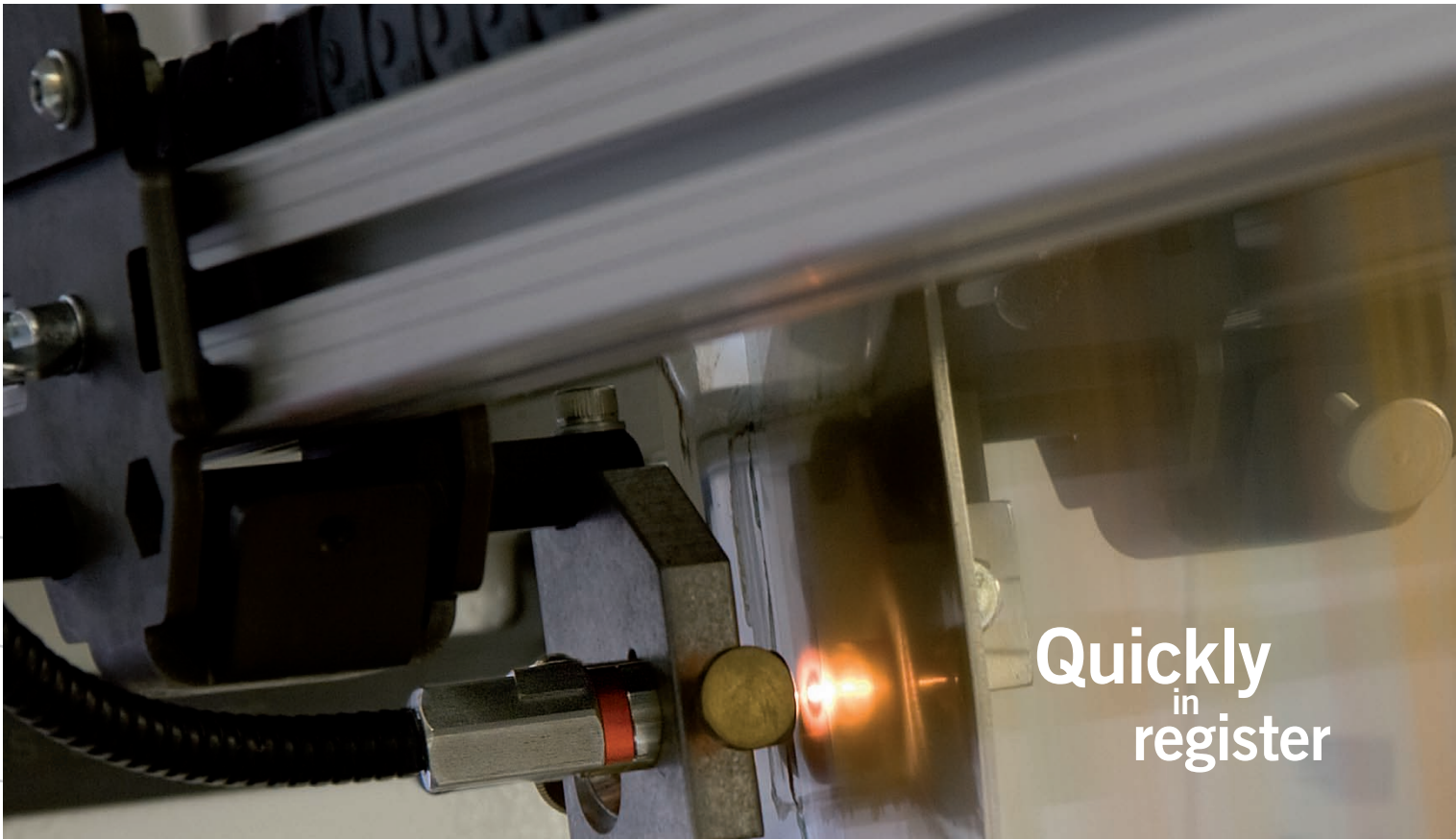
Quickly
in
register

regi_star 20

Register control

vision digital
register colour

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eltromat
tradition meets innovation



Sensor head of the 1-pixel colour camera

- [_Quick to print](#)
- [_Minimising waste](#)
- [_Ensuring print projects of high quality](#)
- [_Increasing customer satisfaction](#)
- [_High degree of automation](#)
- [_Optimising processes](#)
- [_Increasing productivity](#)
- [_Reducing costs](#)

Innovative register control

The newly developed register control system by eltromat guarantees a high degree of automation. Set-up times and waste are reduced considerably, resulting in an increase in the productivity of the printing press.

A new hardware architecture with maximum flexibility was developed especially for the **regi_star 20**, so that additional functions can be integrated at any time.

The worldwide unique intelligent link between register control and web inspection system was developed on this basis.

Challenge us – we can help you to meet your customers' expectations.

eltromat – synonym for excellent detection of all print marks

The newly developed 1-pixel colour camera also allows the detection of marks with a very low contrast. This means that cold seal and lacquer can be controlled in the web-web comparison. The detected marks are displayed on the operator monitor as a live colour image.

The modern user interface with touch monitor offers individual and efficient handling of the register control system. The clearly designed HMI provides a high degree of operating comfort for the printer. This allows the next job to be prepared while the current job is still running.



Options

Automatic process adaptation _pilot_control

Waste accrues mainly when process conditions change in the printing press. This includes changes in the machine speed and reel changes, for example. The eltromat register control system optimises these processes by always adapting itself automatically to the respective process conditions with the aid of **_pilot_control**. The amount of waste created during set-up, start-up, reel changes and speed changes is considerably reduced.

Additional keypad

Set point corrections can be executed simultaneously for several printing units with the aid of the optional keypad.

Remote display and operating unit for the entire control system

An additional remote display and operating unit can be connected to facilitate the setting of tools, for example.

Motorised traverse bars for the register mark sensors

When the printed web runs off laterally, the sensor automatically follows the marks and thus increases the process stability.

Outputs used to connect external logging systems

Appropriate outputs and connections for field buses are available for external capture of process data, such as register deviation.

Register mark sensors for dot marks

In addition to detecting wedge marks using the 1-pixel colour camera, matrix cameras can also be connected to detect dot marks.

Insetter control system

Insetter modules are available to control a preprinted web and for the electronic gear adjustment of tools.

Register presetting for the printing press

The set-up process is streamlined through the presetting of the register rollers, lateral cylinder position as well as mark positions. The functions revert to data from the job memory.

Acquisition of the print cylinder positions

The register mark sensor captures the print cylinder positions of all print units. These positions are provided to be used for the presetting of the print cylinders.

Remote maintenance module


With the aid of the remote maintenance module, the system can be inspected simply and quickly via remote diagnosis.

Technical Data

System performance

Maximum web speed	1,200 m/min (3937 ft/min)
Format length	125 mm – 5,000 mm (4.9 inch – 196.9 inch)
Ambient temperature	0°C – 40°C (32°F – 104°F)
Number of printing units	up to 20

Sensor

Measuring resolution	±5 µm
Measuring frequency	30 Hz
Material	Paper, foil/film, metallized substrates (opaque, transparent, reflecting)
ATEX approvals	CE 0123  II 2 G [Ex op is T4] IIB PTB 11 ATEX 2013 X according to EN 60079-0, EN 60079-28

Operating monitor

Type	19" TFT Touch
Resolution	1280 x 1024 Pixel
Signal input	DVI

Supply voltage

Voltage	115 V / 230 V AC / 50-60 Hz
Power consumption	4 A

Input signals

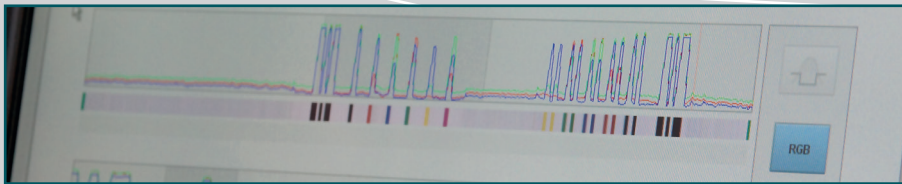
Digital input signals	24 V according to EN 61131-2, Type 3
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Output signals

Digital Output signals	24 V, 0,5 A short-circuit-proof
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User interface with live image of the register marks



Standard functions of the system

Even the standard model offers a wide range of intelligent functions for effective register control.

Live image of the register marks

For the first time, it is possible to provide the operator with a live colour image of the register marks due to the newly developed 1-pixel colour camera. This allows a distinct allocation of printed marks even when they are difficult to detect. Thus, the times in which it was difficult for the operator to determine whether or not the correct print marks were selected are finally over.

Adaptive register mark sensor – 1-pixel colour camera

The adaptive register mark sensor of the **regi_star 20** is even able to detect extremely low-contrast colours and metallised inks, as well as transparent lacquer. The register mark sensor developed as a 1-pixel camera analyses the colour spectrum of the light reflected from the web, and automatically detects all types of register marks. Thanks to the great depth of focus provided by the fibre optics, the user must change neither the signal amplification nor the scanning angle – the reliable mark detection is performed without any operator intervention. As a light source a long-life maintenance free LED is used.

Waste reduction during start-up

With its fully automatic, optimum scanning technology, the register mark sensor designed for the **regi_star 20** supports the single head measuring procedure patented by eltromat. This unique technology not only allows sequential control for a fast production start but also key colour control for the best possible production quality. A maximum in waste and cost reduction is achieved by using the different measuring and control procedures in any desired combination.

Simple, intuitive operation

The modern touch_screen interface with integrated online help makes an operating manual obsolete. The operators are quickly familiar with the system. Time and material are saved, because operating errors are avoided. In addition, the set-up time can be reduced because the subsequent job is being prepared while the current production is still running.

Innovations for your success!

vision



Seeing what is important

- _ 100% print inspection
- _ Web viewing
- _ Quality workflow

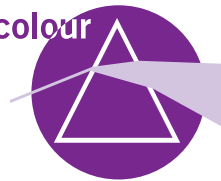
register



Quickly in register

- _ Register control
- _ Sensor for low-contrast colours and varnishes

colour



Fine colour matching

- _ Spectral colour measurement
- _ Densitometric ink setting

digital



Individualised quality

- _ Print defect detection
- _ Inspection of variable data
- _ Register control

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