

## Ultra-sonic edge sensor FX 45

The ultra-sonic edge sensor is designed especially for edge scanning on sound reflective material such as paper and film. Web edges are detected reliably even on highly transparent films or on films with constantly changing transparency.

### Principle

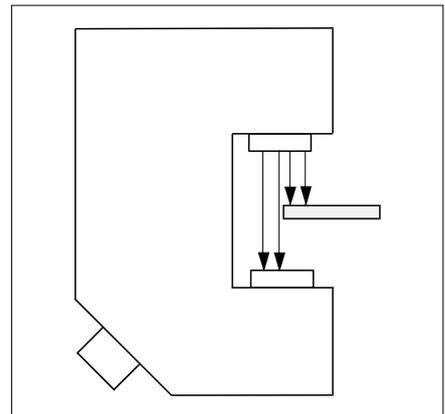
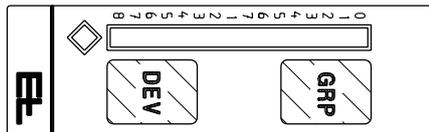
It is the very compact design which makes it possible to integrate the sensor just perfectly into pivoting frames for small webs. The sensor has a CAN bus connection as the entire electronics are integrated; it is therefore fully compatible with the Digital Control System DCS.

The LED strip integrated into the receiver makes it very easy for the user to position the sensor. For use on light-sensitive materials the display can simply be cut off.



### Function

The sensor comprises a receiver and a transmitter. Their measuring range is  $\pm 3$  mm, the resolution being 0.016 mm. The transmitter produces ultrasonic waves which generate a more or less big amplitude in the receiver, depending on how much of the receiver is covered by the web. The AD converter digitalizes the analog tension and the value thus obtained is passed on to the microprocessor. When the value is processed as required it is transferred to the controller via CAN interface.



### Technical data FX 45

Measuring range	$\pm 3$ mm
Deviation in linearity (Measuring range 10 - 90%)	<1 %
Operational voltage Nominal value	24 V DC
Nominal range (including ripple)	20 - 30 V DC
Power consumption	110 mA DC
Ultra-sonic frequency	~ 200 kHz
Transmission pulse frequency	1 kHz
Ambient temperature	10 to 50 °C
Storage temperature	-25 to + 80 °C
Temperature drift (typical) with a relative humidity of 60%	ca. 0,025mm/K
Resolution AD converter	0,016 mm
Scan rate	200 Hz
Cable length	max. 8 m
Protection class	max. IP 54 with suitable connector inserted
Max. installation height	0 to 3000 m above M.S.L.
Weight	0,2 kg

Subjecto to technical modifications without notice