

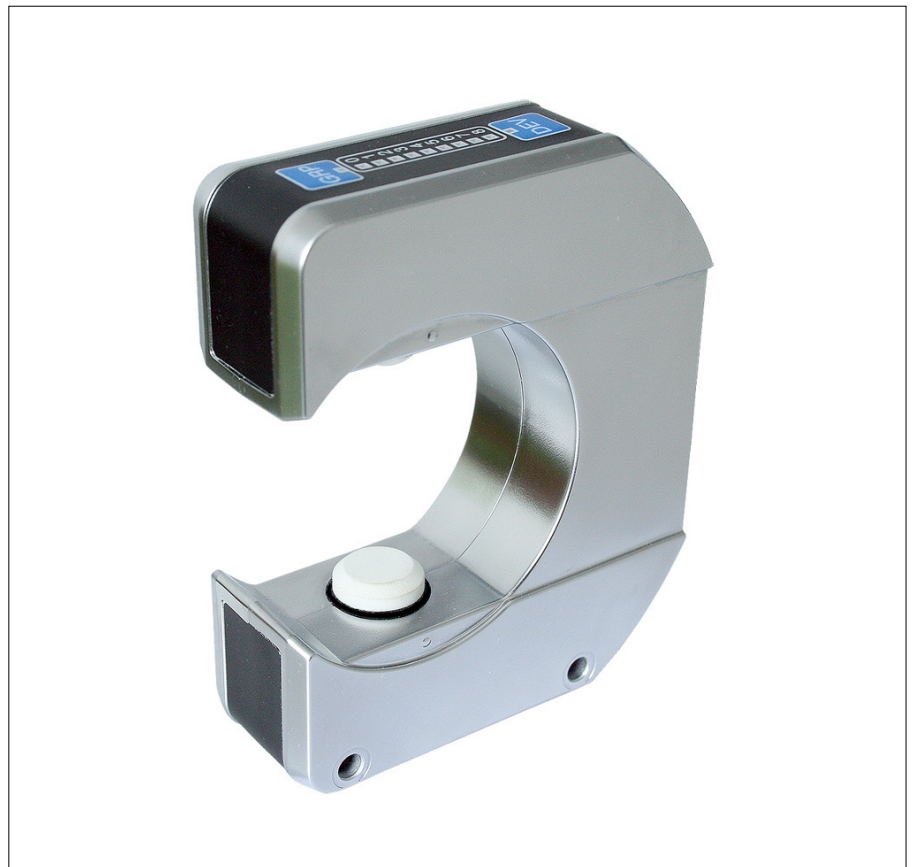
Ultrasonic edge sensor FX 46

The ultrasonic edge sensor is designed especially for edge scanning on sound reflective material such as paper and film. Because of this particular scanning principle changes in web transparency do not influence the measurement signal and reliable web edge detection is guaranteed.

Principle

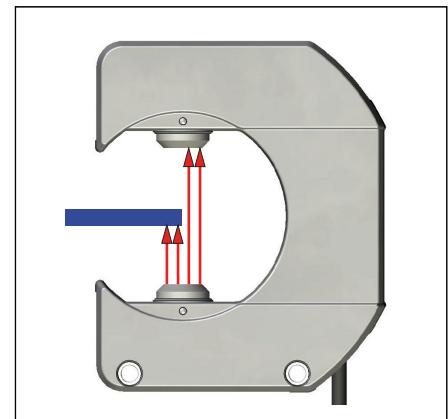
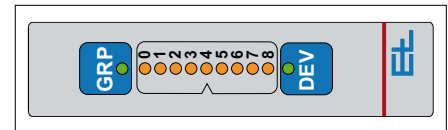
Given the very compact design the sensor integrates perfectly into pivoting frames for small webs. The sensor has a CAN bus connection as the entire electronics are integrated; it is therefore fully compatible with the Digital Control System DCS.

The sensor can be positioned very easily with the assistance of the LED strip integrated into the receiver. For use on light-sensitive materials the display can simply be cut off.



Function

The sensor consists of a receiver and a transmitter. The measuring range is ± 3 mm. The transmitter produces ultrasonic waves which generate an amplitude in the receiver. The size of the amplitude depends on the extent to which the ultrasonic waves are covered by the web. The analog voltage is digitized in the AD converter and the digitized value is processed and evaluated by the microprocessor. After the evaluation the value is transmitted via CAN bus to the controller and to all the other participants.



Technical data

Measuring range	± 3 mm
Deviation in linearity (Measuring range 10 to 90%)	± 1 %
Operational voltage	
Nominal value	24 V DC
Nominal range (including ripple)	20 to 30 V DC
Power consumption	max. 80 mA DC
Transmission pulse frequency	1 kHz
Ambient temperature	+10 °C to +50 °C
Storage temperature	-25 °C to +80 °C
Temperature drift (typical) with a relative humidity of 60%	ca. 0.025mm/K
Scan rate	200 Hz
Cable length	max. 10 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
Dimensions (L x W x H)	76,2 x 27 x 92,4 mm

Subjecto to technical modifications without notice