

# BMI4

## Inductive edge sensor

### Data sheet

Function:	Strip edge position sensing
Mechanical design:	Transmitting and receiving coils with preamplifier, fork type design
Connection:	Separate evaluation electronics BMI2.02; (BMI2.11 with CANopen)
Dimensions/weight:	HxWxL: 336 x 180 x 280 mm; weight: approx. 12 kg

### Application

Using the inductive edge sensor, the edge position of metal strip may be detected in a contact-free manner. In combination with a control amplifier and an actuator, a strip edge guiding system may be implemented. Using two edge sensors, a strip centre guiding system may be provided.

Front view

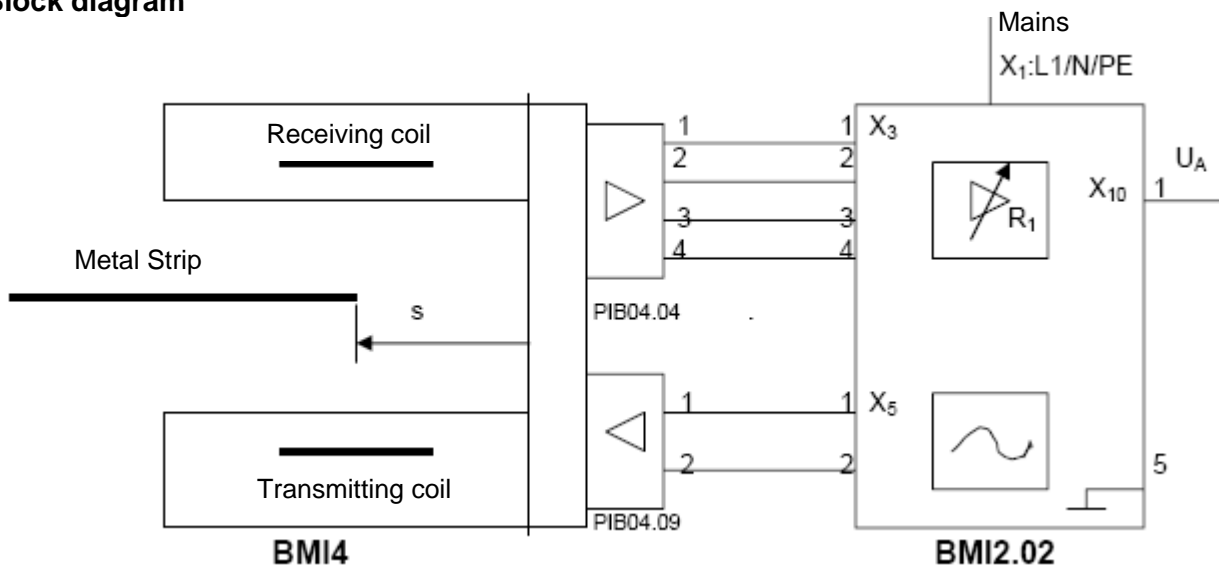


### Functional description

The inductive edge sensor provides, in combination with the separate BMI2.02 evaluation electronics, an output signal  $U_A$  which constantly changes according to the strip position of metal strip (see characteristic curve). The inductive edge sensor basically consists of transmitting and receiving coils, which are accommodated in a protective enclosure and wired to the preamplifiers (PIB04.0x).

A maximum of 2 edge sensors may be simultaneously connected to the BMI2.02 evaluation electronics whereby an output voltage and the difference between the two output voltages is available for each edge sensor.

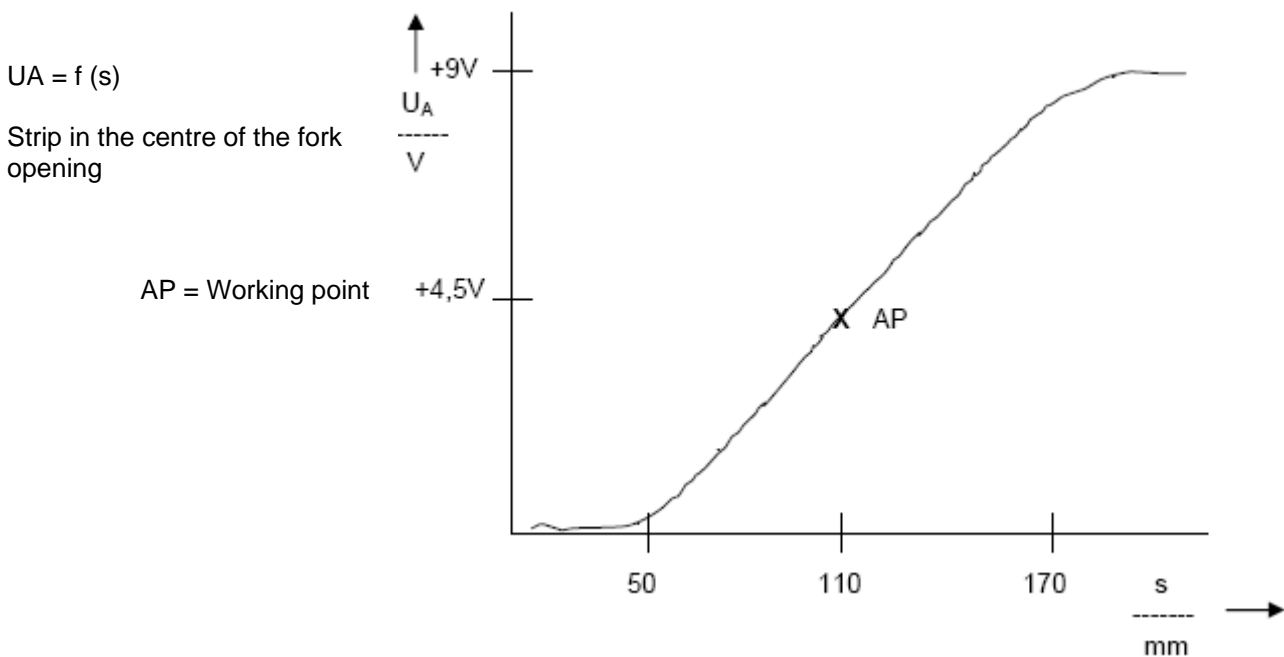
### Block diagram



## Technical data

Type:	BMI4	BMI2.02
Service voltage		110/120/220/230/240V;50/60Hz
Power input		75 VA
Ambient temperature	0 °C ...70 °C	0° C ...50 °C
Measuring range MB	approx. 120 mm	
Analogue output $U_A$		0 .....+9 VDC
Normal working point for edge control		approx. +4.5 VDC (centre of measuring range)
Digital output (with BMI2.11)		CANopen
Measuring precision at working point +4.5V (const. edge cond.)	≤ +/-1mm	
Signal outputs: Measuring equipment OK Strip position OK		potential-free potential-free
Sensing time $T_A$		10 ms
Protection	IP65	IP54
Minimum distance between metal components and edge sensor	200 mm	
Standard length sensor cable (up to BMI2.02)	15 m	
Settings on BMI2.02: see separate BMI2.02 description		
Weight	12 kg	12 kg
Standards	EC conformity EC low voltage directive 73/23/EEC EC EMC directive 89/336/EEC Noise suppression to VDE 0871, limit value class B	

## Characteristic curves:



**Type code**