

**IML, IMM, IMH CP**  
Inductive strip centre sensing in furnaces

**Data Sheet**

|                    |  |
|--------------------|--|
| Function:          | Inductive strip centre sensing in furnaces                             |
| Mechanical design: | High-temperature coils installed in a temperature-resistant metal tube |
| Connection:        | Terminal strip at evaluation electronics                               |
| Weight:            | depending on the sensor type   |

**Application**

Inductive sensors type IM... are used in furnaces at temperatures between 300 and 1000 C°.

They are maintenance-free and have self-test facilities. Windows in the furnace walls are not required. Only two openings must be provided in the furnace wall, and two double-flanges must be welded to the outside wall of the furnace casing.

The coil assemblies are inserted from the outside through the double-flanges and fastened. It is recommended that deflector bars or plates are used for sensor protection.

**View**

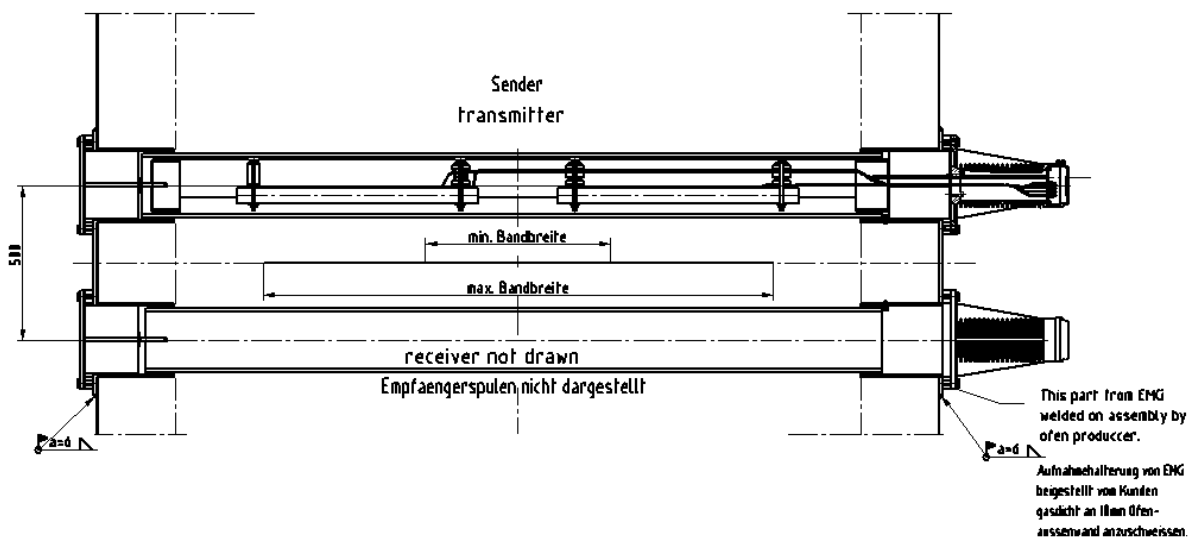


**Measuring principle**

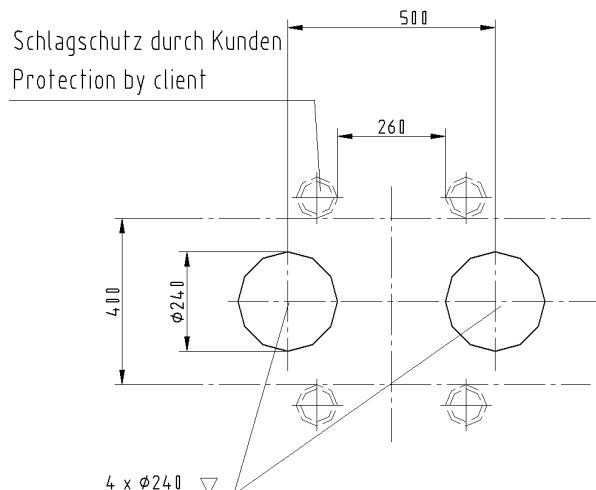
The sensor system consists of two measuring traverses, each of them containing two inductive coils working as transmitter or receiver. The measuring principle is based on electro-magnetic induction. A controlled, sinusoidal voltage is fed to the transmitting coils and, depending on the lateral strip position, a voltage is induced in the receiver coils. The sensor system is delivered ready for connection and installation to the furnace walls.

The evaluation electronics BMI04.10 are installed in a separate housing. In addition to signal evaluation, the evaluation electronics are provided with self-test facilities and a signalling logic.

**Sensor arrangement**



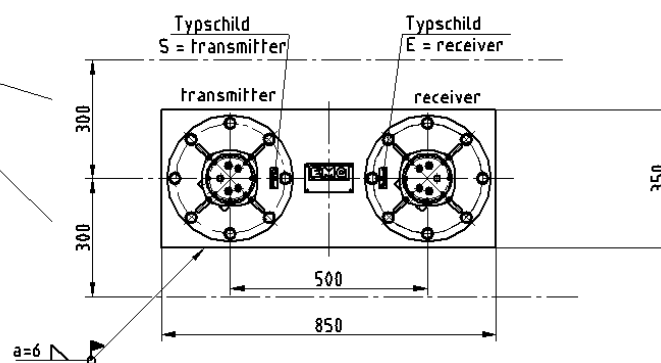
## Protection against impact



2 Loecher auf beiden  
Seiten des Ofens im  
Aussenmantel und Isolierung  
vorsehen.

## Distances

minimaler seith. Abstand  
zu Metallteilen 300mm!



## Technical data

| Version                                  | IML   | IMM    | IMH     |
|--|---|--------|---------|
| Max. ambient temperature                 | 300 °C  | 550 °C | 1000 °C |
| Range of strip width                     | 200 ... 2500 mm depending on the coil design      |        |         |
| Centre position sensing accuracy         | ± 5 mm  |        |         |
| Min. distance for metallic deflectors    | 200 mm  |        |         |
| Type of protection connection space      | IP 54   |        |         |
| <b>Electronics</b>                       | <b>BMI04.10 (BMI2.11.1 with subprint BMI2.51)</b> |        |         |
| Operating voltage                        | 110/120/220/230 V, 50/60 Hz                       |        |         |
| Power consumption                        | 60 VA   |        |         |
| Max. ambient temperature for electronics | 50 °C   |        |         |
| <b>CAN Open data transfer</b>            |   |        |         |
| Strip centre deviation                   | CAN-BUS   |        |         |
| Strip edge I                             | CAN-BUS   |        |         |
| Strip edge II                            | CAN-BUS   |        |         |
| Sensing equipment OK                     | CAN-BUS   |        |         |
| Strip position OK                        | CAN-BUS   |        |         |
| Degree of noise suppression VDE 0871     | Limiting value class B                            |        |         |