

Application

Discrete detection of abnormal die conditions to prevent costly damage to dies in stamping presses.

Industry

- Machine Tool Industry
- Stamping Industry

Application Overview

For metal stamping or forming manufacturers, part quality specifications demand smart-process improvements. Monitoring conditions optimizes production reliability. Inductive proximity sensors are used to provide discrete feedback from stamping processes and improve production yields.

Application Challenges

Space is very limited, but high-performance sensors are required. Cylindrical sensors are required, and mounting brackets are impossible. Considerable cable flexing will occur, and the sensor will be exposed to various oils, resulting in premature wear of the cable.

Solution(s)

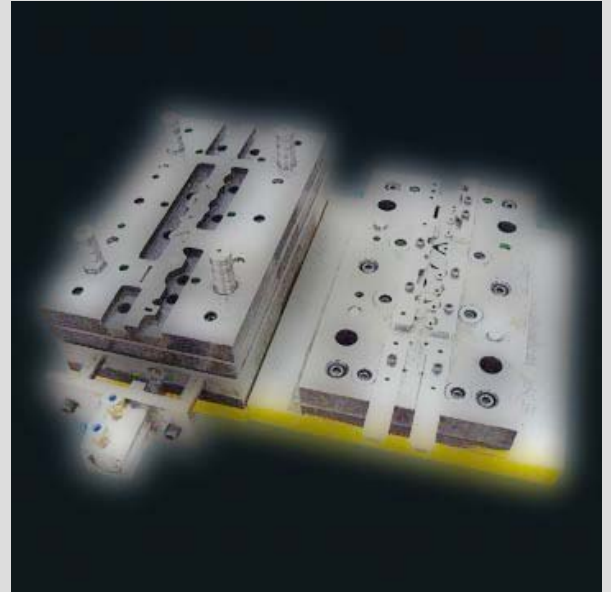
- MEGA inductive sensor technology
- Cylindrical, 4 and 5 millimeter thread Inductive proximity sensors can be threaded into the dies, providing a seamless installation
- The high performance of these sensors allows them to operate even under the toughest conditions.
- Polyurethane (PUR) cables are resistant to oils and flexing, vastly increasing the product lifetime.

Examples include the following:

- IFRM 04x15B1/L, M4, PNP or NPN output, N.O., PUR cable
- IFRM 04x35B1/L, M4, PNP or NPN output, N.C., PUR cable
- IFRM 05x15A1/L, M5, PNP or NPN output, N.O., PUR cable
- IFRM 05x35A1/L, M5, PNP or NPN output, N.C., PUR cable

Supporting Documentation

- Baumer Sensor Solutions Catalog, pages 66 and 73
- Baumer Website: [IFRM 04 \(M4\)](#), and [IFRM 05](#)



Threaded Inductive proximity sensors are mounted into dies to monitor discrete position (green sensor faces).

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