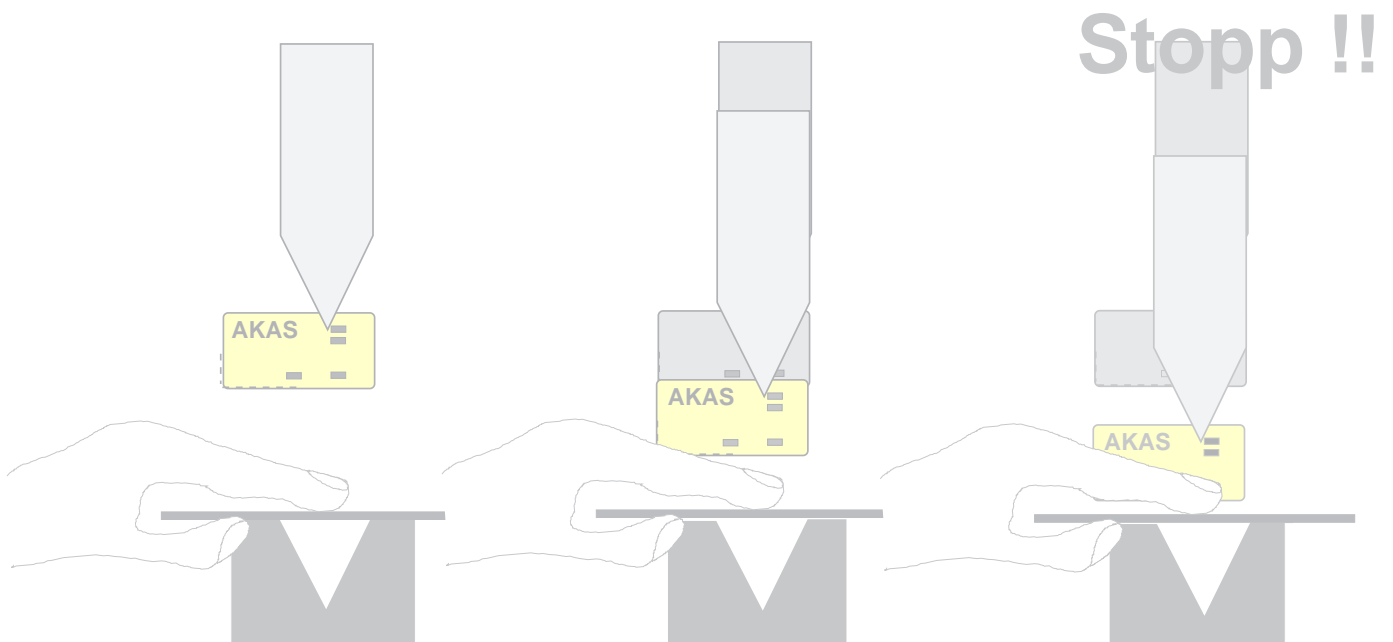


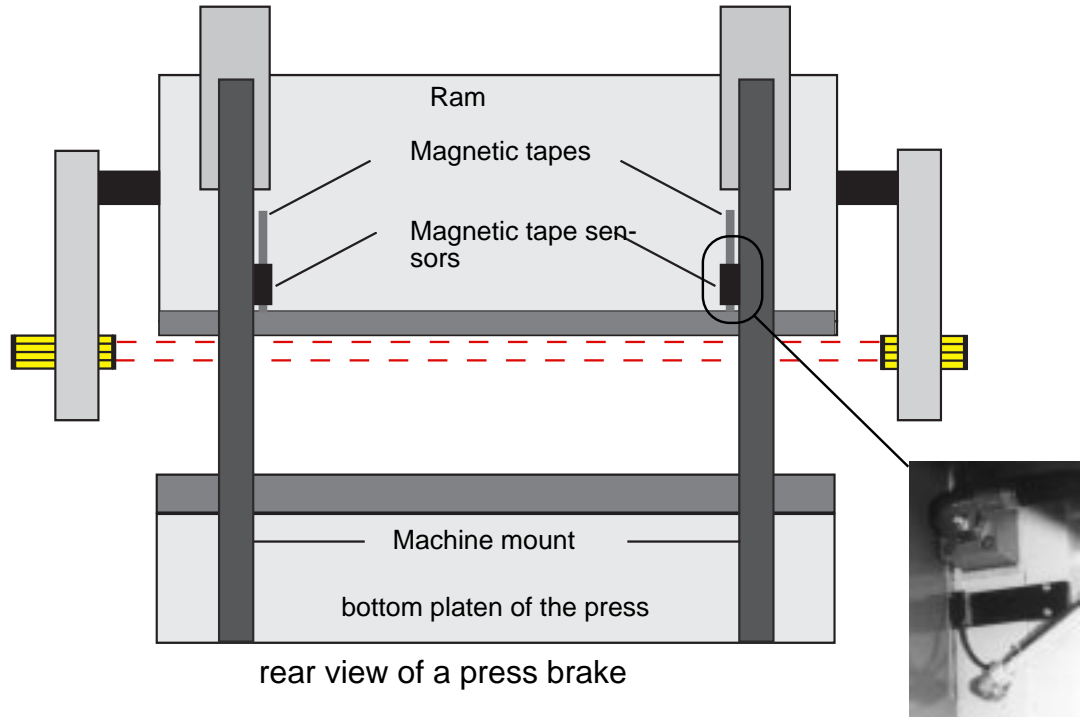
# AMS AKAS Muting System



**Function:** The AMS provides the muting signal according to safety class 4 and the control signals for the AKAS. It measures and evaluates speed, traverse and direction of the closing and opening movement of the press. Furthermore, it can carry out the overrun traverse control during the first stroke of the machine.  
The AMS is especially designed for retrofitting certain older presses that do not have any work speed valves or position monitoring.

The AMS verifies the nature of the movement of the machine. For this purpose, there are incremental magnetic metal tapes on the left and on the right hand side of the moving part of the press. Each of them is scanned by a magnetic sensor.

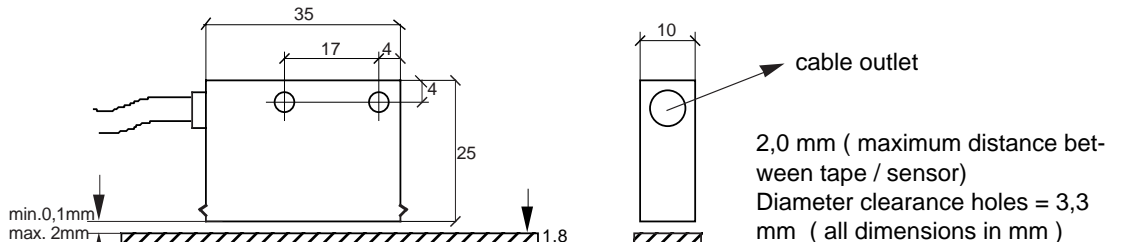
**Notice:** Due to measuring reasons, an operation with AMS is not possible within the sector of 4 mm above the shift point from fast speed into work speed (p.e.: shift at 23 mm then no upper dead centre between 23 and 27 mm)



**mounting:** The switchgear of the AMS must be installed into a switch cabinet of the protective class IP 54. On the ram (on presses with underneath drive it will be the bottom platen of the press) the magnetic tapes must be fixed vertically. The length of the magnetic tapes must be as long as the maximum lift of stroke plus 20 mm reserve at each end of both tapes.

Example: maximum stroke of the press without tool: 300mm + 2 x 20mm reserve = 340mm overall length of the magnetic tape.

The magnetic sensors must be placed vertically on the machine mount so that the sensor surface marked "sensor" is placed directly above the magnetic tape with a maximum distance of 2mm to the tape. The sensor can be fastened by using 2 screws M3 in the ø 3,3 mm clearance holes.



**Electrical connection  
Sensor:**

Brown = + 24 V DC  
black = 0 V  
Red = channel A  
Orange = channel B

Connection diagram is only valid if the sensor is installed so that the cable outlet is at the lower edge of the sensor. If the cable outlet is on the top edge of the sensor, channels A (red) and channels B (orange) must be switched over. On presses with an underneath drive the wiring procedure must be installed vice-versa.

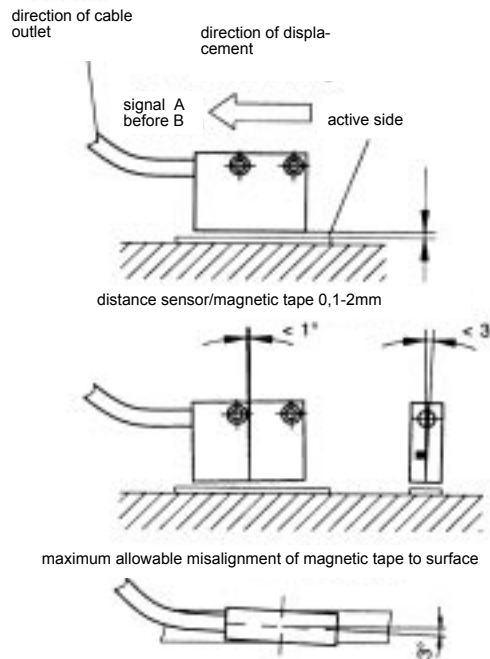


The connection of the insulation of the sensor cables at the equipotential bonding must be made at large surface (low impedance). Sensors and their connecting cables must be laid out well separated from other conductors that may be faulty. If necessary, additional insulating measures have to be met. Avoid any layout of cables parallel to energy transmitting cables.



The spools of the valves must be equipped with spark quenching elements.

When performing electric welding work on the machine, you must remove the terminal strip of the switchgear, otherwise the stray welding currents may cause destruction of the installed electronics.



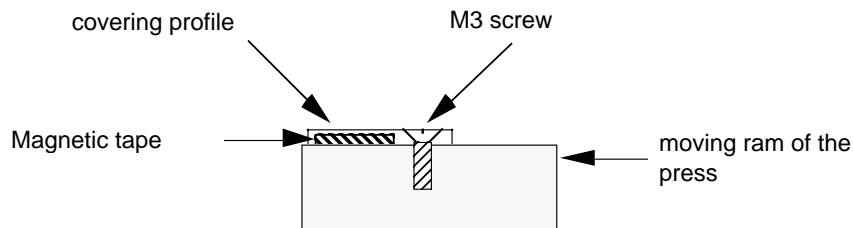
**mounting of magnetic tape:**

Installation must be performed strictly parallel to the mounting surface, i.e. to the traverse to be measured. Uneven surfaces will always reduce the accuracy of measurement.

**Notice:**

For an optimum of adhesion, all anti-adhesive substances (such as oil, grease, dust etc.) must be removed by using residue-free (=evaporating) cleaners. Ketones (acetone) or alcohols like the fast cleaning agents available from companies like Loctite or 3M are suitable substances for this purpose. Surfaces must be dry and adherends must be pressed against each other as tightly as possible. Temperature of adherends will be optimal between 20° und 30 °C in dry ambience.

**mounting of covering profile of magnetic tape**



If the magnetic tape is mounted without its covering profile, the self-adhesive steel tape must be glued onto the magnetic tape as a protective means against mechanical damages.



Avoid any unwanted influences of magnetic fields. In particular, all sorts of magnetic fields ( e.g. from magnetic clamps or from similar permanent magnetic materials) must be kept away from direct contact with the magnetic tape.

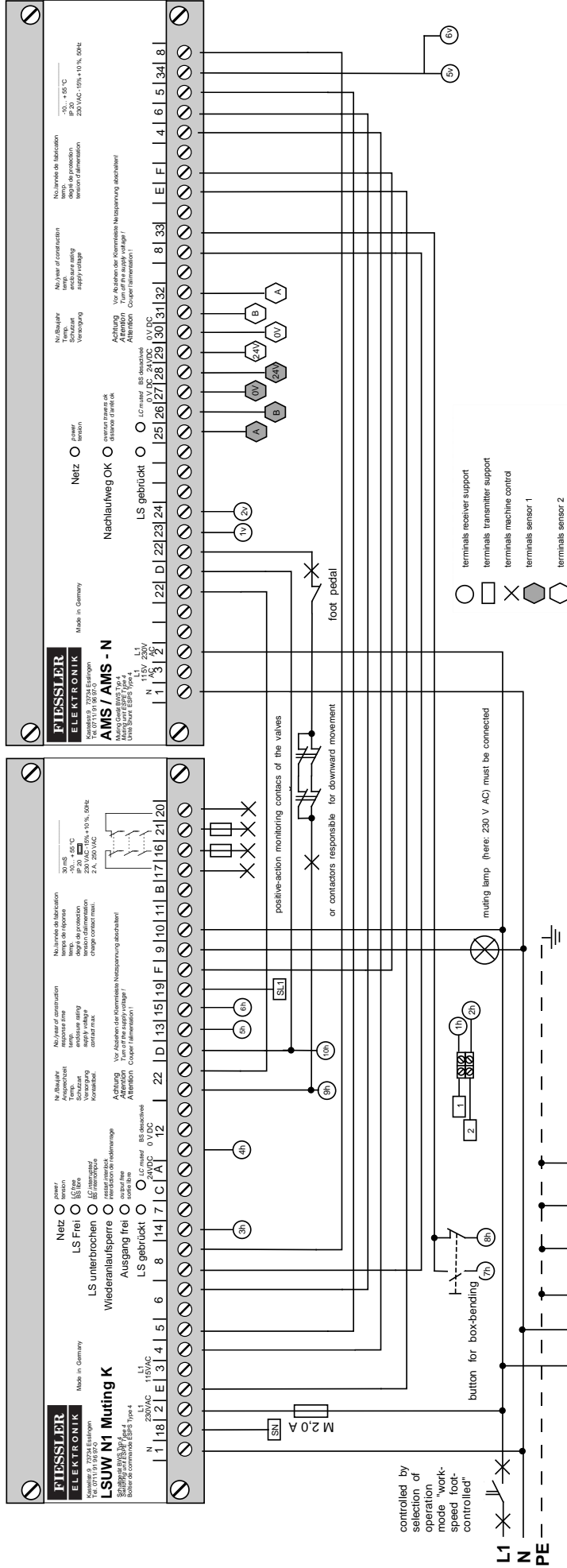
**Overrun traverse control**

After the voltage reset of the AMS, an overrun traverse control is carried out during the first stroke of the press. For this purpose, the stroke of the machine is stopped after 50 mm traverse and the AMS checks the overrun traverse. If the overrun traverse does not exceed 10 mm, the green LED on the AMS display lights up. After having completed the opening movement, the machine is ready for operation. If the overrun traverse exceeds 10 mm, the green LED remains dark and, after having completed the opening movement, another overrun traverse control procedure starts during the next stroke of the press. As long as the overrun traverse measuring does not furnish correct measuring results, no operation will be possible. For machines already equipped with an overrun traverse control the above-mentioned measuring procedure may be deactivated by adjusting both jumpers beneath the removable type plate of the AMS switch gear.



**Never operate the press with AKAS without having executed the overrun traverse control !**

## electrical connection



### Display

- red LED lights up: power is on
- green LED stays dark: overrun traverse measuring result still unknown or overrun traverse measuring result too high.
- green LED lights up: overrun traverse measuring result o.k.
- green LED flashes: Error! If this error cannot be eliminated by a voltage reset, check connection of sensors at the initial operation. If error occurs during regular operation, search possible defect in the sensors or in the AMS unit.

**ambient conditions of  
the AMS**

**ambient temperature  
during storage and  
transport:** - 10 up to + 55 °C

**protection/enclosure:** IP 40; optional IP 55 ( wall-mounting housing)

**humidity class:** E

**Electrical data AMS:**

**operational voltage:** 230 V 50 Hz- 15 %, + 10 % (optional 24 V DC )

**protection against  
faulty connection:** Protection against all possibilities of faulty connections is not provided.

**short circuit strength:** Outputs not protected against all possibilities of short-circuit

**surge voltage:** surge voltage class 2 with safe separation, surge voltage class 3 without safe separation

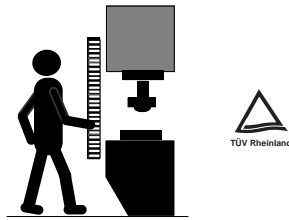
**delivery:**

Switch gear	AMS
Magnetic sensor	with 5m cable
Magnetic sensor	with 10m cable
Magnetic tape	length 1m (2 x 0,5m) , for a maximum stroke traverse of 468mm. (longer magnetic tapes are optionally available)

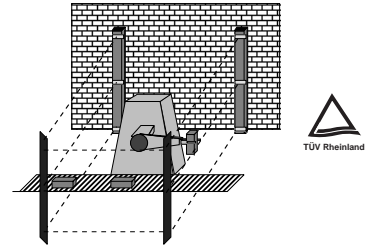
**order code:** AKAS Muting System with integrated overrun traverse measuring: **AMS/N**

# Lieferprogramm:

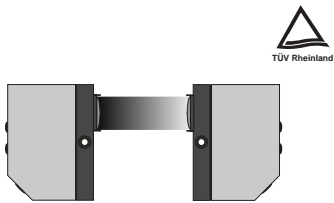
Fiessler Elektronik  
 Kastellstr. 9 D-73734 Esslingen  
 Telefon: 0711 / 91 96 97-0  
 Telefax: 0711 / 91 96 97-50  
 WWW.fiessler.de  
 E-Mail: info@fiessler.de



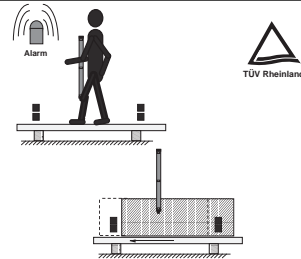
safety light curtains



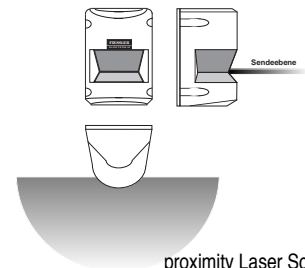
safety light grids



single-beam safety light barrier



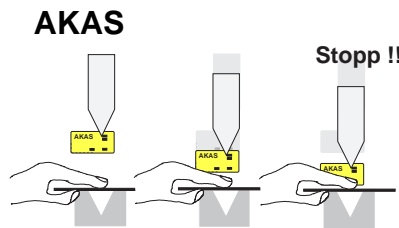
safety light grid with muting function



proximity Laser Scanner



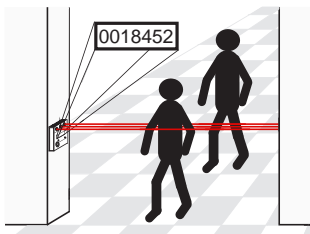
safety mats



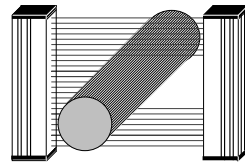
the innovative finger guard for press brakes



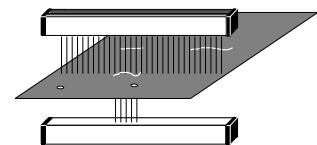
Safety foot pedal



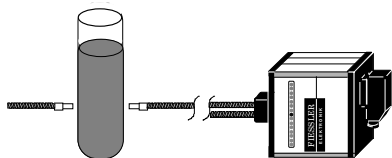
photoelectric controls for counting applications



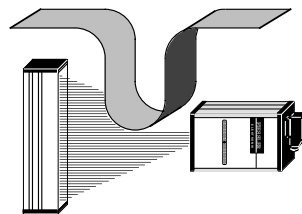
switching and analogue light curtains



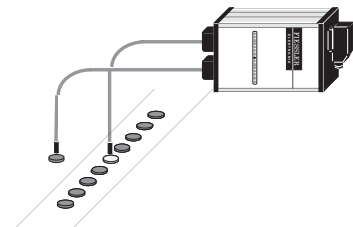
hole detectors



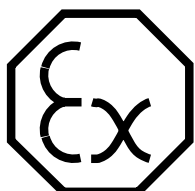
cloudiness sensors



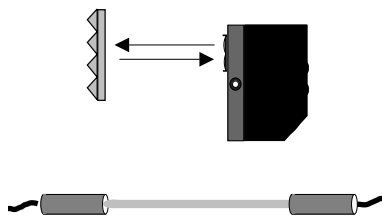
analogue loop detectors



reference-sensors



light barriers for EX-zones



light barriers for general applications



your application