



Instruction Manual

MAGNET-Ex 12



LIST OF CONTENTS

	Pages
1. Safety notes	12
2. Operation in Ex-designated area	12
3. Malfunctions and inadmissible stress	12
4. Introduction	12
5. Ex-data	13
6. Technical data	13
7. View on construction	14
8. Operating instructions	15
9. Safety instructions	15
10. Replacing rechargeable and standard batteries	15
11. Operation	16 - 17
12. Repair	17

Magnet-Ex 12

1. Safety notes

This operating manual gives important information and safety notes that are essential for any safe operation under the conditions described below. All given advice has to be heeded without exception!

2. Operating the test probe in hazardous area

The magnet probe Magnet-Ex 12 is suitable for short-term tests on magnetic fields in hazardous area. Short-term testing means, that any stationary use of the equipment is forbidden.

3. Malfunctions and inadmissible stress

As soon as it is to fear that the equipment's safety has been impaired, the magnet probe has to be taken out of operation and any unintended action of putting it back to use must be prevented.

The instrument's safety for example can be impaired if

- there are visible signs of damage to the probe (i. e. color coating is cracked)
- the equipment was stored in an inadequate way
- the equipment suffered damage from transport.

4. Introduction

The magnet probe Magnet-Ex 12 is a handy explosion protected testing instrument for the detection of magnetic fields in hazardous area.

It is used to detect quickly and precisely magnetic fields on solenoid valves, pneumatic and hydraulic machinery, coils, relays and contactors.

The indication LED will light with any kind of magnetic field, either alternating, direct or permanent magnetic fields.

The indication LED will light even without direct contact to metallic parts of a solenoid valve for example.

With the help of a test magnet that is fixed to the cap at the bottom of the instrument, you are in the position to carry out a test on the Magnet Ex 12 itself as well as on its batteries.

The instrument complies with the european standards EN 50 014 and EN 50 020. It is available with explosion protection EEx ia IIC T6.

Ex-data

Explosion protection: EEx ia IIC T6

Certification: PTB-Nr. Ex-93.C.4090

Technical data

Detection: no contact required
magnetic fields that

Can be detected: alternating, direct and
12 permanent fields

Indication: optical, built-in LED

Working temperature: - 20 °C to + 40 °C

Storage temperature: - 40 °C to + 60 °C

Power supply: 2 standard batteries AAA
according to
IEC R 03, LR 03
or rechargeable
batteries AAA
according to IEC R 03

Replacing the batteries: outside hazardous area only!

Ingress protection: IP 67

Dimensions: 150 x Ø 18 mm

Casing: metal, plastic probing point

Weight: 60 gr. (batteries included)

7. View on construction

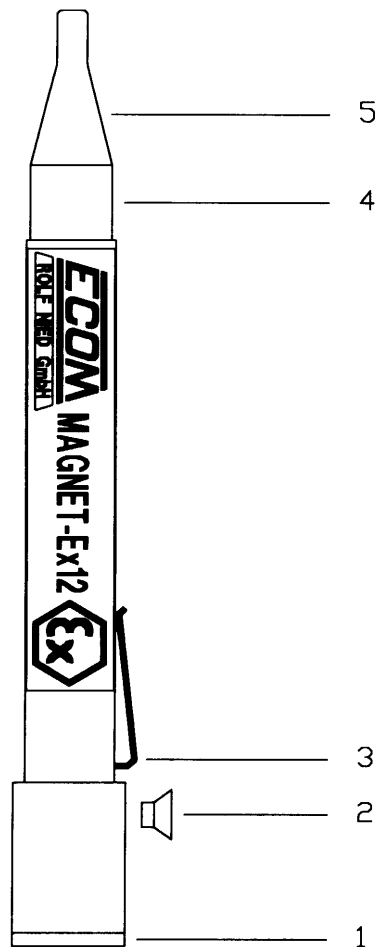


fig.1

- 1 removeable cap with built-in test magnet
- 2 extra locking device
- 3 clip
- 4 probing point
- 5 indication light

8. Operating instructions

9. Safety instructions

Using the Magnet-Ex 12 demands strict observe of all usual safety instructions to avoid operation. The batteries must only be replaced outside hazardous area!

10. Replacing batteries

When the batteries are running low, the indication LED will light noticeably feable, while the sensor part of the instrument is still working properly. With the help of the test magnet that is located underneath the cap at the bottom of th instrument, you can check on the brightness of the LED.

Batteries must be replaced outside hazardous area only!

Please use of differing batteries is strictly forbidden.

To replace batteries open the locking device on the instrument's side with the included tool and remove the cap by unscrewing it to the left. Now the batteries can be taken out of the equipment.

To close the battery case proceed in opposite order as described above. Only batteries AAA marked LR 03, R 03 must be used.

Rechargeable batteries AAA according to IEC R 03.

11. Operation

First of all, you should carry out a test Magnet Ex-12 itself!

To do so, unscrew the cap, take out the test magnet and move it towards the probing point, then the indication LED must light. (see fig. 2)

Now place the magnet probe Magnet-Ex 12 with its probing point near an estimated magnetic field e. g. of a solenoid valve.

If there is a sufficiently strong magnetic field, the built-in indication LED will light (see fig. 3)

Through the magnetic field it will be detected whether a solenoid valve has pulled up or whether it dropped out.

Where an explosion protected measuring instrument can only check either current or voltage at a valve, the Magnet-Ex 12 can tell about the effectiveness.

A user will realize wheter an interruption of the valve's coil is the case or not.

If a valve doesn't pull up, even when a magnetic field is detected, the valve is very likely to be choked-up.

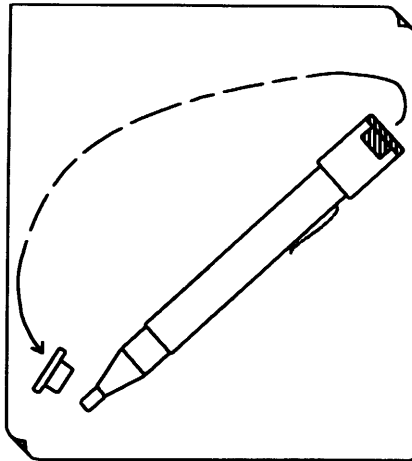


fig. 2
with the help of the test magnet
a selftest is possible.

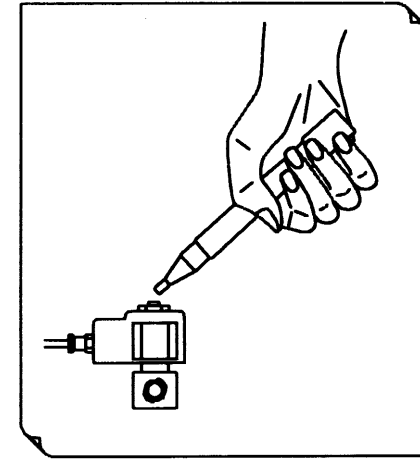


fig. 3
If there is a magnetic field e. g.
of a solenoid valve the built-in
indication LED will light.

12. Repair

For any repair the conditions of ELEX V are valid. We recommend to have all repairs carried out in the manufacturers factory, because for reasons of safety engineering the guard circuits have to be checked too.