

# IFM E18430 Sensor Testpak



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Earlier posts mentioned that my team and I frequently use the [Turk TB3-CP80 Sensor Test Box](#) and [Banner DBQ5 Proximity Sensor Tester Demo Box](#) sensor testers. Both units work well and suit our needs. That said, some minor changes or improvements should be standard for all sensor testers, and to that end, I present the **IFM E18430 Sensor Testpak** sensor tester.

What separates the IFM E18430 Sensor Testpak from the previously mentioned offerings from Turck and Banner? Keep reading.

1. **Color-Coded Pushbutton Connectors:** The color-coded buttons to attach the sensor wires match the standard wire colors on 3 and 4-wire sensors. Brown (+), Black (Input), Blue (-), and White (Teach).
2. **Teach Function:** Some sensors use a fourth white wire to access the sensors teach mode.
3. **Built-In Magnet:** A built-in magnet to actuate magnetic sensors
4. **Built-In Reflector:** A built-in reflector helps test retro-reflective photoelectric sensors.
5. **Built-In Induction Target:** A built-in induction target helps test inductive proximity sensors. Inductive proximity sensors actuate on metal.
6. **Programmable Buzzer:** The IFM E18430 Sensor Testpak can be user-programmed to

buzz on PNP or NPN sensors, or the buzzer can be disabled.

The details above seem insignificant, but these small details make the sensor tester easier to use while being more versatile than other sensor testers.

I have purchased an IFM E18430 Sensor Testpak for my newest hire, a senior maintenance technician. See what else is in his toolbox.

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## **IFM E18430 Sensor Testpak Description**

The IFM E18430 Sensor Testpak is a versatile test tool that works with most 24V DC sensors. It's a valuable accessory for fault-testing 2, 3, and 4-wire sensors. The Sensor Testpak, for programmable sensors, includes a "Teach" input.

The Testpak has an input voltage of 4.5V DC and an output voltage of 18V DC. The total output current is 0.04A. It operates under ambient temperatures ranging from -20 °C to 40°C. The device is designed to withstand these conditions with a protection rating of IP 21.

The E18430 Sensor Testpak has a Mean Time To Failure (MTTF) of 341 years, indicating its durability and reliability. It weighs 393.3g and has dimensions of 141mm x 82mm x 34mm. The materials used in its construction include ABS and silicone.

The Testpak features a green display for voltage supply and a yellow display for switching status. It also has membrane keys for ON/OFF and "Teach" functions. The device requires 3 x AA / 1.5V batteries to operate.

Four quick-press terminals facilitate the electrical connection of the Testpak. In summary, the IFM E18430 Sensor Testpak is a robust and reliable tool designed for testing a wide range of sensors. Its technical specifications, operating conditions, mechanical data, and classification codes demonstrate its versatility and durability.

For more detailed information, refer to the technical data, mounting and installation instructions, CAD drawings, and compatible accessories provided by the manufacturer.

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# **IFM E18430 Sensor Testpak Sensor Tester Operating Instructions**



Operating instructions

GB

Sensor tester

**E18430**

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# 1 Preliminary note

You will find instructions, technical data, approvals and further information using the QR code on the unit / packaging or at [www.ifm.com](http://www.ifm.com).

## 1.1 Symbols used

- ✓ Requirement
- ▶ Instructions
- ▷ Reaction, result
- [...] Designation of keys, buttons or indications
- Cross-reference



Important note

Non-compliance may result in malfunction or interference.



Information

Supplementary note

## 2 Intended use

The unit tests 2-, 3- and 4-wire sensors with digital switching output and an operating voltage of at least 18 V DC. For sensors with 2 switching outputs, the switching outputs are connected to the quick-press terminal [IN] and tested one after the other.

The function can be tested without removing the sensor. By means of the teach function sensors with a teach input can be set.

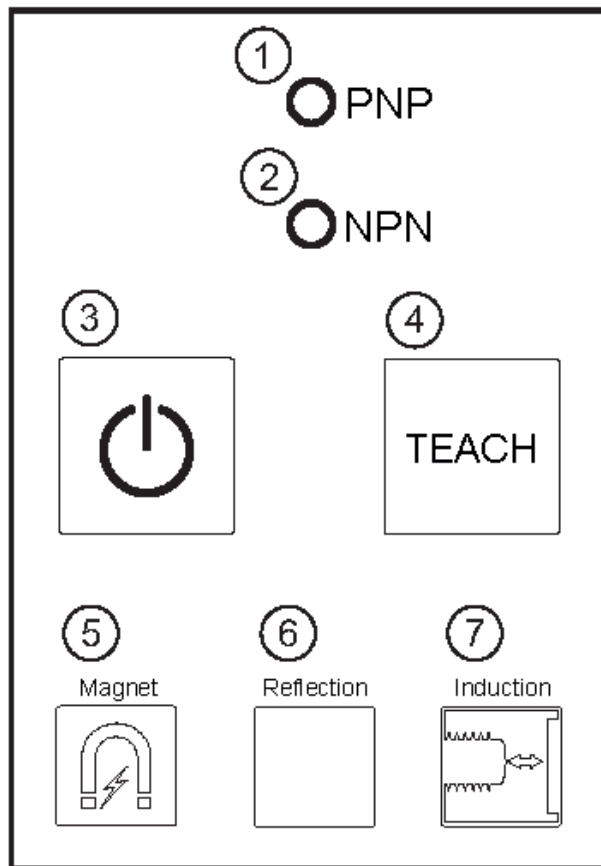
The unit is intended for operation with a voltage supply  $\leq 4.5$  V. When the voltage supply drops to a minimum of 3 V, a stable output voltage of 18 V is guaranteed.

Operation with rechargeable batteries is possible. For higher loads, connect a standard 12 V power supply observing the correct polarity.





### 3 Operating and display elements



- 1: LED display 'PNP'
- 2: LED display 'NPN'
- 3: ON/OFF button with status LED
- 4: Teach button
- 5: Test surface magnetic operating principle
- 6: Test surface reflector
- 7: Test surface inductive operating principle

#### 3.1 Status LED

A permanent flashing of the green status LED (3) indicates low batteries. If the output voltage drops to  $< 16 \text{ V DC}$ , the unit automatically switches off.

When switching on while the batteries are low, the green status LED flashes twice and the unit switches off.

► Change the batteries or rechargeable batteries.

### 4 Set-up

► Insert batteries or rechargeable batteries.

► Alternatively, connect a standard 12 V DC power supply.

To switch the unit on, press the [ON/OFF] button briefly.

#### 4.1 Insert batteries

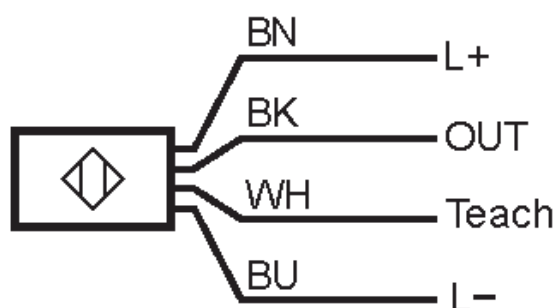
► Remove all connected units.



- ▶ Carefully remove the protective cover.
- ▶ Remove the battery compartment cover by pulling it downwards.
- ▶ Insert 3x 1.5 V batteries or rechargeable batteries with the poles in the direction marked.
- ▶ Place the cover back on the battery compartment.
- ▶ Refit the protective cover.

## 5 Electrical connection

Connect the sensor to be tested to the colour-coded quick-press terminals as follows:



BK:	black	BN:	brown
BU:	blue	WH:	white

(Colours to DIN EN 60947-5-2)



Do not use a connection cable with integrated LED.

## 6 Operation

Test the connected sensor at the corresponding test surfaces of the unit.

- [Magnet] for sensors with magnetic operating principle
- [Reflection] for retro-reflective sensors
- [Induction] for sensors with inductive operating principle

### 6.1 Teach function

Test units with remote teach function by pressing the [Teach] button.





As long as [Teach] is being pressed, a voltage of 18 V is applied to the white quick-press terminal (T).

## 6.2 Automatic switch-off

The unit will be automatically switched off after 5 minutes when:

- not used (without load)
- no change of switching state in NPN/PNP operation

No automatic switch-off occurs if a sensor with push-pull function is connected.

## 6.3 Buzzer operation mode

The unit emits an acoustic signal (buzzer) during the sensor test.

In the delivery state, the buzzer is active on PNP.

Change of buzzer operation mode:

- ▶ Switch on the unit.
- ▶ Press the [ON/OFF] button > 2 s.
- ▷ Green status LED flashes:
  - flashing 1x: buzzer active on PNP
  - flashing 2x: buzzer active on NPN
  - flashing 3x: buzzer OFF

The last selected state will be saved when the unit is switched off.

## 7 Maintenance, repair and disposal

If used correctly, no maintenance and repair measures are necessary.

Only the manufacturer is allowed to repair the unit.

- ▶ After use dispose of the device in an environmentally friendly way in accordance with the applicable national regulations.

