

Press Release

TWO IN ONE – Dual foilsensor ensures relevant torque settings

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The foiltechnologie offers new applications for potentiometric sensors. Metallux AG as a manufacturer of electronic components, offers a wide selection of sensors, which also can be adjusted to accomodate custom specific requirements. In the cordless screwdriver Quadrive by Protool, a customspecific foilsensor supports the setting of torque - and speed adjustments.

Metallux foilsensors, within the application of tool technology, allow for a simple and reliable torque adjustment, whereby the sensor is linked to an evaluation electronic. A custom specific MetaPot-Foilsensor is integrated in the new cordless screwdriver by Protool.



Photo 1 Protool cordless screwdriver

The MetaPot foil sensor translates the settings of the control elements into readable values for the control electronics. It functions as a setpoint setting for the electronic functioning torque cut-off.

The MetaPot foilpotentiometer, integrated into the cordless screwdriver, offers, compared to conventional potentiometers, many advantages not only for this application in the Protool cordless screwdriver.

In close cooperation with the customer, the specially developed foilpotentiometer with its fitting round form ensures an optimal system integration. The custom specific design of the sensor resulted in having no additional fixation to take care off. The foilsensor is simply

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plugged in. This easy contact via a plug connection facilitates a more efficient production flow and should there be faults, can easily be exchanged.

The flat design with a height of only 0,5mm allows a space saving installation. Important in the application of a cordless screwdriver is an extreme leak tightness. Dust and dirt, accumulating during the drilling process, cannot permeate into the hermetically sealed system. In the long run the sensors will keep on functioning, wear and tear is kept to a minimum and the life span is increased.



Photo 2: Metallux MetaPot custom specific foilpotentiometer

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Conclusion: The custom specific hermetically sealed foil potentiometer in the cordless screwdriver performs two functions - the setting of torque - and speed adjustments. In contrast to conventional systems, the MetaPot foil technology distinguishes itself with an extremely flat design, easy installation possibilities as well as a wide temperature range. Due to the high resistance value of $5k\Omega$ the power consumption of the sensor is very low.



Photo 3: Integration in the housing

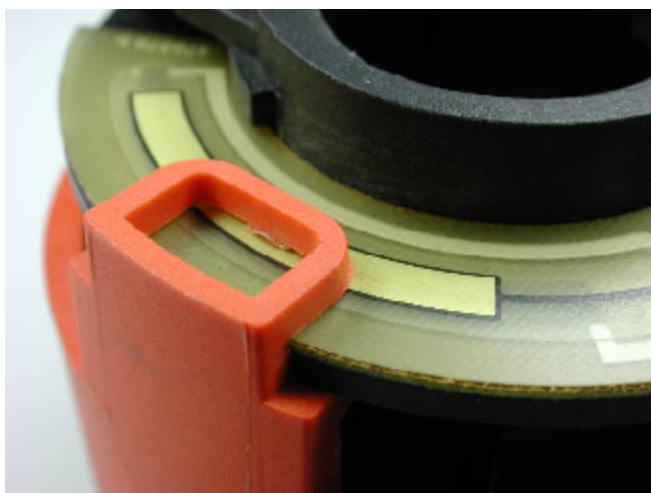


Photo 4: Close-up integration in the housing

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Photo 5: Protool cordless screwdriver

The range of applications for linear and rotative MetaPot-Foilsensors is manifold. Linear sensors are suitable for level measurements in containers, travel measurements (e.g. in cylinders) , alignment of antennas, in the medical technology (e.g. operation tables), syringe pumps and in the automotive industry (e.g. seat adjustments).

The rotative sensors can be utilised in power tools, serving to position drives and robot-systems. Further use can be found in the medical and automotive industrie.

The MetaPot – Foiltechnology offers especially following advantages:

- hermetically sealed against dust, dirt and liquids
- minimal wear and tear
- very good price-performance relation
- very flat design < 0,5mm
- easy installation
- high life cycle > 5.000.000 cycles
- extended temperature range [-20°C – 85°C]
- high resolution due to analog technology
- low power consumption due to high sensor resistance
- measuring length up to 500mm
- custom specific dimensions possible [length, width,radii]
- various connections as per customer requirements
- sensor position maintains-> no reference movement required

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About Metallux:

Metallux AG is a high-performance manufacturer of electronic components produced in thick-film technology. Metallux offers a vast product portfolio and next to the standard program of pressure-, linear- and rotary- as well as foil sensors, high voltage- and power resistors as well as custom specific solutions; up to assembling of potentiometers and joysticks. A balanced customer orientation with relevant ideas and solutions make for a satisfied customer base. Innovative products, a multitude of registered patents and long time experience- numerous well known customers in the fields of automotive, electro static, medical- and industrial electronic as well as sensor systems, rely and trust for 24 years the company, located near Stuttgart.

For more information:

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