

Description

Les capteurs de la série **DK** intègrent un capteur à effet Hall et un conditionneur de signal dans un seul boîtier. Ceci permet une plus grande précision, un coût de connexion moins élevé et une installation mécanique facile. Ce produit est disponible en boîtiers ouvrants et monoblocs.

Problèmes

1. Signal de sortie trop faible

- Le calibre peut être mis dans une gamme qui est trop forte pour le courant surveillé. Déplacer le calibre dans une gamme adaptée.
- L'alimentation n'est pas adaptée. Vérifier l'alimentation en étant certain que la tension est suffisante pour une charge maximum. La consommation des **DK** s'approche des 2.0 VA.

Modèles à sortie 0-20 mA, 4-20 mA

- L'impédance de sortie est trop élevée. Vérifier que la résistance de sortie est inférieure à 500 Ω .

Modèles à sortie 0-5, 0-10 VDC

- L'impédance de sortie est trop basse. Vérifier que la charge de sortie soit supérieure à 25 k Ω .

2. Signal de sortie est toujours au maximum

- Le calibre est mis dans une gamme trop inférieure au courant mesuré. Déplacer le calibre dans une gamme adéquate.

3. Absence du signal de sortie

- La polarité n'est pas correcte. Vérifier et corriger la connexion du secondaire.
- Le courant primaire est inexistant ou il n'est pas continu. Vérifier le fonctionnement du système et/ou le type du courant primaire.
- Pour les modèles à tores ouvrants : La surface de contact n'est pas propre. Ouvrir le capteur et nettoyer la surface de contact.

Beschreibung

Die **DK**-Baureihe ist eine Kombination von Hall-Effekt-Stromwandler und Signalaufbereitung in einem Gehäuse. Dadurch werden eine höhere Genauigkeit, niedrigere Verdrahtungskosten sowie eine einfachere Installation erreicht und wertvoller Platz im Schaltschrank eingespart. Die Messumformer dieser Baureihe sind als Klappwandler oder in geschlossener Bauform erhältlich.

Fehlersuche

1. Ausgangssignal zu niedrig

- Der Jumper ist auf einen Messbereich gesetzt, der für den Strom, der überwacht wird, zu hoch ist. Setzen sie den Jumper auf den richtigen Messbereich.
- die Stromversorgung ist nicht richtig dimensioniert. Überprüfen Sie Nennspannung und Nennstrom der Stromversorgung. Stellen sie sicher, dass die Nennspannung unter Vollast eingehalten wird. die DK-Baureihe benötigt 2.0 VA.

Fehlersuche 0-20, 4-20 mA Typen

- Lastwiderstand ist zu hoch. Überprüfen Sie den Lastwiderstand, stellen Sie sicher, dass er nicht mehr als 500 Ω beträgt.

Fehlersuche 0-5 VDC & 0-10 VDC Typen

- Lastwiderstand ist zu niedrig. Überprüfen Sie den Lastwiderstand, stellen Sie sicher, dass er mindestens 25 k Ω beträgt.

2. Sensor gibt immer den Maximalwert aus

- Der Jumper ist auf einen Messbereich gesetzt, der für den Strom, der überwacht wird, zu niedrig ist. Versetzen Sie den Jumper auf den richtigen Messbereich.

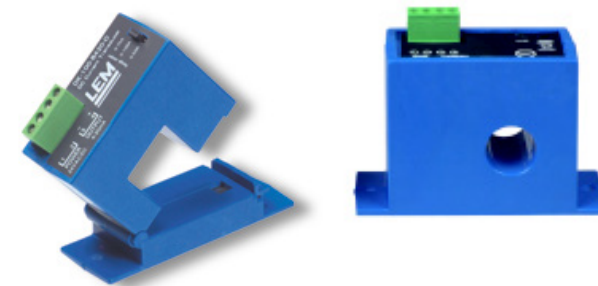
3. Sensor liefert kein Ausgangssignal

- Anschlüsse der Spannungsversorgung vertauscht. Polarität der Anschlüsse richtig stellen.
- Überwachte Last ist kein Gleichstromverbraucher oder ist nicht eingeschaltet. Stellen Sie sicher, dass es sich um einen Gleichstromverbraucher handelt und er eingeschaltet ist.
- Umbauwandler: Die Endflächen der Kernteile könnten verschmutzt sein. Öffnen Sie den Sensor und reinigen Sie die Endflächen.



DK SERIES

DC Current Transducers
Ranges from 5 to 400 A
With 0-20 mA, 4-20 mA,
0-5 VDC or 0-10 VDC Outputs



Installation guide Manuel d'utilisation Einbauvorschriften

Description

DK Series transducers combine a Hall Effect sensor and a signal conditioner into a single package. This provides higher accuracy, lower wiring costs, easier installation and saves valuable panel space. This product is available either in solid core or in split core package.

Important before to start

In order to guarantee safe operation of the transducer and to be able to make proper use of all the features and functions, please read the following instructions thoroughly.

Ensure you get up-to-date technical information that can be found in the latest associated datasheet under www.lem.com.

Installation

1. Run wire to be monitored through sensor aperture. Be sure the monitored current flow is in accordance with any directional arrows on sensor.
2. Mount the transducer to a surface if needed. They can be mounted in any position or hung directly on wires with a wire tie. Just leave at least 30 mm distance between sensor and other magnetic devices.
3. Connect output wiring to deadfront captive screw terminals and observe polarity. Use up to 2.5 mm² (14 AWG) copper wires. Tighten terminals to 0.6 Nm (5 in-lbs) torque.
 - for current output models (mA), make sure output load is no more than 500 Ω.
 - for voltage output models (VDC), make sure output load is at least 25 kΩ.
4. Connect the appropriate power supply. For optimal performance, ensure unit has been energized for a period of 20 minutes prior to sensing operation.
5. Select the range that is equal to or slightly higher than the normal operating amperage of monitored circuit. Place the range jumper in the appropriate position.

Trouble shooting

1. Output Signal Too Low

- The jumper may be set in a range that is too high for current being monitored. Move jumper to the correct range.
- Power supply is inadequate. Check power supply. Make sure it is of sufficient voltage with all loads at maximum. **DK series consumes 2.0 VA.**

For 0-20 mA, 4-20 mA Models

- Output load too high. Check output load, be sure it is no more than 500 Ω.

For 0-5, 0-10 VDC Models

- Output load too low. Check output load, be sure it is at least 25 kΩ.

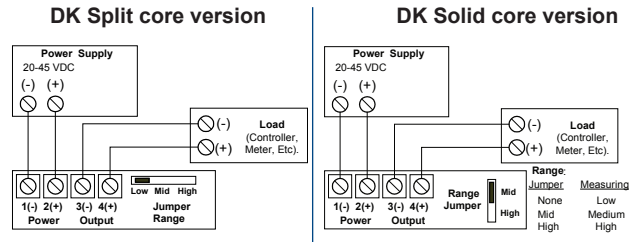
2. Output Signal is always at maximum

- The jumper may be set in a range that is too low for current being monitored. Move jumper to the correct range.

3. Sensor has not output

- Polarity is not properly matched. Check and correct wiring polarity.
- Monitored load is not DC or is not on. Check that the monitored load is DC and that it is actually on.
- Split Core models: The core contact area may be dirty. Open the sensor and clean the contact area.

Connection diagram



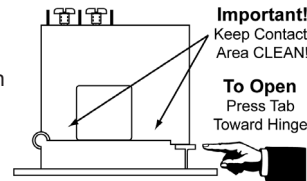
Output polarity and primary current direction

For correct transducer mounting, please refer to the appropriate datasheet for the respective positive current direction and transfer characteristics of the:

- standard unipolar output version (magnitude only)
- unidirectional version ("U" option)
- bi-directional version ("B" option).

Split-core model

Press the tab in the direction as shown to open the sensor. After placing the wire in the opening, press the hinged portion firmly downward until a definite click is heard and the tab pops out fully.



Silicone grease is factory applied on the mating surfaces to prevent rust and improve performance. Be careful not to allow grit or dirt onto the grease in the contact area. Operation can be impaired if the mating surfaces do not have good contact. Check visually before closing.

Isolation characteristics

U_b Rated insulation voltage rms, reinforced insulation, CAT III, PD2 150 V
If isolated cable is used for the primary circuit, the voltage category could be improved according to the following table:

Cable isolation (primary)	Category
HAR 03	300 V CAT III
HAR 05	600 V CAT III
HAR 07	1000 V CAT III

U_d Rms voltage for AC insulation test, 50Hz, 1 min 3 kV

ULXX Plastic case classification UL 94-V0



Safety and warning notes

Safe operation can only be guaranteed if the transducer is used for the purpose it has been designed for and within the limits of the technical specifications.



Caution! Risk of danger

Ignoring the warnings can lead to serious injury and/or cause damage!

The electric measuring transducer may only be installed and put into operation by qualified personnel that have received an appropriate training.

The corresponding national regulations shall be observed during installation and operation of the transducer and any electrical conductor.

The transducer shall be used in electric/electronic equipment with respect to applicable standards and safety requirements and in accordance with all the related systems and components manufacturers' operating instructions.



Caution! Risk of electrical shock

When operating the transducer, certain parts of the module may carry hazardous live voltage (e.g. primary conductor, power supply).

The user shall ensure to take all measures necessary to protect against electrical shock.

The transducer is a built-in device containing conducting parts that shall not be accessible after installation.

A protective enclosure or additional insulation barrier may be necessary.

The transducer shall not be put into operation if the jaw opening is open (split core version) or the installation is not completed.

Installation and maintenance shall be done with the main power supply disconnected except if there are no hazardous live parts in or in close proximity to the system and if the applicable national regulations are fully observed.

At the heart of power electronics

LEM is the market leader in providing innovative and high quality solutions for measuring electrical parameters. Its core products current and voltage transducers are used in a broad range of applications in industrial, traction, energy, automation and automotive markets.

For more information: www.lem.com



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