

## ENGLISH

### Inductive proximity sensor IQ12 Operating Instructions

#### Safety Instructions

- Box-shaped inductive sensor for category 3G/3D.
- Ambient operating temperature  $T_a = -20\text{ °C} \dots +60\text{ °C}$  for 3D,  $T_a = -20\text{ °C} \dots +70\text{ °C}$  for 3G.
- Maximum surface temperature of  $T = 100\text{ °C}$ .
- Enclosure rating IP 54.
- The sensor housing does not provide sufficient protection against mechanical shocks in the sense of ex-norms. The sensor operator must ensure that the sensor is not subject to any mechanical shocks.
- The withdrawal-lock clips must be installed above the M12 plug connection.
- Do not disconnect the plug when it is voltage-carrying.
- Read the operating instructions before starting operation.
- Connection, assembly, and commissioning only by competent technicians.
- No safety component in accordance with EU machine guidelines.
- The sensor should be protected against UV light.

#### Proper Use

This inductive proximity sensor is used for detecting targets made of metal capable of conducting electricity in areas subject to danger of explosions.

#### Performance data of sensor

Operating voltage  $U_B = 6 \dots 36\text{ V DC}$   
Continuous current  $I_a \leq 100\text{ mA}$

#### Sensor marking

Due to space limitations, the following, reduced marking is applied on the sensor:

- II 3G EX nA IIC T4X
- II 3D EX tc IIIB T100 °C X

#### Commissioning

The following must be observed when connecting the sensor to a voltage source:

- The performance data (operating voltage, continuous current).
- The connection diagram of the sensor.

#### Maintenance

The inductive proximity sensor from SICK does not require any maintenance. We recommend that you check the connections at regular intervals.

# SICK

8011732.V608 0511 GO

# SENSICK IQ12

II 3G EX nA op is IIC T4 Gc X  
II 3D EX tc IIIB T100 °C Dc IP54 X

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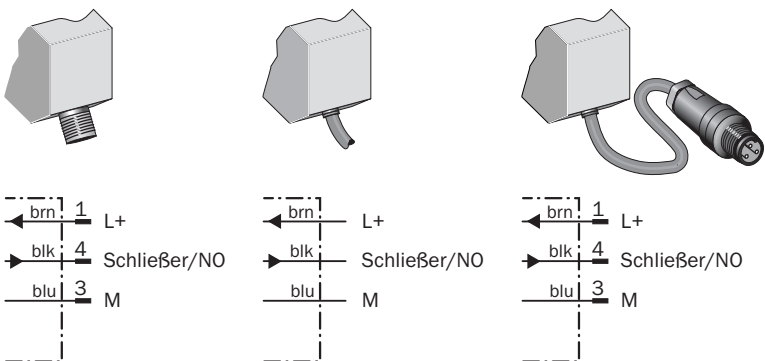
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Please find detailed addresses and additional representatives and agencies in all major industrial nations at [www.sick.com](http://www.sick.com)

BZ 10/36

Subject to change without notice  
Irrtümer und Änderungen vorbehalten

## A Anschlussdiagramm/Connection diagram



Aderfarbe/Wire color	Belegung/Assignment
brn braun/brown	+ V DC
blk schwarz/black	Schließer/NO
blu blau/blue	- V DC


Typ/Model name	Artikelnr./Part no.
IQ12-06NPS-KQX	1029594

### EC Declaration of conformity

The undersigned, representing the following manufacturer

**SICK AG**  
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Germany

herewith declares, that the products listed above are in conformity with the provisions of the following EC directives (including all applicable amendments), and that the standards and/or technical specifications referenced below have been applied.

Following inspection result has been achieved for the listed devices:  II 3G EX nA op is IIC T4 Gc X  
II 3D EX tc IIIB T100°C Dc IP54 X

*The housing of the sensor offers an insufficient protection against mechanical hits in the sense of the Ex-standards. This has to be taken into account while operating the sensor (see instruction manual).*

### Used directives and standards:

Directive or standard	Title or short decription	Issued
Directive 2004/108/EC	EMC-Directive – electromagnetic compatibility	2004 – 12
Directive 94/9/EC	Equipment intended for use in potentially explosive atmosphere (ATEX)	1994 – 03
EN 60947 – 5 – 2	Low voltage switchgear and controlgear – part 5-6: Control circuit devices and switching elements – proximity switches	2007 – 12
EN 60079 – 0	Electrical apparatus for explosive atmospheres – part 0: General requirements	2009 – 08
EN 60079 – 15	Explosive atmospheres – part 15: Construction, test and marking of type of protection „n“ electrical apparatus	2005 – 10
EN 60079 – 28	Explosive atmospheres – part 28: Protection of equipment and transmission systems using optical radiation	2007 – 03
EN 60079 – 31	Explosive atmospheres – part 31: Equipment dust ignition protection by enclosure “t”	2009 – 12

Waldkirch, 12.06.08

  
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## DEUTSCH

### Induktiver Näherungssensor IQ12 Betriebsanleitung

#### Sicherheitshinweise

- Quaderförmiger induktiver Sensor für Kategorie 3G/3D.
- Umgebungstemperatur  $T_a = -20\text{ °C} \dots +60\text{ °C}$  für 3D,  $T_a = -20\text{ °C} \dots +70\text{ °C}$  für 3G.
- Maximale Oberflächentemperatur von  $T = 100\text{ °C}$ .
- Schutzart IP 54.
- Das Sensorgehäuse bietet keinen ausreichenden Schutz gegenüber mechanischen Schlägen im Sinne der Ex-Normen. Der Betreiber des Sensors hat sicherzustellen, dass der Sensor keinen mechanischen Schlägen ausgesetzt wird.
- Die Abzugs-Sicherungs-Clips müssen über die Steckverbindung M12 montiert werden.
- Stecker nicht unter Spannung trennen.
- Vor der Inbetriebnahme die Betriebsanleitung lesen.
- Montage, Anschluss und Inbetriebnahme nur durch Fachpersonal.
- Kein Sicherheitsbauteil gemäß EU-Maschinenrichtlinie.
- Der Sensor ist vor UV-Licht zu schützen.

#### Bestimmungsgemäße Verwendung

Dieser induktive Näherungssensor wird zum Erkennen von Schaltfahnen aus elektrisch leitfähigem Metall in explosionsgefährdeten Bereichen eingesetzt.

#### Leistungsdaten des Sensors

Betriebsspannung  $U_B = 6 \dots 36\text{ V DC}$   
Dauerstrom  $I_a \leq 100\text{ mA}$

#### Sensorkennzeichnung

Aus Platzgründen wird auf dem Sensor folgende, eingeschränkte Kennzeichnung angebracht:

- II 3G EX nA IIC T4X
- II 3D EX tc IIIB T100 °C X

#### Inbetriebnahme

Beim Anschluss des Sensors an eine Spannungsquelle müssen folgende Punkte berücksichtigt werden:

- Die Leistungsdaten (Betriebsspannung, Dauerstrom).
- Das Anschlussdiagramm des Sensors.

#### Wartung

Der induktive Näherungssensor von SICK ist wartungsfrei. Wir empfehlen, in regelmäßigen Abständen die Anschlüsse zu überprüfen.