



TIMM BITE

SIMPLE GROUNDING SOLUTIONS WITH A BITE

- ✓ ATEX approved safety
- ✓ For Ex zones 1 | 2 and 21 | 22
- ✓ Chemical resistant material
- ✓ Grounding teeth with extra hardened tips*
- ✓ Strengthended pliers spring*
- ✓ Integrated strain relief*

TIMM BITE GROUNDING CLAMPS

Choose from 6 high-quality grounding clamps and combine your clamp with with a strong steel stranded cable or a flexible copper cable.



TIMM Large Bite

Extra large grounding clamp



BESTSELLER

TIMM Medium Bite

Handy grounding clamp



TIMM Mini Bite

Small grounding clamp for laboratory and work bench applications



TIMM Profi Bite

Extra strong grounding clamp



TIMM Round Bite

Strong grounding clamp for round profiles and fabrics (ideal for IBC)



TIMM Basic Bite

Economic grounding clamp for basic protection

*depending on model







Technical details [→](#)



TIMM BITE

APPLICATION AREAS

✓ recommended ✓ usable

						
Suitable applications	TIMM Large Bite	TIMM Medium Bite	TIMM Mini Bite	TIMM Profi Bite	TIMM Basic Bite	TIMM Round Bite
Trucks / tank wagons	✓	✓		✓		✓
Large items (barrels, canisters)	✓	✓		✓	✓	✓
Small items (oil cans, buckets, funnels)	✓	✓	✓	✓	✓	✓
IBC / RIBC / fabrics		✓				✓
Object surface						
Coated / with product deposits	✓	✓	✓	✓		
Uncoated and clean	✓	✓	✓	✓	✓	✓
ATEX approval	Gas: Zone 1 2			Dust : Zone 21 22		

TIMM BITE GROUNDING CABLES

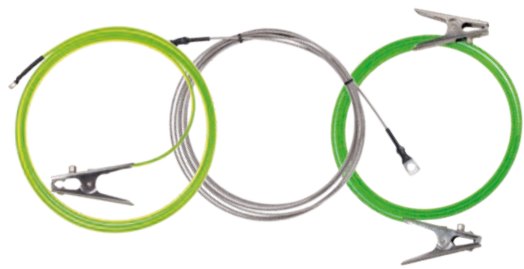
Create your individual and ready-made grounding solution.

1. Choose your grounding cable from different materials and lengths

a) Coiled cable



b) Straight cable



2. Individualize the ends of your cable to suit your application

- a) Grounding clamp and ring cable lug
- b) Grounding clamps on both sides
- c) Ring cable lugs on both sides

Configure and order your TIMM Bite grounding solution easily and conveniently online

 www.timm-technology.de/en/simple-grounding-solutions-with-a-bite/



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GROUNDING CONTROL DEVICE EKX-4 (2-POLE) SPECIALIZED VERSION FOR CONTAINERS, IBCS AND BARRELS

The danger of **electrostatic charges** must always be observed when loading, unloading or handling **bulk solids** or **inflammable liquids** in the **petrochemical, chemical, pharmaceutical, as well as in the food and feed industry**. For application with **containers, IBCs, barrels** or **trays**, that may be insulated from ground potential, the EKX-4 (2-pole) is the Grounding Control Device to choose.

FUNCTIONAL PRINCIPLE

EKX-4 (2-pole) ensures that **static electricity is safely discharged** to the ground. It continuously **monitors** the electrical resistance of the grounding connection including the connection points at the grounding clamp. Only if the connected object is **detected** and **grounded properly**, the filling release will be signaled by green LEDs and the control outputs will switch. If there are any breaks in the grounding connection, the LEDs change to red and the filling will be interrupted immediately.

APPLICATION AREAS

EKX-4 (2-pole) is mounted **stationary**, close to the loading/unloading gantry. It is used in gas and dust hazardous areas of **zone 1 and 21** for objects to be grounded, that cannot be detected by the standard 1-pole Grounding Control Device EKX-4 such as containers, IBCs or barrels. Further areas of application are the grounding of materials handled with trays on conveyors in automated industrial processes.

PRODUCT BENEFITS

- **Controlled low resistance** grounding connection especially for containers, IBCs and barrels
- Automatic diagnosis system **continuously self-monitors** all safety-related functions
- Possibility to **connect longer cables** (up to 50 m)
- **NAMUR-compatible** Ex i control output
- **Opening the housing** under voltage is permissible - thanks to intelligent explosion protection (IEPC)



HIGHEST LEVEL OF SAFETY
in hazardous areas

LEADING TECHNOLOGY
in monitoring, diagnostics, and configuration

EASY TO OPERATE
by ability to open housing in hazardous areas



2-POLE



TECHNICAL SPECIFICATIONS

Type of protection:

according to ATEX 2014/34/EU:

⊕ II 2 G – Ex eb q [ib] IIC T4 Gb

⊕ II 2 D – Ex tb [ib] IIIC T80°C Db

Power supply:

230 V AC \pm 10 %, 50 Hz, approx. 10 VA

Control outputs:

2 potential-free closing contacts

1 change-over contact | 1 NAMUR-output

Operating temperature: - 30 °C up to + 60 °C

Approvals: ATEX, EAC Ex, CQST, SIL 2

ACCESSORIES*

CABLES WITH 2-POLE CLAMP



Coiled grounding cable
up to 15 m



Straight grounding cable
up to 50 m



Cable reel
up to 10 m

OTHER ACCESSORIES



Testing equipment



Clamp hanger



Rubber insulating sheath

*For further information and additional accessories, visit us at www.timm-technology.de or contact us in person.



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GROUNDING CONTROL DEVICE EKX-4 SAFE DISCHARGE OF ELECTROSTATIC CHARGES

During loading and unloading of **tank trucks, silo trucks** and **railway wagons** with **flammable liquids** or **bulk solids**, an **explosive gas and dust atmosphere** may arise – a single spark can be sufficient to initiate an explosion. To prevent this, the occurring **electrostatic charges must be discharged safely**.

FUNCTIONAL PRINCIPLE

Before each loading or unloading, the Grounding Control Device EKX-4 gets connected to the transport vehicle using the grounding cable and clamp. EKX-4 **ensures static electricity is discharged safely to Earth and continuously monitors the grounding connection**. Only if the connected object is **detected** and grounded properly, the electronic control outputs will switch to permissive and **filling release** will be signalled by green, widely visible LEDs. If there is an interruption of the grounding connection, this will be shown by red LEDs and the filling process will be stopped immediately.

APPLICATION AREAS

EKX-4 provides **monitored electrostatic grounding** at loading/unloading stations and gets installed directly in **gas and dust hazardous areas of zone 1, 2 and 21, 22**. Its control outputs allow connection to the loading control system. Typical applications are **top loading** of fuel tank trucks, **gas carrying trucks** (compressed, cryogenic, high pressure tubes), tank vehicles for **petrochemical/chemical products** or when handling **flammable bulk materials**, such as coal dust, starch, sugar or flour.

PRODUCT BENEFITS

- **Protection against electrostatic discharges** in hazardous areas
- Designed to purpose **intelligent explosion protection (IEPC)**
- **Prevents manipulation** by object detection (measuring impedance)
- **Simple application configuration** (e.g. "tank truck", "rail way wagon")
- **Automatic diagnosis and continuously self-monitoring** of device functions
- **Opening the housing** for quick change of cables or configuration is permissible under power
- Possibility to **connect longer grounding cables** due to cable compensation



HIGHEST LEVEL OF SAFETY
in hazardous areas

LEADING TECHNOLOGY
in monitoring, diagnostics, and configuration

EASY TO OPERATE
by ability to open housing in hazardous areas



EKX-4



TECHNICAL SPECIFICATIONS

Type of protection:

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⊕ II 2 G – Ex eb q [ib] IIC T4 Gb

⊕ II 2 D – Ex tb [ib] IIIC T80°C Db

Power supply:

230 V AC $\pm 10\%$, 50 Hz, approx. 10 VA

Control outputs:

2 potential-free closing contacts

1 change-over contact | 1 NAMUR-output

Operating temperature: - 30 °C up to + 60 °C

Approvals: ATEX, EAC Ex, CQST, PESO, SIL 2

ACCESSORIES*

CABLES AND CABLE REEL



Coiled grounding cable
up to 15 m



Straight grounding cable
up to 30 m



Cable reel
up to 10 m

CLAMPS



Grounding clamp



Clamp hanger



Rubber insulating
sheath

BREAKAWAY COUPLING



Grounding
socket



Grounding clamp
with brass pin

OBJECT SELECTOR



Push button



Key Switch

TESTING EQUIPMENT



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GROUNDING CONTROL DEVICE EKX-FIBC

MONITORED GROUNDING WITH OBJECT DETECTION FOR BIG BAGS

DO YOU FILL OR EMPTY BIG BAGS? Then you should remember that many dusts in conjunction with air have a **high risk of explosion**. **Flours, sugars or aluminum dusts** are well known as an explosion hazard. But even the dust of products such as **fertilizers, rubber, tobacco, spices** and **many other substances** can cause explosions. Therefore, when processing such products, conductive big bags must be used. Grounding is required for these types of big bags to prevent ignition due to **electrostatic charges**.

FUNCTIONAL PRINCIPLE

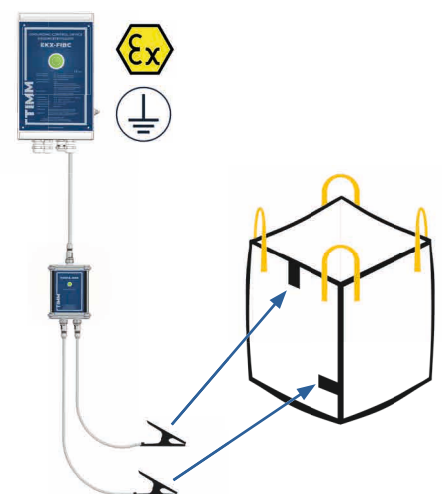
The Grounding Control Device EKX-FIBC provides and **monitors a safe grounding connection** between the big bag and the designated ground point via **two active clamps**. The **digital measuring technology** prevents misuse or bypassing of the device by means of **automatic object recognition**. A filling release via the **electronic control outputs** and the highly visible LED indicator is only given if the connected big bag is properly recognized and safely grounded via both clamps. In case of an interruption of the ground connection, the control outputs lock and the **optical LED indicator** changes from green to red.

HANDLING

The EKX-FIBC can be used in gas and dust explosive atmospheres up to **Zone 1/21**. The main unit can be mounted at a distance of **up to 20 m** to the workplace. The **cable quick couplings** at the optional external measuring module and the **plain text diagnostic display** in the main unit allow **easy initial installation, handling and maintenance**.

PRODUCT BENEFITS

- For all FIBC Type C according to **IEC 61340-4-4** ($10^7 \Omega$ and $10^8 \Omega$)
- **Tamper-proof** through digital measurement technology and **reliable object detection** (5-check-principle)
- Simultaneous monitoring of **two big bags** is possible
- Relay and NAMUR **control outputs**
- **Autodiagnosis system** for permanent self-monitoring of all safety-related functions
- **Easy handling** thanks to cable quick couplings and the integrated plain text OLED display
- Mounting the main unit at a distance of **up to 20 m** from the workplace is possible





TECHNICAL SPECIFICATIONS

Type of protection:

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⊕ II 2 G – Ex eb ib q IIB T4 Gb

⊕ II 2 D – Ex ib tb IIIC T80°C Db

Power supply:

230 V AC ± 10 %, 50-60 Hz, approx. 10 VA

Control outputs:

2 potential-free closing contacts

1 change-over contact | 2 NAMUR-outputs

Operating temperature: - 30 °C up to + 60 °C

Certificate: ATEX, IECEx

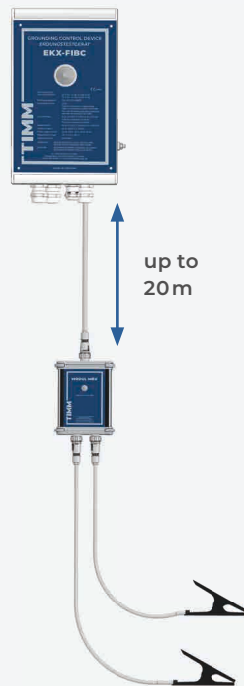
VARIANTS

INTEGRATED MEASURING ELECTRONIC



Monitoring of 1 big bag

ONE EXTERNAL MEASURING MODULE



Monitoring of 1 big bag with remote LED indicator

TWO EXTERNAL MEASURING MODULES



Simultaneous monitoring of 2 big bags

For further information and additional accessories, visit us at www.timm-technology.de/en/products/ekx-fibc or contact us.



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