

# GROUNDING CONTROL DEVICE EKX-4

## SAFE DISCHARGE OF ELECTROSTATIC CHARGES

During loading and unloading of **tank trucks, silo trucks, railway wagons** or **tank containers** with inflammable liquids or 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

EKX-4 ensures **static electricity is discharged to the ground by a grounding cable** and **continuously monitors the grounding quality**. Only if the connected object is detected and grounded properly, the **electronic control outputs** will switch and filling release will be signaled by green, widely visible LEDs. If there is an interruption of the grounding connection, this will be shown by red LEDs, the filling process will be interrupted immediately.

### APPLICATION AREAS

EKX-4 is mounted stationary at the filling gantry and can be connected to the PLC or loading computer by control outputs for process interlock. It is used in gas and dust hazardous areas of **zone 1 and 21** – mainly in the petrochemical and chemical industry. Further areas of application are the food and feed industry, when handling potentially explosive bulk materials and in the aviation industry.

### PRODUCT BENEFITS

- **Prevents manipulation** due to object recognition (by measuring the impedance)
- **Automatic diagnosis system** continuously self-monitors all safety-related functions
- **Simple device configuration** (e.g. "road tank truck", "railway tank wagon")
- Possibility to **connect longer cables** (up to 30 m) due to cable compensation
- **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





## 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



Coiled grounding cable  
up to 15 m



Straight grounding cable  
up to 30 m



Cable reel  
up to 10 m

### CLAMPS



Grounding  
clamp

### Breakaway coupling - option 1



Grounding  
socket

Grounding clamp  
with brass pin

### Breakaway coupling - option 2



Grounding  
socket

Grounding plug

Grounding clamp

### OTHER ACCESSORIES



Testing equipment



Clamp hanger



Rubber insulating sheath

\*For further information and additional accessories, visit us at [www.timm-technology.de](http://www.timm-technology.de) or contact us in person.



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