

# Operating Instructions



F01083y

## Ground Clamps Series 70

for active grounding with the Eltex ground monitoring systems and for passive grounding

BA-en-4017-2107





# List of contents

<b>1</b>	<b>Overview</b>	<b>6</b>
<b>2</b>	<b>Safety</b>	<b>12</b>
2.1	Identification of risks and hazards	12
2.2	Technical advance	12
2.3	Proper use	12
2.4	Work and operational safety	14
2.5	Special conditions according to the certificate of conformity	15
<b>3</b>	<b>Installation and assembly</b>	<b>16</b>
3.1	Electrical connection of the ground clamps	16
3.1.1	Active ground clamps	16
3.1.2	Passive ground clamps	17
3.2	Wiring diagram of the ground clamps	18
3.3	Pin assignment of the coupling plug	20
3.4	Cable specifications	20
<b>4</b>	<b>Operation</b>	<b>21</b>
4.1	Start-up	21
<b>5</b>	<b>Maintenance</b>	<b>22</b>
5.1	Checking the resistance to earth	22
5.2	Ground clamps	23
<b>6</b>	<b>Technical specifications</b>	<b>24</b>
6.1	Active Ground clamps	24
6.2	Passive Ground clamps	25
<b>7</b>	<b>Dimensions</b>	<b>27</b>
<b>8</b>	<b>Spare parts and accessories</b>	<b>32</b>
<b>A</b>	<b>Annex</b>	<b>35</b>
A.1	Grounding with ground monitoring unit (active grounding)	35
A.2	Grounding without ground monitoring unit (passive grounding)	35
A.3	Overview Approvals	36
	<b>Declarations of Conformity</b>	<b>38</b>



## Dear Customer,

The active Eltex ground clamps series 70 are designed for making and - in connection with Eltex TUE30 Terra-Control and **TERRALIGHT** Ground Monitoring Systems - for monitoring ground connections.

Special ground monitoring systems operating with two ground clamps are capable of monitoring the correct grounding of conductive Big Bags by measuring the electric resistance between two opposing grounding flags.

The passive Eltex Ground Clamps Series 70 are designed for making ground connections for discharging static charges.

The appliances are used in areas where potentially explosive materials and substances are loaded, discharged, refilled or transported. Any developing static charges are safely and effectively eliminated and led to ground. This means that the risk of ignition caused by static discharges is eliminated at source.

Different design variants and sizes of ground clamps are available for active, passive and Big Bag grounding and for use in potentially explosive atmospheres.

The clamp holders are designed for wall mounting and may be used in zones with potentially explosive atmospheres.

Please read the operating instructions carefully before starting the instrument. This will help you prevent personal injuries and damage to property.

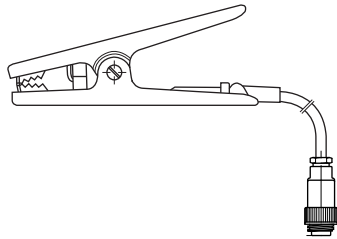
Please give us a call if you have any suggestions, proposals or ideas for improvements. We greatly appreciate the feedback from the users of our appliances.



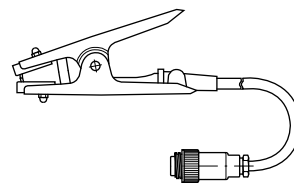
# 1. Overview

## Active ground clamps

70AG

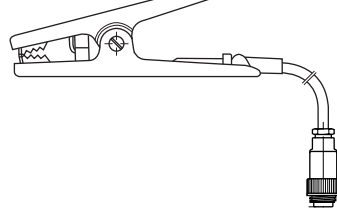


70AK

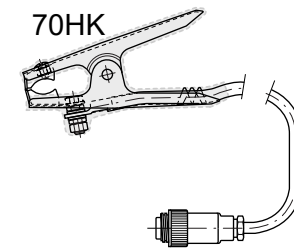


## Active ground clamps for Big-Bag

70BG

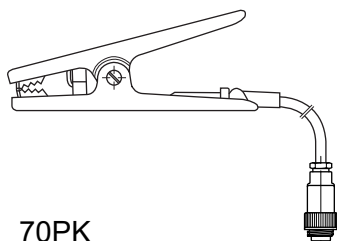


70HK

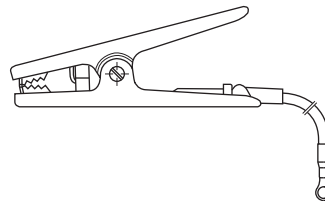


## Passive ground clamps

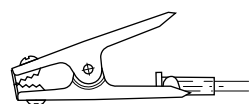
70SG



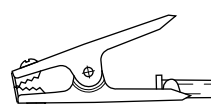
70PG



70PK



70OK



70OK/020

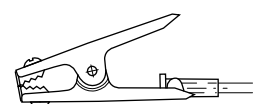
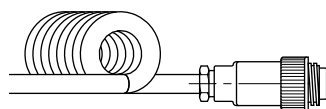


Fig. 1:  
Ground clamps  
series 70

Z01153y

## Cable

helix ground cable



ground cable



Fig. 2:  
Cables

Z01156y

### Accessory

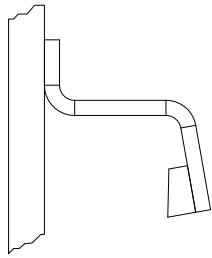


Fig. 3:  
Clamp holder

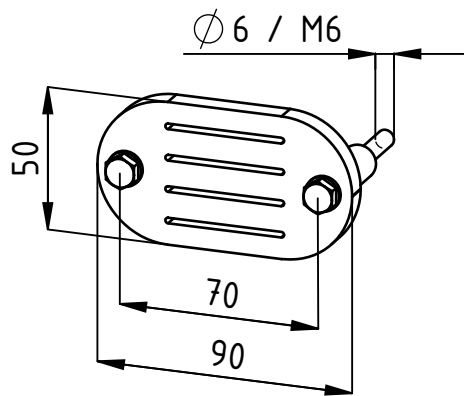


Fig. 4:  
Clamp holder  
wall mounting

Z-113113\_1y

Z-116742y\_2

## Design Variants

### Active ground clamps for use with the components of the Terra-Control ground monitoring system

70AG: Ground clamp, large  
with coupling plug and lead length of 300 mm ± 50mm  
or  
without plug and lead length of 3, 6, 9, 12, 15 or 18 m  
(specify length)  
or  
without plug and helix lead length of 5 or 10 m  
(specify length)  
cable color: light blue

70AK: Ground clamp, small  
with coupling plug and lead length of 300 mm ± 50mm  
or  
without plug and lead length of 3, 6, 9, 12, 15 or 18 m  
(specify length)  
or  
without plug and helix lead length of 5 or 10 m  
(specify length)  
cable color: light blue

### Active ground clamps for Big Bags:

70BG: Ground clamp, large  
with coupling plug and lead length of 300 mm ± 50mm  
or  
without plug and lead length of 3, 6, 9, 12, 15 or 18 m  
(specify length)  
or  
without plug and helix lead length of 5 or 10 m  
(specify length)  
cable color: light blue

70HK: Ground clamp, small  
with coupling plug and lead length of 300 mm ± 50mm  
or  
without plug and lead length of 3, 6, 9, 12, 15 or 18 m  
(specify length)  
or  
without plug and helix lead length of 5 or 10 m  
(specify length)  
cable color: light blue  
(always use two clamps)



**Passive ground clamps for use without ground monitoring systems:**

- 70SG: Ground clamp, large  
with current limiting resistor  
with coupling plug and lead length of 300 mm ± 50mm  
or  
without plug and lead length of 3, 6, 9, 12, 15 or 18 m  
(specify length), cable color: orange
- 70PG: Ground clamp, large  
with current limiting resistor  
connection via cable lug 10.5 mm diameter  
lead length of 3, 6, 9, 12, 15 or 18 m (specify length)  
or helix lead length (5 m), cable color: orange
- 70OK: Ground clamp, small  
straight design with anti-kink protection  
connection by the user
- 70OK/020 Ground clamp, small  
lead length 2 m, highly flexible, cable color: transparent
- 70PK: Ground clamp, small  
with coupling plug and lead length of 300 mm ± 50mm  
or  
connection via cable lug 10.5 mm diameter  
lead length of 3, 6, 9, 12, 15 or 18 m (specify length)  
or helix lead length (5 m), cable color: orange

**Cable for active grounding:**

- KG/BSAB050: helix ground cable  
with wire end sleeve and coupling socket  
extensible 1 to 5 m  
cable color: light blue
- KG/BSAB100: helix ground cable  
with wire end sleeve and coupling socket  
extensible 2 to 10 m  
cable color: light blue
- KG/BSBS050: helix ground cable  
with coupling socket and coupling plug  
extensible 1 to 5 m  
cable color: light blue
- KG/BSBS100: helix ground cable  
with coupling socket and coupling plug  
extensible 2 to 10 m  
cable color: light blue
- KG/BNAB\_\_\_: ground cable  
with and wire end sleeve and coupling socket  
5 to 95 m in steps of 5 meters (specify length)  
cable color: light blue
- KG/BNBS\_\_\_: ground cable  
with coupling socket and coupling plug  
5 to 95 m in steps of 5 meters (specify length)  
cable color: light blue

**Cable for passive grounding:**

KG/GSAB050: helix ground cable  
with wire end sleeve and coupling socket  
extensible 1 to 5 m  
cable color: orange

KG/GSBS050: helix ground cable  
with coupling socket and coupling plug  
extensible 1 to 5 m  
cable color: orange

KG/GNAB\_\_\_: ground cable  
with wire end sleeve and coupling socket  
5 to 95 m in steps of 5 meters (specify length)  
cable color: orange

KG/GNBS\_\_\_: ground cable  
with coupling socket and coupling plug  
5 to 95 m in steps of 5 meters (specify length)  
cable color: orange

**Clamp holder:**

113112: available as accessory,  
dimensions see Fig. 23

116740: available as accessory,  
dimensions see Fig. 24

## 2. Safety

The units have been designed, built and tested using state-of-the-art engineering, and have left the factory in a technically and operationally safe condition. If used improperly, the units may nevertheless be hazardous to personnel and may cause injury or damage. Read the operating instructions carefully and observe the safety instructions.

For warranty conditions, please refer to the General Terms and Conditions (GTC), see [www.eltex.de](http://www.eltex.de).

### 2.1 Identification of risks and hazards

Possible risks and hazards resulting from the use of the units are referred to in these operating instructions by the following symbols:



#### **Warning!**

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in serious personal injuries.



#### **Caution!**

This symbol appearing in the operating instructions refers to operations which, if carried out improperly, may result in damage to property.



#### **Ex Warning!**

Only for units with Ex approval.

This symbol denotes the special conditions which must be observed when operating the units in explosion hazard areas as specified in the approvals.

### 2.2 Technical advance

The manufacturer reserves the right to make changes to the technical specifications without prior notice in order to adapt the units to state-of-the-art engineering. Eltex will provide the latest information on any changes or modifications in the operating instructions on request.

### 2.3 Proper use

#### **Active grounding**

The active ground clamps series 70 and the accessories helix ground cable series KG must be used only for static grounding and must be connected to the appropriate Eltex ground monitoring systems.

The application area are for example: refilling and filling stations, agitators or dryers for liquid or powdery substances, and in conveyor and transportation equipment with potentially explosive atmosphere. The purpose of the ground clamps is to leak off or discharge static charges from these plants and equipment to ground.

The Eltex active ground clamps generate a transitory electric connection between the plant and equipment in use and the equipotential bonding (PA). They are fitted with internal suppresser circuits and provide maximum safety. Together with the TUE30 Terra-Control and **TERRALIGHT** ground monitoring systems, this configuration provides the ultimate grounding effect for static charges.

### **Passive grounding**

The passive Eltex ground clamps series 70 and the accessories helix ground cable series KG must be used only for “static grounding” in refilling and filling stations, agitators or dryers for liquid or powdery substances, and in conveyor and transportation equipment with potentially explosive atmosphere.

The passive Eltex ground clamps generate a transitory electric connection between the plant and equipment in use and the equipotential bonding (PA). The purpose of the ground clamps is to leak off or discharge static charges from these plants and equipment to ground. The passive ground clamps must not be connected to analyzing devices.

The 70OK and the 70PK ground clamps generate a low-resistance connection to the PA. The 70SG and 70PG ground clamps (with an internal resistance of >200 kOhm) can also be connected to systems linked to the protective circuit. With this protective suppressor circuit, no explosive sparking can occur between the PA and the equipment connected to the protective circuit system in the event of potential differences of <120 V.

The accessory cable rewriter serves as extension between the passive ground clamp 70SG with internal suppressor circuit and the equipotential bonding (PA).

The manufacturers will not assume any liability and warranty if the units are used improperly or used outside the intended purpose.

Modifications or changes made to the devices are not permitted.

Use only original Eltex spare parts and equipment.

## 2.4 Work and operational safety



### Warning!

Carefully observe the following notes and the complete [chapter 2 "Safety", page 12!](#)

- The local standards, rules and regulations relating to the installation and operation of electrical appliances in potentially explosive atmospheres must be observed.
- Appliances designed for use in potentially explosive atmospheres must not be modified. The technical specifications for ambient conditions and operation must be maintained and observed (see [chapter 6 "Technical specifications", page 24](#)).
- Electrical systems in potentially explosive atmospheres must always be in perfect technical condition. Defects must be rectified immediately (see [chapter 4 "Operation", page 21](#)).
- Any work involving the units must be carried out by qualified electricians (see [chapter 3 "Installation and assembly", page 16](#), [chapter 5 "Maintenance", page 22](#)).
- The unit may only be used by qualified personnel trained for explosion hazard areas.
- Please note the type plate indicating the connection data (supply voltage) of the units (see [chapter 4 "Operation", page 21](#)).
- A „Connect/Disconnect Approval“ by the plant operator must be obtained before carrying out any installation, assembly, service, repair or maintenance work in potentially explosive atmospheres. Make sure that there is no potentially explosive atmosphere existing in the working area. Ensure adequate ventilation and/or screening (see [chapter 3 "Installation and assembly", page 16](#), [chapter 5 "Maintenance", page 22](#)).
- **Before starting the plant in use, connect the clamps to the equipment and make sure that no potentially explosive atmosphere exists in the working area.**  
The clamp connection of the ground clamp must make good and secure contact throughout the whole time the plant is in operation (see [chapter 3.1 "Electrical connection of the ground clamps", page 16](#)).
- The maximum cable length in the intrinsically safe circuit must not exceed the maximum rated capacitance and inductance (see the operating instructions of the ground monitoring unit). The ground monitoring unit must always be connected to the equipotential bonding (see [chapter 3.1 "Electrical connection of the ground clamps", page 16](#)).
- The connection cable for equipotential bonding of the clamps types 700K must be at least 4 mm<sup>2</sup> (see [chapter 3.1.2 "Passive ground clamps", page 17](#)).

- The ground clamps must not be clamped under tensile in order to avoid an uncontrolled retraction of the cable with ground clamps. For this purpose, the cable rewinders are equipped with a stop mechanism. After use, the cable must be rolled up in a controlled manner in order to avoid an uncontrolled retraction (see [chapter 3.1 "Electrical connection of the ground clamps", page 16](#)).
- Cables and clamps must not be damaged. Damaged cables and clamps must be replaced with new parts (see [chapter 5 "Maintenance", page 22](#)).
- To make sure that the proper ground connection exists with the equipotential bonding and that no malfunctions occur in active clamps, the ground clamp must be cleaned when dirty (see [chapter 5.2 "Ground clamps", page 23](#)).



## 2.5 Special conditions according to the certificate of conformity

### Active Eltex ground clamps:

- Equipotential bonding must be provided along the entire length of the measuring circuit (see [chapter 3.1 "Electrical connection of the ground clamps", page 16](#)).

### Passive Eltex ground clamps:

See [chapter 3.1 "Electrical connection of the ground clamps", page 16](#)).

- The use of the ground clamps is strictly limited to leading potentially hazardous static charges to ground.
- Before connecting the ground clamps, make sure that no potentially explosive atmosphere exists in the working area.
- The use of the clamps in areas requiring Category 1 is not permitted for Explosion Class IIC.

### 3. Installation and assembly



When installing the systems in potentially explosive zones, every possible precaution must be taken to ensure that no explosive atmosphere exists!



#### 3.1 Electrical connection of the ground clamps

- When installing the systems in potentially explosive zones, every possible precaution must be taken to ensure that no explosive atmosphere exists!

- **Before starting the plant in use, connect the clamps to the equipment and make sure that no potentially explosive atmosphere exists in the working area**

The clamp connection of the ground clamp must make good and secure contact throughout the whole time the plant is in operation.

- The ground clamps must not be installed under load, to avoid uncontrolled snapping back of the cable together with the ground clamp. For this, the cable rewinders are equipped with a stop mechanism. After use, the cable should be rolled up in a controlled manner to avoid uncontrolled snapping back.

#### 3.1.1 Active ground clamps



##### **Notes for use in atmospheres with potential gas explosion hazard!**

In areas in which gas can generate a potentially hazardous and explosive atmosphere, simple power equipment such as the Eltex ground clamps can be connected to the measuring circuit of the ground monitoring devices. Simple power equipment must comply with the appropriate requirements of EN 60079-11, but no certification and marking is required. Under DIN EN 60079-14, temperature class T6 can be assigned to the ground clamps.

The active Eltex ground clamps are connected to the cable of the re-winder or to the cable of the ground monitoring system in use via a coupling plug (IP67).

All active grounding components have a light blue cable.

For the terminal assignment of the ground monitoring unit, please refer to the appropriate operating instructions.



##### **Warning!**

The maximum cable length in the intrinsically safe circuit must not exceed the maximum rated capacitance and inductance (see the operating instructions of the ground monitoring unit). The ground monitoring unit must always be connected to the equipotential bonding!



An equipotential bonding connection (PA) must be established along the entire intrinsically safe measuring circuit.





### 3.1.2 Passive ground clamps

- The use of the ground clamps is strictly limited to leading potentially hazardous static charges to ground.
- Before connecting the ground clamps, make sure that no potentially explosive atmosphere exists in the working area.
- The use of the clamps in areas requiring Category 1 is not permitted for Explosion Class IIC.

The passive Eltex ground clamp 70SG is equipped either with a coupling plug for connection to the cable rewriter, or with a wire end ferrule for connecting the clamp directly to the equipotential bonding, the cable is to be connected and strain relieved by the user.

The clamp type 70PG is connected to the equipotential bonding with a cable lug, the cable is to be connected and strain relieved by the user.

Type 70OK is supplied without connecting cable; the cable is to be connected to the clamp by the user.



The connection cable for equipotential bonding of the clamps types 70OK must be at least 4 mm<sup>2</sup>.

Type 70OK/020 is provided with a 2 m connection cable.

Depending on the version, Type 70PK can be connected to the cable of the rewriter via a coupling plug (IP67) or, in the case of the version with a cable lug to the equipotential bonding.

Type 70PK is connected to the cable of the rewriter via a coupling plug (IP67).

All passive grounding components have an orange cable, Type 70OK/020 has a transparent cable.

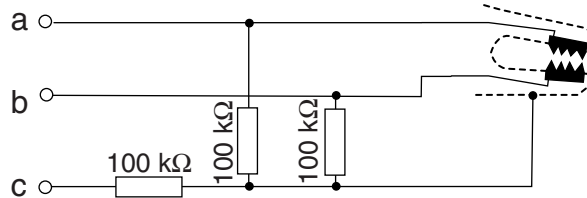
### 3.2 Wiring diagram of the ground clamps

For the types 70AG, 70AK, 70BG, 70SG and 70PG the resistance circuitry is encapsulated in the clamp.

#### Active ground clamps

70AG / 70AK

Fig. 5:  
Type 70AG, 70AK,  
connecting cable  
3 x 1.5 mm<sup>2</sup>

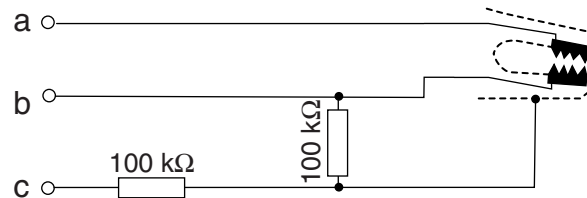


*a = blue*  
*b = brown*  
*c = green/yellow*

Z00100y

70BG

Fig. 6:  
Type 70BG,  
connecting cable  
3 x 1.5 mm<sup>2</sup>



*a = blue*  
*b = brown*  
*c = green/yellow*

Z00101y

70HK

Fig. 7:  
Type 70HK  
connecting cable  
3 x 1.5 mm<sup>2</sup>



*a = blue*

Z00102y

## Passive ground clamps

Fig. 8:  
Type 70SG  
connecting cable  
3 x 1.5 mm<sup>2</sup>

70SG



*c = brown + green/yellow*

Z00103y

Fig. 9:  
Type 70PG  
connecting cable  
3 x 1.5 mm<sup>2</sup>

70PG



*d = cable lug*

Z00105y

Fig. 10:  
Type 70OK  
w/o connecting  
cable

70OK



Z00104y

Fig. 11:  
Type 70OK/020  
with connecting  
cable

70OK/020



Z00575y

Fig. 12:  
Type 70PK  
with connecting  
cable

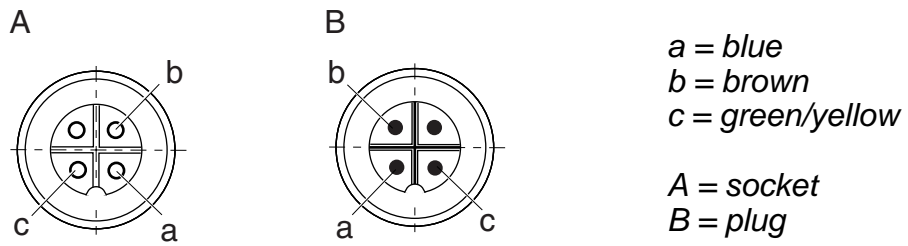
70PK



Z00104ay

### 3.3 Pin assignment of the coupling plug

Fig. 13:  
Pin assignment  
of the coupling  
plug



### 3.4 Cable specifications

- three-core 3 x 1.5 mm<sup>2</sup>
- wire color blue, brown, green/yellow, light blue-sheathed for active grounding, orange-sheathed for passive grounding
- oil and gasoline resistant

Z00108y

## 4. Operation



Electrical systems used in explosion hazard areas must at all times be in a technically faultless condition. Any defects must be repaired or remedied immediately.



### **Caution!**

Observe the connection ratings (supply voltage) of the units.

### 4.1 Start-up

#### **Active ground clamps**

If all connections (supply voltage, ground clamp, etc.) have been made correctly, the system is operational and the supply voltage may be activated.

The units are operational now.

#### **Passive ground clamps:**

Once the clamps are properly connected to the equipotential bonding, they can be used for grounding.

## 5. Maintenance



When maintaining or servicing the systems in potentially explosive zones, every possible precaution must be taken to ensure that no explosive atmosphere exists!



### Warning!

Maintenance and repair work must be carried out only by qualified personnel trained in working in potentially explosive areas.

Cables and clamps must not be damaged. Damaged cables and clamps must be replaced with new parts.

### 5.1 Checking the resistance to earth

#### Active clamps:

To measure the earthing resistance between clamp jaw and ground (PAL) the supply voltage to the ground control unit must be disconnected.

When using TCB030 / TCO030 standard version with ground clamp 70AG or 70AK the resistance value is (depending on the measuring voltage of the measuring device):

between ground and clamp jaw 1: 15 - 60 kOhm

between ground and clamp jaw 2: 14 kOhm,  $\pm 20$  %

When using TCB030 / TCO030 BIG-BAG version with ground clamp 70BG or 70HK the resistance value is:

between ground and connected clamp jaws: 14 kOhm,  $\pm 20$  %

#### Passive clamps:

Measurement of the earthing resistance between clamp jaw and ground (PAL):

ground clamp 70SG or 70PG:

earthing resistance: 235 kOhm,  $\pm 5$  %

clamping force: 140 N,  $\pm 20$  %

ground clamp 70OK or 70PK:

earthing resistance:  $< 1$  Ohm

clamping force: 100 N,  $\pm 20$  %



## 5.2 Ground clamps

To make sure that the proper ground connection exists with the equipotential bonding and that no malfunctions occur in active clamps, the ground clamp must be cleaned when dirty.

Store the ground clamp such that it cannot be damaged. Replace damaged cables and clamps with new parts. Whenever possible, the ground clamp should either be hung up freely or be clamped to a non-conductive object.

## 6. Technical specifications

The current approval with all supplements can be found on our servicesite at <http://service.eltex.de>.

### 6.1 Active Ground clamps

as shown on  
appliance  
marking:



Types 70AG, 70BG	
Clamp material	Stainless steel
Operating ambient temperature	-40...+70°C (-40...+158°F)
Ground cable	oil and gasoline resistant control lead, 3 x 1.5 mm <sup>2</sup> color: light blue temperature range -40...+90°C (-40...+194°F) connected 4-pin plug IP67
Dimensions	see Fig. 14
Weight	approx. 0.6 kg
Approval / Identification marking	ATEX: DMT 00 ATEX E 068 X Ex II 2D Ex ia IIIC T135°C Db, II 2G Ex ia IIC T6 Gb IECEX: BVS 16.0016X Ex ia IIIC T135°C Db, Ex ia IIC T6 Gb

as shown on  
appliance  
marking:



Types 70AK, 70HK	
Clamp material	70AK: Stainless steel 70HK: galvanized sheet steel, plastic covered
Operating ambient temperature	-40...+70°C (-40...+158°F)
Ground cable	oil and gasoline resistant control lead, 3 x 1.5 mm <sup>2</sup> color: light blue temperature range -40...+90°C (-40...+194°F) connected 4-pin plug IP67
Dimensions	see Fig. 17, Fig. 18
Weight	70AK: approx. 0.3 kg; 70HK: approx. 0.25 kg
Approval / Identification marking	ATEX: DMT 00 ATEX E 068 X Ex II 2D Ex ia IIIC T135°C Db, II 2G Ex ia IIC T6 Gb IECEX: BVS 16.0016X Ex ia IIIC T135°C Db, Ex ia IIC T6 Gb



## 6.2 Passive Ground clamps

<b>Types 70SG, 70PG</b>	
Clamp material	Stainless steel
Operating ambient temperature	-40...+70°C (-40...+158 °F)
Ground cable	oil and gasoline resistant control lead, H07BQ-F conductor cross section 3 x 1.5 mm <sup>2</sup> , color:orange temperature range -40...+90 °C (-40...+194°F) with fixed wire end ferrule for 70SG with fixed cable lug for 70PG
Dimensions	see Fig. 15, Fig. 16
Weight	approx. 0.6 kg
Clamping width	35 mm
Clamping force	140 N ±20 %
Earth leakage resistance	235 kOhm ±5 % 120 V
Max discharge voltage	oil and gasoline
Chemical resistance	EPS 19 ATEX 1 184X
Approval	⊕ II 1G IIB T6 Ga, II 2G IIIC T6 Gb,
Identification marking	II 1D IIIC T80°C Da



<b>Type 700K</b>	
Clamp material	Stainless steel
Operating ambient temperature	-40...+70°C (-40...+158°F)
Ground cable	without cable min. conductor cross section 4 mm <sup>2</sup> ; max. 10 mm <sup>2</sup>
Tightening torque	terminal screw for the cable lug: 9 Nm
Dimensions	see Fig. 19
Weight	approx. 0.22 kg
Clamping width	35 mm
Clamping force	100 N ±20 %
Earth leakage resistance	<1 Ohm
Chemical resistance	oil and gasoline
Approval	EPS 19 ATEX 1 184X
Identification marking	⊕ II 1G IIB T6 Ga, II 2G IIIC T6 Gb, II 1D IIIC T80°C Da





<b>Typ 70PK</b>	
Clamp material	Stainless steel
Operating ambient temperature	-40...+70°C (-40...+158°F)
Ground cable	oil and gasoline resistant control lead, 3 x 1.5 mm <sup>2</sup> , color: orange, temperature range -40... +90°C (-40...+194°F), with connected 4-pin plug IP67 or with fixed cable lug
Dimensions	see Fig. 21
Weight	approx. 0.29 kg
Clamping width	35 mm
Clamping force	100 N ±20 %
Earth leakage resistance	< 1 Ohm
Approval	EPS 19 ATEX 1 184X
Identification marking	Ex II 1G IIB T6 Ga, II 2G IIIC T6 Gb, II 1D IIIC T80°C Da

## 7. Dimensions

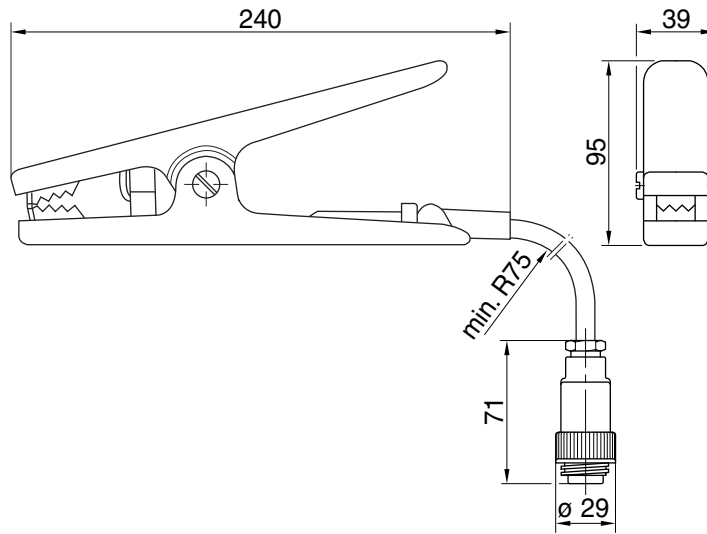


Fig. 14:  
Types 70AG,  
70BG, 70SG  
with coupling plug;  
maximum clamp  
opening 35 mm

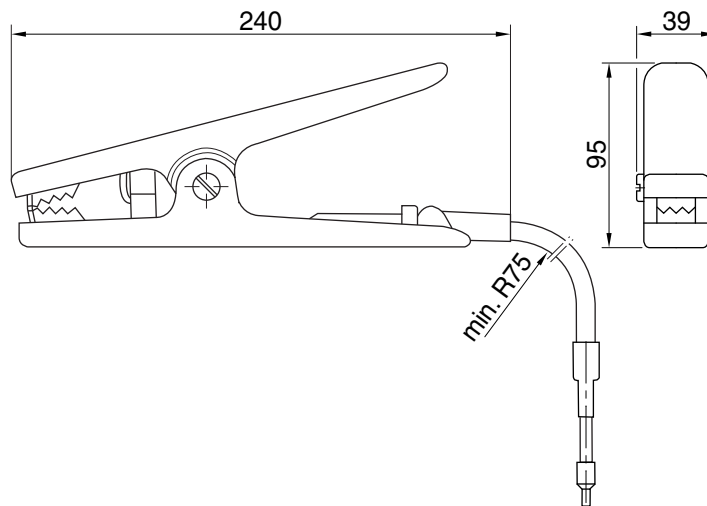


Fig. 15:  
Type 70SG with  
wire end ferrule;  
maximum clamp  
opening 35 mm

Z00111y

Z00202y

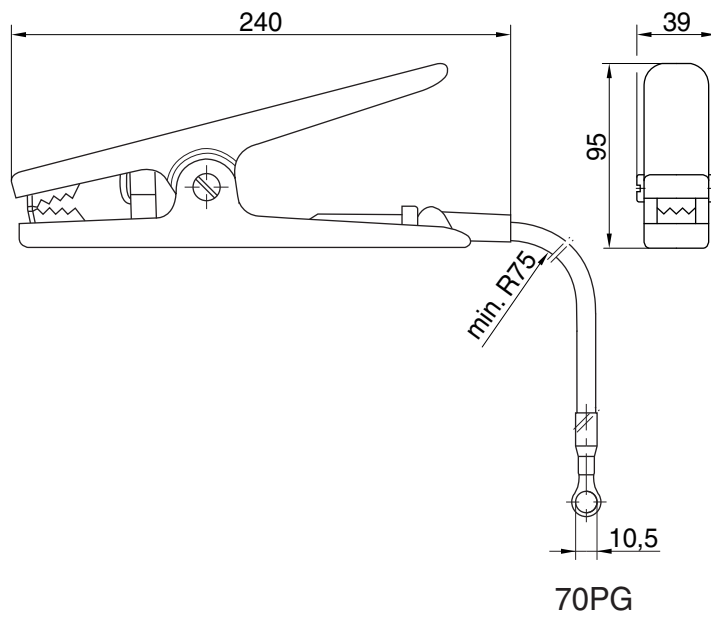


Fig. 16:  
Type 70PG;  
maximum clamp  
opening 35 mm

Z00112y

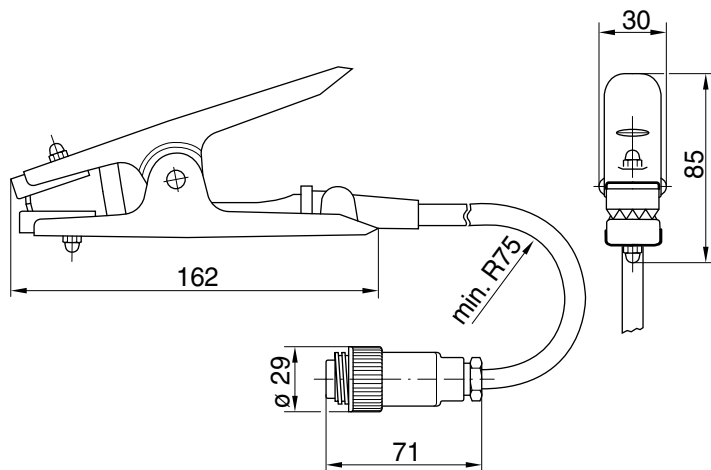
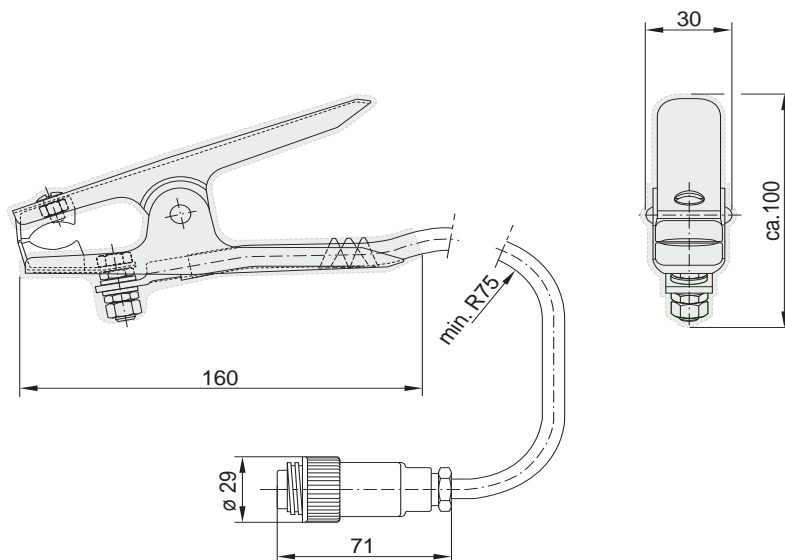


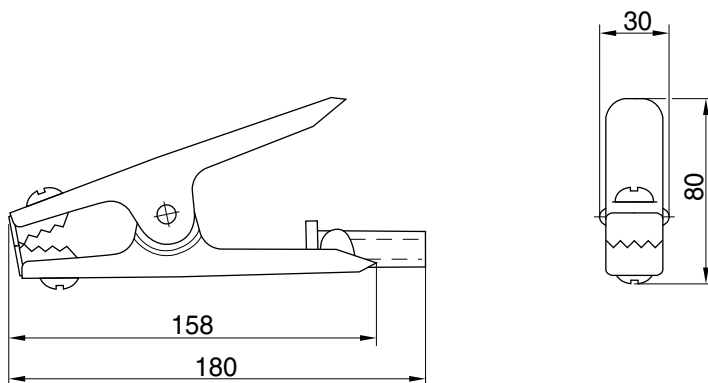
Fig. 17:  
Type 70AK;  
maximum clamp  
opening 35 mm

Z00113y



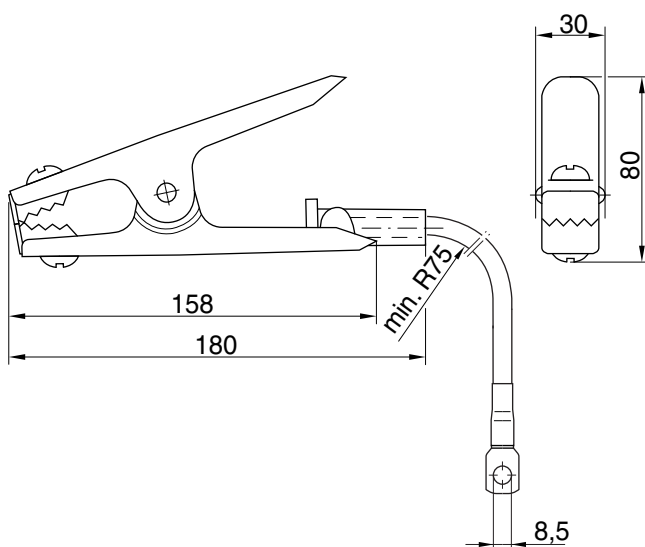
**Fig. 18:**  
 Type 70HK;  
 maximum clamp  
 opening 35 mm

Z00205y



**Fig. 19:**  
 Type 700K;  
 maximum clamp  
 opening 35 mm

Z00115y



**Fig. 20:**  
 Type 700K/020;  
 maximum clamp  
 opening 35 mm

Z00576y

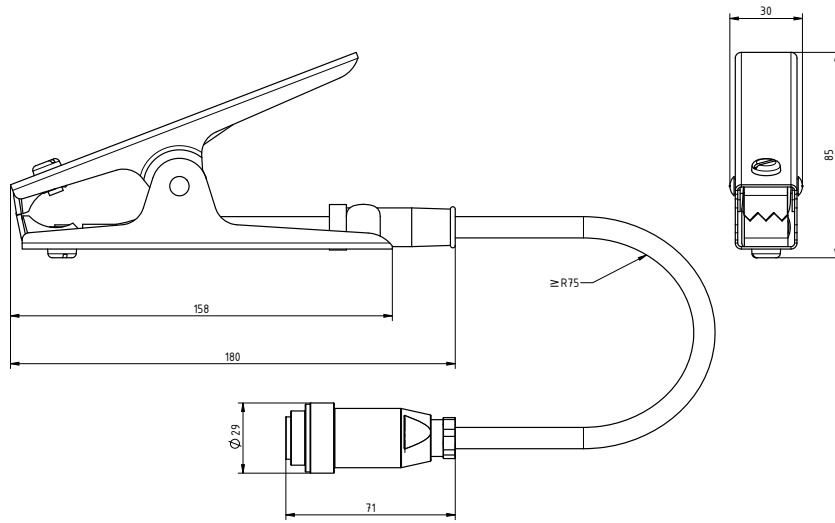


Fig. 21:  
Type 70PK;  
maximum clamp  
opening 35 mm

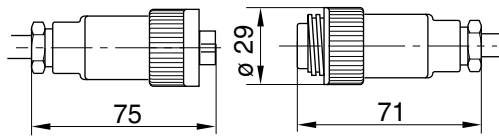


Fig. 22:  
Coupling  
plug

Z-114761y

Z00116y

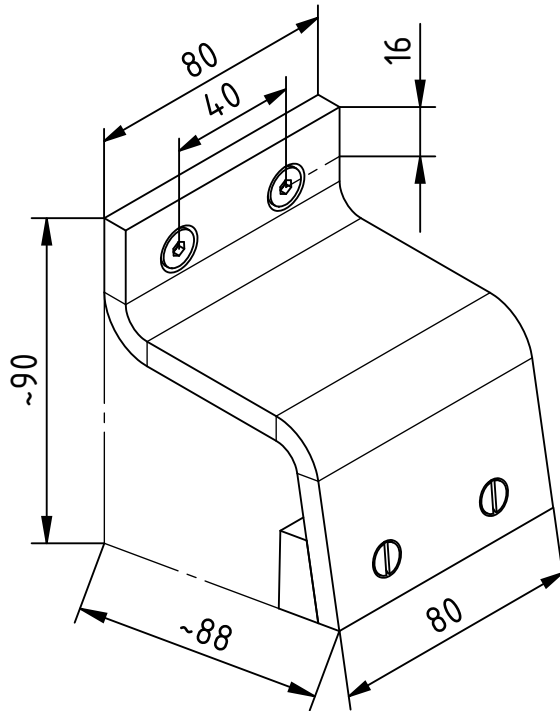


Fig. 23:  
Clamp holder  
article-no. 113112

Z-113113\_2y

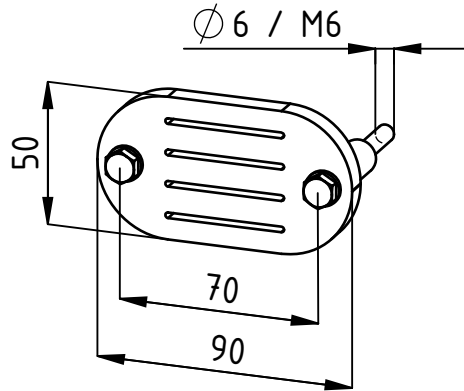


Fig. 24:  
Clamp holder  
article-no. 116740  
wall mounting

Z-116742y\_2

## 8. Spare parts and accessories

Article	Article No.
<b>Active grounding</b>	
Active ground clamp, large, with coupling plug IP67 and 300 mm ± 50mm lead length or without plug and lead length as specified (3, 6, 9, 12, 15 or 18 m) or without plug and helix lead length as specified ( 5 or 10 m)	70AG
Active ground clamp, large, for Big Bag grounding with coupling plug IP67 and 300 mm ± 50mm lead length or without plug and lead length as specified (3, 6, 9, 12, 15 or 18 m) or without plug and helix lead length as specified (5 or 10 m)	70BG
Active ground clamp, small, with coupling plug IP67 and 300 mm ± 50mm lead length or without plug and lead length as specified (3, 6, 9, 12, 15 or 18 m) or without plug and helix lead length as specified (5 or 10 m)	70AK
Active ground clamp, small, for Big Bag grounding with coupling plug IP67 and 300 mm ± 50mm lead length or without plug and lead length as specified (3, 6, 9, 12, 15 or 18 m) or without plug and helix lead length as specified (5 or 10 m)	70HK
Active helix ground cable, 3-pin with wire end sleeve and cou- pling socket IP67 for connecting ground clamps, extensible 1 to 5 m, cable color: light blue	KG/ BSAB050
Active helix ground cable, 3-pin with wire end sleeve and cou- pling socket IP67 for connecting ground clamps, extensible 2 to 10 m, cable color: light blue	KG/ BSAB100
Active helix ground cable, 3-pin with coupling socket and cou- pling plug IP67 for connecting ground clamps, extensible 1 to 5 m, cable color: light blue	KG/ BSBS050
Active helix ground cable, 3-pin with coupling socket and cou- pling plug IP67 for connecting ground clamps, extensible 2 to 10 m, cable color: light blue	KG/ BSBS100
Active ground cable, 3-pin with wire end sleeve and coupling socket IP67 for connecting ground clamps, 5 to 95 m in steps of 5 meters,, cable color: light blue	KG/ BNAB__
Active ground cable, 3-pin with coupling socket and coupling plug IP67 for connecting ground clamps, 5 to 95 m in steps of 5 meters,, cable color: light blue	KG/ BNBS__



Article	Article No.
<b>Passive grounding</b>	
Passive ground clamp, large with coupling plug IP67 and 300 mm ± 50mm lead length or without plug and lead length as specified (3, 6, 9, 12, 15 or 18_m)	70SG
Passive ground clamp, large, with cable lug connection, cable length as specified (3, 6, 9, 12, 15 or 18 m) or helix lead length 5 m	70PG
Passive ground clamp, small, without connecting cable	70OK
Passive ground clamp, small, with 2 m connecting cable	70OK/020
Passive ground clamp, small with coupling plug IP67 and 300 mm ± 50mm lead length or connection via cable lug 10.5 mm diameter and lead length as specified (3, 6, 9, 12, 15, or 18_m) or helix lead length 5 m	70PK
Passive helix ground cable, 3-pin with wire end sleeve and coupling socket IP67 for connecting ground clamps, extensible 1 to 5 m , cable color: orange	KG/ GSAB050
Passive helix ground cable, 3-pin with coupling socket and coupling plug IP67 for connecting ground clamps, extensible 1 to 5 m, cable color: orange	KG/ GSBS050
Passive ground cable, 3-pin with wire end sleeve and coupling socket IP67 for connecting ground clamps, 5 to 95 m in steps of 5 meters (specify cable length), cable color: orange	KG/ GNAB__
Passive ground cable, 3-pin with coupling socket and coupling plug IP67 for connecting ground clamps, 5 to 95 m in steps of 5 meters (specify cable length), cable color: orange	KG/ GNBS__
<b>Accessories</b>	
Clamp holder	113112
Clamp holder, wall mounting	116740
3-pin ground cable for active grounding (specify length)	LEI00009
3-pin ground cable for passive grounding (specify length)	LEI00297
Coupling socket, 4-pin, IP67	ELM00714
Coupling plug, 4-pin, IP67	ELM00713
Ring tongue for 70PG	ELM00099

<b>Article</b>	<b>Article No.</b>
Ring tongue for 70PK	110460
Transparent wire for 70OK (specify length)	LEI00281
Cable socket for 70OK	101067
Operating Instructions (specify language)	BA-xx-4017

Please specify the article number when ordering.

## A. Annex

### A.1 Grounding with ground monitoring unit (active grounding)

In compliance with EC-Type Examination Certificate PTB18ATEX2005 (**TERRALIGHT**), PTB99ATEX2188X (TCO) and PTB00ATEX2174X (TCB), the clamps and cable rewinders may be used in the gas explosion hazard zone with the following intrinsically safe ground monitoring units:

- **TERRALIGHT** Typ TERRA-L/\_\_\_\_
- Terracompact II Type TCO030S and TCO030B
- Terrabox Type TCB030/\_\_\_\_
- or other ground monitoring systems with the following max. output values:

voltage:	$U_o \leq 35 \text{ V DC}$
current strength:	$I_o \leq 250 \text{ mA}$
power:	$P_o \leq 650 \text{ mW}$

The following Eltex clamps and cable rewinders have been specially tested for the explosion hazard zone and carry the EC-Type Examination Certificate DMT00ATEXE068X and BVS 20 ATEX E 017 X:

- Clamps Type TERRA-C/\_\_\_\_
- Clamps Type 70AG, 70AK, 70BG, 70HK
- Cable rewinders Type 601KR/AW, 601KR/DW, 601KR/KW

The maximum connectable total cable length to the grounding system Terra-Control TUE30 resp. **TERRALIGHT** is 200 m.

Please note the information in the separate operating instructions for the Eltex ground monitoring devices **TERRALIGHT**, Terracompact II or Terrabox.

### A.2 Grounding without ground monitoring unit (passive grounding)

#### Ground clamps (Zone 0, 1, 2, 20, 21, 22):

The Eltex ground clamps Type 70OK, 70PK, 70SG, 70PG are approved in compliance with EC-Type Examination Certificate EPS 19 ATEX 1 184X.

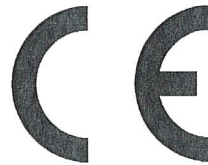
### A.3 Overview Approvals

Approval No.	Units	File name
PTB18ATEX2005	TERRALIGHT Type TERRA-L/_____	TERRALIGHT-ATEX-en.pdf
PTB99ATEX2188X	Terracompact II Type TCO030S, TCO030B	TCO-ATEX-en.pdf
PTB00ATEX2174X	Terrabox Type TCB030/___	TCB-ATEX-en.pdf
BVS 20 ATEX E 017	Clamps Type TERRA-C/SO, TERRA-C/SL, TERRA-C/BO, TERRA-C/BL	TERRA-C-Zangen-ATEX-en.pdf
DMT00ATEXE068X	Clamps Type 70AG, 70AK, 70BG, 70HK Cable rewinders Type 601KR/AW, 601KR/DW, 601KR/KW	601KR+Zangen-aktiv-ATEX-en.pdf
EPS19ATEX1184X	Clamps Type 70OK, 70PK, 70SG, 70PG	70-Zangen-passiv-ATEX-en.pdf
PTB 05ATEXD121-1	Cable rewinders Type 601KR/CW, 601KR/EW	601KR-passiv-Selbstbescheinigung.pdf
IECEX BVS 20.0012 X	Clamps Type TERRA-C/SO, TERRA-C/SL, TERRA-C/BO, TERRA-C/BL	TERRA-C-IECEX_BVS_200012x_en.pdf
IECEX BVS 16.0016X	Clamps 70** Cable rewinders 601KR/*W	601KR+Zangen 70-IECEX_BVS_160016x_en.pdf



# EU-Declaration of Conformity

CE-4017-en-2105



Eltex-Elektrostatik-Gesellschaft mbH  
Blauenstraße 67 - 69  
D-79576 Weil am Rhein

declares in its sole responsibility that the product

## Ground clamp type 70AG, 70HK, 70AK, 70BG, 70CG, 70CK

Identification:  II 2D Ex ia IIIC T135°C Db resp. II 2G Ex ia IIC T6 Gb  
Certification-no.: DMT 00 ATEX E 068 X  
Notified body: DEKRA EXAM GmbH, Dinnendahlstraße 9, 44809 Bochum, NB No. 0158

complies with the following directives and standards.

Relevant EU-Directive:

**2014/34/EU**

Directive: Equipment or Protective System intended for use in potentially explosive Atmospheres

Harmonized standards applied:

EN IEC 60079-0:2018

Explosive atmospheres – Equipment – General requirements

EN 60079-11:2012

Explosive atmospheres – Equipment protection by intrinsic safety "i"

Relevant EU-Directive:

**2011/65/EU**

RoHS Directive

in the version effective at the time of delivery.

Eltex-Elektrostatik-Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentation

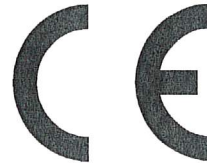
Weil am Rhein, 10.05.2021  
Place/Date



Lukas Hahne, Managing Director

# EU-Declaration of Conformity


CE-4017-en-2105\_pasZ



Eltex-Elektrostatik-Gesellschaft mbH  
Blauenstraße 67 - 69  
D-79576 Weil am Rhein

declares in its sole responsibility that the product

## Ground clamp type 70OK, 70PK, 70PG, 70SG

Identification:  II 1G IIB T6 Ga resp. II 2G IIC T6 Gb resp. II 1D IIIC T80°C Da  
Certification-no.: EPS 19 ATEX 1 184X  
Notified body: Bureau Veritas Consumer Products Services Germany GmbH,  
Thurn-und Taxis-Str. 18, 90411 Nürnberg, NB No. 2004

complies with the following directives and standards.

Relevant EU-Directive:

**2014/34/EU**

Directive: Equipment or Protective System intended for use in potentially explosive Atmospheres

Harmonized standards applied:

EN IEC 60079-0:2018

Explosive atmospheres – Equipment – General requirements

EN ISO 80079-36:2016

Explosive Atmospheres – Non-electrical equipment for explosive atmospheres – Basic method and requirements

Relevant EU-Directive:

**2011/65/EU**

RoHS Directive

in the version effective at the time of delivery.

Eltex-Elektrostatik-Gesellschaft mbH keep the following documents for inspection:

- proper operating instructions
- plans
- other technical documentation

Weil am Rhein, 10.05.2021  
Place/Date



Lukas Hahne, Managing Director

# Eltex offices and agencies

The addresses of all  
Eltex agencies can be  
found on our website at  
[www.eltex.de](http://www.eltex.de)



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