

Operating Instructions



F01063y



Cable Rewinder Series 601KR

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

BA-en-4007-2304



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Dear Customer,

The Eltex cable rewinders of series 601KR ensure that the ground cable is safely reeled back after use, protecting it from damage and dirt.

The aluminum cable rewriter is made of impact-proof aluminum and is mounted with an assembly bracket. This allows the cable rewriter to be turned into the direction of the cable run making unwinding and rewinding easy. At type 601KR/AW the rubber cable outlet prevents moisture and dirt from penetrating the housing. The built-in cable stop mechanism allows the cable to be locked in place and released as required.

The plastic cable rewriter is encased in a robust and sturdy plastic housing. The cable outlet is fitted with four cable guide rollers for easy cable guidance.

The cable rewinders and the clamp holder 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.

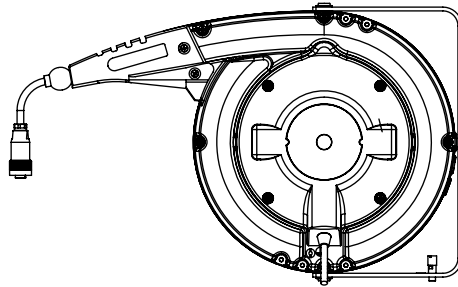
Please give us a call if you have any suggestions, proposals or ideas for improvements. We greatly appreciate the feedback from the users of our appliances.

1. Overview

Cable rewinders

Aluminium

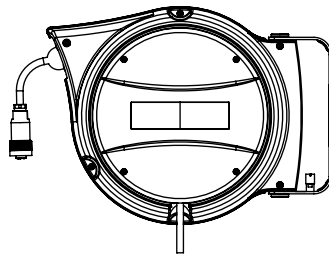
601KR/AW (active)



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Aluminium

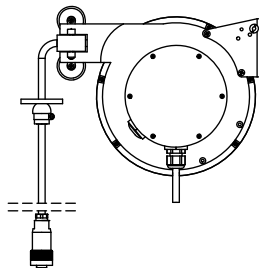
601KR/DW (active) / 601KR/EW (passive)



Z-114868y_8

Plastic

601KR/KW (active)



Z-114868y_9

Fig. 1:
Cable rewinders
series 601KR

Design Variants

Cable rewinders for active grounding:

- 601KR/AW: Cable rewriter in impact-proof aluminum housing, IP43
assembly bracket for wall mounting, swivel-type
stop mechanism for ground cable
3 meters connecting cable
20 meters ground cable, cable color: light blue
ground clamp connection via coupling socket
- 601KR/DW: Cable rewriter in impact-proof aluminum housing, IP42
assembly bracket for wall mounting, swivel-type
stop mechanism for ground cable
3 meters connecting cable
12 meters ground cable, cable color: light blue
ground clamp connection via coupling socket
- 601KR/KW: Cable rewriter in plastic housing, IP42
assembly plate for wall mounting
3 meters connecting cable
9 meters ground cable, cable color: light blue
ground clamp connection via coupling socket

Cable rewinders for passive grounding:

- 601KR/EW: Cable rewriter in impact-proof aluminum housing
IP42
assembly bracket for wall mounting, swivel-type
stop mechanism for ground cable
3 meters connecting cable
12 meters ground cable, cable color: orange
ground clamp connection via coupling socket

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.

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 cable rewinder series 601KR 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 cable rewinders series 601KR are not suitable for use in a saline environment (e.g. sea ports).

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 8!](#)

- 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 21](#)).
- Electrical systems in potentially explosive atmospheres must always be in perfect technical condition. Defects must be rectified immediately (see [chapter 4 "Operation", page 20](#)).
- Any work involving the units must be carried out by qualified electricians (see [chapter 3 "Installation and assembly", page 11](#), [chapter 5 "Maintenance", page 20](#)).
- 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 20](#)).
- 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 11](#), [chapter 5 "Maintenance", page 20](#)).

- The equipotential bonding line to the housing of the cable rewinders must be connected permanently according to the universal rules of electrical engineering. The terminal cross-section must equal at least the cross-section of the power supply of the ground testing device (see [chapter 3.3 "Electrical connection of the cable rewriter", page 16](#)).
- The housing of the cable rewinders may not be opened; the internal, pre-tensioned spring represents a significant risk. Only the cap may be removed to configure the stop mechanism (see [chapter 3.3 "Electrical connection of the cable rewriter", page 16](#)).
- Perform regular checks to ensure that the cable and the insulation show no tears or abrasion that could impair the cable's insulation or functioning (see [chapter 5.1 "Cable rewinders", page 20](#)).



2.5 Special conditions according to the certificate of conformity

Special conditions for safe use

The equipment is only to be connected to the measurement circuit of the following ground monitoring systems:

Terracompact II Typ TCO030 S/B, Terrabox TCB030/..., Terracap Type TCB040-V2, TERRALIGHT Type TERRA-L/.. or other ground monitoring systems with the following output date:

Voltage:	$U_o \leq 40 \text{ V DC}$
Current:	$I_o \leq 250 \text{ mA}$
Power:	$P_o \leq 650 \text{ mW}$

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 Aluminum cable rewriter

The aluminum cable rewriter is attached to a wall, column or ceiling via the installation bracket as shown in Fig. 2. Roofing must be provided when installing the unit outside. Select a suitable installation height to make sure that the ground clamp is within easy reach and does not make contact with the floor. The cable rewriter type 601KR/AW may be turned by 320° and types 601KR/DW and 601KR/EW by 170° around its installation axis.

The cable rewriter is suitable for hazardous location area.

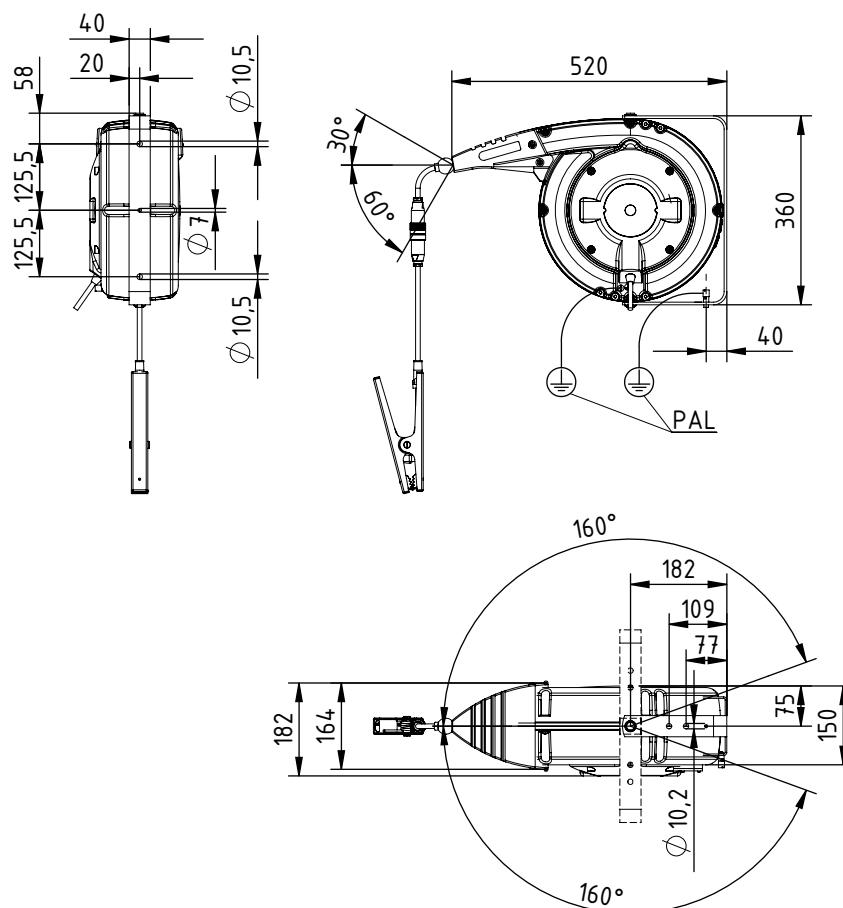


Fig. 2:
Assembly of the
aluminum cable
rewinder
601KR/AW

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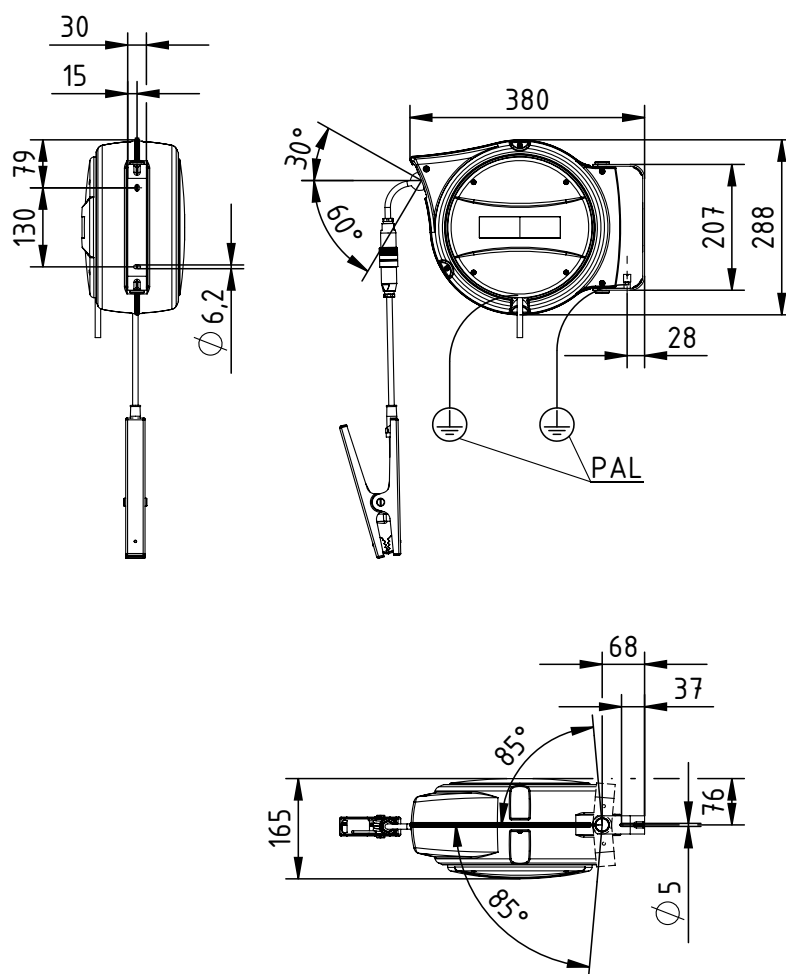


Fig. 3:
Assembly of the
aluminum cable
rewinder
601KR/DW
601KR/EW

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Stop mechanism, aluminum cable rewriter 601KR/AW

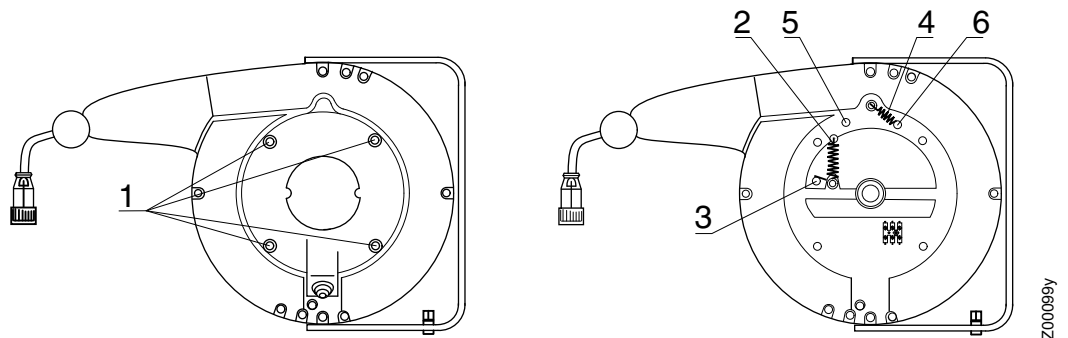
Enabling the stop mechanism:

- Remove the four bolts (1) and take off the side cover (see Fig. 4).
- Take the spring (4) off bolt (5) and hook into bolt (6).
- Remove the screw (2) to make sure that the locking mechanism (3) is free.
- Replace the side cover.

Disabling the stop mechanism:

- Remove the four bolts (1) and take off the side cover (see Fig. 7).
- Take the spring (4) off bolt (6) and hook into bolt (5).
- Turn the locking mechanism (3) by 120° in clockwise direction and turn in the screw (2) fully to make sure that the locking mechanism is disabled.
- Replace the side cover.

*Fig. 4:
Locking
mechanism of the
aluminum cable
rewinder for type
601KR/AW*



Type 601KR/DW and Type 601KR/EW

Enabling / Disabling the stop mechanism

- Remove the four bolts (1) and take off the side cover (see Fig. 5).
- Take the spring and hook into according position 2 resp. 3.
- Replace the side cover.

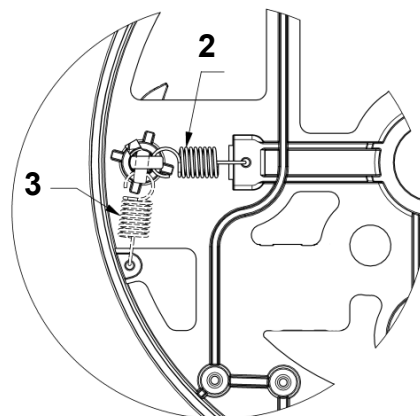
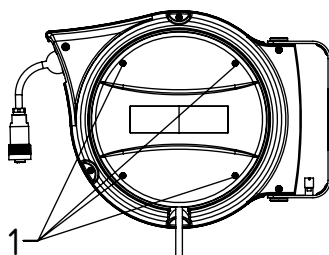


Fig. 5:
Locking
mechanism of the
aluminum cable
rewinder for type
601KR/DW and
601KR/EW

2 = enabled stop mechanism
3 = disabled stop mechanism

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3.2 Plastic cable rewriter

The cable rewriter made of weather-resistant plastic is designed for wall mounting. It can be installed in the explosion hazard zone.

The cable rewriter is attached to a wall, column or ceiling via the installation bracket as shown in Fig. 6. Roofing must be provided when installing the unit outside. Select a suitable installation height to make sure that the ground clamp is within easy reach and does not make contact with the floor.

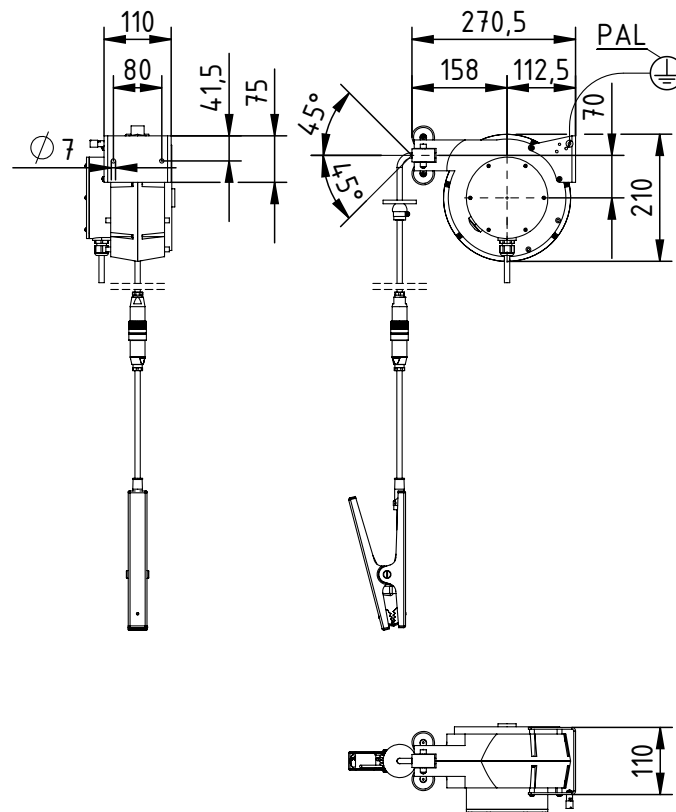


Fig. 6:
Assembly of the
plastic cable
rewinder
type 601KR/KW

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3.3 Electrical connection of the cable rewinder

- The equipotential bonding line to the housing of the cable rewinders must be connected permanently according to the universal rules of electrical engineering. The terminal cross-section must equal at least the cross-section of the power supply of the ground testing device.
- The housing may not be opened; the internal, pre-tensioned spring represents a significant risk. Only the cap may be removed to configure the stop mechanism.

Active grounding

The cable rewinder in connection with the active ground clamps is connected to the Eltex ground monitoring system via the terminal box of the cable rewinder. The cable rewinder must be permanently connected to an equipotential bonding lead.

The ground clamps are connected via the existing coupling plug.

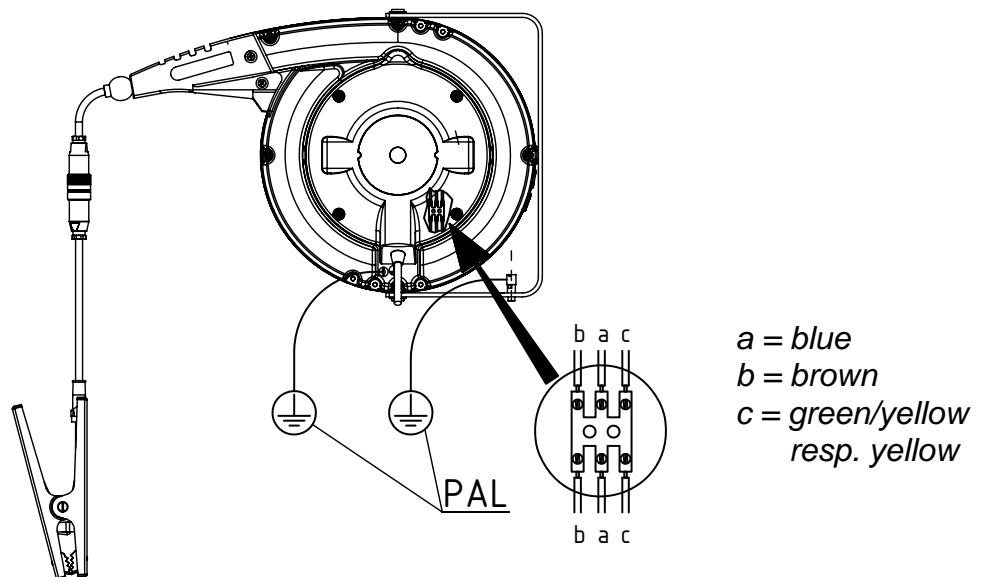
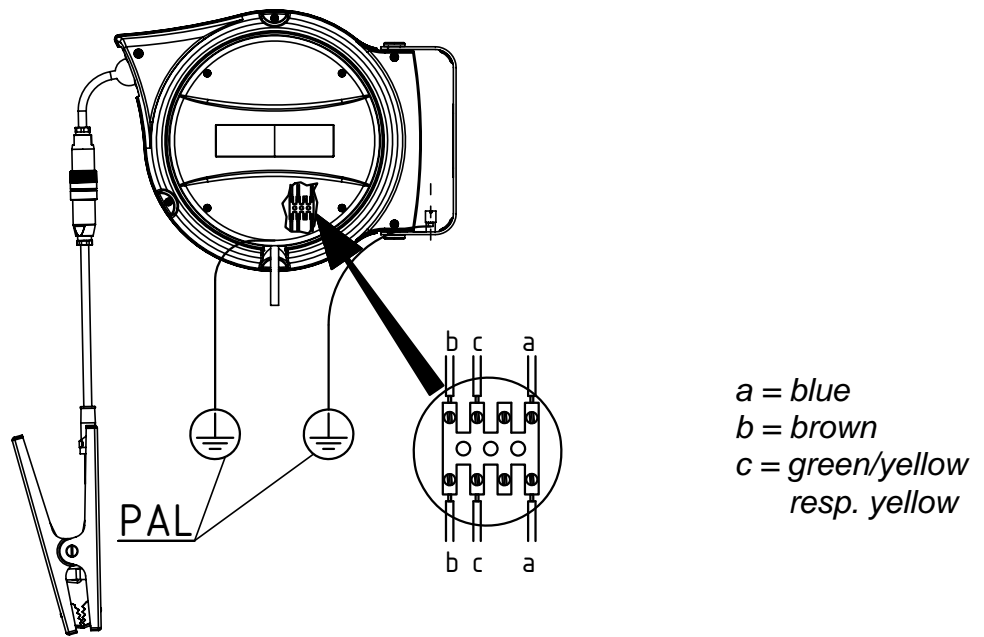


Fig. 7:
Connecting the
aluminum cable
rewinder
601KR/AW

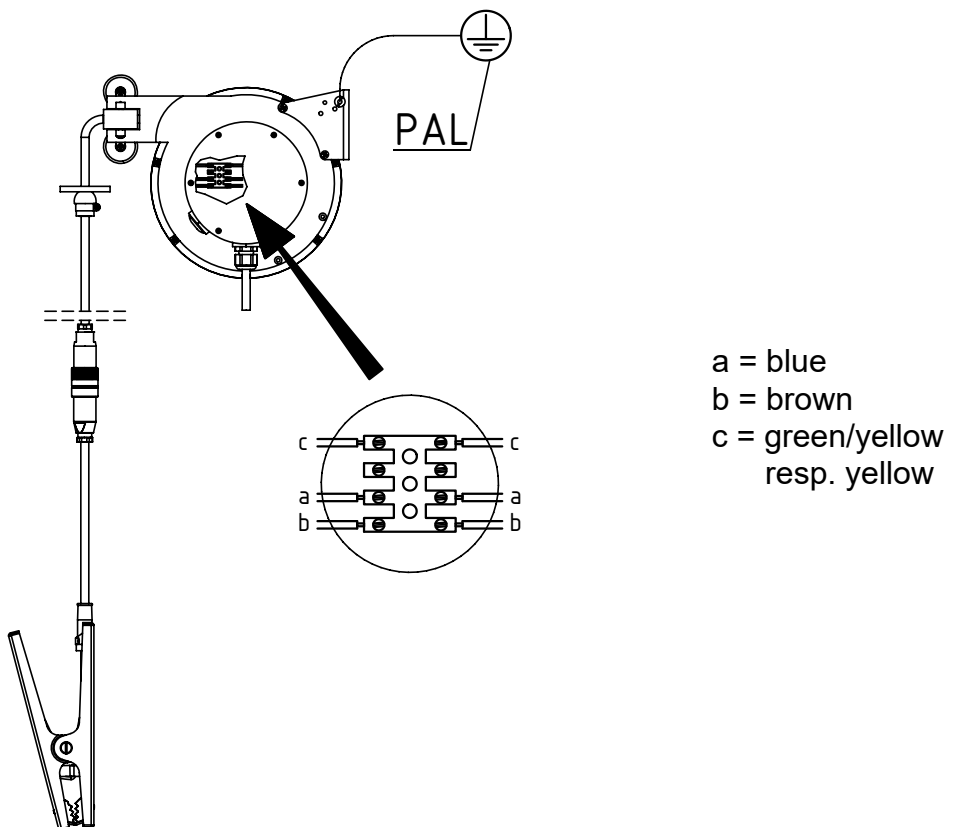
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Fig. 8:
Connecting the
aluminum cable
rewinder
601KR/DW



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Fig. 9:
Connecting the
plastic cable
rewinder
601KR/KW



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Passive grounding

The cable rewriter in connection with the 70SG passive ground clamps is connected to the equipotential bonding via the terminal box of the cable rewriter. The cable rewriter must be permanently connected to the equipotential bonding via the three-wire connecting cable. All three wires must be connected to the equipotential bonding.

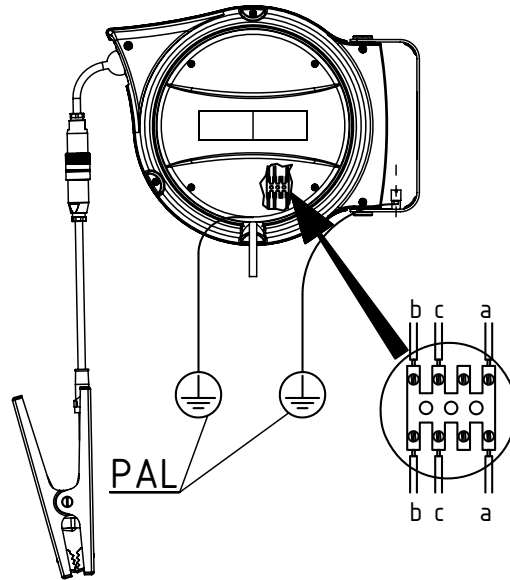


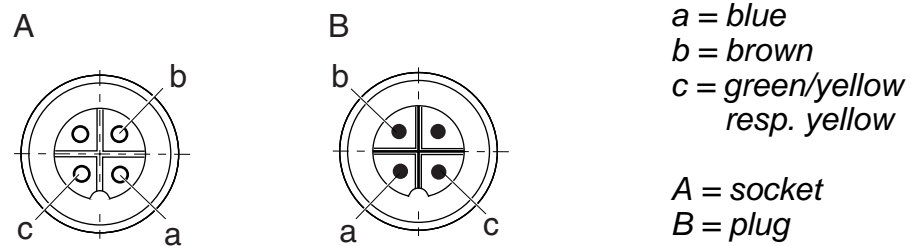
Fig. 10:
Connecting the
aluminum cable
rewinder
601KR/EW

*All three wires
must be
permanently
connected to
the PAL*

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3.4 Pin assignment of the coupling plug

Fig. 11:
Pin assignment
of the coupling
plug



3.5 Cable specifications

- three-core 3 x 1.5 mm²
- wire color blue, brown, green/yellow resp. yellow, light blue-sheathed for active grounding, orange-sheathed for passive grounding
- oil and gasoline resistant

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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.

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.



5.1 Cable rewinders

Perform regular checks to ensure that the cable and the insulation show no tears or abrasion that could impair the cable's insulation or functioning. Clean the cable with a cloth soaked in warm water to remove dirt or incrustations and ensure perfect unwinding.

Defective devices must be sent in for repair.

6. Technical specifications

6.1 Cable rewriter for active grounding

as shown on
appliance
marking:



Type 601KR/AW	
Enclosure	ribbed and reinforced aluminum, protected cable inlet aperture with stopper
Rewind mechanism	automatic, special spring, on-off function
Protection class	IP43, EN 60529
Operating ambient temperature	-40...+70 °C (-40...+158 °F)
Attachment	wall assembly via assembly bracket
Ground cable	20 m oil and gasoline resistant control lead 3 x 1.5 mm ² , color: light blue temperature range -40...+90 °C (-40...+194 °F) connected 4-pin socket IP67
Connecting lead	3.0 m, connecting cable 3 x 1.5 mm ²
Dimensions	see Fig. 12
Weight	approx. 14 kg with 20 m ground cable
Inductance	105 µH
Capacitance	2.3 nF
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 16.0016 Ex ia IIIC T135°C Db, Ex ia IIC T6 Gb

as shown on
appliance
marking:



Typ 601KR/DW	
Enclosure	Aluminium with rollers and stopper
Rewind mechanism	automatic, stop mechanism with on/off function
Protection class	IP42 according to EN 60529
Operating ambient temperature	-40...+70 °C (-40...+158 °F)
Attachment	wall assembly via assembly bracket
Ground cable	12 m oil and gasoline resistant control lead 3 x 1.5 mm ² , color: light blue temperature range -40...+90 °C (-40...+194 °F) connected 4-pin socket IP67
Connecting lead	3.0 Meter, connecting cable 3 x 1.5 mm ² , color: light blue
Dimensions	see Fig. 14
Weight	approx. 5.7 kg with 12 m ground cable
Inductance	72 µH
Capacitance	1.65 nF
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:



Type 601KR/KW	
Enclosure	plastic, cable inlet aperture with rollers
Protection class	IP42 according to EN 60529
Operating ambient temperature	20...+70 °C (-4...+158 °F)
Attachment	wall assembly via metal assembly plate
Ground cable	9 m oil and gasoline resistant control lead 3 x 1.5 mm ² , color: light blue temperature range -40...+90 °C (-40...+194 °F), connected 4-pin socket IP67
Connecting lead	3.0 m, connecting cable 3 x 1.5 mm ² , color: light blue
Dimensions	see Fig. 15
Weight	approx. 4 kg with 9 m ground cable
Inductance	57 µH
Capacitance	1.25 nF
Approval / Identification marking	DMT 00 ATEX E 068 X 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 Cable rewriter for passive grounding



Typ 601KR/EW	
Enclosure	Aluminium with rollers and stopper
Rewind mechanism	automatic, stop mechanism with on/off function
Protection class	IP42 according to EN 60529
Operating ambient temperature	-40...+70 °C (-40...+158 °F)
Attachment	wall assembly via assembly bracket
Ground cable	12 m oil and gasoline resistant control lead 3 x 1.5 mm ² , color: orange temperature range -40...+90 °C (-40...+194 °F), connected 4-pin socket IP67
Connecting lead	3.0 Meter, connecting cable 3 x 1.5 mm ² , color: orange
Dimensions	see Fig. 14
Weight	approx. 5.7 kg with 12 m ground cable
Inductance	approx. 0,07 mH
Capacitance	approx. 1.6 nF
Aproval / Identification marking	PTB: 05ATEXD121-1 ⊕ Ex II 2D c T80°C, II 2G c T6

7. Dimensions

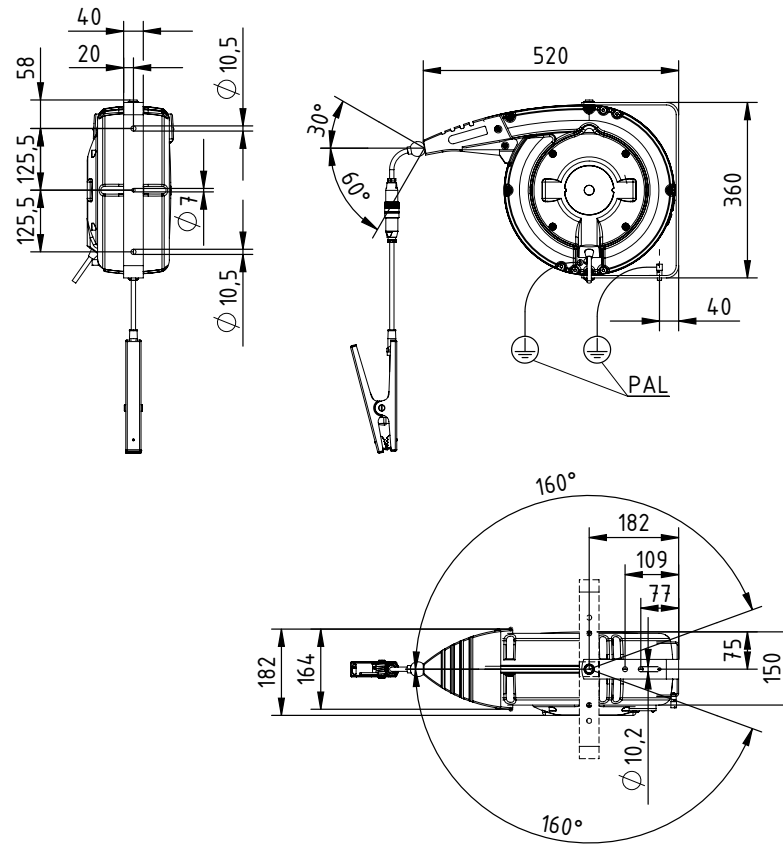


Fig. 12:
Aluminum
cable rewriter
type 601KR/AW

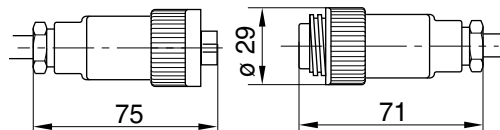


Fig. 13:
Coupling
plug

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Z00116y

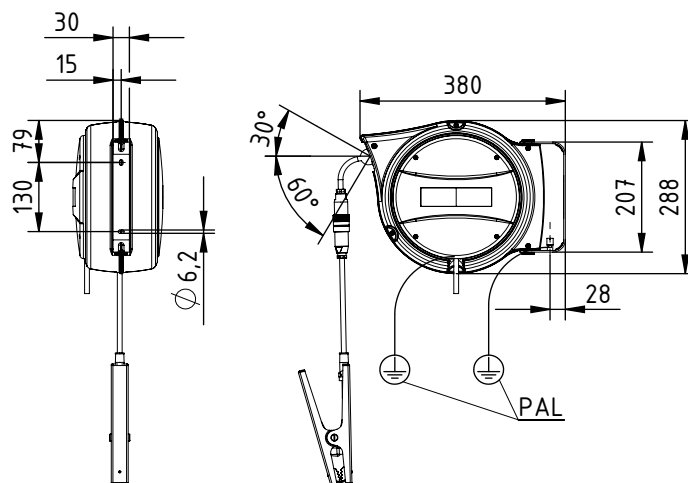


Fig. 14:
Aluminum
cable retractor
type 601KR/DW
type 601KR/EW

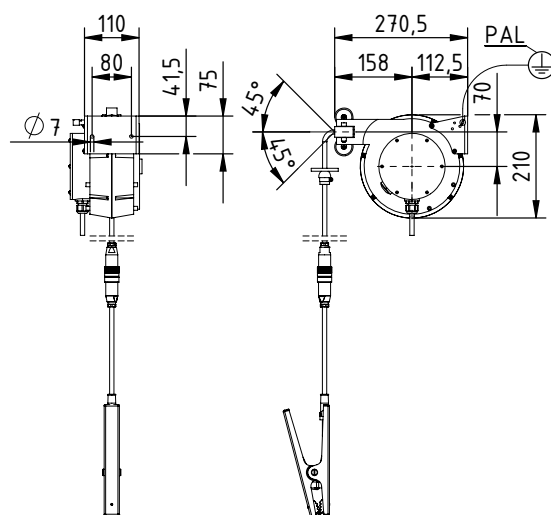
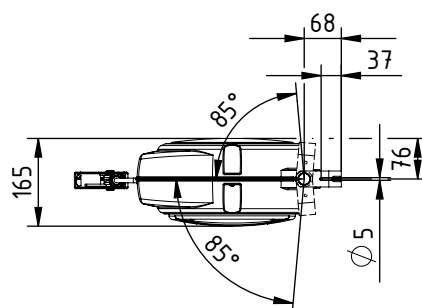
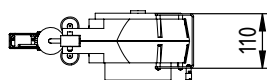


Fig. 15:
Plastic
cable retractor
type 601KR/KW



Z-114868y_2

Z-114868y_3

8. Spare parts and accessories

Article	Article No.
Active grounding	
Cable rewinder, aluminum, for active grounding, 20 meters ground cable with coupling socket IP67 for connecting ground clamps with plug	601KR/AW
Cable rewinder, aluminum, for active grounding, 12 meters ground cable with coupling socket IP67 for connecting ground clamps with plug	601KR/DW
Cable rewinder, plastic, for active grounding, 9 meters ground cable with coupling socket IP67 for connecting ground clamps with plug	601KR/KW
Passive grounding	
Cable rewinder, aluminum, for passive grounding, 12 meters ground cable with coupling socket IP67 for connecting ground clamps with plug	601KR/EW
Operating Instructions (specify language)	BA-xx-4007

Please specify the article number when ordering.

EU-Declaration of Conformity

CE-4007-en-2303 active



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

declares in its sole responsibility that the product

Cable rewriter type 601KR/AW, 601KR/DW, 601KR/KW

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 Testing and Certification 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, 09.03.2023
Place/Date



Lukas Hahne, Managing Director

EU-Declaration of Conformity



CE-4007-en-2105_pasR



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

declares in its sole responsibility that the product

Cable rewriter type 601KR/BW, 601KR/CW, 601KR/EW

Identification:  II 2D c T80°C,  II 2G c T6
Registration-no.: PTB 05 ATEX D121-1
Deposited: Physikalisch-Technische Bundesanstalt, Bundesallee 100, 38116 Braunschweig,
NB No. 0102

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 ISO 80079-36:2016

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

EN ISO 80079-37:2016

Explosive Atmospheres – Non-electrical equipment for explosive atmospheres – Non-electrical type of protection constructional safety “c”, control of ignition sources “b”, liquid immersion “k”

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

A handwritten signature in blue ink, reading "Lukas Hahne". Below the signature is a horizontal line, and underneath that line, the text "Lukas Hahne, Managing Director" is printed.

Eltex offices and agencies

The addresses of all
Eltex agencies can be
found on our website at
www.eltex.de



Z01007y



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