



- Continuous monitoring of correct earthing
- Potential operator errors are prevented thanks to object detection (on truck)
- Water-jet-proof IP65 stainless steel or aluminum enclosure
- Up to four potential-free change-over contacts for signaling
- Ambient temperature -55 °C to +60 °C
- Auxiliary power: 24 V DC – 230 V AC
- Parameterisation when enclosure is closed

A7

WebCode **8485A**



The grounding monitoring device ensures the electrostatic grounding of road tankers, rail cars and Big Bag (Rev. C) while loading flammable liquids and powder.

The device provides a conductive connection to the ground and monitors in parallel the quality of the electrostatic grounding. This guarantees that the electrostatic charge remains at a safe level and that no explosion hazard is generated by uncontrolled energy discharge.

The following recommendation requires grounding during loading and recommends interrupting loading in case of incorrect grounding:




- CLC/TR 60079-32-1 recommendation for avoiding ignition hazards due to electrostatic charges.
- TRBS 727 rules for avoiding ignition hazards as a result of electrostatic charges.

	IECEx / ATEX					
	0	1	2	20	21	22
Zone						
Ex interface		•	•		•	•
Installation in		•	•		•	•





Selection Table				
Product Description	Grounding monitoring device			
Enclosure material	Product Type	Art. No.	Weight kg	
Aluminium	8485/111-42	263091 ■	12.100	

Technical Data	
Explosion Protection	
IECEx gas explosion protection	Ex db ib [ib] IIB T4 Gb
IECEx dust explosion protection	Ex ib [ib] tb IIIC T130 °C Db
ATEX gas explosion protection	⊕ II 2 G Ex db ib [ib] IIB T4 Gb
ATEX dust explosion protection	⊕ II 2 D Ex ib [ib] tb IIIC T130 °C Db
Certificates	ATEX (FTZU), IECEx (FTZU)
Safety Data	
Max. voltage U _i signalling contacts	50 V DC
Max. current I _i signalling contacts	200 mA


Technical Data	
Electrical Data	
Connections	Maximum diameter, single-wire - rigid 2.5 mm ² - flexible 2.5 mm ² - flexible, cable end sleeves with plastic cover 1.5 mm ² - flexible, cable end sleeves without plastic cover 2.5 mm ²
Operating mode selection	Road tanker, rail car and Big Bag recognition Selection via DIP switch
Frequency range	47 – 63 Hz
Auxiliary Power	
Nominal voltage range AC	20 – 230 V
Nominal voltage range DC	20 – 300 V
Nominal current	50 mA
Power consumption	10 VA
Output	
Limit contact	Up to 4 change-over contacts
Min. output load condition	10 V DC/100 mA
Max. output AC load condition	230 V AC / 3 A
Max. output DC load condition	230 V DC / 0.25 A, 40 V DC / 3 A
Ambient Conditions	
Ambient temperature	-55°C ... +60°C
Storage temperature	-55°C ... +60°C
Mechanical Data	
Degree of protection (IP)	IP65
Enclosure version	Flameproof enclosure (Ex d)
Terminal range of cable glands	6.1 – 11.7 mm

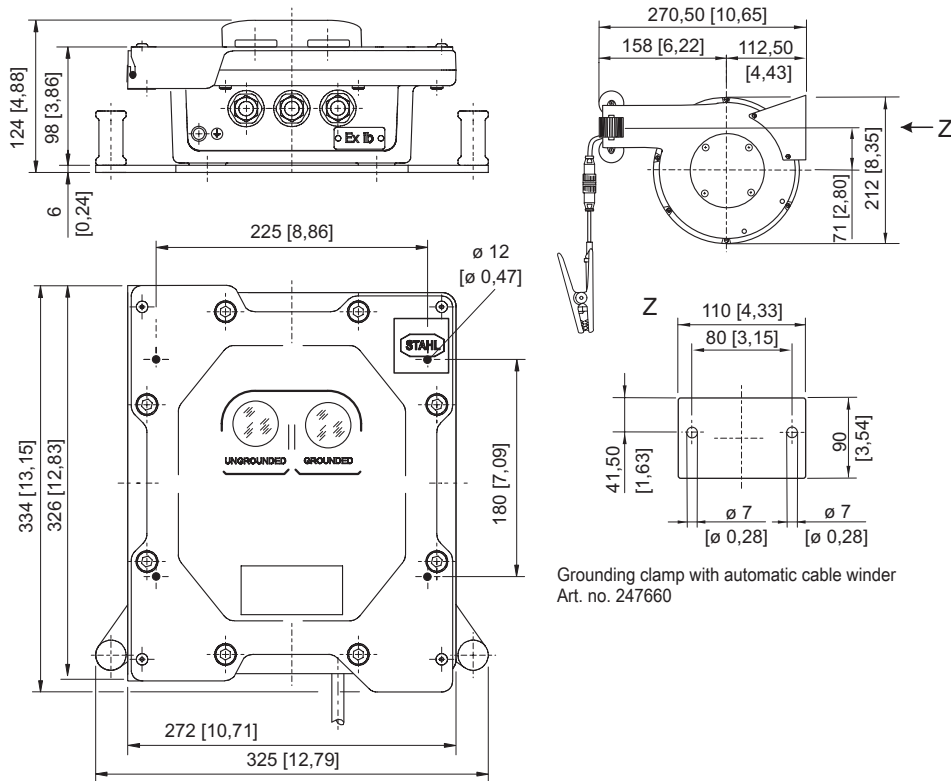
Accessories			
Figure	Description	Art. No.	Weight kg
Earth clamp with spiral cable			
	10 m ÖLFLEX with cable gland for 8485/111-42 Clamp made of stainless steel 1.4301 Ambient temperature: -30 ... +60 °C	263025 ■	4.000
	10 m ÖLFLEX with cable gland for 8485/121-42 Rev. C Clamp made of stainless steel 1.4404 Ambient temperature: -30 ... +60 °C	263094	4.000
Earth clamp with cable			
	10 m ÖLFLEX with cable gland for 8485/111-42 Clamp made of stainless steel 1.4301 Ambient temperature: -40 ... +60 °C	263023 ■	2.900
	10 m SIHF-J with cable gland for 8485/111-42 Clamp made of stainless steel 1.4404 Ambient temperature: -55 ... +60 °C	263095	2.900

Accessories

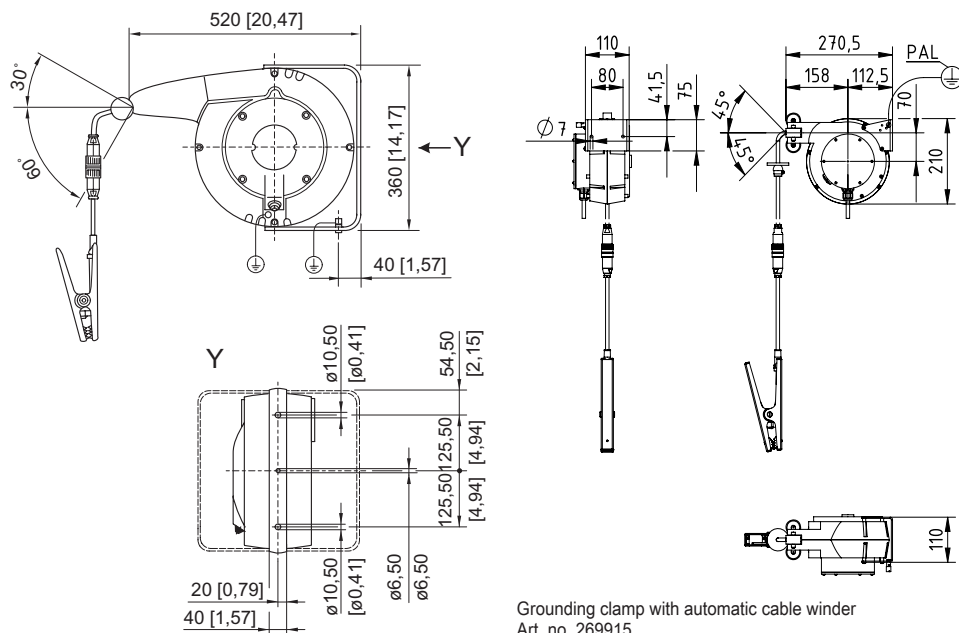
Figure	Description	Art. No.	Weight kg
Earth clamp with automatic cable winder			
	Automatic winder with 9 m of oil and petrol resistant cable with robust ergonomic grounding clamp of stainless steel and fast-action plug, plastic enclosure Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C Temperature range: -40 ... +70 °C Degree of protection (IP): IP42 Certificates: ATEX, IECEx	247660 ■	4.500
	Automatic winder with 20 m of oil and petrol resistant cable with robust ergonomic grounding clamp of stainless steel, and fast-action plug, aluminium enclosure, protected cable duct with stopper Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C Temperature range: -40 °C ... +70 °C Degree of protection (IP): IP43 Certificates: ATEX, IECEx	247671 ■	14.500
	Automatic winder with 12 m of oil and petrol resistant cable with robust ergonomic grounding clamp of stainless steel, and fast-action plug, aluminium enclosure, protected cable duct with stopper Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C Temperature range: -40 ... +70 °C Degree of protection (IP): IP42 Certificates: ATEX, IECEx	269915	6.200
Configuration set			
	Configuration set consisting of infrared adapter with USB port and USB stick with configuration software	263097 ■	1.000

Spare Parts

Figure	Description	Art. No.	Weight kg
Earth clamp with fast-action plug			
	Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug Spare part for automatic retractors (247660, 269915 and 247671), regular cables and spiral cables	247675	0.600



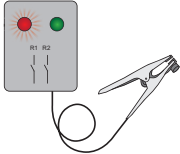
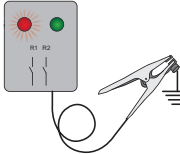
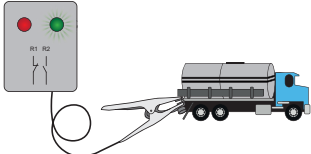
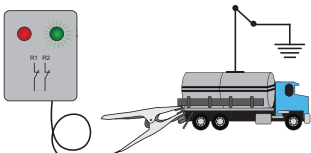
Type 8485/111-42



Grounding clamp with automatic cable winder
Art. no. 247671

Grounding clamp with automatic cable winder
Art. no. 269915

Operating mode

LED indication	Grounding condition with road tanker	Reaction of the grounding monitoring device
	Clamp is not connected, device not used	Grounding fault <ul style="list-style-type: none"> red indicating lamp ON green indicating lamp OFF Relays R1 and R2 are de-energised
	Clamp is directly connected to ground, for example via the loading platform	Grounding fault <ul style="list-style-type: none"> red indicating lamp ON green indicating lamp OFF Relays R1 and R2 are de-energised
	Clamps connected to tank vehicle	Grounding ok <ul style="list-style-type: none"> red indicating lamp OFF green indicating lamp ON Relay R1 is energised and relay R2 is de-energised
	Clamps connected to tank vehicle. Tank vehicle is grounded subsequently (e.g. via the loading arm).	Grounding ok <ul style="list-style-type: none"> red indicating lamp OFF green indicating lamp ON Relays R1 and R2 are energised

If the resistance of grounding loop of tanker is <math><10 \Omega</math>, relay R2 is energised.