

8485/111-42 Art. No. 263091



- Continuous monitoring of correct grounding
- Object recognition prevents potential operator errors (for lorries)
- Aluminium enclosure with IP65 degree of protection (protected against water jets)
- Up to four potential-free change-over contacts for signalling
- Ambient temperature -55 °C to +60 °C
- Auxiliary power: 24 V DC – 230 V AC
- Parameterisation when the enclosure is closed

MY R. STAHL 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.

## Technical Data

### Explosion Protection

Application range (zones)	1 2 21 22
Ex interface zone	1 2 21 22
IECEX gas certificate	IECEX FTZU 15.0031X
IECEX gas explosion protection	Ex db ib [ib] IIB T4 Gb
IECEX dust certificate	IECEX FTZU 15.0031X
IECEX dust explosion protection	Ex ib [ib] tb IIIC T130 °C Db
ATEX gas certificate	FTZU 09 ATEX 0059X
ATEX gas explosion protection	⊕ II 2 G Ex db ib [ib] IIB T4 Gb
ATEX dust certificate	FTZU 09 ATEX 0059X
ATEX dust explosion protection	⊕ II 2 D Ex ib [ib] tb IIIC T130 °C Db
Certificates	ATEX (FTZU), IECEX (FTZU)
Declaration of Conformity	ATEX (EUK)

### Safety Data

Max. voltage $U_i$ signalling contacts	50 V DC
Max. current $I_i$ signalling contacts	200 mA

### Electrical Data

Number of channels	1
--------------------	---

8485/111-42 Art. No. 263091

### Electrical Data

Connections	Maximum diameter, single-wire - rigid 2.5 mm <sup>2</sup> - flexible 2.5 mm <sup>2</sup> - flexible, cable end sleeves with plastic cover 1.5 mm <sup>2</sup> - flexible, cable end sleeves without plastic cover 2.5 mm <sup>2</sup>
Operating mode selection	Detection of lorry, rail vehicle or big bag Selection via DIP switch
Parameterisation	IrDA and Bluetooth
Frequency range	47 – 63Hz

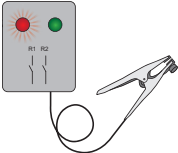
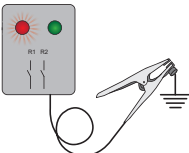
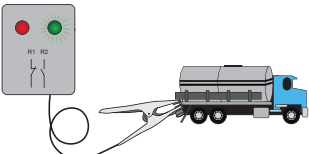
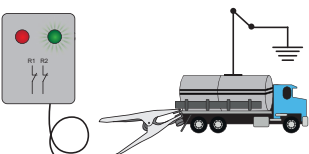
### Auxiliary Power

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 DC load condition	230 V DC / 0.25 A, 40 V DC / 3 A
Max. output AC load condition	230 V AC / 3 A

### Operating principle:

LED indication	Grounding condition with road tanker	Reaction of the grounding monitoring device
	Clamp is not connected, device not used	Grounding fault • 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 • red indicating lamp ON • green indicating lamp OFF • Relays R1 and R2 are de-energised
	Clamps connected to tank vehicle	Grounding ok • 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 • 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.

### Ambient Conditions

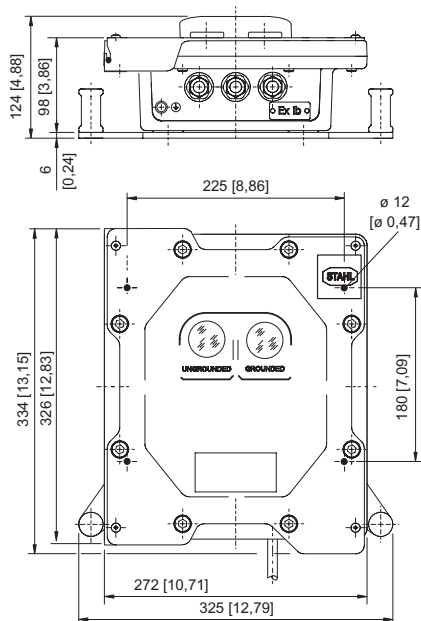
Ambient temperature	-55 °C ... 60 °C
Ambient temperature	-67°F ... +140°F
Storage temperature	-55 °C ... 60 °C
Storage temperature	-67°F ... +140°F

8485/111-42 Art. No. 263091

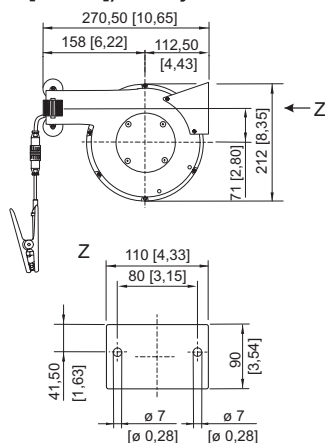
### Mechanical Data

Degree of protection (IP)	IP65
Enclosure version	Flameproof enclosure (Ex d)
Enclosure material	Aluminium
Silicone-free	No
Terminal range of cable glands	6.1 – 11.7 mm
Cable connection terminal area, inches	0.24 – 0.46 in
Width	325 mm
Width, inches	12.8 in
Height	334 mm
Height, inches	13.15 in
Depth	124 mm
Mounting depth, inches	4.88 in
Weight	12.1 kg
Weight	26.68 lb

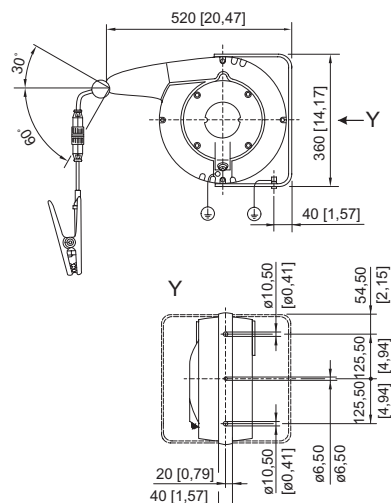
### Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



Type 8485/111-42

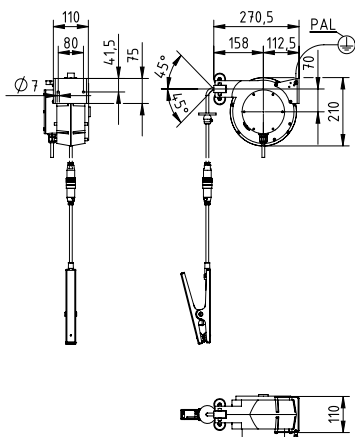


Grounding clamp with automatic retractor for cable  
Item no. 247660



Grounding clamp with automatic retractor for cable  
Item no. 247671

8485/111-42 Art. No. 263091



Grounding clamp with automatic retractor for cable  
Item no. 269915

### Accessories

#### Grounding clamp with spiral cable

Art. No.



10 m ÖLFLEX cable with cable gland for 8485/111-42  
Clamp made from stainless steel 1.4301  
Ambient temperature: -30 °C to +60 °C

263025

10 m ÖLFLEX cable with cable gland for 8485/121-42 Rev. C  
Clamp made from stainless steel 1.4404  
Ambient temperature: -30 °C to +60 °C

263094

#### Grounding clamp with cable

Art. No.



10 m ÖLFLEX cable with cable gland for 8485/111-42  
Clamp made from stainless steel 1.4301  
Ambient temperature: -40 °C to +60 °C

263023



10 m SiHF-J cable with cable gland for 8485/111-42  
Clamp made from stainless steel 1.4404  
Ambient temperature: -55 °C to +60 °C

263095

#### Grounding clamp with automatic retractor for cable

Art. No.



Self retracting reel with 9 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug, plastic enclosure  
Roofing must be provided when installing the unit outside.

247660

Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C  
Temperature range: -20 °C to +70 °C  
Degree of protection (IP): IP42  
Certificates: ATEX, IECEx




Self retracting reel with 20 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug, aluminium enclosure, protected cable duct with stopper

247671


Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C  
Temperature range: -40 °C to +70 °C  
Degree of protection (IP): IP43  
Certificates: ATEX, IECEx

8485/111-42 Art. No. 263091

	<p>Self retracting reel with 12 m oil- and petrol-resistant cable with robust, ergonomic grounding clamp made from stainless steel, and fast-action plug, aluminium enclosure, protected cable duct with stopper</p> <p>Installation in Zone 1, IIC, T6; Zone 21, IIIC, 135 °C</p> <p>Temperature range: -40 °C to +70 °C</p> <p>Degree of protection (IP): IP42</p> <p>Certificates: ATEX, IECEx</p>	269915
--	---	--------


### Protective roof

Art. No.

	<p>Protective roof 8298/05-111 for additional protection against the elements, such as rain and sunlight.</p> <p>Material: Stainless steel 1.4404</p>	226972
--	---	--------

### Configuration set

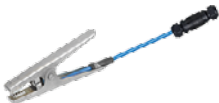
Art. No.

	<p>Configuration set consisting of infrared adapter with USB port and USB stick with configuration software</p>	263097
--	---	--------

## Spare Parts

### Grounding clamp with fast-action plug

Art. No.

	<p>Robust, ergonomic grounding clamp with 150 mm cable and fast-action plug</p> <p>Spare part for self retracting reels (247660, 269915 and 247671), cable and spiral cable</p>	247675
--	---	--------

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.