

Ground Monitoring Device

Series 8485



www.stahl.de



12723E00

- > Controlled electrostatic grounding of road tankers and rail cars during loading
- > Continuous monitoring of correct grounding
- > The object recognition prevents potential operator errors (with road tankers)
- > Water jet protected aluminium enclosure IP65
- > Two potential-free change-over contacts per channel for signalling
- > Insulated point of suspension for clamps
- > Ambient temperature - 50 ... + 60 ° C



E4

The ground monitoring device ensures the electrostatic grounding of road tankers and rail cars 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:

- > CENELEC LC/TR 50404 recommendation for avoiding ignition hazards due to electrostatic charges.
- > BGR 132 - BG rules for avoiding ignition hazards as a result of electrostatic charges






Zone	ATEX / GOST					
	0	1	2	20	21	22
Ex i interface		x	x			
For use in		x	x			

WebCode 8485A

Ground Monitoring Device

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Selection Table






Version	Description	Order number	Weight kg
Single-channel grounding system	 <p>12635E00</p> <p>Ground Monitoring Device</p>	8485/111-31	12.900
	 <p>12638E00</p> <p>Clamp with cable</p>	202500	2.900
	 <p>12640E00</p> <p>Clamp with spiral cable</p>	202502	4.000
	 <p>12715E00</p> <p>Grounding clamp with automatic cable winder</p>	105544	16.000
	 <p>12643E00</p> <p>Configuration set</p>	202511	0.500

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Selection Table

Version	Description	Order number	Weight kg
Dual-channel grounding system	 <p>12633E00 Ground Monitoring Device</p>	8485/112-31	13.600
	 <p>12639E00 Clamp with cable</p>	202501	4.800
	 <p>12641E00 Clamp with spiral cable</p>	202503	7.000
	 <p>12715E00 Grounding clamp with automatic cable winder</p>	105544	16.000
	 <p>12643E00 Configuration set</p>	202511	0.500

*) Special cable length possible on request (max. 20 m).
Price and date of delivery differ from the standard.

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Explosion Protection

Explosion protection

Europe (ATEX)

Gas

FTZÚ 09 ATEX 0059X

II 2 G Ex d [ib] IIB T4

Installation

in Zones 1, 2

Certificates and approvals

Certificates

ATEX, Russia (GOST R), Belarus (GOST-B)

Technical Data

Electrical data

Power supply

Rated voltage

230 +/- 10 % V AC

Rated current

50 mA

Power consumption

10 VA

Output

Signalling contact

two floating change-over contacts per channel

Minimum load

10 V DC / 100 mA

Maximum load DC

230 V DC / 0.25 A 40 V DC / 3 A

Maximum load AC

230 V AC / 3 A

Operating mode selection per channel

Road tanker and rail car recognition by means of DIP switch

LED display

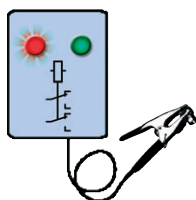
Selection via DIP switch

Operating principle:

LED display

Grounding condition with road tanker

Reaction of the grounding monitoring device

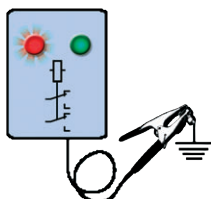


10736E00

Clamp is not connected, grounding equipment not in use

Grounding incorrect

- Red indicating lamp ON
- Green indicating lamp OFF
- Contacts OPEN

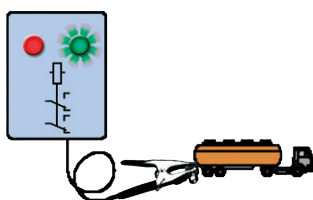


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Clamp is directly grounded, e.g. via the loading platform

Grounding incorrect

- Red indicating lamp ON
- Green indicating lamp OFF
- Contacts OPEN

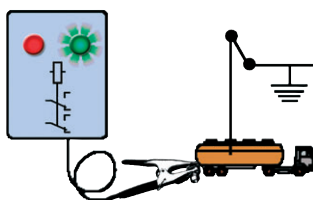


10738E00

Clamps connected to tank vehicle.

Grounding ok

- Red indicating lamp OFF
- Green indicating lamp ON
- Contacts CLOSED



10739E00

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
- Contacts CLOSED

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Technical Data

Mechanical data

Enclosure version	Flameproof enclosure (Ex d)	
Degree of protection	IP65	
Material	Aluminium	
Enclosure	Galvanised steel, contact point: copper	
Grounding clamp		
Weight	8485/111-31	10.2 kg
	8485/112-31	10.9 kg

Ambient conditions





Ambient temperature	- 50 ... + 60 °C
Storage temperature	- 50 ... + 60 °C

Assembly / Installation

Cable glands	Cable diameter range 6 ... 12 mm	
Connection	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

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Accessories and Spare Parts

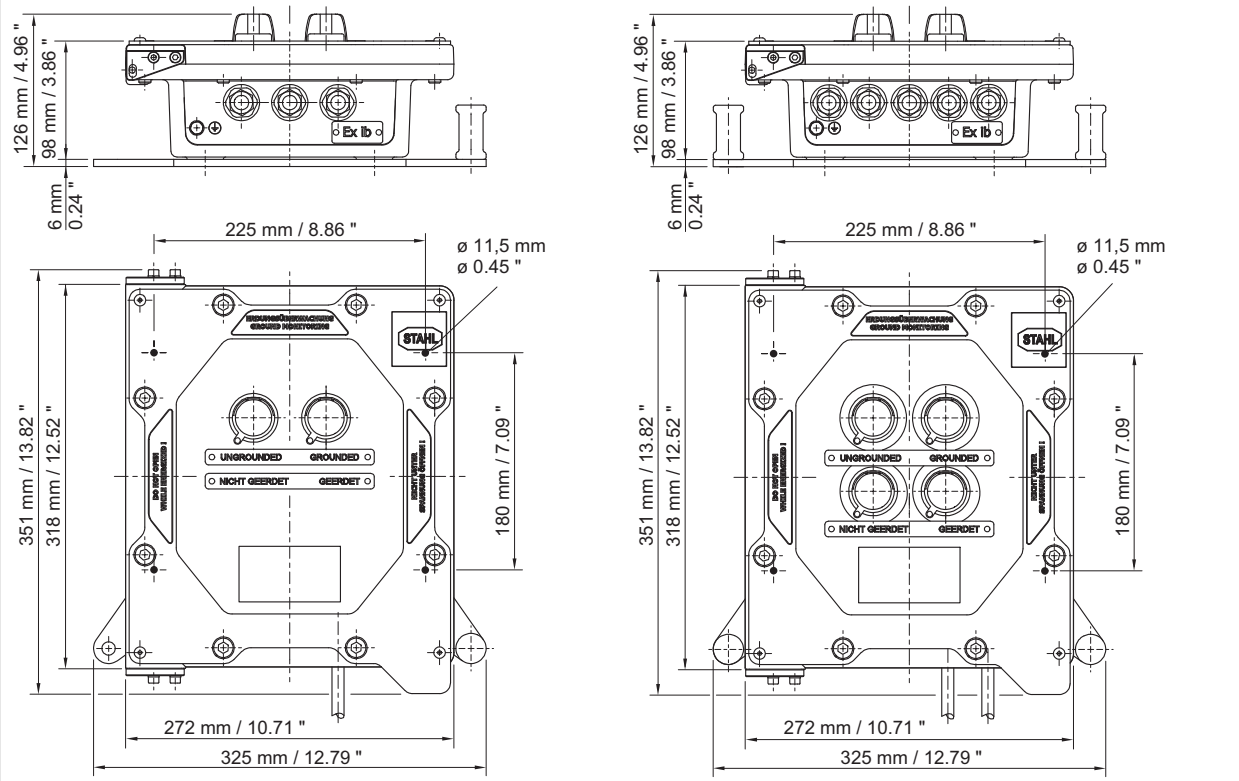
Designation	Illustration	Art. no.	Weight kg
Key-operated switch	 <p>12801E00</p> <p>Key-operated switch Series 8040 2 switching positions Key removable in 0 + 1 For use in Zones 1, 2, 21, 22</p> <p>For manual by-pass of the signalling contact by authorised staff</p>	130902	0.450
Flashlight and permanent light	 <p>12802E00</p> <p>Flashlight and permanent light Series 6161 230 V AC, red For use in Zones 1, 2, 21, 22</p> <p>Additional signalling of the grounding condition</p>	120655	1.370
Horn	 <p>00448E00</p> <p>Horn Series 8491/1 with horn and connection lead 230 V AC For use in Zones 1 and 2</p> <p>Additional signalling of the grounding condition</p>	145280	1.450
Flat horn	 <p>10614E00</p> <p>Flat horn 8491/2 with terminal compartment and cable gland 230 V AC For use in Zones 1, 2, 21, 22</p> <p>Additional signalling of the grounding condition</p>	145285	1.500

Further signalling and monitoring equipment can be found in the main catalogue.

Ground Monitoring Device

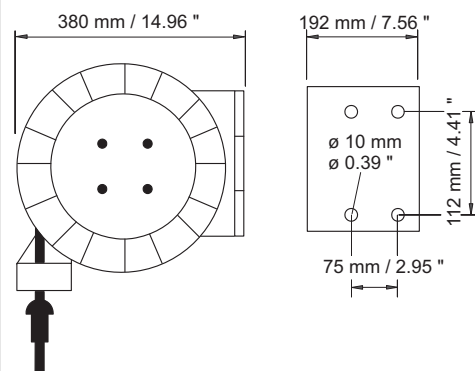
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Dimensional Drawings (All Dimensions in mm / inches) - Subject to Alterations



Single-channel ground monitoring device 8485/111-31

Dual-channel ground monitoring device 8485/112-31



Cable drum with automatic cable winder

04878E00

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.

Representante oficial de:



[Argentina – Uruguay – Paraguay – Bolivia – Ecuador.]



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