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STAHL



- 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 - 55 ... + 60 °C



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.
- TRGS 727 rules for avoiding ignition hazards as a result of electrostatic charges

	ATEX / IECEx					
Zone	0	1	2	20	21	22
Ex i interface		х	х		х	х
For use in		х	х		х	х

WebCode 8485A

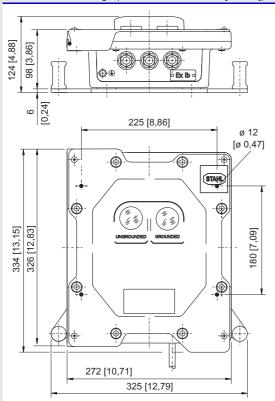
Monitored electrostatic grounding of tank containers and rail cars during loading Ambient temperature: - 55 + 60 °C 8485/111-42 12. Single-channel grounding system Monitored electrostatic grounding of tank containers and rail cars during loading Ambient temperature: - 55 + 60 °C 8485/112-42 13. Dual-channel grounding system Monitored electrostatic grounding of tank containers and rail cars during loading Ambient temperature: - 50 + 60 °C 240197 2.90 Dual-channel grounding system 10 m OLFLEX with cable gland ° Clamp with cable 10 m OLFLEX with cable gland ° Clamp is made of stainless steel Ambient temperature: - 50 + 60 °C 239969 2.90 I on OLFLEX with cable gland °; Clamp with cable 10 m OLFLEX with cable gland °; Clamp with cable of stainless steel; Ambient temperature: - 55 + 60 °C 239970 4.00 I on OLFLEX with cable gland ?; Clamp with spiral cable 10 m OLFLEX with cable gland ?; Clamp is made of stainless steel; Ambient temperature: - 55 + 60 °C 238970 4.00 I on OLFLEX with cable gland ?; Clamp with spiral cable 10 m OLFLEX with cable gland ?; Clamp is made of stainless steel; Ambient temperature: - 40 + 60 °C 238970 4.00 I on OLFLEX with cable gland ?; Clamp is made of stainless steel; Ambient temperature: - 40 + 60 °C 238970 4.00 I on OLFLEX with cable gland ?; Clamp is made of stainless steel; Ambient temperature: - 40 + 60 °C 238970 7.30 I on OLFLEX with cable gland ?; Clamp is made of s	Version	Description	Order number	Weight
Single-channel grounding system Monitored electrostatic grounding of tank containers and rail cars during loading Ambient temperature: - 55 + 60 °C B485/112-42 13. Dual-channel grounding system If on OLFLEX with cable gland " Clamp is made of stainless steel Ambient temperature: - 55 + 60 °C 200197 2.90 Output cable 10 m OLFLEX with cable gland "): Clamp is made of stainless steel Ambient temperature: - 55 + 60 °C 238969 2.90 Output cable 10 m SHF-J with cable gland "): Clamp is made of stainless steel; Ambient temperature: - 55 + 60 °C 238969 2.90 Output cable 10 m OLFLEX with cable gland "): Clamp is made of stainless steel; Ambient temperature: - 55 + 60 °C 238970 4.00 Output cable 10 m OLFLEX with cable gland "): Clamp is made of stainless steel; Ambient temperature: - 30 + 60 °C 238970 4.00 Output cable 10 m OLFLEX with cable gland "): Clamp is made of stainless steel; Ambient temperature: - 30 + 60 °C 238970 2.90 Output cable 10 m OLFLEX with cable gland "): Clamp is made of stainless steel; Ambient temperature: - 30 + 60 °C 238970 2.90 Clamp is made of stainless steel; Ambient temperature: - 30 + 60 °C 238970 2.90 Clamp is transfer with 9 m of ol and petrol resistant cable with otious tergonomic grounding clamp of stainless steel, and fast-a	1265500	rail cars during loading	8485/111-42	kg 12.100
10 m OLFLEX with cable gland *) 240197 2.91 Clamp with cable 10 m SIHF-J with cable gland *): 238969 2.91 Clamp with cable 10 m SIHF-J with cable gland *): 238969 2.91 Clamp with cable 10 m OLFLEX with cable gland *): 238969 2.91 Clamp with cable 10 m OLFLEX with cable gland *): 238969 2.91 Clamp with cable 10 m OLFLEX with cable gland *): 238970 4.01 Clamp with cable 10 m OLFLEX with cable gland *): 238970 4.01 Clamp with cable 10 m OLFLEX with cable gland *): 238970 4.01 Clamp with spiral cable 10 m OLFLEX with cable gland *): 238970 4.01 Clamp with spiral cable 10 m OLFLEX with cable gland *): 238970 4.01 Clamp with spiral cable 10 m OLFLEX with cable gland *): 238971 2.01 Grounding clamp 10 m OLFLEX with cable glang the provide glang th	Single-channel grounding system	rail cars during loading	8485/112-42	13.100
10 m SIHF-J with cable gland *); Clamp is made of stainless steel; Ambient temperature: - 55 + 60 °C 238969 2.90 Image: Clamp with cable 10 m OLFLEX with cable gland *); Clamp is made of stainless steel; Ambient temperature: - 30 + 60 °C 238970 4.00 Image: Clamp with spiral cable 10 m OLFLEX with cable gland *); Clamp is made of stainless steel; Ambient temperature: - 30 + 60 °C 238970 4.00 Image: Clamp with spiral cable 10 m OLFLEX with cable gland *); Clamp is made of stainless steel; Ambient temperature: - 40 + 60 °C 238971 2.00 Image: Clamp with spiral cable 10 m OLFLEX with cable gland *); Clamp is made of stainless steel; Ambient temperature: - 40 + 60 °C 247660 7.30 Image: Clamp with spiral cable 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 247660 7.30 Image: Clamp ima	17200E00	Clamp is made of stainless steel	240197	2.900
Clamp is made of stainless steel." Clamp is made of stainless steel." Ambient temperature : - 30 + 60 °C Clamp is made of stainless steel." Clamp with spiral cable Robust ergonomic grounding clamp, stainless steel, and fast-action plug. 238971 2.00 Grounding clamp 17132E00 Automatic winder with 9 m of oil and petrol resistant cable with robust ergonomic grounding clamp of stainless steel, and fast-action plug. 247660 7.30 Grounding clamp 17637E00 Robust ergonomic grounding clamp of stainless steel, and fast-action plug. 247675 0.60 Grounding clamp 17637E00 Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug. 247675 0.60 Grounding clamp 17638E00 Configuration set consisting of infrared adapter with USB port and CD-ROM 202511 0.51	17130E00	Clamp is made of stainless steel;	238969	2.900
Robust ergonomic grounding clamp, stainless steel, and fast-action plug. 238971 2.00 Grounding clamp 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 247660 7.30 Grounding clamp Intersteel Robust ergonomic grounding clamp of stainless steel, and fast-action plug, Plastic enclosure 247660 7.30 Grounding clamp Intersteel Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug 247675 0.60 Grounding clamp Intersteel Configuration set consisting of infrared adapter with USB port and CD-ROM 202511 0.50		Clamp is made of stainless steel;	238970	4.000
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 247660 7.34 Grounding clamp with automatic cable winder Nobust ergonomic grounding clamp with 150 mm of cable and fast-action plug 247675 0.64 Grounding clamp Integration Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug 247675 0.64 Grounding clamp Integration set consisting of infrared adapter with USB port and CD-ROM 202511 0.56	17132E00	Robust ergonomic grounding clamp, stainless steel, and fast-action plug. Ambient temperature : - 40 + 60 $^\circ\text{C}$	238971	2.000
Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug 247675 0.60 Grounding clamp Configuration set consisting of infrared adapter with USB port and CD-ROM 202511 0.50	Grounding clamp	with robust ergonomic grounding clamp of stainless steel, and fast-action plug,	247660	7.300
Configuration set consisting of infrared adapter with USB port and CD-ROM 202511 0.50	17638E00	Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug	247675	0.600
Configuration set	12643E00		202511	0.500



Explosion Protection Global (IECEx)			
Giobal (IECEX) Gas and dust	IECEx FTZU 15.003	31X	
	Ex d ib [ib] IIB T4 G		
	Ex ib [ib] tb IIIC T13		
Europe (ATEX)			
Gas and dust	FTZÚ 09 ATEX 005	9X	
	🐼 II 2 G Ex d [ib] II	IB T4 Gb	
	€ II 2 D Ex to IIIC		
Certifications and certificates	ey 2 9 2x to mo		
Certificates	IECEx, ATEX, Kaza	khstan (TR), Russia (TR), Belarus (TR)	
Further parameters			
Installation Safety data	in Zones 1, 2, 21, 22	2	
For signalling contact			
Max. connectable voltage L	J _i 50 V DC		
Max. permissible current li	200 mA		
Max. permissible current if	200 11/1		
Technical Data			
Electrical data			
Power supply			
Rated voltage	20 V DC - 230 V AC		
Nominal current	50 mA		
Frequency range	40 60 Hz		
Power consumption	10 VA		
Output			
Signalling contact		free change-over contacts per channel	
Minimum load	10 V DC / 100 mA	10.4	
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 rec Selection via DIP switch	cognition by means of DIP switch	
LED indication road tankers			
	Operating principle:		
	LED indication	Grounding condition	Reaction of the
		with road tanker	grounding monitoring device
	38.	Clamp is not connected, grounding equipment not in	Grounding incorrect
	٠ ا	use	 Red indicating lamp ON
	U - Ū - U		 Green indicating lamp OFF Contacts OPEN
			Contacts OF EN
	0/		
	0	10738E00	
		10738E00 Clamp is directly	Grounding incorrect
		Clamp is directly grounded, e.g. via	0
		Clamp is directly	Red indicating lamp ON
		Clamp is directly grounded, e.g. via	J. J
		Clamp is directly grounded, e.g. via	 Red indicating lamp ON Green indicating lamp OFF
		Clamp is directly grounded, e.g. via	 Red indicating lamp ON Green indicating lamp OFF
		Clamp is directly grounded, e.g. via	 Red indicating lamp ON Green indicating lamp OFF
		Clamp is directly grounded, e.g. via	 Red indicating lamp ON Green indicating lamp OFF
		Clamp is directly grounded, e.g. via	 Red indicating lamp ON Green indicating lamp OFF
		Clamp is directly grounded, e.g. via the loading platform	 Red indicating lamp ON Green indicating lamp OFF
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON
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		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok Red indicating lamp OEE
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok Red indicating lamp OFF Green indicating lamp OFF Green indicating lamp OFF
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok Red indicating lamp OFF Green indicating lamp OFF Green indicating lamp OFF
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok Red indicating lamp OFF Green indicating lamp OFF Green indicating lamp OFF
		Clamp is directly grounded, e.g. via the loading platform	Red indicating lamp ON Green indicating lamp OFF Contacts OPEN Grounding ok Red indicating lamp OFF Green indicating lamp ON Contacts CLOSED Grounding ok Red indicating lamp OFF Green indicating lamp OFF Green indicating lamp OFF

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Technical Data			
Mechanical data			
Enclosure version	Flameproof enclosure (Ex d)		
Degree of protection	IP65		
Material			
Enclosure	Aluminium		
Grounding clamp	Stainless steel		
Ambient conditions			
Ambient temperature	-55 +60 °C		
Storage temperature	-55 +60 °C		
Mounting / 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	

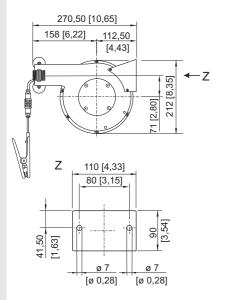


Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations

Single-channel grounding monitoring device 8485/111

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Dual-channel grounding monitoring device 8485/112



Cable drum with automatic cable winder (Art. no. 247660)

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.

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