

# Grounding Monitoring Device Series 8485



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17198E00

- > 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



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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:

- > CLC/TR 60079-32-1 Electrostatic hazards - guideline
- > TRBS 727 rules for avoiding ignition hazards as a result of electrostatic charges









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

**WebCode 8485A**

# Grounding Monitoring Device

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Selection Table



Version	Description	Order number	Weight kg
 <p>12635E00</p> <p>Single-channel grounding system</p>	<p>Monitored electrostatic grounding of tank containers and rail cars during loading</p> <p>Ambient temperature: - 55 ... + 60 °C</p>	<b>8485/111-42</b>	12.100
 <p>12633E00</p> <p>Dual-channel grounding system</p>	<p>Monitored electrostatic grounding of tank containers and rail cars during loading</p> <p>Ambient temperature: - 55 ... + 60 °C</p>	<b>8485/112-42</b>	13.100
 <p>17200E00</p> <p>Clamp with cable</p>	<p>10 m ÖLFLEX with cable gland *)</p> <p>Clamp is made of stainless steel</p> <p>Ambient temperature: -40 ... +60 °C</p>	<b>240197</b>	2.900
 <p>17130E00</p> <p>Clamp with cable</p>	<p>10 m SIHF-J with cable gland *);</p> <p>Clamp is made of stainless steel;</p> <p>Ambient temperature: - 55 ... + 60 °C</p>	<b>238969</b>	2.900
 <p>17199E00</p> <p>Clamp with spiral cable</p>	<p>10 m ÖLFLEX with cable gland *);</p> <p>Clamp is made of stainless steel;</p> <p>Ambient temperature : - 30 ... + 60 °C</p>	<b>238970</b>	4.000
 <p>17132E00</p> <p>Grounding clamp</p>	<p>Robust ergonomic grounding clamp, stainless steel, and fast-action plug.</p> <p>Ambient temperature : - 40 ... + 60 °C</p>	<b>238971</b>	2.000
 <p>17637E00</p> <p>Grounding clamp with automatic cable winder</p>	<p>Automatic winder with 9 m of oil and petrol resistant cable with robust ergonomic grounding clamp of stainless steel, and fast-action plug,</p> <p>Plastic enclosure</p>	<b>247660</b>	7.300
 <p>17636E00</p> <p>Grounding clamp with automatic cable winder</p>	<p>Automatic winder with 20 m of oil and petrol resistant cable with robust ergonomic grounding clamp of stainless steel, and fast-action plug,</p> <p>Aluminium enclosure, protected cable duct with stopper</p>	<b>247671</b>	14.500

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### Selection Table

Version	Description	Order number	Weight kg
 Grounding clamp 17638E00	Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug	247675	0.600
 Configuration set 12643E00	Configuration set consisting of infrared adapter with USB port and CD-ROM with configuration software	202511	0.500

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

### Explosion Protection

#### Global (IECEx)

Gas and dust	IECEx FTZU 15.0031X Ex d ib [ib] IIB T4 Gb Ex ib [ib] tb IIIC T130°C Db
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#### Europe (ATEX)

Gas and dust	FTZÚ 09 ATEX 0059X E II 2 G Ex d ib [ib] IIB T4 Gb E II 2 D Ex ib [ib] tb IIIC T130°C Db
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#### Certifications and certificates

Certificates	IECEx, ATEX, Kazakhstan (TR), Russia (TR), Belarus (TR)
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#### Further parameters

Installation	in Zones 1, 2, 21, 22
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#### Safety data

For signalling contact	
Max. connectable voltage $U_i$	50 V DC
Max. permissible current $I_i$	200 mA

### Technical Data

#### Electrical data

Power supply	
Nominal voltage	Nominal voltage range AC: 20 ... 230 V Nominal voltage range DC: 20 ... 300 V
Nominal current	50 mA
Frequency range	47 ... 63 Hz
Power consumption	10 VA
Output	
Signalling contact	Ex i or Ex e - two potential-free 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 Selection via DIP switch

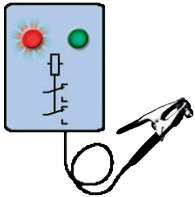
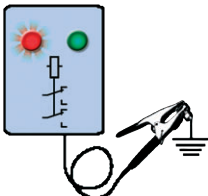
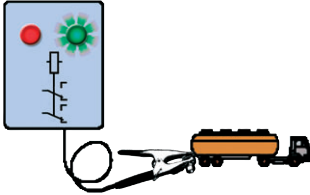
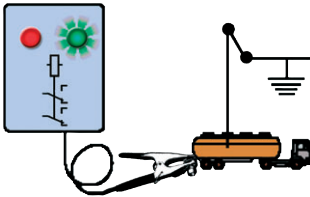
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# Grounding Monitoring Device

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### Technical Data

LED indication road tankers

Operating principle:		
LED indication	Grounding condition with road tanker	
 <p>10738E00</p>	<p>Clamp is not connected, grounding equipment not in use</p> <p>Grounding incorrect</p> <ul style="list-style-type: none"> <li>• Red indicating lamp ON</li> <li>• Green indicating lamp OFF</li> <li>• Contacts OPEN</li> </ul>	
 <p>10737E00</p>	<p>Clamp is directly grounded, e.g. via the loading platform</p> <p>Grounding incorrect</p> <ul style="list-style-type: none"> <li>• Red indicating lamp ON</li> <li>• Green indicating lamp OFF</li> <li>• Contacts OPEN</li> </ul>	
 <p>10738E00</p>	<p>Clamps connected to tank vehicle.</p> <p>Grounding ok</p> <ul style="list-style-type: none"> <li>• Red indicating lamp OFF</li> <li>• Green indicating lamp ON</li> <li>• Contacts CLOSED</li> </ul>	
 <p>10739E00</p>	<p>Clamps connected to tank vehicle. Tank vehicle is grounded subsequently (e.g. via the loading arm).</p> <p>Grounding ok</p> <ul style="list-style-type: none"> <li>• Red indicating lamp OFF</li> <li>• Green indicating lamp ON</li> <li>• Contacts CLOSED</li> </ul>	
<b>Mechanical data</b>		
Enclosure version	Flameproof enclosure (Ex d)	
Degree of protection	IP65	
Material		
Enclosure	Aluminium	
Grounding clamp	Stainless steel	
<b>Ambient conditions</b>		
Ambient temperature	-55 ... +60 °C	
Storage temperature	-55 ... +60 °C	
<b>Mounting / Installation</b>		
Cable glands	Cable diameter range 6 ... 12 mm	
Connection	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>

# Grounding Monitoring Device

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### Technical Data

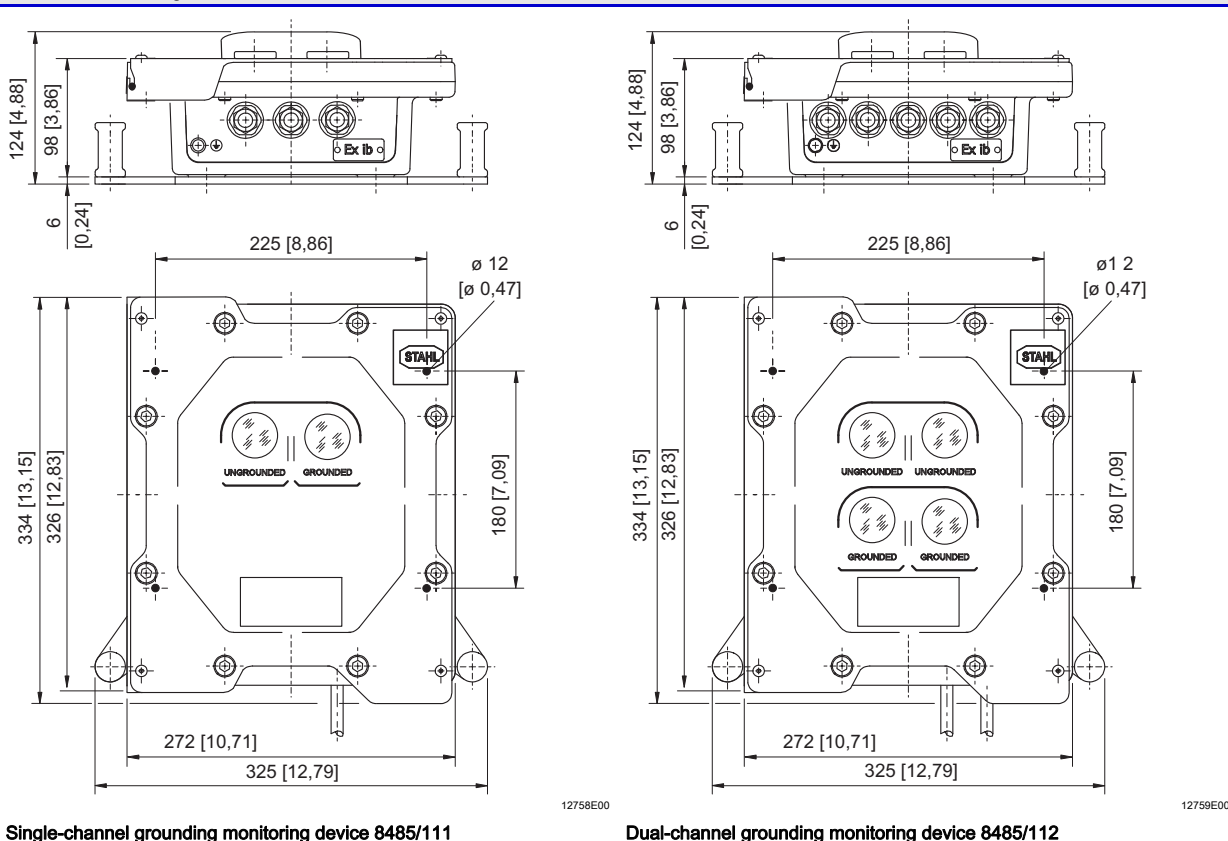
Version	Clamp with cable (art. no. 240197)	Clamp with spiral cable (art. no. 238970)	Clamp with SIHF-J cable (art. no. 238969)
<b>Mechanical data</b>			
Material	Stainless steel	Stainless steel	Stainless steel
Grounding clamp	10 m ÖLFLEX 540 P 3 GX 2,5 blue with cable gland	10 m ÖLFLEX 540 P 3 GX 2,5 blue with cable gland	10 m self-extinguishing and flame retardant SIHF-J 3 GX 2,5 red-brown with cable gland
<b>Ambient conditions</b>			
Ambient temperature	-40 ... +60 °C	-30 ... +60 °C	-55 ... +60 °C
<b>Mounting / Installation</b>			
Cable entries	6 ... 12 mm	6 ... 12 mm	6 ... 12 mm
Clamping range	6 ... 12 mm	6 ... 12 mm	6 ... 12 mm

### Technical Data

Design	Automatic cable winder with 20 m of cable (art. no. 247671)	Automatic cable winder with 9 m of cable (art. no. 247660)
<b>Ambient conditions</b>		
Ambient temperature	-40 to +70 °C	-40 to +70 °C
<b>Mechanical data</b>		
Degree of protection	IP43	IP42
Material	Aluminium ribbed and reinforced, protected cable duct with stopper	Plastic, cable duct with rollers
Enclosure	Aluminium ribbed and reinforced, protected cable duct with stopper	Plastic, cable duct with rollers
Return mechanism	automatic, stopping device can be switched on and off	--
Grounding cable	20 m oil and petrol resistant grounding cable, 3 x 1.5 mm Temperature range: -20 ... +90 °C Connected 4-pole plug receptacle, IP67	9 m oil and petrol resistant grounding cable, 3 x 1.5 mm Temperature range: -20 ... +90 °C Connected 4-pole plug receptacle, IP67
Weight	approx. 14 kg with 20 m grounding cable	approx 7.0 kg with 9 m grounding cable
Fire resistance (UL 94)	--	HB
<b>Mounting / Installation</b>		
Mounting	Wall mounting with mounting plate	Wall mounting with mounting plate
Connection	2.5 m, connection cable 3 x 1.5 mm <sup>2</sup>	2.5 m, connection cable 3 x 1.5 mm <sup>2</sup>

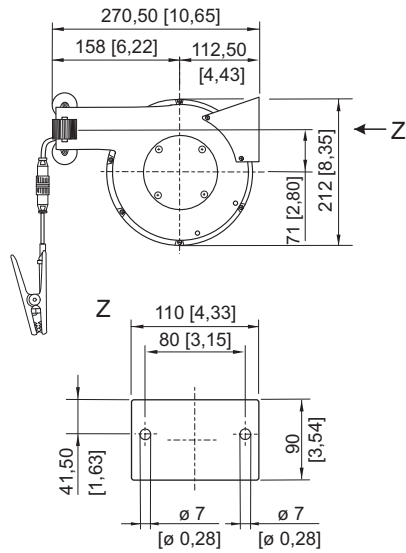
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### Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations

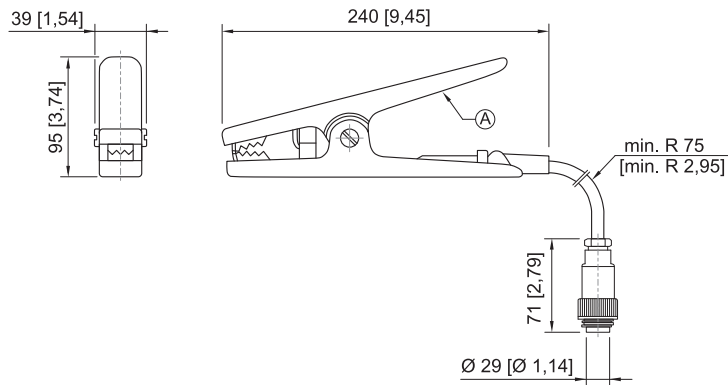


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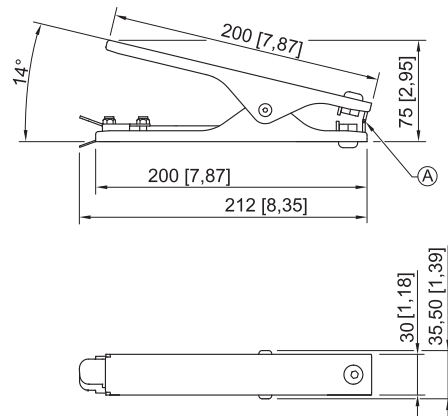
Dimensional Drawings (All Dimensions in mm [inches]) - Subject to Alterations



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



Clamp for oder no. 247660, 247671, 247675

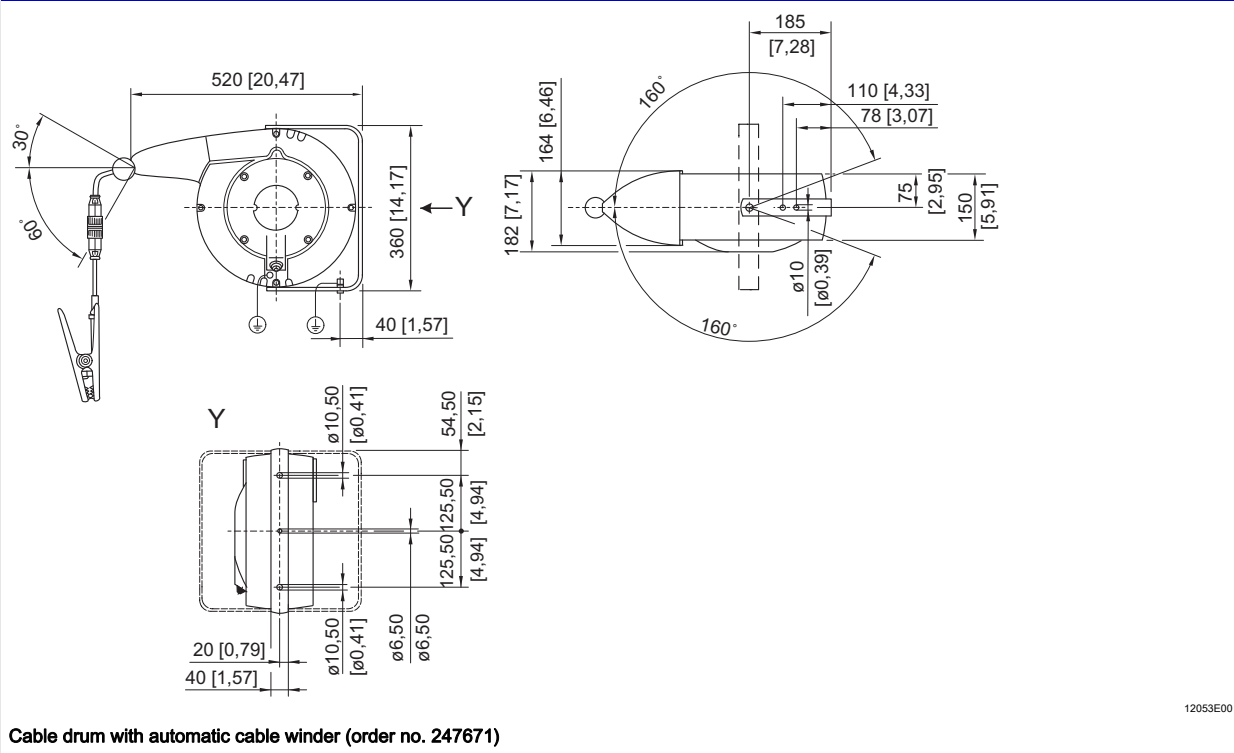


Clamp for order no. 240197, 238969, 238970, 238971)

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



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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