

8485/111-42 Art. No. 263091



- Controlled electrostatic grounding of road tankers, rail cars and Big Bag (Rev. C) during loading
- Continuous monitoring of correct grounding
- The object recognition prevents potential operator errors (with road tankers)
- Water jet protected aluminium enclosure IP65
- Up to four potential-free change-over contacts for signalling
- Insulated point of suspension for clamps
- Ambient temperature -55 ... +60 °C
- Bluetooth communication and infrared

WebCode 8485A



The ground 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
EAC certificate	TS RU S-DE.GB04.B.00410
EAC gas explosion protection	⊕ 1Ex d ib [ib] IIB T4 Gb X
EAC dust explosion protection	⊕ Ex ib [ib] tb IIC T130 °C Db
Certificates	ATEX (FTZU), EAC (STV), IECEX (FTZU), India (PESO)

Safety Data

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

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Electrical Data

Number of channels	1
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
Parameterization	IrDA and Bluetooth
Frequency range	47 – 63 Hz

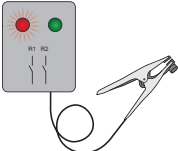
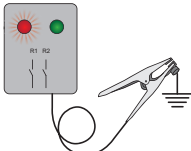
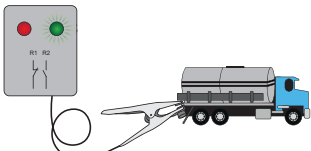
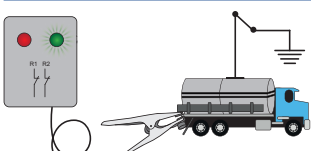
Auxiliary Power

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 changeover contact
Output min. load	10 V DC / 100 mA
Output max. load DC	230 V DC / 0.25 A, 40 V DC/3 A
Output max. load AC	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 <10 Ω, relay R2 is energised.

Ambient Conditions

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

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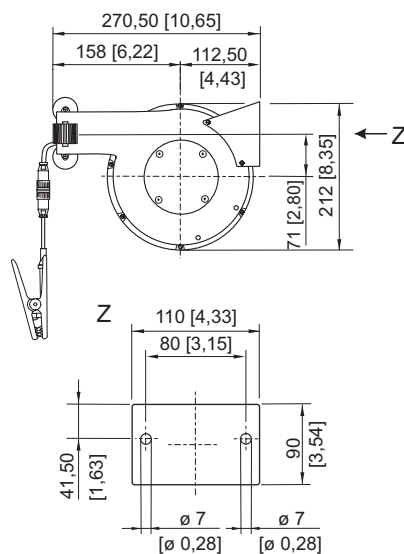
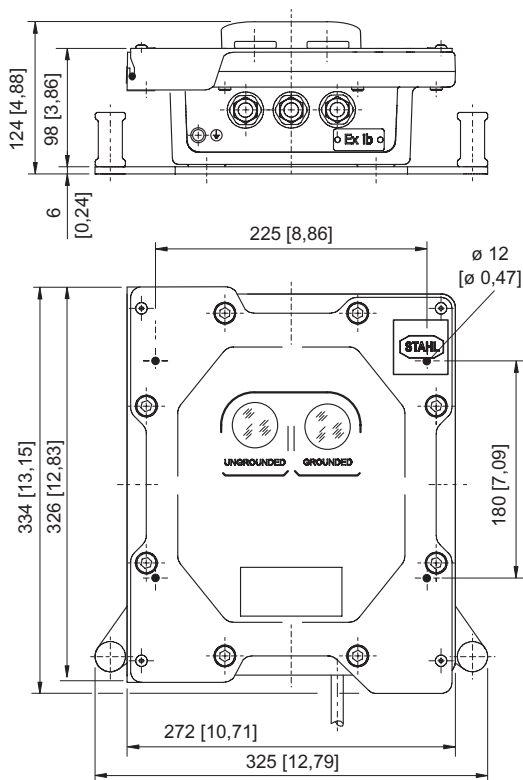
Ambient Conditions

Storage temperature -67°F ... +140°F

Mechanical Data

Degree of protection (IP)	IP65
Enclosure version	Flameproof enclosure (Ex d)
Enclosure material	Aluminium
Cable diameter range of cable glands	6.1 – 11.7 mm
Terminal range cable glands 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

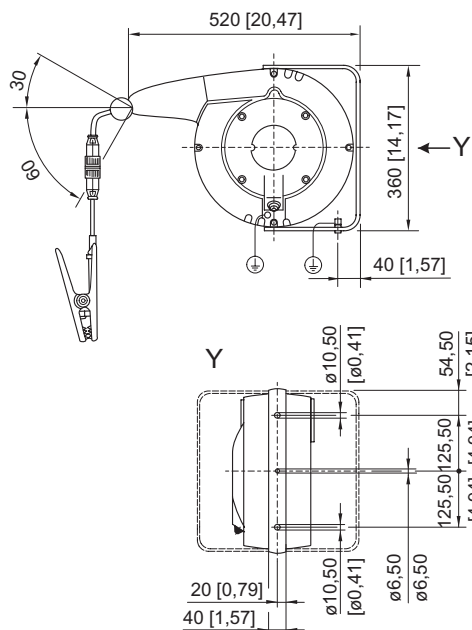
Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



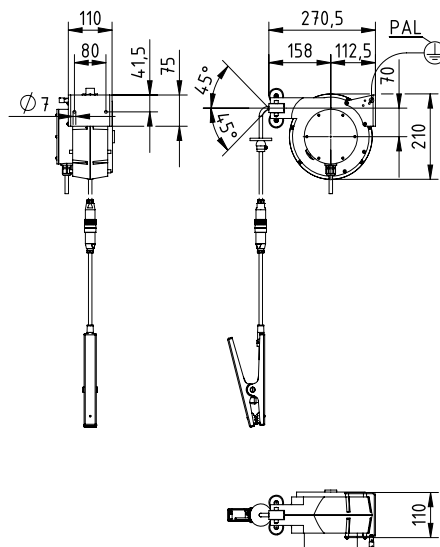
Grounding clamp with automatic cable winder
Art. no. 247660

Type 8485/111-42

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Grounding clamp with automatic cable winder
Art. no. 247671




Grounding clamp with automatic cable winder
Art. no. 269915

Accessories and Spare Parts



Earth clamp with fast-action plug

		Art. No.
	Robust ergonomic grounding clamp with 150 mm of cable and fast-action plug Spare part for automatic retractors (247660, 269915 and 247671), regular cables (247673) and spiral cables (247674 and 247672)	247675

Earth clamp with spiral cable

		Art. No.
	10 m ÖLFLEX with cable gland for 8485/111-42 Rev. C Clamp made of stainless steel 1.4301 Ambient temperature: -30 ... +60 °C	263025



Earth clamp with cable

		Art. No.
	10 m ÖLFLEX with cable gland for 8485/111-42 Rev. C Clamp made of stainless steel 1.4301 Ambient temperature: -40 ... +60 °C	263023
	10 m SIHF-J with cable gland for 8485/111-42 Rev. C Clamp made of stainless steel 1.4301 Ambient temperature: -55 ... +60 °C	263024


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Earth clamp with automatic cable winder

Art. No.


	<p>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</p>	<p>247660</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, aluminium enclosure, protected cable duct with stopper</p>	<p>247671</p>

Art. No.

	<p>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</p>	<p>269915</p>
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Configuration set

Art. No.

	<p>Configuration set for Rev. C devices consisting of infrared adapter with USB port and USB stick with configuration software</p>	<p>263097</p>
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