

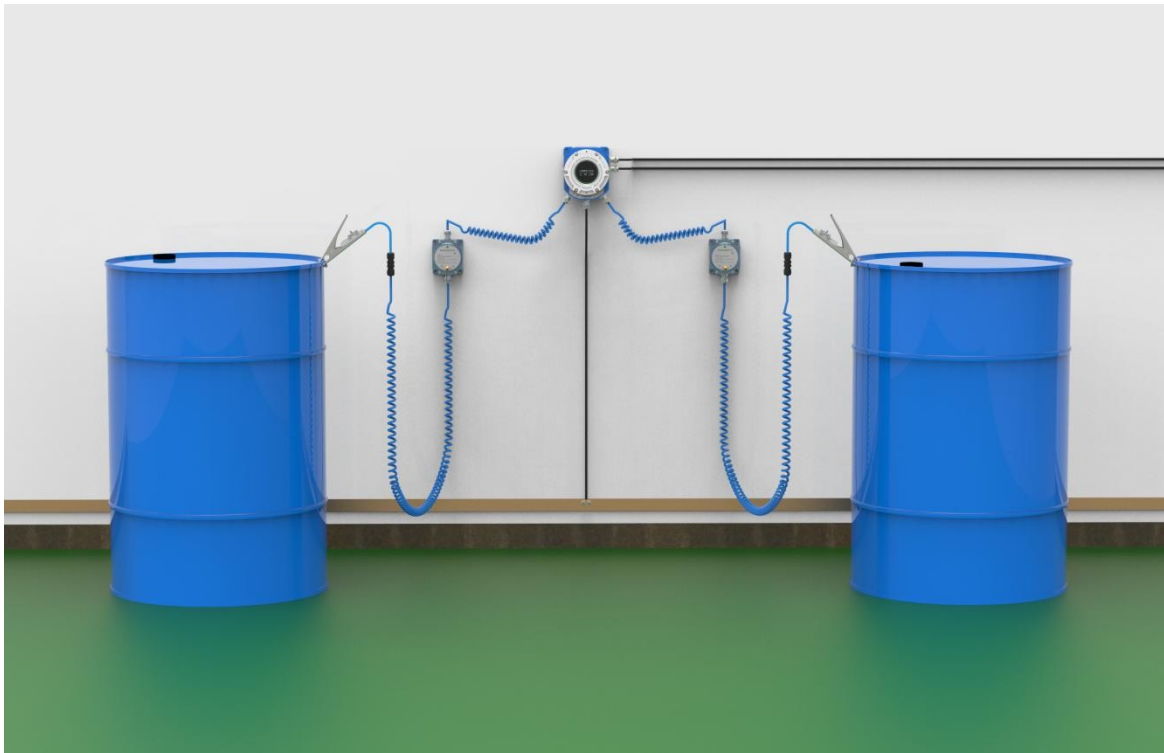
Earthing Pro DU Static Earthing System

● General

Earthing Pro DU is a static protection solution specifically designed for applications requiring simultaneous static dissipation and monitoring for two separate units. It is suitable for, but not limited to, the following scenarios:

- ◆ Two Metal Drums
- ◆ Two Tanker Trucks
- ◆ Two EX IBCs

Earthing Pro provides two independent monitoring channels within a single unit, enabling simultaneous operation. Each channel establishes its own grounding loop and continuously monitors the resistance to ensure it remains below 10Ω. The system can independently indicate the permissive or prohibitive status of each connection and output separate interlock signals.



● Principle of Operation

The Earthing Pro DU primarily consists of one controller, two junction boxes, and two sets of grounding clamps with spiral cables.

It features two completely independent monitoring channels that can operate either separately or



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simultaneously. The interlock circuits for each channel are fully independent and do not interfere with one another. The device will be in a permissive state and output an independent interlock signal when the network resistance of each channel is less than $10\ \Omega$, specifically the resistance between the 'clamp teeth and the grounded object' and the 'grounded object and earth'.

The Earthing Pro DU static grounding system continuously monitors the loop resistance between the grounded object and the designated grounding point. This function is field-proven and adheres to industry standards, complying with the recommendations for bonding and grounding found in IEC TS 60079-32-1, NFPA 77, and API RP 2003.

- **Performance Features:**

1. **Highly Visible Audio-Visual Alarms**

Under normal operating conditions (grounded), the ring indicator on the controller and the status lights on the junction box remain a steady green, clearly indicating that the object requiring electrostatic protection is safely grounded. If the system is in standby mode or detects a grounding loop resistance exceeding $10\ \Omega$, the lights switch to a steady red, and the buzzer on the junction box activates to sound an alarm.

2. **Real-Time Ground Loop Monitoring**

The system continuously monitors the resistance of the grounding loop, displaying the real-time value directly on the LED screen for full visibility.

3. **Intuitive Human-Machine Interface (HMI)**

The system features a user-friendly interface with graphical step-by-step instructions, guiding operators through the correct usage procedures and ensuring ease of operation, even for first-time users.

4. **Interlock Signal Output**

The controller provides up to three interlock outputs, configurable as either Normally Open (NO) or Normally Closed (NC) to match the input logic of various PLCs/DCS. This flexibility simplifies system integration and retrofit projects.

5. **Flexible Power and Signal Input**

Supporting a wide input voltage range of 85–250 VAC or 24–48 VDC, the system offers flexible power options to accommodate diverse field requirements.

6. **Reliable Grounding Clamps**

The clamp features a serrated jaw design that penetrates paint and rust layers, ensuring reliable contact with the base metal and significantly reducing the risk of false "permit" signals.

7. **Clamp Holster Function**


The junction box is equipped with a dedicated holster point. After use, the grounding clamp must




be returned to this holster; otherwise, the junction box will trigger an audio-visual alarm. This feature provides a secondary layer of safety protection.

● **Technical Specifications:**

Controller

Power Supply	85~250VAC/24~48VDC	
Current	<90mA	
Monitoring Resistance	≤10 Ω (Normal State)	
Operating Temperature	-40 °C ~ 60 °C	
Output Signal	Passive Digital Switch	
Relay Contact Rating	5A 30VDC/10A 250VDC	
Protection Rating	IP66	
Electrical Connection	7-M20x1.5	
Material	Cast Aluminum (Copper-free)	
Display	LED	
Weight	5.0kg	

Two Junction Boxes

Material	Aluminum Alloy	
Electrical Connection	2-M20*1.5	
Weight	1.8kg	





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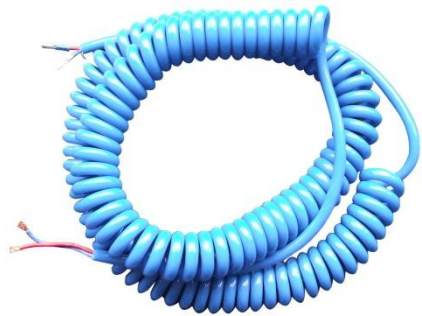
Grounding Clamp

Clamp	High-strength alloy contacts at both poles
Clamp Body	SS 304

Option 1: SC-08	Body: 304 stainless steel	
Weight: 0.38 kg	Paint-piercing pins: 3 × tungsten carbide	
Max. Opening: 26 mm	Dimensions (L × W × H): 205 × 100 × 43 mm	

Option 2: SC-10	Body: 304 stainless steel	
Weight: 0.32 kg	Paint-piercing pins: 3 × tungsten carbide	
Max. Opening: 20 mm	Dimensions (L × W × H): 170 × 82 × 38 mm	

Spiral Cable

Jacket	Blue Polyether TPU	
Conductor	2 x 1.5 mm ² Copper	
Length	5m,7m,10m, 13m,15m (Custom lengths available upon request)	

Certification

ATEX



II 2(1) G Ex db ia [ia Ga] IIC T6 Gb
 II 2(1) D Ex ia tb [ia Ga] IIIC T80°C Db

IECEx



Ex db ia [ia Ga] IIC T6 Gb
 Ex ia tb [ia Ga] IIIC T80°C Db

● Installation Kit

This component is required for equipment installation; the user needs to select one of the two types of components when placing an order.




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Kit 1

Explosion-Proof Cable Gland	Explosion-proof cable glands for non-armoured cables 7.5 mm - 12 mm Ø (x3)	
	Explosion-proof cable glands for non-armoured cables 8.7 mm - 14 mm Ø (x3).	
Grounding Wire	2x1.5 mm ² Conductor, 3 m Length	
Ex Seal Connector	3-M20*1.5;SS304	

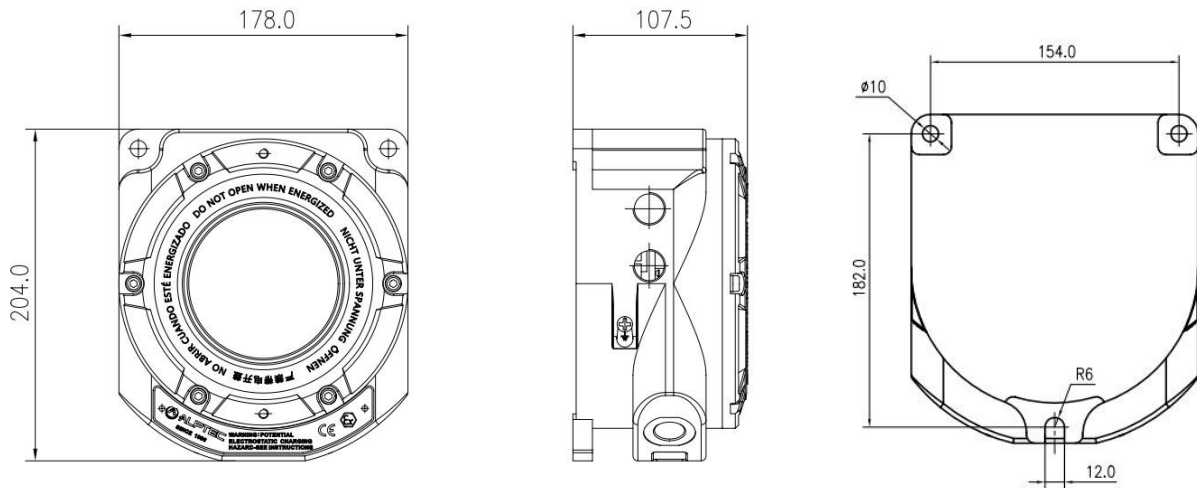
Kit 2

Explosion-Proof Cable Gland	Explosion-proof cable glands for non-armoured cables 7.5 mm - 12 mm Ø (x3)	
	Explosion-proof cable glands for armoured cables 9.5 mm - 16 mm Ø (x3).	
Grounding Wire	2x1.5 mm ² Conductor, 3 m Length	
Ex Seal Connector	3-M20*1.5;SS304	

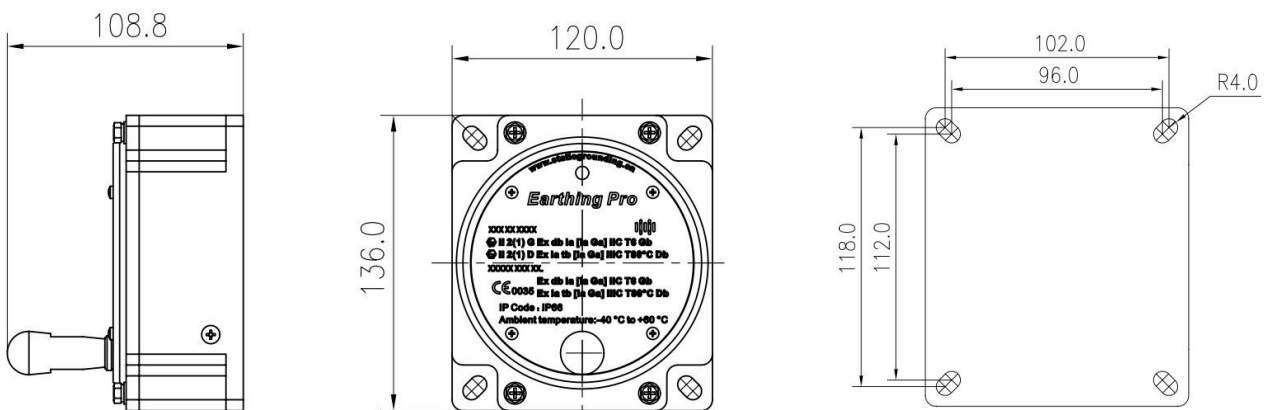


● Dimensions and Mounting

Controller Dimensions



Junction Box Dimensions



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