

Grounding Systems



Securiterre



Enraf



"The Tank Gauging People"

Eliminate explosive danger with Securiterre

Grounding tanks is essential for safe loading or unloading of flammable liquids. With the Enraf Securiterre, your business is assured of simple and safe electrostatic discharge. The Securiterre device continuously monitors to ensure the grounding clamp is properly connected. If not, loading or unloading is automatically interrupted.

Enraf works hand-in-hand with the world's leading technical institutions and universities. And as a member of the Delft Instruments Group, we have ready access to the latest technologies - for excellent safety tailored to your organization!

Enraf offers Securiterre systems especially for:

- Road tankers
- Rail tankers
- Barges
- Tanker
- Airplanes
- Helicopters
- Oil drums



Characteristics

Explosion-proof and intrinsically safe

- EEx d[ia] ia IIC T6 (general system)
- EEx [ia] ia IIC (marine system, electrical)
- EEx d II T6 (marine system, enclosure)

Power supply

110 V or 220 V \pm 10%, 50 / 60 Hz

Housing material

Cast aluminum

Operating temperature

-20 °C to 60 °C (-4 °F to 140 °F)

Mounting

Wall mounting

Approved by leading organizations

Enraf Securiterre systems are fully certified in accordance with European standards, comply with all relevant CE regulations, and have been approved by leading organization - including CENELEC Europe LCIE France.

Enraf has also received ISO 9001 certification.



Making your working world a safer place

For all your applications

Leading companies and organizations the world over have chosen Enraf Securiterre as their preferred grounding system. Installations in a wide variety of fields depend on Securiterre daily, including:

- Petrochemical industries
- Refineries
- Independent terminals
- Marketing terminals
- Pipeline terminals
- Gas terminals
- Chemical industries
- Aviation fuel supply companies
- Strategic oil and gas storage organizations
- Rail transport companies
- Harbor authorities



Features

Your Benefits !

Continuous monitoring of grounding connection

Safe and reliable operation

Self-releasing grounding clamp

Prevents cable rupture

Large red and green LED indication

Status clearly visible from a distance

Securiterre systems for different applications

Grounding solution for all types of industries

Certified by leading authorities

Your guarantee of safety in hazardous areas

Internal monitoring system

Even greater reliability

Brine magnet

Always available for loading service



"The Tank Gauging People"

A Securiterre system



Operating principle

Connecting the Securiterre grounding clamp to an object results in a controlled and safe initial discharge of any possible electric charges.

Securiterre truck grounding system

After initial discharge, the Securiterre verifies the truck's electric characteristics. If these are determined to be OK, the truck is directly switched to the ground. When this connection is properly carried out and verified, the output relay is energized and potential free contacts are available for external power switching.

Securiterre rail wagon grounding system

The Securiterre measuring principle has been adapted to meet the needs of the specific characteristics of a rail wagon. This system can also be used for grounding any object that has a maximum resistance to the ground of 2 k Ω .

Securiterre oil drum and container grounding

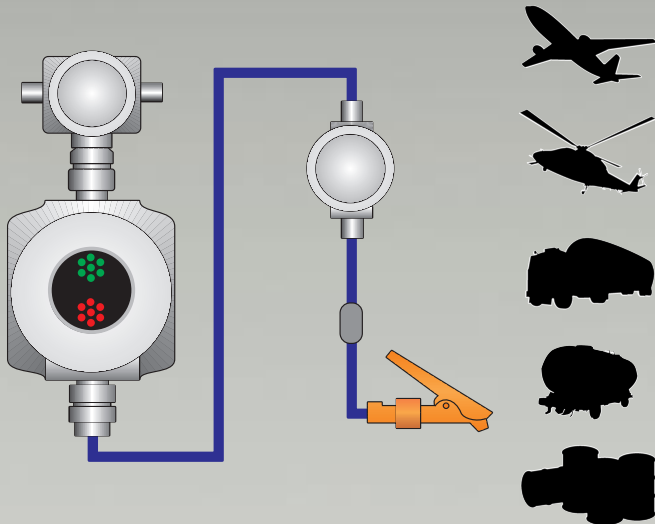
Because containers and drums are not necessarily connected to the ground, Enraf makes use of a double-insulated grounding clamp. Proper connection is verified by the electrical resistance between the two poles of the clamp. This version can be used for grounding any conductive object!

Marine Securiterre system

The measuring principle of this Securiterre is similar to the oil the drum Securiterre. Power relays are included for the safe discharge of tankers with cathodic protection. A push button is used for initialization, after the grounding clamp has been connected to the tanker.

Safety for all installations

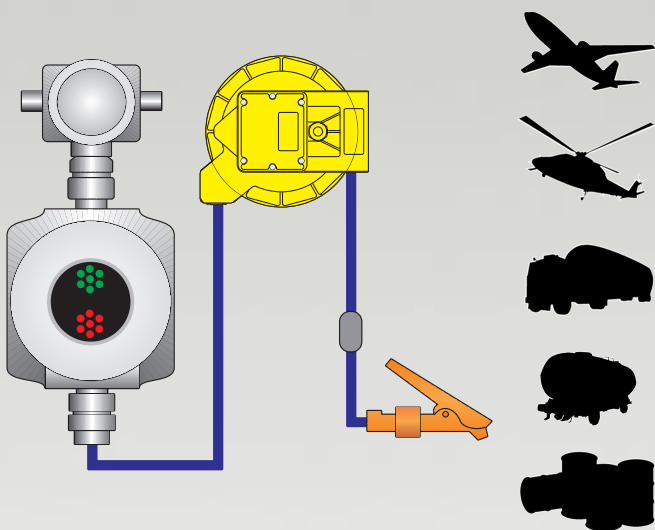
SECURITERRE



Grounding system with grounding cable and clamp includes:

- Explosion-proof electronic housing with multiple green/red LED indicators.
- Six meters of blue grounding cable.
- Stainless steel self-releasing grounding cable.

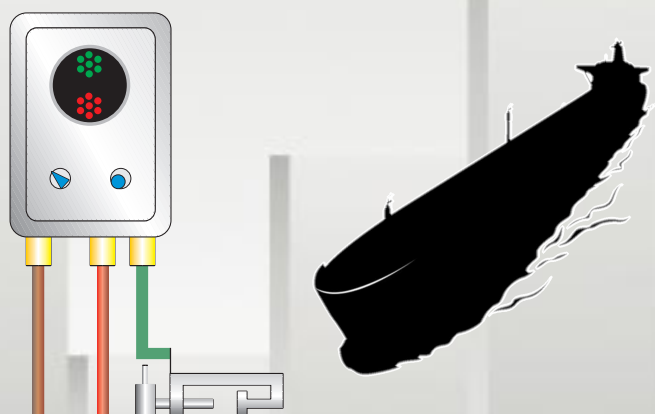
SECURITERRE-SECURISTORE



Grounding system with Securistore includes:

- Explosion-proof electronic housing with multiple green/red LED indicators.
- Fourteen meters of blue grounding cable.
- Closed fluid contact (no slip rings).
- Stainless steel self-releasing grounding clamp.

MARINE SECURITERRE



Marine grounding system includes:

- Explosion-proof electronic housing with multiple green/red LED indicators.
- Mains on/off switch and push-button grounding start.
- Thirty meters of grounding cable.
- Heavy-duty brass grounding clamp.



"The Tank Gauging People"

Grounded in safety-on truck, train, or sea



Built-in protection

Securiterre systems offer a wide range of grounding applications - whether your company works with road, rail, or sea transport. LED indicators are housed in an explosion-proof terminal box and clearly signal green or red, showing when loading/unloading can take place. The self-releasing grounding clamp has a built-in damping transfer for road and rail tankers as well as barges. There is even a double-insulated grounding clamp available for oil drums.

The Marine Securiterre

A special Securiterre system is now available for marine applications, developed for grounding large ships making use of cathodic protection. This system not only includes the basic safety features, it also has a power relay for the safe discharging of large initial currents as well as a heavy-duty double-insulated grounding clamp.

Handy Securistore cable dispenser

Enraf has developed an easy-to-use cable dispenser especially for the Securiterre. This rigid aluminum cable reel is adapted with hermetically sealed fluid contacts for optimal conductivity. The grounding cable has a 5mm-thick insulating shield for the suppression of all cable effects.

The clever brine magnet

In situations concerning excessive humidity, brine, or when trucks have conductive tires, the electrical characteristics of a tank truck may change - making identification impossible. To solve this problem, Enraf developed a special brine magnet, which overrides the identification function and establishes a direct and secure ground connection.



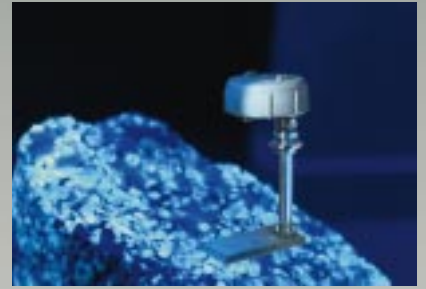
For more information

If you would like to receive more detailed information about the Securiterre or Marine Securiterre systems - or any Enraf product shown on the following page - please contact the office nearest you. A complete list of Enraf offices are on the back of this brochure.

Other Tank Gauging products

SmartRadar

This unique tank gauge - complete with the newest radar technology - is the very latest development in non-intrusive level measurement systems for bulk liquid storage tanks. SmartRadar gives optimal measuring performance in any application. Its small size and flexible construction ensure that there are no problems integrating it with existing servo, hydrostatic, or hybrid gauging installations.



Servo Gauges

Providing optimal measuring performance in any application, the Enraf servo gauge is an intelligent instrument with only a few moving parts. This was the first automatic servo gauge for bulk liquid storage tanks to receive certification from leading weights and measures authorities. The ATG and XTG series servo gauges are very compact and require only a 50mm (2 inch) mounting flange. Enraf servo gauges can easily be integrated in any existing SmartRadar, hydrostatic, or hybrid gauging installation.



HTG & HIMS

The Hydrostatic Tank Gauging system - the ultimate solution for accurate direct mass measurement - is an example of trend-setting technology at its best. The system's highly accurate digital pressure transmitters also provide continuous product density data. The Hybrid Inventory Management System (HIMS) is an easy-to-install combination of hydrostatic and level gauging technology. The system unites the best of Smart Radar and servo gauging techniques with digital pressure transmitter technology.



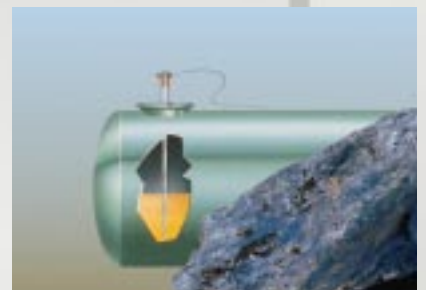
Tank Inventory Management Systems

Enraf's systems collect and calculate data for effective tank farm management, and can be fully customized to meet specific needs. Information is provided in a range of formats over a series of user-friendly screens. A variety of documents and reports can easily be produced. The system includes its own diagnostics routines. Enraf's Tank Inventory Management Systems have received official recognition from a number of international measurement authorities.



DataDIP Tank Gauge System

The total tank inventory system that puts you in control. Developed for tanks situated above or below ground - especially at service stations. The system makes use of proven solid-state technology to provide highly efficient inventory control. It is an effective early warning system for product loss and leaks.



Other instruments in the Enraf range

- **WaterScout** - for product/water interface measurement.
- **Multi Temperature Sensor Thermometer (MTT)** - for liquid and vapor temperature measurement.
- **Portable Enraf Terminal (PET)** - for easy commissioning and field configuration.
- **Communication Interface Unit (CIU)** - for communication between field instruments and management systems.
- **Indicators** - remote and local, for data in the field or any location.
- **AlarmScout** level and interface sensors - to prevent overfill and spills.



Enraf

Enraf B.V.

Röntgenweg 1, 2624 BD Delft
P.O. Box 812, 2600 AV Delft
The Netherlands
Tel.: +31 (0)15 269 86 00, Fax: +31 (0)15 261 95 74
Email: info@enraf.nl
<http://www.enraf.com>

China: Enraf B.V. (Shanghai Rep. Office)

18-01, Suncome Liauw's Plaza,
738 Shangchen Road, Pudong, Shanghai 200120
Tel.: +86 21 58311611, Fax: +86 21 58313011

France: ENRAF S.a.r.l.

ZAC Les Beaudottes, 15 rue Paul Langevin,
93270 SEVRAN
Tel.: +33 (0)1 49 36 20 80, Fax: +33 (0)1 43 85 26 48

Germany: Enraf GmbH

Obere Dammstrasse 10, 42653 Solingen
Postfach 101023, 42648 Solingen
Tel.: +49 (0)212 58 750, Fax: +49 (0)212 58 7549

Singapore: Enraf B.V. (Singapore Rep. Office)

Lam Soon Industrial Building
63 Hillview Avenue, # 05 - 03, Singapore 669569
Tel.: +65 76 94 857, Fax: +65 76 94 348

United Kingdom: Enraf Ltd.

Unit 11, Sandridge Park, Porters Wood
St. Albans, Herts AL3 6PH
Tel.: +44 (0)1 727 843 376, Fax: +44 (0)1 727 842 185

USA: ENRAF Inc.

500 Century Plaza Drive, Suite 120
Houston, Texas 77073
Tel.: +1 281 443 4291, Fax: +1 281 443 6776

Russia: Enraf B.V. (Moscow Rep. Office)

c/o Nucletron - Oldelft
2nd Donskoy Proezd, Building 6/4
117071 Moscow
Tel.: +7 095 935 7877, Fax: +7 095 935 7877



The Tank Gauging People

Delft
Instruments