

The Scully Groundhog™

Vehicle Earthing System

Self-Proving Earthing Verification For Loading Operations



Don't let unsure earthing methods leave you guessing. Transport vehicles should be properly tied to earth before and during the loading operation. There should never be any doubt that the earthing systems at your terminals are performing their proper function. Many systems give you little assurance of their operation. The Scully Groundhog™ gives you complete assurance that a proper earth tie-in is present. The Scully Groundhog is a self-proving earthing system for maximum safety in loading operations.

The system consists of a rack mounted control housing with two installation methods. It can operate in conjunction with your existing Scully Overfill Prevention System or as an independent unit. Scully Signal Company has over 30 years of electronic liquid handling system experience along with the dependability, service and safety Scully is known for.

The Scully Groundhog earthing system can be used for a wide variety of loading applications for use with tank trucks, rail cars, and aircraft refuelers.

Only the Scully Groundhog™ offers you all of these advantages:

- Proof-Positive that the vehicle is properly earthed for static discharge before the loading operation can begin.
- Immediately shuts down the loading operation if proper earthing is not present.
- Direct earthing tie point at gantry available.
- No manual checks are needed.
- The Scully Groundhog cannot be fooled by attaching the clamp to the rack, a metal shim or by jumping the contacts with a paper clip.
- Can be used in conjunction with your Scully Overfill Prevention System offering one quick connection for overfill protection and earthing verification.
- Can also be used as a completely independent earthing system with a special quick-release plug for earthing connection to a specially designed, vehicle mounted, electronic ball.
- Self-Proving, the Groundhog monitors the earthing connection throughout the loading operation.
- CENELEC, FM, CSA approved models available.

67221, Rev A

Safe Vehicle Earthing for Volatile Liquid Loading Operations

The Scully Groundhog Proves It!

The Scully Groundhog™ gives you complete assurance that earthing to the vehicle's frame has been accomplished*. The Groundhog is an intelligent system which continuously and automatically monitors the earthing connection during the entire loading operation.

The Groundhog is designed to immediately shut down the loading operation if the earth tie-in is broken. That's proof-positive, something no other system can provide.

The Groundhog™ control monitor is mounted at the gantry. Indicator lights on the face of the control monitor are visual proof that proper earthing has been accomplished.

The Groundhog requires that each vehicle is equipped with a specially designed Scully electronic ground ball or bolt. Before the loading operation can begin, the controller must see an intelligent return signal from the ground ball or bolt, indicating that a proper earthing connection has been made.

Are Your Earthing System Options Limited?

As Part of Your Scully Overfill Prevention System:

The Groundhog™ Control Unit can be wired into your existing Scully Overfill Prevention System for the ultimate safety system. Just one connection gives you overfill and earthing protection. This single connection simplifies loading and eliminates the need for additional plugs and cables at the gantry.

The Groundhog utilizes a spare conductor in the existing Scully Overfill Prevention Plug and Cable together with a special Scully Ground Bolt mounted on each vehicle. The Scully Ground Bolt's sensing lead is wired to the Scully Overfill Prevention Socket.

Only Scully offers you a complete, integrated overfill prevention and vehicle earthing system for maximum safety in your loading operations.



One connection for overfill prevention and earthing

Ordering Information

If you intend to wire the Groundhog in conjunction with your existing Scully Overfill Prevention System, you need only order the control monitor. For the independent system, order the control monitor and junction box with plug and cable.

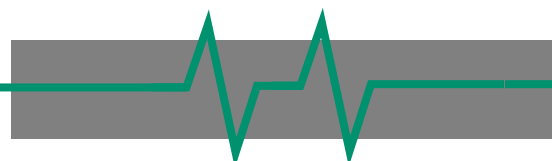


Scully Ground Bolt

Control Units and Plug & Cable Assembly

Model	Description	Part #
ST-47C-240E	Control monitor only (240 VAC)	08814
ST-47C-240-EL	Control monitor with lamps (240 VAC)	08710
ST-47C-240-ELK	Control monitor with lamps and key protected bypass switch (240 VAC)	08711
ST-47C-120E	Control monitor only (120 VAC)	08843
ST-47C-120-EL	Control monitor with lamps (120 VAC)	08844
ST-47C-120-ELK	Control monitor with lamps and key protected bypass switch (120 VAC)	08845
SC-47	Gantry mounted heavy duty junction box with 6m (20') straight cable and ground proving plug for connection to vehicle mounted ground proving ball (Independent System)	08249
SC-47-CC	Gantry mounted heavy duty junction box with 10m (30') coiled cable and ground proving plug for connection to vehicle mounted ground proving ball (Independent System)	08567

*Provisions are available for a direct connection to a ground stake.



Safe Vehicle Earthing for Volatile Liquid Loading Operations

Don't Use a System That is Easily Cheated.

There are many systems that claim to be foolproof and even self-checking. It is possible with many of these systems to bypass a safe earth tie-in by attaching the clamp to the rack, a metal shim or by jumping the plug contacts with a paper clip. In many cases, there is no proof that proper earthing has been made or the system is functioning correctly.

The Scully Groundhog foils these typical cheating methods and malfunctioning problems that can lead to earthing vehicles improperly.



Groundhog Control Monitor for connection through the overfill prevention system

The Scully Earthing System insures that unless the proper earthing connection has been made, the loading process will not begin. It will automatically shut down the loading operation if the ground is broken. The Groundhog's intelligent monitoring capabilities and the special electronic circuitry inside the Scully Ground Ball and Ground Bolt form a self-proving system. No manual checks are needed.

Only the Scully Groundhog can provide you with the safest and most dependable means for vehicle static earthing. It maintains the integrity of your loading operation.

Scully Has a System for Every Application!

As a Separate and Independent Earthing System:



Independent earthing connection

The Groundhog™ can be used as a completely independent system. This system is ideal for top loading or applications where a Scully Overfill Prevention System is not in use.

The control monitor connects to a heavy duty Sculcon® junction box with attached cable and special quick release snap-on plug. The Scully Ground Plug connects to a specially designed electronic Scully Ground Ball mounted on each vehicle. The controller in conjunction with the ground ball provides and verifies vehicle earthing before loading can begin. The controller must receive an electronic return signal from the ball throughout the loading operation.



Scully Groundhog Control Monitor with Plug and Cable and Ground Ball

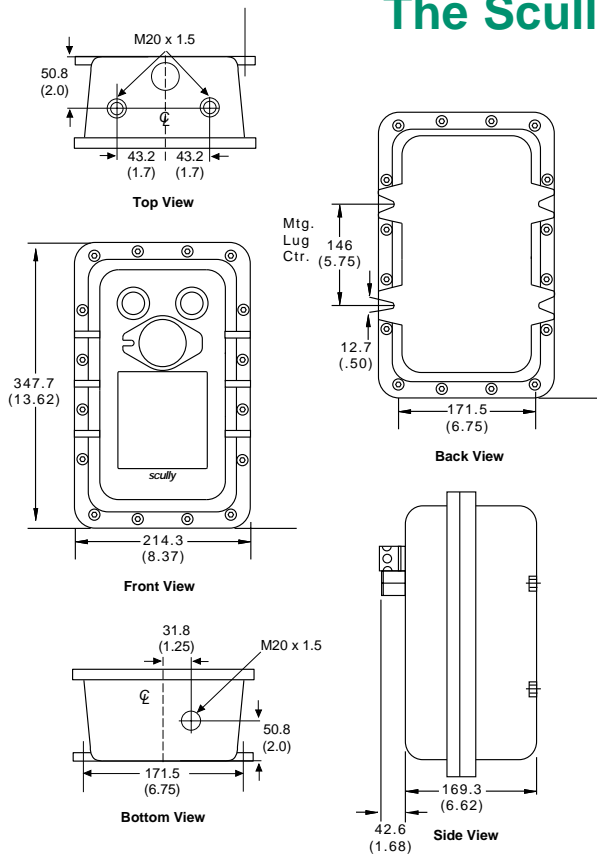
Replacement Parts

Model	Description	Part #
Ground Ball	Truck mounted electronic ground proving ball for independent earthing system	08274
Ground Bolt	Truck mounted electronic ground proving bolt for wiring to overfill prevention socket	08560
Coiled Cable	Replacement plug and 6m coiled cable for SC-47	08566
Plug	Replacement plug only for SC-47	08565
Module 240	Replacement module (240 VAC)	31513
Bulb	Replacement indicator lamp bulb (240 VAC) for ST-47C-240	27065
Module 120	Replacement module (120 VAC)	31858
Bulb, 120V	Replacement indicator lamp bulb (120 VAC)	27085

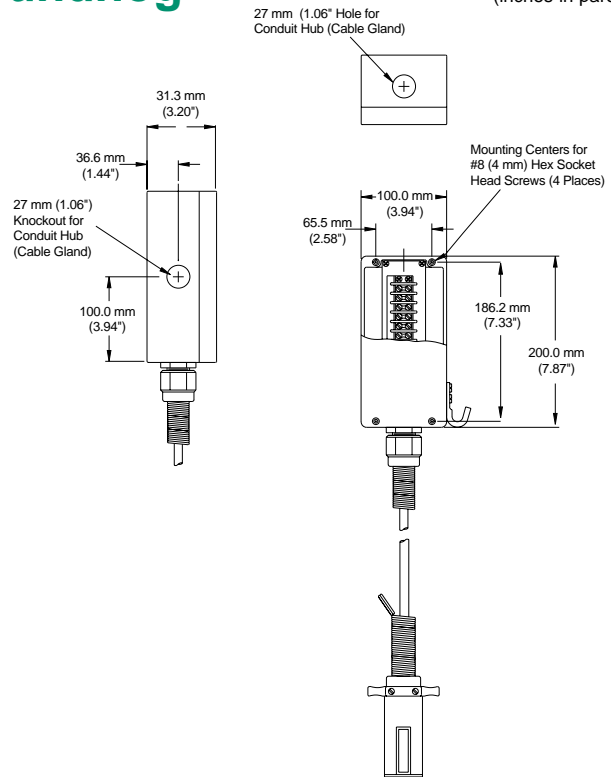
scully

The Scully Groundhog™

All Dimensions in millimeters
(inches in parenthesis)



Model ST-47C ELK Shown in Illustration



Model SC-47 CC Shown in Illustration*

*Dimensions of units manufactured prior to 3/1/97 may vary.

Technical Information

Operation Temp.:	-40° to +60° C (-40° to +140° F).
Enclosure:	Explosion-Proof/Weather-Proof IP65 suffix "E".
Indicators:	Red, not earthed/non-permit. Green, earthed/permit.
Response Time:	0.5 seconds maximum.
Electrical Connections:	Internal terminal strips, identified for easy installation.
Bypass Switch:	Key lockable off-on bypass switch for ELK model only.

Output Control:	One normally open user contact rated 250, 5A
Power Requirements:	
ST-47C-240 Models:	208-240 VAC, 50/60 Hz. 0.125 Amperes maximum.
ST-47C-120 Models:	105-125 VAC, 50/60 Hz. 0.250 Amperes maximum.
Shipping Weights:	ST-47C-ELK; 12 kgs (26 lbs) ST-47C-EL; 12 kgs (26 lbs) SC-47; 4 kgs (9 lbs)

Approvals

CENELEC: EEx [ia] IIB T5 Consult factory for FM, CSA approved models.

The Scully Groundhog, when used in conjunction with an overfill prevention controller and connected to a vehicle mounted grounding bolt via the overfill prevention system's plug and cable, is protected under U.S. patent.

Biclops, Dynacheck, Dynamic Self-Checking, Dynamic Self-Test, Faylsafe, IntelliCheck, Load Anywhere, Maxsafety, MulteCept, Scully, Scultrrol, Scul-Lock, Scul-Tel, Scul-Tite, TABS and V.I.P. are registered trademarks of Scully Signal Company. Specifications are subject to change without notice.

Worldwide Contact
 Scully Signal Company
 70 Industrial Way



Wilmington, MA 01887 USA
 Tel: 1-800-272-8559 or (617) 692-8600
 Fax: (617) 692-8620
 email: sales@scully.com
 www.scully.com

67221, Rev A

© Scully Signal Company, Printed in USA, May 1998
 ♻️ Printed on recycled paper

scully