



The Scully Groundhog™

Vehicle Static Grounding System

ELECTRONIC
PRODUCT
LINE



Featuring Dynacheck® – Automatic and Continuous Self-Checking Circuitry



Groundhog™
Ground Verification System

DESCRIPTION

Don't let unsure grounding methods leave you guessing. Transport vehicles should be properly tied to ground before and during the loading operation. There should never be any doubt that the grounding 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 ground tie-in is present. The Groundhog™ is a self-proving grounding 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™ grounding system can be used for a wide variety of loading applications for use with tank trucks, rail cars, and aircraft refuelers.

FEATURES AND BENEFITS

ONLY THE SCULLY GROUNDHOG™ OFFERS YOU ALL OF THESE ADVANTAGES:

- Self-Proving, the Groundhog™ monitors the grounding connection throughout the loading operation.
- Can be used in conjunction with your Scully Overfill Prevention System offering one quick connection for overfill protection and grounding verification.
- Can also be used as a completely independent grounding system with a special quick-release plug for grounding connection to a specially designed, vehicle mounted, electronic ball.
- Direct grounding tie point at gantry available.
- Immediately shuts down the loading operation if proper grounding is not present.
- CENELEC, FM, CSA approved models available.
- No manual checks are needed.
- Direct grounding tie point at gantry available.



60733 Rev D



THE SCULLY GROUNDHOG™ PROVES IT!

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

The Groundhog™ is designed to immediately shut down the loading operation if the ground 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 grounding 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 grounding connection has been made.



Scully Ground Bolt



One Connection for Overfill Prevention and Grounding

**ARE YOUR GROUNDING 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 grounding 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 grounding system for maximum safety in your loading operations.

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.

CONTROL UNITS AND PLUG & CABLE ASSEMBLY

Model	Description	Part #
ST-47-115 EL	Control monitor with lamps (115 VAC operation)	08508
ST-47-115 ELK	Control monitor with lamps and key protected bypass switch (115 VAC operation)	08220
ST-47-115 ELK/D	Control monitor with lamps, key protected bypass switch with additional circuitry for deadman switch	08749
ST-47-240 EL	Control monitor with lamps (240 VAC operation)	08675
ST-47-240 ELK	Control monitor with lamps and key protected bypass switch (240 VAC operation)	08502
SC-47	Rack mounted heavy duty junction box with 20' straight cable and ground proving plug for connection to vehicle mounted ground proving ball (Independent System)	08249
SC-47CC	Rack mounted heavy duty junction box with 32' coiled cable and ground proving plug for connection to vehicle mounted ground proving ball (Independent System)	08567
SC-47CC/D	Same as SC-47-CC with additional circuitry for the deadman switch for aviation applications	08653



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 ground 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 grounding has been made or the system is functioning correctly.

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

The Scully Grounding System insures

that unless the proper grounding 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 grounding. It maintains the integrity of your loading operation.



Scully Groundhog™ Control Monitor with Plug and Cable and Ground Ball™

**SCULLY HAS A SYSTEM FOR EVERY APPLICATION!
AS A SEPARATE AND INDEPENDENT GROUNDING SYSTEM:**

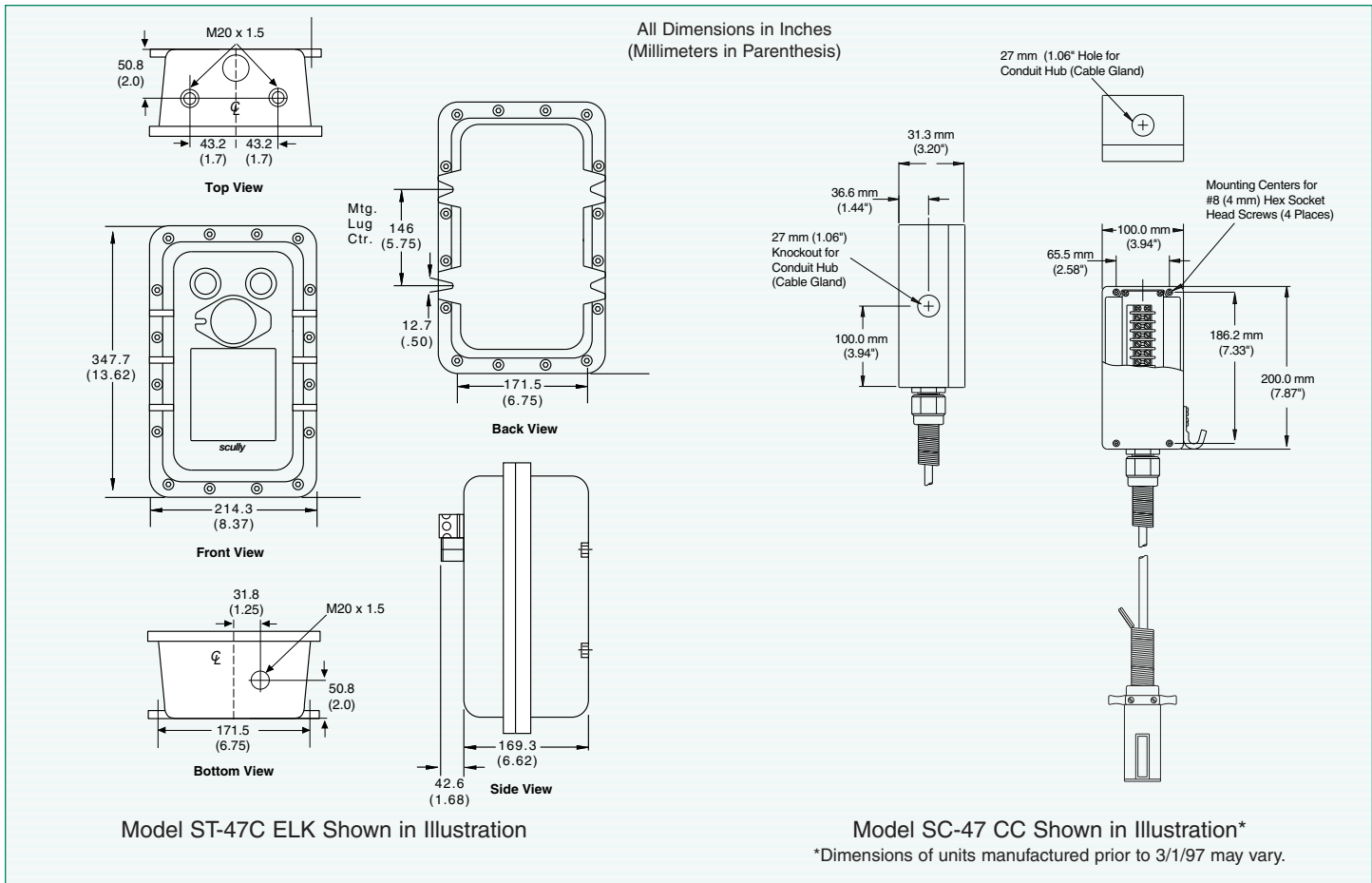
The Groundhog™ can be used as a completely independent system. This system is ideal for top loading or applications where a Scully Overfill Prevention System is not in use.

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 grounding before loading can begin. The controller must receive an electronic return signal from the ball throughout the loading operation.

REPLACEMENT PARTS

Model	Description	Part #
Ground Ball™	Truck mounted electronic ground proving ball for independent Grounding System	08274
Ground Bolt™	Truck mounted electronic ground proving bolt for wiring to overfill prevention socket	08560
Coiled Cable	Replacement plug and 32' coiled cable assembly for SC-47	08566
Straight Cable	Replacement plug and 20' straight cable assembly for SC-47	08219
Plug	Replacement plug only for SC-47	08565
Module 115	Replacement module for 115 VAC models	22040
Bulb 135V	Replacement indicator lamp bulb for 115 VAC models	27005
Module 240	Replacement module for 240 VAC models	22407
Bulb, 250V	Replacement indicator lamp bulb for 240 VAC models	27006
Deadman Control	Deadman switch with coiled cable	08863



TECHNICAL SPECIFICATIONS

Operation Temp.:	-40° to +60° C (-40° to +140° F).
Enclosure:	Explosion-Proof/Weather-Proof IP65 suffix "E".
Indicators:	Red: Not Grounded/Non-Permit. Green: Grounded/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)

The explosion-proof housing is approved for mounting in Class I, Division 1, Groups C & D environments by FM Global (FM) and the Canadian Standards Association (CSA). The intrinsically safe outputs are approved for use in Class I, Division 1, Groups A, B, C & D environments by FM and CSA.

The Scully Groundhog™, when used in conjunction with an overfill prevention controller and connected to a vehicle mounted Ground Bolt™ via the overfill prevention system's plug and cable, is protected under U.S. Patent No. 4,901,195.

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