



ST-47C Groundhog

Vehicle Static Earthing System

Featuring Dynacheck® – Automatic and Continuous Self-Checking Circuitry



Groundhog Earthing Verification System



IEC 61508 SIL 2 Capable

DESCRIPTION

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 static earth tie-in is present. The Groundhog is a self-proving earthing system for maximum safety in loading operations.

The system consists of a rack mounted control housing with two connection 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. Scully is widely recognised for dependability, service and safety.

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.

FEATURES AND BENEFITS

- Self-Proving, the Groundhog continuously 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 earthing verification.
- Can also be used as a completely independent earthing system with a special quick-release plug for grounding to a specially designed, vehicle mounted, electronic ball.
- Direct earthing tie-in point at gantry available.
- Immediately shuts down the loading operation if proper static earthing is not present.
- ATEX, FM, CSA approved models available.
- No manual checks are needed.

IMPORTANT

Static grounding is used to dissipate any electrical charges which can build up as a result of product flow or other movement. Some applications such as rail lines and pipelines may also have stray currents present. In these situations the rail or pipeline must be bonded to ground independently from the Scully system. Local codes should be consulted regarding wire gauges and number of conductors.



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ST-47C Groundhog



Scully Ground Bolt



One Connection for Overfill Prevention and Earthing

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 loading rack. Indicator lights on the face of the control monitor are visual proof that proper earthing has been accomplished.

The Groundhog requires that each vehicle be 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?

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 separate 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.

CONTROL UNITS AND PLUG AND CABLE ASSEMBLY

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.

| ORDERING INFORMATION | | |
|----------------------|---|-------------|
| Model | Description | Part Number |
| 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 |
| SC-47CC | 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) | 08567NV |
| FGE SC-47CC CLMP | Sculcon Jct Box Kit, GRND Verify Clamp, BLK Coil CA, 32' | 08815NV |



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Scully Groundhog Control Monitor with Plug and Cable

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 that the system is functioning correctly.

The Scully Groundhog when used together with a Scully Ground Ball or Ground Bolt, foils these typical cheating methods and malfunctions that can lead to earthing vehicles improperly.

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

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.

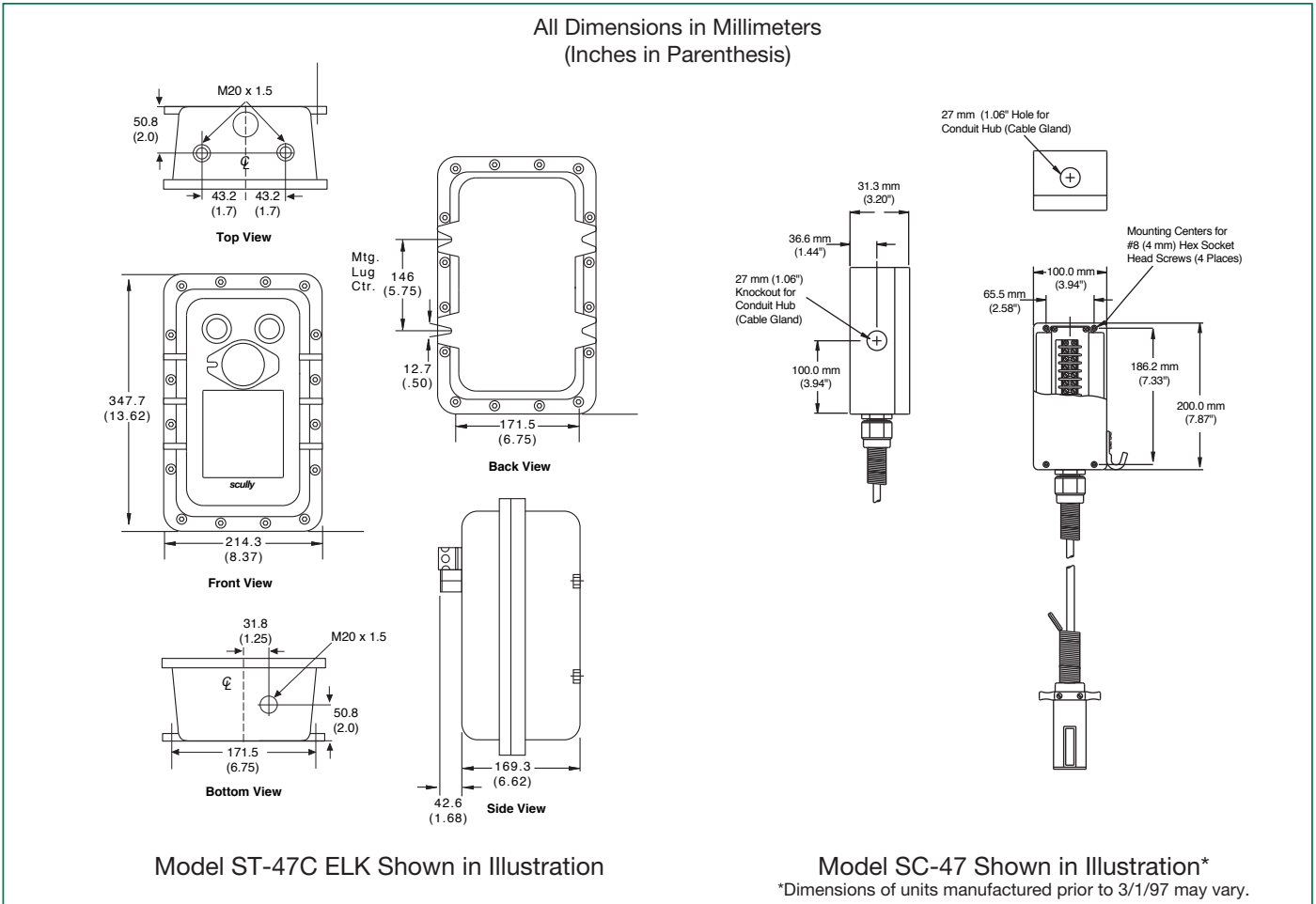
REPLACEMENT PARTS

| <i>Model</i> | <i>Description</i> | <i>Part Number</i> |
|---------------------|---|--------------------|
| 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 | 09011 |
| Coiled Cable | Replacement plug and 32' coiled cable assembly for SC-47 | 08566 |
| Plug | Replacement plug only for SC-47 | 08565 |
| Module 240 | Replacement module for 240 VAC models | 09512 |
| Deadman Control | Deadman switch with coiled cable | 08863 |
| SAE Clamp & CA Assy | Grounding Cable, BLK,Coil, 32' | 31766 |



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TECHNICAL SPECIFICATIONS

| | |
|--------------------------------|--|
| Operation Temperature: | -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: | ATEX: Ex d [ia] IIB T5 Gb Consult factory for FM, CSA approved models. |

SIL 2 Capable



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67221 Rev D
December 2013



Dynamic Self-Testing® Overfill Prevention Systems

