



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 / bonding 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 static 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 Approved.
- 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 earth independently from the Scully system. Local codes should be consulted regarding wire gauges and number of conductors.

* When used in conjunction with the Scully ST-15C or ST-35C series controllers.



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 bonding to the vehicle's frame has been accomplished. The Groundhog is an intelligent system which continuously and automatically monitors the bonding 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 bonding 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 bonding 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
ST-47C-120 EL	Control Monitor with lamps (120VAC)	08844
ST-47C-120 ELK	Control monitor with lamps and key protected bypass switch (120VAC)	08845
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
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/Cable or with Dual Ground Stud Connector

RELIABILITY AND LEGACY IN GROUNDING SYSTEMS

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 bond 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.

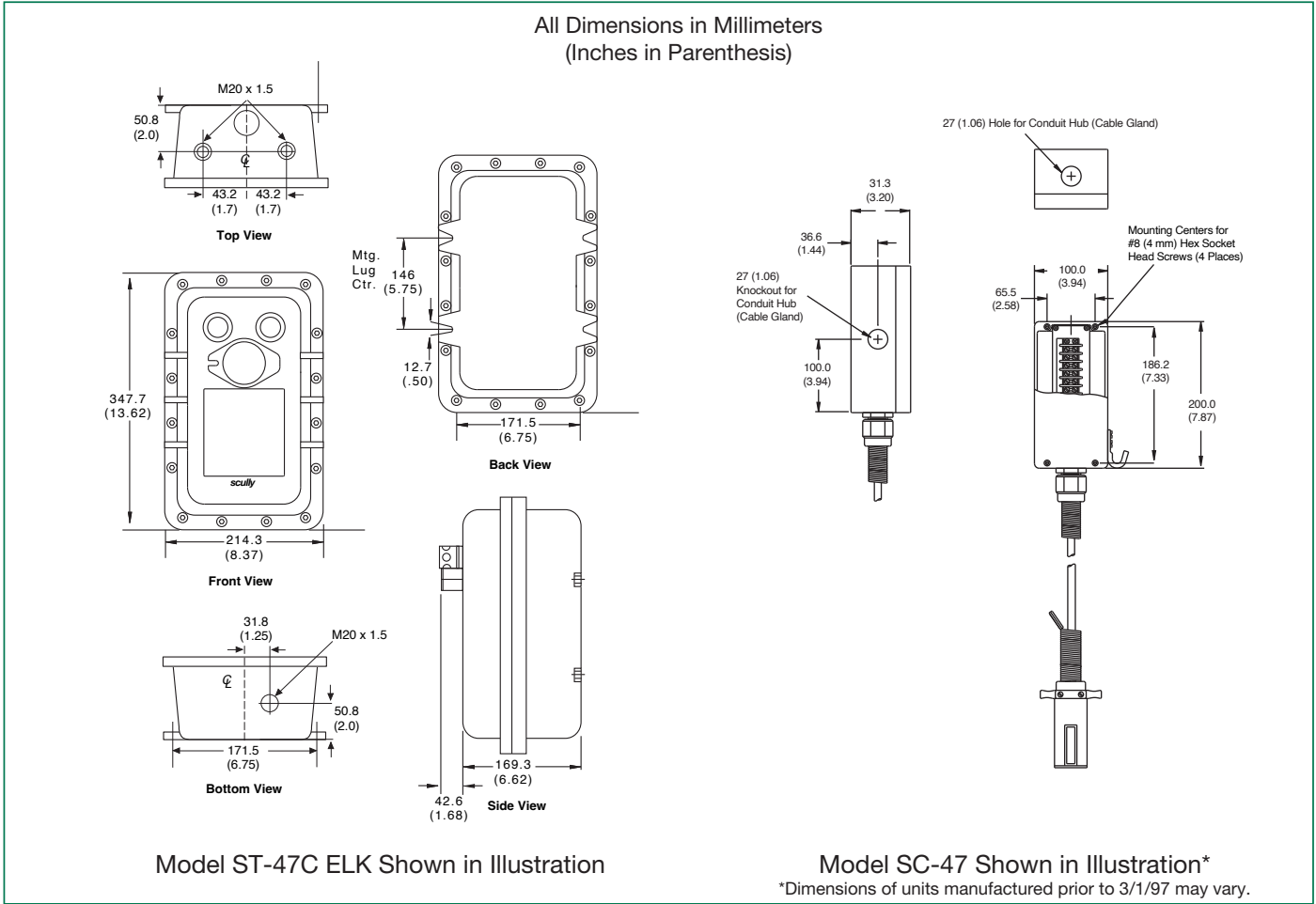
The controller in conjunction with the Ground Ball provides and verifies vehicle earthing before loading can begin. The controller must receive an electronic return signal from the Ground Ball throughout the loading operation.

The Dual Stud Connector is used for connection to vehicles equipped with two Earth Studs mounted side-by-side, on a tank vehicle chassis.

REPLACEMENT PARTS		
Model	Description	Part Number
Ground Ball	Truck mounted electronic earth proving ball for independent Earthing System	08274
Ground Bolt	Truck mounted electronic earth 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
Module 120	Replacement module for 120 VAC models	09511
Deadman Control	Deadman switch with coiled cable	08863
Clamp & Cable Assy	Grounding Cable, BLK, Coil, 32'	31766
Connector	DUAL Ground Stud Connector and 32' Coiled Cable Assembly for SC-47	32682
Stud	Brass Ground Stud	32681



ST-47C Groundhog



TECHNICAL SPECIFICATIONS

Operation Temperature:	-40° to + 60° C (-40° to +140° F).
Enclosure:	Explosion-Proof Weather-Proof Housing.
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 250VAC, 5A resistive load.

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:	Baseefa17ATEX0158 IECEX BAS 17.0134 Ex db [ia Ga] mb IIB T5 Gb (Tamb = -40°C to 60°C)

SIL 2 Capable



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