Scully Vapor Connect™ Kit

Self proving system, monitoring the vapor hose connection to a truck or trailer throughout the loading operation.

ST-46

FM US APPROVED

DESCRIPTION

The Scully Vapor Connect kit is used to detect and display connection status between the terminal vapor hose coupler and the vapor adaptor on the truck or trailer. When loading petroleum products at a terminal, connecting the vapor hose is the second step a truck driver applies after connecting the overfill and grounding plug. Verifying the hose is connected increases the probability that the vapor generated during the fuel loading is captured and flows to the vapor recovery system and is not released to the atmosphere. When companies invest in equipment to protect people and the environment, ensuring it is used properly benefits everyone.

The Scully Vapor Connect kit includes the ST-46, a self-proving controller that can function independently or in tandem with other Scully Overfill and Grounding controllers, and can include the vapor verification status as part of the loading permit. Scully Signal Company has over 40 years of electronic liquid handling experience providing the ultimate dependability, service and safety.
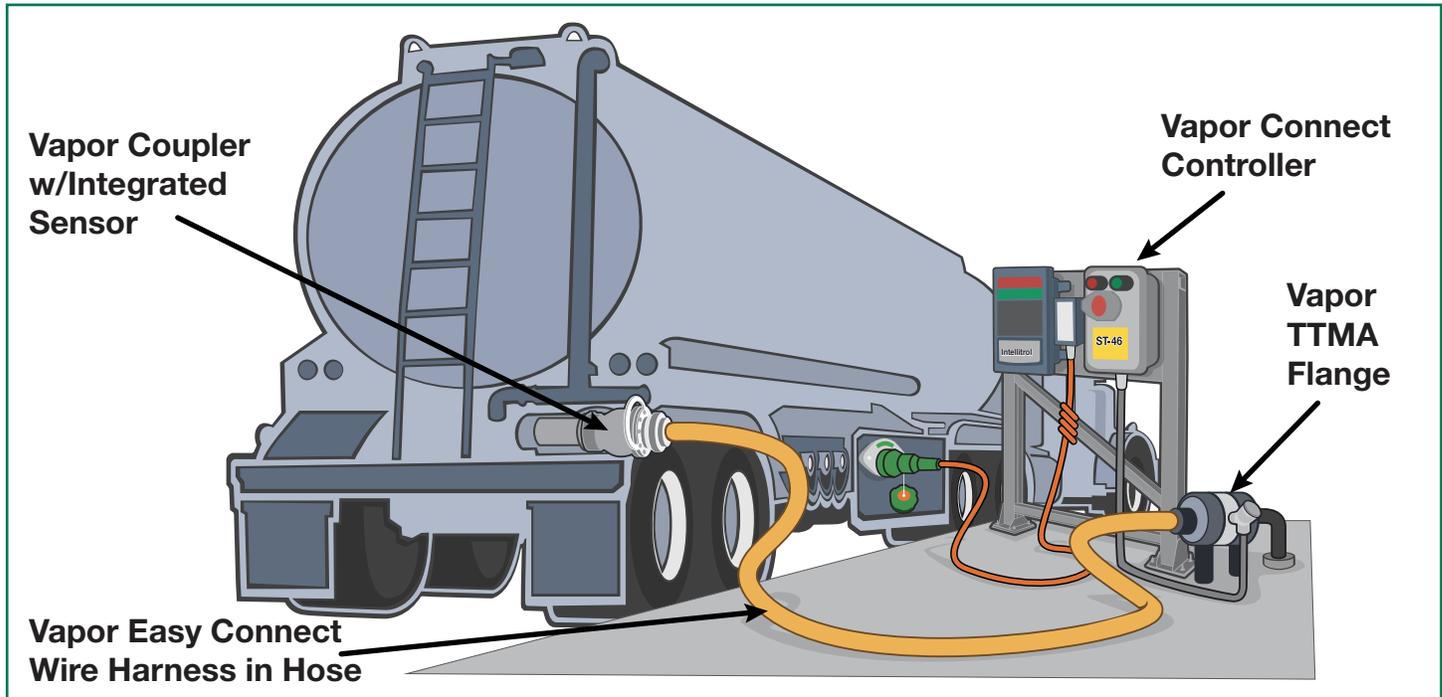
FEATURES AND BENEFITS

■ **Maximum Vapor Capture** using a closed system design with a poppet coupler adaptor.

■ **Trusted System that is Difficult to "Cheat"** due to an integrated sensor and wiring internal to the coupler and hose, plus a proprietary signal that cannot be "shorted" to pass as a proper connection.

■ **Best in Class Vapor Flow** using a high-low pressure drop vapor coupler, resulting in reduced back pressure in the truck compartments benefiting in lower potential vapor release via the vapor vents to the atmosphere.

■ **No Changes Required** on the truck/trailer using standard 4" vapor adaptors per API RP1004 specification.

■ **Ease of Maintenance Hose Replacement** with quick connect / disconnect wire harness.

■ **No Exposed Electrical Wires** to the Environment that can get tangled or damaged in use.

■ **Proven Control System** based on an existing Scully platform in production for over 40 years, fit for the terminal environment.

■ **Multiple Hose Options Per User Preference**—system can interface with 3" and 4" vapor hoses or vapor loading arms with a standard 4" TTMA interface.

■ **Provides an Electrical Output** to TAS or batch controller as an option to include in the permit logic.

■ **Bypass Feature Available** in case a terminal operator decides a situation requires bypassing of the vapor connection from the permit.

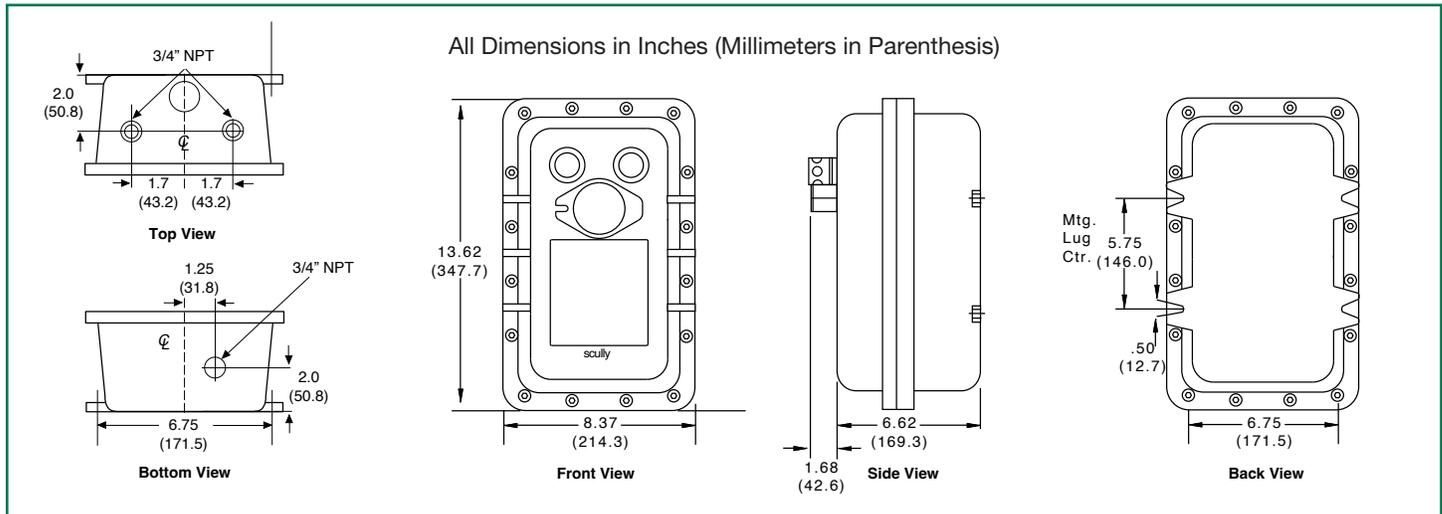■ **System Works with Rack Equipment** either independently or in tandem
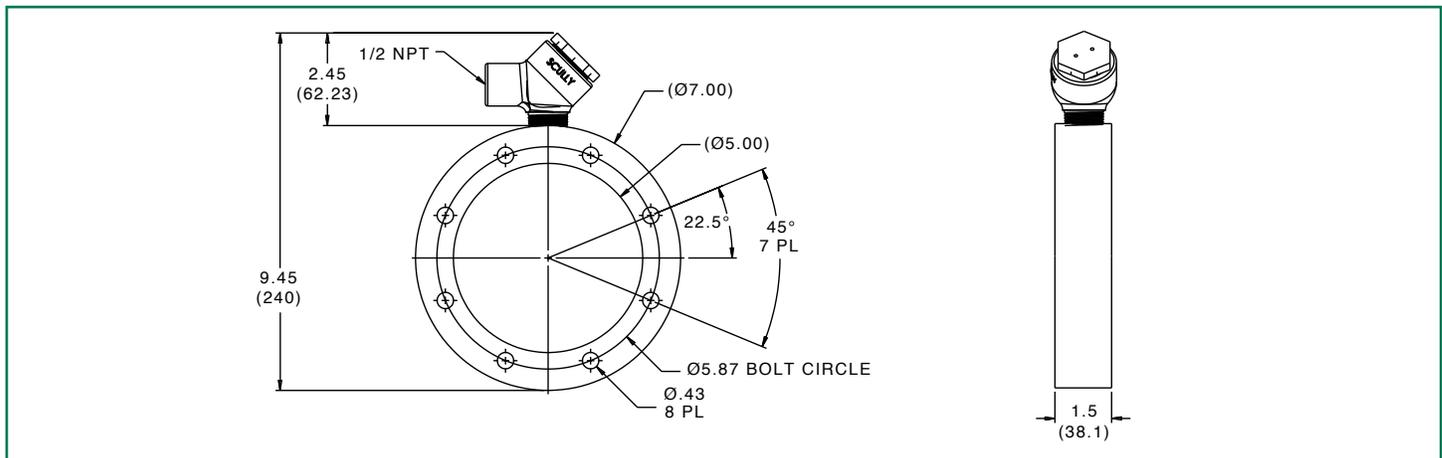
Scully Vapor Connect™ Kit

THE SCULLY VAPOR CONNECT KIT INCLUDES FOUR KEY COMPONENTS

Vapor Coupler w/Integrated Sensor

Vapor Connect Controller

Vapor TTMA Flange

Vapor Easy Connect Wire Harness in Hose

TECHNICAL DIAGRAM OF MODEL ST-46

All Dimensions in Inches (Millimeters in Parenthesis)

3/4" NPT

2.0 (50.8)

1.7 (43.2)   1.7 (43.2)

Top View

1.25 (31.8)

3/4" NPT

2.0 (50.8)

6.75 (171.5)

Bottom View

13.62 (347.7)

scully

8.37 (214.3)

Front View

6.62 (169.3)

1.68 (42.6)

Side View

Mtg. Lug Ctr.

5.75 (146.0)

.50 (12.7)

6.75 (171.5)

Back View

TECHNICAL DIAGRAM OF FLANGE ASSEMBLY

1/2 NPT

2.45 (62.23)

(Ø7.00)

(Ø5.00)

22.5°

45° 7 PL

9.45 (240)

Ø5.87 BOLT CIRCLE

Ø.43 8 PL

1.5 (38.1)

Scully Vapor Connect™ Kit

SCULLY VAPOR CONNECT KIT

COUPLER SUBASSEMBLY WITH CARRY HANDLE

	4" TTMA Flanged Inlet and Female CAM & Groove Outlet.	Weight: 9.0 lbs.
	Low Pressure drop better airflow.	Rated Operating Temp: -4°F to +140°F. (-40°F version contact sales)
	Aluminum body, Brass Cams.	
	Product Drain Plug.	Carry Handle designed to match the TTMA holes of coupler, for easy handling of the coupler when vapor hose is attached.
	Integrated Proximity sensor compatible with Scully ST-46 Controller.	
		Carry Handle aluminum body with smoothed edges.
	Dimensions: 9.875"(13.5" with sensor) length x 6.875" width.	Carry Handle dimensions: 8" diameter.
		Carry Handle only weight: 0.5lbs.

FLANGE

	4" TTMA Coupler with integrated wiring, Sealed exit port for cable.	Dimensions: 7" diameter x 1.5" width.
	Material: Aluminum.	Weight: 3.0lbs.

CABLES AND CONNECTORS

	Available in multiple lengths.	Connectors: Glass Filled PC, 3 conductors.
	18AWG, 2 conductors with shield, FEP Teflon jacket & insulation.	Rated Operating Temp: -40°C to +100°C.

ST-46 VAPOR CONTROLLER

	Operation Temperature: -40°F to +140°F (-40°C to +60°C).	Power Requirements: ST-46–115 Models: 105–125 VAC, 50/60 Hz. 0.250 Amp max . ST-46–240 Models: 208–240 VAC, 50/60 Hz. 0.125 Amp max.
	Enclosure: Explosion-Proof Weather-Proof Housing.	
	Indicators: Red– Not Connected/non-permit. Green– Connected/permit.	
		Shipping Weights: ST-46 ELK; 26 lbs (12 kgs).
	Response Time: 0.5 seconds maximum.	Approvals: Explosion-proof with intrinsically safe ground connection outputs. Rated for Class I, Division 1, Groups C & D Hazardous Locations, by FM Global (FM) United States standards. Canadian Approval Pending. SIL 2.
	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.	

Scully Vapor Connect™ Kit

ORDERING INFORMATION

Customer information required to choose a correct kit:

1. Length of hose specified between coupler and vapor recovery piping entry.
2. AC power source 120V or 240V
3. Hazardous area certification requirement per region:
   - IEC - ATEX /IECEx, Zone & Division
   - NEC - FM, Class and Division

SYSTEM KIT PART NUMBERS

ST-46-115 ELK CONTROL UNITS

Description	Part Number
Scully Vapor Connect Kit, ST-46-115 ELK, 10ft (3m) vapor hose	091000040-10
Scully Vapor Connect Kit, ST-46-115 ELK, 12ft (3.6m) vapor hose	091000040-12
Scully Vapor Connect Kit, ST-46-115 ELK, 14ft (4.3m) vapor hose	091000040-14
Scully Vapor Connect Kit, ST-46-115 ELK, 16ft (4.9m) vapor hose	091000040-16
Scully Vapor Connect Kit, ST-46-115 ELK, 18ft (5.5) vapor hose	091000040-18
Scully Vapor Connect Kit, ST-46-115 ELK, 20ft (6.1m) vapor hose	091000040-20
Scully Vapor Connect Kit, ST-46-115 ELK, 22ft (6.7m) vapor hose	091000040-22
Scully Vapor Connect Kit, ST-46-115 ELK, 24ft (7.3m) vapor hose	091000040-24
Scully Vapor Connect Kit, ST-46-115 ELK, 26ft (7.9m) vapor hose	091000040-26
Scully Vapor Connect Kit, ST-46-115 ELK, 28ft (8.5m) vapor hose	091000040-28
Scully Vapor Connect Kit, ST-46-115 ELK, 30ft (9.1m) vapor hose	091000040-30

ST-46-240 ELK CONTROL UNITS

Description	Part Number
Scully Vapor Connect Kit, ST-46-240 ELK, 10ft (3m) vapor hose	091000041-10
Scully Vapor Connect Kit, ST-46-240 ELK, 12ft (3.6m) vapor hose	091000041-12
Scully Vapor Connect Kit, ST-46-240 ELK, 14ft (4.3m) vapor hose	091000041-14
Scully Vapor Connect Kit, ST-46-240 ELK, 16ft (4.9m) vapor hose	091000041-16
Scully Vapor Connect Kit, ST-46-240 ELK, 18ft (5.5m) vapor hose	091000041-18
Scully Vapor Connect Kit, ST-46-240 ELK, 20ft (6.1m) vapor hose	091000041-20
Scully Vapor Connect Kit, ST-46-240 ELK, 22ft (6.7m) vapor hose	091000041-22
Scully Vapor Connect Kit, ST-46-240 ELK, 24ft (7.3m) vapor hose	091000041-24
Scully Vapor Connect Kit, ST-46-240 ELK, 26ft (7.9m) vapor hose	091000041-26
Scully Vapor Connect Kit, ST-46-240 ELK, 28ft (8.5m) vapor hose	091000041-28
Scully Vapor Connect Kit, ST-46-240 ELK, 30ft (9.1m) vapor hose	091000041-30

ST-46 REPLACEMENT PARTS LIST

Description	Part Number
Scully Vapor Connect Coupler w/Sensor	091000025
Scully Vapor Connect Coupler w/Sensor low temp	091000033
Scully Vapor Connect Coupler Handle	091000034
Scully Vapor Connect 4" TTMA Flange	091000026
Scully Vapor Connect wire harness 10ft (3m) replacement part	235002010
Scully Vapor Connect wire harness 12ft (3.6m) replacement part	235002012
Scully Vapor Connect wire harness 14ft (4.3m) replacement part	235002014
Scully Vapor Connect wire harness 16ft (4.9m) replacement part	235002016
Scully Vapor Connect wire harness 18ft (5.5m) replacement part	235002018
Scully Vapor Connect wire harness 20ft (6.1m) replacement part	235002020
Scully Vapor Connect wire harness 22ft (6.7m) replacement part	235002022
Scully Vapor Connect wire harness 24ft (7.3m) replacement part	235002024
Scully Vapor Connect wire harness 26ft (7.9m) replacement part	235002026
Scully Vapor Connect wire harness 28ft (8.5m) replacement part	235002028
Scully Vapor Connect wire harness 30ft (9.1m) replacement part	235002030
F ST-46/46C-115 ELK,VAPOR CONNECT Control Module	091000031
F ST-46/46C-240 ELK,VAPOR CONNECT Control Module	091000032

Note: Custom length wire harness available. Please contact Scully.

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