



Featuring Dynacheck® – Automatic and Continuous Self-Checking Circuitry

DESCRIPTION



Scully's Intellitrol® System is the most advanced terminal overfill prevention and ground verification system available today! At Scully, safety is not just a product feature; it's a passion. That is why every Scully overfill prevention system incorporates Dynacheck® Dynamic Self-Checking®.

Dynacheck® is a unique technique that automatically and continuously checks every critical component in the entire system. If any single component failure or fault in the Scully system renders the system unable to detect an overfill, the output switches to non-permissive signaling for loading shutdown.

Scully's Intellitrol® with Dynacheck® goes far beyond the pulsed signaling or self-checking employed by other systems in the market. These other systems may fail to detect an overfill because they cannot detect every critical component failure or even a simple short in the vehicle wiring. Dynacheck® detects a fault anywhere in the Scully system including the Intellitrol control unit, wiring and the sensor circuitry¹.

Scully was the first to offer redundant output relays. Scully's Intellitrol® now offers the ultimate in safety with a patented design that continuously monitors the relay contacts.

1. Maximum safety not ensured when Scully loading rack controllers are connected to non Scully vehicle mounted overfill prevention equipment. Remember to specify Scully tank trailer equipment.

Intellitrol®
Overfill Prevention
Control Unit

FEATURES AND BENEFITS

- Overfill prevention, ground verification and vehicle identification in one compact state of the art explosion-proof enclosure.
- Scully Dynacheck® automatic and continuous self-checking circuitry.
- Automatic detection of two-wire optic/thermistor or five-wire optic vehicle sensors.
- Monitoring of up to 8 two-wire or 15 five-wire vehicle sensors.
- Complete visual diagnostic display of overfill sensors' status. Will not permit loading under any fault or wet sensor condition.
- Advanced optical bypass feature eliminates unauthorized system bypass.
- Complete compatibility with Scully Intellicheck® and Load-Anywhere® on-board systems or compatible signals from truck overfill prevention systems conforming to industry standards.²
- Easy connection to vehicles with rugged high impact industry standard plug and cable units.

2. Per API Recommended Practice No. RP-1004 or European Draft Standard EN 296007.



TECHNICAL SPECIFICATIONS

Temperature Range:

Operating IC Models: -40° to +140°F (-40° to +60°C)
Storage -50° to +185°F (-45° to +85°C)

Power

Requirements: 100 - 130 VAC (120 VAC Setting) or 200 - 250 VAC (240 VAC Setting)
50/60 Hz, 30 watts maximum

Enclosure: Explosion-proof weathertight housing with powder coated corrosion resistant finish.
Weathertight rating: Type 4X and IP 65.

Sensor Inputs: Up to 8 Scully two-wire optic/thermistor sensors (6 or 8 channels) or 15 five-wire optic sensors (maximum). Automatic detection of two-wire vs. five-wire sensors.
Three-wire high-temperature thermistor sensors are not supported.

Ground Verification

Inputs: When configured for Ground Bolt detection, a Scully Ground Bolt connected to pin number 9 of the overfill prevention system socket(s) and installed onto the vehicle frame per Scully installation instructions (No.61081) is needed to satisfy this input. When configured for Resistive Ground detection, all vehicles must be wired with socket pin number 9 and 10 connected to separate points on the vehicle chassis.

Deadman Input: An intrinsically safe input is provided for an optional deadman switch.

Outputs: Two independent outputs are provided as follows:

Main Permissive Output:

A Form-A (“normally open”) AC relay output with “monitored redundant contacts”. This output closes when all overfill prevention sensors are dry and functional, a proper ground connection, and/or vehicle I.D. (optional), and/or deadman (optional) is established. This output is an AC control output and must only be used with AC voltage. This output should be used for product flow shutdown capability and is rated at 250 VAC, 5 amps resistive.

Main Form-C, Volt-Free Output Relay:

A Form-C (“normally open” and “normally closed”) volt-free redundant relay output contact. These output contacts reverse state (“normally open” closes and “normally closed” opens) when all overfill prevention sensors are dry and functional, and a proper ground connection, and/or deadman (optional), and/or vehicle I.D. is established. If a volt-free relay output contact is needed, the “normally open” relay output contact may be used for product flow shut down. The “normally closed” relay output contact is intended for any additional non-critical output status reporting functions. This Form-C contact is rated at 250 VAC, 5 amps resistive.

Response Time: 450 milliseconds maximum after wet sensor or fault condition.

Communications

Port: The communications port is a half-duplex, RS-485 multi-drop communications port, utilizing Modbus™ RTU (straight binary) communications protocol at 1200, 2400, 4800, 9600 or 19200 baud rate; 8 bits; even, odd or no parity.

Approvals: IC Models: FM and FMC approvals for use in Class I, Division 1, Group C and D Hazardous locations, Type 4X.

Dimensions: Refer to diagram

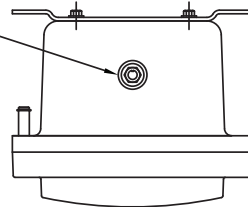
Shipping Weight: 31 lbs. (14.1 kg.)

MODEL DESIGNATIONS

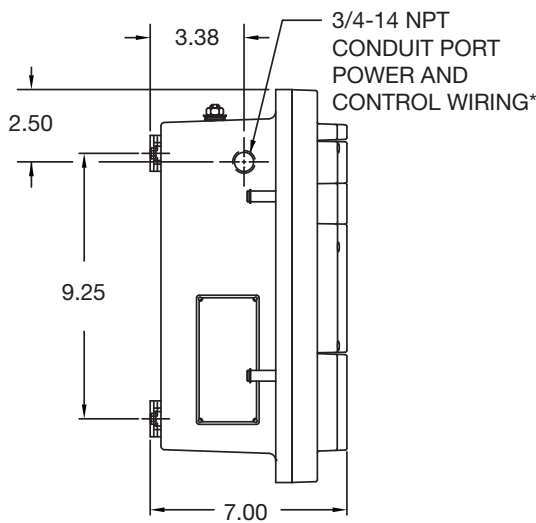
Model Designations	Prefixes	Suffixes
FM & FMC Approved =	IC }-	O Overfill Prevention G Ground Verification V Vehicle Identification

Dimensions shown in inches

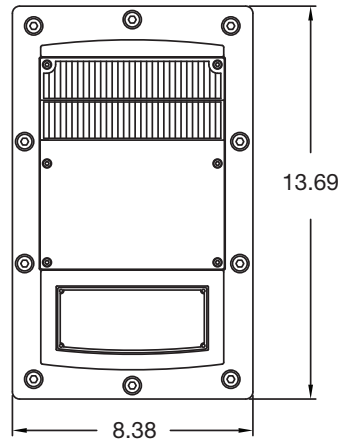
ENCLOSURE EARTH
BONDING STUD



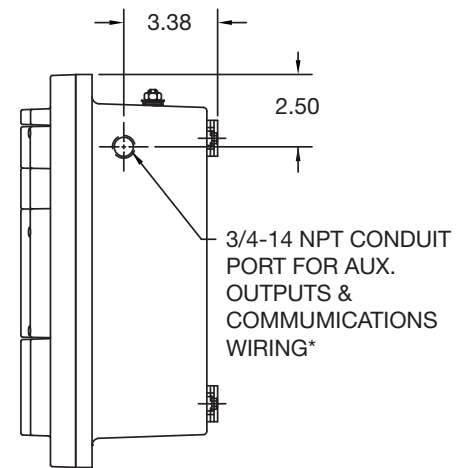
Top View



Side View Left

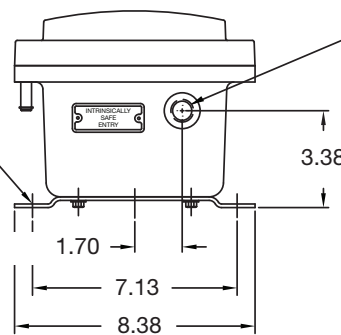


Front View



Side View Right

MOUNTING BOLT
CENTERS FOR
3/8 - INCH DIA. BOLTS



Bottom View

3/4-14 NPT CONDUIT
PORT FOR I.S. SENSOR
WIRING ONLY*

*The "IC" models feature 3/4" - 14 NPT conduit entries. The "ICC" models feature M25 x 1.5 metric conduit entries.



Intellitrol®

Overfill Prevention, Ground Verification and Vehicle Identification
for Petroleum & Chemical Loading Racks

ELECTRONIC
PRODUCT
LINE

CONTROL UNITS	Model Number	Part Number
Intellitrol Overfill Prevention Only Unit (FM & FMC approvals)	IC-O	08907*
Intellitrol Overfill Prevention and Ground Verification (FM & FMC Approvals)	IC-OG	08908*
Intellitrol Overfill Prevention, Ground Verification and V.I.P. (FM & FMC approvals)	IC-OGV	08909*

* For a diagnostic display panel in a language other than English add - "S" for Spanish, "F" for French, "I" for Italian, "D" for Danish or "G" for German
eg: 08907S is for the Intellitrol unit with Spanish label.



SYSTEM ACCESSORIES	Part Number
Security Bypass Authorizer	08939
Scully Intelliview Windows based software	09296
Scully Advanced Programmers Interface software	08952
Sculcon SC-6A with Green Poly 2-Pin Plug and 30' (9m) Coiled Cable (API 2-wire Optic/Thermistor Standard Interface)	08156
Sculcon SC-6W with Blue Poly 3-Pin Plug and 30' (9m) Coiled Cable (API 5-wire Optic Standard Interface)	08159
Poly Plug and Cable, Green 6A Style, 2 Pin with 30' (9m) coiled cable	21818
Poly Plug and Cable, Green 8A Style, 2 Pin with 30' (9m) coiled cable	31092
Poly Plug and Cable, Blue 6W Style, 3 Pin with 30' (9m) coiled cable	21831



REPLACEMENT PARTS (Also see the exploded view Intellitrol Replacement Parts Sheet #4516)	Part Number
Corrosion Inhibitor (One year life)	40268
O-Ring, Cover Seal	31340
Replacement Control Module, Overfill only, FM & CSA	08979O
Replacement Control Module, Overfill and Grounding, FM & CSA	08979OG
Replacement Control Module, Overfill, Grounding, and Vehicle Identification	08979OGV
Cover Bolt, M8 x 1.25 x 25 mm long	50005
Contact Fuse (F5, F8), 5A, Hi-Interrupt	26372
Real Time Clock Backup Battery (FM & CSA Models Only)	26904
Replacement Lens Assembly (w/ 6 mounting screws)	08980
Replacement Display PCB Assembly (w/ backing plate)	08981
Display Cable Feed-through Assembly	08982
Lens Mounting Screw, 8-32 x 3/4 Hex Socket Head Cap Screw	50080
Cover Hinge Retaining Ring	54039
Text Mask, (English), Overfill & Grounding Options	32085*
Text Mask, (English), Overfill, Grounding and Vehicle I.D. Options	32086*

* For a diagnostic display panel in a language other than English add - "S" for Spanish, "F" for French, "I" for Italian, "D" for Danish or "G" for German

Copyright © 2014 Scully Signal Company. Dynacheck, Dynamic Self-Checking, Dynamic Self-Testing, Faylsafe, IntelliCheck, Intellitrol, Load-Anywhere are registered trademarks of Scully Signal Company. All Rights Reserved. Specifications are subject to change without notice.



MaxSafety®
SYSTEMS

Scully Signal Company

70 Industrial Way,
Wilmington, MA 01887-3479, USA
Tel: 800 272 8559 / 617 692 8600
email: sales@scully.com

Scully Systems Europe NV

Eksterveldlaan 31a
2820 Bonheiden / Belgium
Tel: +32 (0) 15 56 00 70
email: info@scully.be

Scully UK Ltd

Meridian House, Unit 33,
37 Road One Winsford Industrial Estate,
Winsford Cheshire CW7 3QG / UK
Tel: +44 (0) 1606 553805
email: sales@scullyuk.com

67247 Rev B
January 2014

Dynamic Self-Testing® Overfill Prevention Systems

