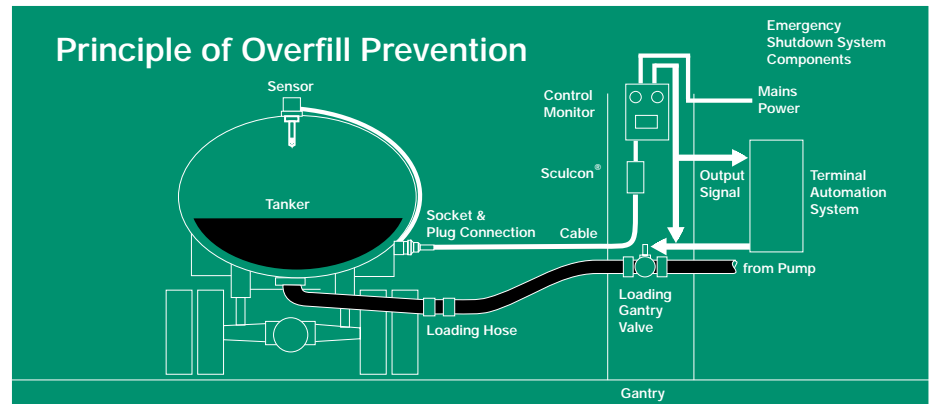


Scully Two-Wire Optic Sensor

Liquid Level Sensor for Road Tanker Overfill Prevention

Featuring Dynacheck® – Automatic and Continuous Self-Checking Circuitry



Scully Two-Wire Instant-On™ Optic Sensors are part of an automatic and continuous self-checking system you can count on. Scully two-wire optic sensors offer all these advantages:

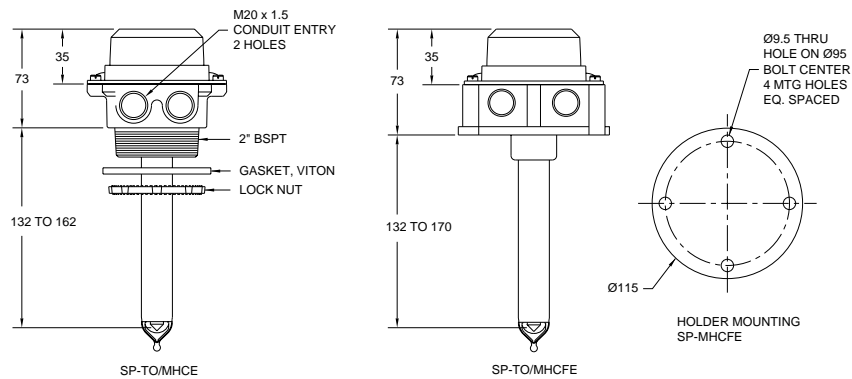
- Maximum safety with Dynacheck® – automatic and continuous self-checking circuitry when used with Scully gantry controls and vehicle onboard monitors
- Solid state construction employing state-of-the-art components and technology
- Scully's field proven electro optics technology
- Wide temperature range
- Employs shaft that is easy to cut when shorter length is needed
- Adjustable sensing level
- Instant-On™ – Instant permissive signal – no warmup time required
- Quick purging of liquid – instant re-permit as product level drops below the sensing point
- Fully compatible with all Scully thermistor controllers
- CENELEC approvals per ATEX Directive 94/9/EC
- Meets new European document WI 296007 requirements

Description

Scully two-wire optic sensors are designed for liquid petroleum product overfill prevention and point level detection. They are designed to be used with the Scully Intellitrol®, Biclops® III, and ST-15C series gantry control monitors, and are also used with Scully IntelliCheck® Monitor. There is no waiting for the control monitors' permit light to go on because the sensor requires no warm up time. They can be used for overfill prevention on road tankers, rail cars and storage tanks.

Safety Features

The two-wire optic sensor incorporates Scully's unique and exclusive Dynacheck® circuitry when connected to Scully monitoring equipment. To ensure that the system will always detect an overfill condition, the controller uses pulsed signals which continuously check the entire system operation, including sensors, wiring, connectors and itself. If a sensor comes in contact with liquid, or in the unlikely event of a system fault, the pulsed signals cease and the controller automatically signals for immediate shutdown of the loading operation. No operator involvement is needed! Shutdown is accomplished by controlling pumps or valves.



Technical Specifications

Operating Temperature Range

-40° C to +60° C

Product Range

Gasoline blends and light fuel oils

Exposed Materials

Aluminum, zinc, borosilicate (Pyrex®) glass, epoxy, conductive nylon and Viton® seals

Detection Level and Size

The detection level is adjustable. Refer to sensor outline drawing above, shown for 175mm shaft length. Dimensions in mm except as noted.

Level Repeatability

±1 mm

Electrical Leads

40 cm long, 0.82 mm² (18 AWG)

Cable Entry

Two holes M20 x 1.5 threads

Approvals

The sensor is intrinsically safe for mounting in Zone 0 according to ATEX Directive 94/9/EC.
 EEx ia IIB T5 (-40°C ≤ T_a ≤ 60°C)



Ordering Information

Model	Description	Shaft Length	Part Number
SP-TO/MHCE(SC)	Two-wire optic sensor, 2" BSPT holder, 35mm standard cap	175mm	09014
		300mm	09034
		375mm	09044
SP-TO/MHCFE(SC)	Two-wire optic sensor, flanged holder, 35mm standard cap	300mm	09033
SD-5CE	5-Element Electronic Dummy <i>(Employed on road tankers with less than 8 compartments when not using IntelliCheck monitor)</i>		08542

Replacement Parts

Model	Description	Shaft Length	Part Number
SP-TO	Two-wire optic sensor (without holder)	175mm	09032
		300mm	09035
		375mm	09045
	Shaft O-ring		08577
SP-MHCE(SC)	2" BSPT Threaded Holder Only		08714
	Mounting Gasket for SP-MHCE Holder		20893
	Mounting Lock Nut for SP-MHCE Holder		57044
	Mounting Gasket for SP-MHCFE Holder		31020
	Cap O-ring		20766
	Standard Cap (SC), height 35mm		21583
	Medium Cap (MC), height 54mm		20888
	Cap screw		50652
	Cap screw spring washer		51122

Biclops, Dynacheck, Dynamic Self-Checking, Faylsafe, Load Anywhere, IntelliCheck, Intellitrol, IntelliTank, Intelliview, Maxsafety, MulteCept, Sculcon, Scultrol, Scully, R.S.V.P., TABS and Scully V.I.P. are registered trademarks of Scully Signal Company.

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Specifications are subject to change without notice.



Corporate Headquarters

Scully Signal Company

70 Industrial Way

Wilmington, MA 01887

Tel: (800) 272-8559 • (617) 692-8600

Fax: (617) 692-8620

email: sales@scully.com • www.scully.com

