



# MODEL TGS-20EX



## MAGNETICALLY ACTUATED ELECTRONIC SWITCH

Tank Gauging Systems Corp., 12532 - 124 St., Edmonton, AB, T5L 0N5 Edmonton: 780-474-2365 Calgary: 403-685-8867

### FEATURES

- Unique Concept of Magnetic Coupling, Eliminating Direct Contact With Process
- Un-Limited Number of Switches can be Added at any Time Without Opening the Vessel
- Easy Mounting and Adjustment
- Trip Point Infinitely Adjustable Without Changing Process Piping
- Hermetically Sealed SPDT Switch (NO & NC Contacts)
- Vibration Resistant
- Switch is Encapsulated Within a Stainless Steel Housing
- Designed and Constructed to CSA Guidelines



### Description

The TGS 20EX Switch is a Magnetically Activated SPDT Bi-Stable Latching Hermetically sealed reed switch. The TGS 20EX is actuated by a passing external magnetic field and remains latched after the magnetic field continues to rise or fall. Reversing the magnetic polarity causes the reed switch to transfer and latch back to its original state. The TGS 20EX will provide either a normally open or normally closed dry contact that can be used to activate external devices such as alarms or solenoids. To mount the TGS 20EX simply clamp it directly to the gauge chamber using two Stainless Steel clamps. The switch can easily be re-positioned by loosening the clamps & sliding the switch to the correct position.

### Specifications

Voltage:	150 VDC Max. / 75VAC Max.
Current:	1.0 Amp DC Max.
Power:	25 Watts DC Max.
Contact material:	Rhodium
Operating & Storage:	Ambient Temperature to +40C
Housing:	Encapsulated in a 316 Stainless Steel housing
Approvals:	CSA Class 1, Division 1, Groups C, D, Enclosure Type 4

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# TANK GAUGING

## SYSTEMS

### TGS 20EX Switch Installation / Operation

#### Description

The TGS 20EX Switch is a Magnetically Activated SPDT Bi-Stable Latching Hermetically sealed reed switch. The TGS 20EX is actuated by a passing external magnetic field and a bias magnetic forces it to remain latched after the magnetic field continues to rise or fall. Reversing the magnetic polarity causes the reed switch to transfer and latch back to its original state.

#### Specifications

Voltage:	150 VDC Max. / 75VAC Max.
Current:	1.0 Amp DC Max.
Power:	25 Watts DC Max.
Contact material:	Rhodium
Operating & Storage:	Ambient Temperature to +40C
Housing:	Encapsulated in a 316 Stainless Steel housing
Approvals:	CSA Class 1, Division 1, Groups C, D, Enclosure Type 4

#### Application

The TGS 20EX will provide either a normally open or normally closed dry contact that can be used to activate external devices such as alarms or solenoids. To mount the TGS 20EX simply clamp it directly to the gauge chamber using two Stainless Steel clamps. The switch can easily be re-positioned by loosening the clamps & sliding the switch to the correct position.

#### Operation

Wire leads on the TGS 20EX should be terminated using suitable means that comply with National Electrical Codes. Any conduit or other fittings hooked to the TGS 20EX should be aluminum or some other non-magnetic material.



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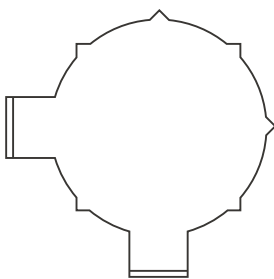
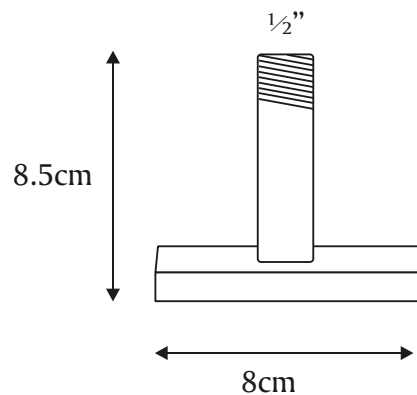
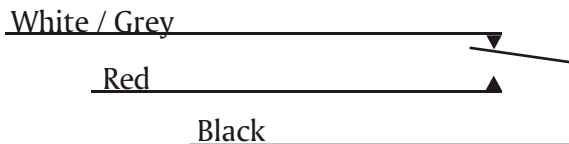
## SYSTEMS

## TGS 20EX Switch Installation / Operation

### NOTE

After the switch is mounted and wired they need to be set to the correct state. This is easily accomplished by manually moving the magnet field past the switch in both directions to insure that the switches are properly set when put into service. ALWAYS USE THE MAGNET SUPPLIED WITH THE GAUGING PACKAGE TO ACTIVATE THE SWITCH. The switch activates via a magnetic field (north polarity of a magnet) and de-activates via the opposite magnetic field (south polarity of a magnet). Using other magnets or using the same polarity of the magnet to activate & de-activate the switch will cause faulty and/or sporadic switch operation

### Schematic



### DIMENSIONS - L-GEML-1

HUB SIZE 1/2"

A = 2 13/16"

B = 3"

C = 2 1/16"

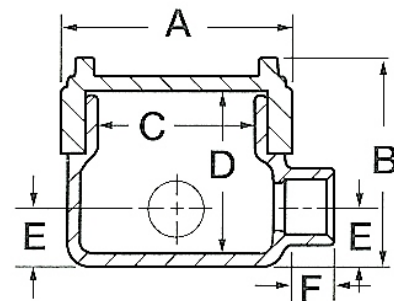
D = 2 5/16"

E = 11/16"

F = 13/16"

COVER OPENING = 2 1/16"

VOLUME CU. IN. = 8



## Technical Specifications

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