

# CABLE SUSPENDED LEVEL TRANSMITTER MODEL 591 HEAD PRESSURE TYPE

00-59101

## FEATURES

- 4-20 mADC Signal, 2 Wire Loop
- Small Size is Easy to Install, Enters a 3/4" NPT Hole and Slides Easily down a 1" Pipe
- Insensitive to Down Hole Pumps
- Ranges From 1 to 2500 Feet of Water
- Signal Cable Lengths to 5000 Feet (1500Meters)
- Lighting and Voltage Surge Protectors
- Zero & Span Pots For Field Calibration
- Cable and Sensor are Required
- Kalrez® Seals Optional for Difficult Services
- Sludge Nose Optional for Dirty Liquids
- Test Tubing Checks Down Hole Sealing
- Highly Reliable with Maintenance Free Operation

## TYPICAL APPLICATIONS

Water Wells	Remediation
Treatment Chemicals	Storage Tanks
Landfill Leachate Wells	Reservoirs
Storm Water Retention Basins	Fuel Oils

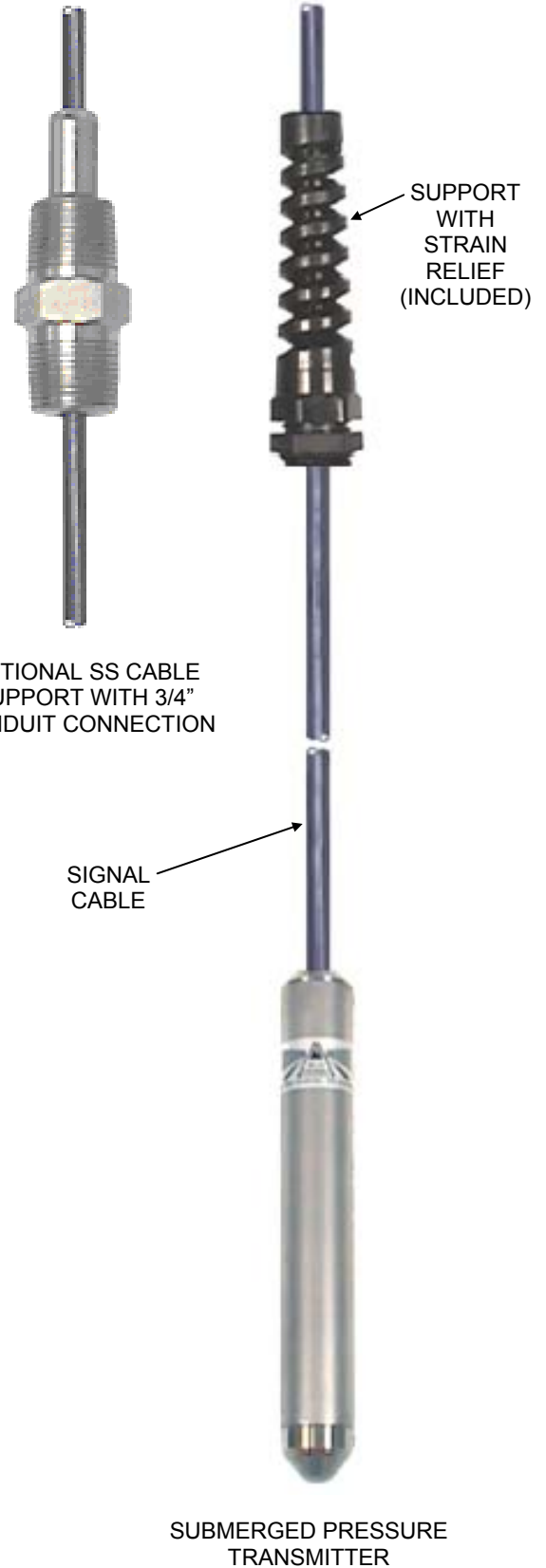
## DESCRIPTION

The Delta Controls Model 591 Level Transmitter incorporates both the sensor and the electronics unit in a single potted module. The module is protected by a Viton® or Kalrez® sealed heavy corrosion proof body. This lower body is sealed to an electrical cable, both of which are supported from the wellhead above. The sensor detects the pressure due to the water high above it. This pressure is linearly proportional to the height of liquid (commonly water) above it. The sensor/electronics unit converts the pressure into a 4-20 mADC signal equivalent to the level of the liquid.

The 591 is equipped with lighting and power line surge protective circuitry. The 591 is also immune to electrical fields and noise generated by variable speed pump motors, 2 way radios, contactors, etc.

The Model 591 is a heavy-duty industrial grade transmitter. It is constructed from industrial grade components making it free from drift and eliminating the need for frequent recalibration. It is a highly reliable transmitter.

The 591 is also very useful for measuring levels in tanks. The 591 does an outstanding job when used for measuring the water level in well bores and pits. The flexible cable is easy to install, even when the headroom above a tank is minimal. The compact body diameter allows it to be installed through a small 3/4" NPT hole. The optional PTFE cable jacket and seals, with Hastelloy "C" body are resistant to most corrosive agents.



# MODEL NUMBERING SYSTEM



MODEL EXAMPLE 591Y - CN - G4Y - 25V - AA

M/N	BODY MATERIAL
591Y	316L S.S.
591G	HASTELOYS "C"

SEALS: VITON®

M/N	DESCRIPTION
CN	CONICAL, BASIC
SN	PERFORATED, SLUDGE

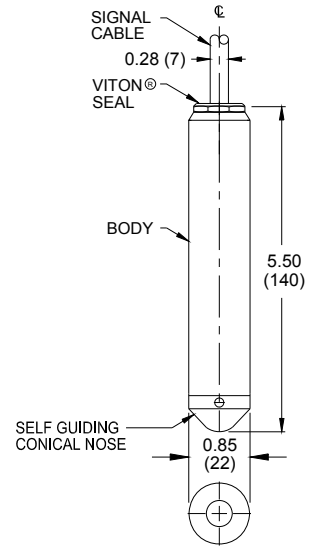
M/N*	FULL SCALE RANGE (H <sub>2</sub> O)	
	FEET	METERS
G1 Y	3.5	1.0
G2 Y	7.0	2.0
G3 Y	17.5	5.0
G4 Y	35.0	10.0
G5 Y	70.0	20.0
G6 Y	125.0	40.0
G7 Y	250.0	80.0
G8 Y	500.0	160.0

\*Y = 316L SS FACE IS BASIC;  
CHANGE "Y" TO "G" FOR HASTELOYS "C"  
INSTEAD

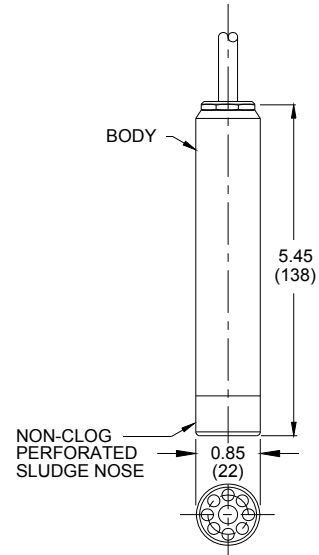
M/N	DESCRIPTION
AA	NONE
SU	UP TO 80% ELEVATED ZERO
RC	20-4 mADC REVERSE CALIBRATION
SCT	VENT TUBE ISOLATION BLADDER
SCJ	VENT TUBE ISOLATION BLADDER; TUBULAR TYPE IN POLY CARB HSG
LSS	SUPER LIGHTNING PROTECTION; INCLUDES A 10 YEAR WARRANTY AGAINST A FAILURE
CCY	316 SS CABLE SUPPORT CLAMP
BKT	BRACKET TO SUPPORT 591; FRONT VERTICAL OR HORIZONTAL SURFACE
KZ	KALREZ® SEALS
ZZ	OTHER CONFIGURATIONS, ETC.

M/N	DESCRIPTION
	220°F (105°C) SERVICE
* V	PVC OUTER JACKET
* R	PTFE OUTER JACKET

REPLACE \* WITH NUMBER OF FEET  
REQUIRED.  
C/F IF OVER 2500 FEET (750 M)  
CCY OPTION REQUIRED IF CABLE IS  
LONGER THAN 150 FEET



"CONICAL" NOSE



"SLUDGE" NOSE

## BASIC SPECIFICATIONS

- Technology: Silicon strain gage
- Cable Length: Up to 5000 feet (1500M)
- Wetted Materials: 316L SS Body, Viton® Seals, Nylon Nose
- Supply Voltage: 13 to 35 VDC, 2 Wire Loop
- Output Signal: 4-20 mADC isolated, Intrinsically Safe
- Adjustments: Span, from 30% to 100% of sensor range, non-interactive; zero from 0% to 15% suppression
- Range: Calibrated to users specifications
- Temperature Range:
  - 20° to +180°F (-30 to +85° C) Continuous
  - 30° to +130°F (-1 to +55° C) Compensated
  - 40° to +220°F (-40 to +105° C) Intermittent
- Accuracy: ±0.25% F.S. or better
- Thermal Error: ±0.01% F.S./°F maximum
- Barometric Effect: None
- Weight: Transmitter, less than 1 pound  
Cable, 1 pound per 25 feet

### AUXILIARY EQUIPMENT (See Data Sheets)

- DC Loop Power Supply: 120 VAC to 24 VDC
- Alarm Module(s): 5 amp, SPDT output
- Pump Control: One to Four Pumps
- Display: LCD or LED; with Alarms



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