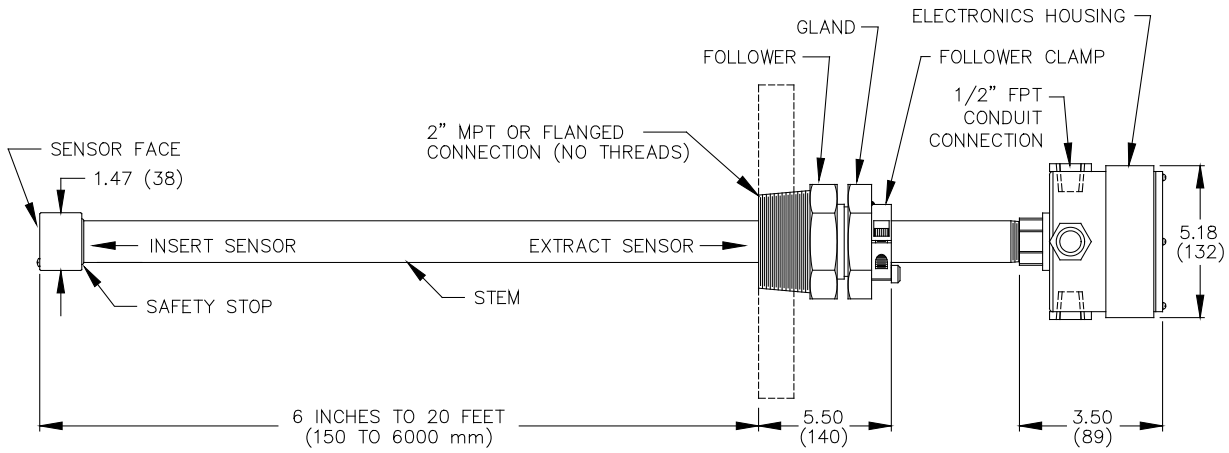
MODEL 564 INSERTED-UNDER-PRESSURE LEVEL OR PRESSURE TRANSMITTER

00-56401



FEATURES

- Intended To Be Inserted Or Removed Without Draining Or Depressurizing The Tank Or Vessel
- Used From Hard Vacuum To 3000 PSIG Pressure
- Suitable For Dirty Liquids And Slurries
- Measures Levels In Tanks Pressurized Up To 15 PSIG (1 Bar) Or Down To Hard Vacuum
- Integral Sealed Electronics Module
- Spark, Voltage Surge, And Noise Protection
- Can Also Transmit The Process Temperature Over A Second 4-20 mADC Signal Loop
- Flush Face Sensing Diaphragm; 316-L Basic

TYPICAL LEVEL APPLICATIONS

Liquid Ammonia Storage Tank Level
Sewage Treatment Digesters
High Reliability Hydrocarbon Confinement
Toxic Materials that must be contained
Paint and Coating Storage Tanks

DESCRIPTION

The Model 564 is a two-wire pressure transmitter designed to measure liquid level and pressure in tanks which cannot be depressurized or allowed to leak. It is suitable for services that are very dirty, leave deposits and generally tend to plug up any cavity or recess they encounter. The ability to insert the sensor face of the Model 564 all the way into the inside of the vessel usually eliminates these problems. Other applications include process materials that tend to set up or crystallize when stagnant; that solidify and plug sensing lines when allowed to cool, slurries of polymerizing agents, and many other difficult to handle materials.

The Model 564 can be inserted from the top or side of a vessel as required. Safety stops prevent accidental ejection of the transmitter and rapid discharge of the tank contents into the environment. The block valve, fittings and adaptors are available from Delta or may be furnished by the user..

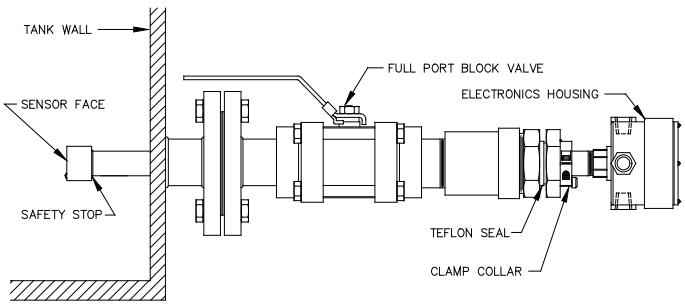
SPECIFICATIONS

Technology: Silicon strain gage
Supply Power: 13 to 35 VDC, 2 wire loop powered
Output: 4-20 mADC isolated; Intrinsically Safe
Loop Impedance: 550Ω at 24 VDC; 1100Ω at 35 VDC
Adjustments: Span from 30% to 100% of sensor range. Zero to 30% is basic and to 80% is optional, non-interactive.
Temperature: -20 to +220°F (Process)
-20 to +180°F (Electronics)
30 to +130°F (Compensated)
Accuracy: ±0.25% F.S. or better
Thermal Error: ±0.02% F.S./ °F maximum
Over Pressure: 2X Range (35 PSI / 2.5 Bar min) without damage; 3X Range (1000 PSI / 70 Bar min) without rupture

OPTIONAL FEATURES
Dampening: Selectable 0.1 to 22 seconds
Indicator: Direct reading LCD display
Temperature Transmitter:
4-20 mA, 2-wire; any 50°F span
High Pressure*: To 3000 PSIG (200 Bar)
* Not Third Party Approved

LOW PRESSURE INSTALLATION

Most applications are for low pressure (< 25 PSIG) service such as tank head pressure, gas receivers, etc. The Model 564 can be manually inserted (by pushing) or extracted (by pulling) the 564 when the pressure is 25 PSIG (2 Bar) or less. Reasonable care must be taken to prevent damage or injury, even when the pressure is low.



DELTA CONTROLS CORPORATION

MODEL NUMBERING SYSTEM

BASIC TYPE	RANGE & SENSOR	HOUSING & RATING	"IN/EX" MOVEMENT	PROCESS CONN.	OPTIONS
MODEL NO.: 564Y	– G5Y	– 7W	– 18"	– 2"MPTS	– AA

M/N *	BODY MATERIAL
564Y	316 S.S.
564G	HASTELLOY "C"

* –15 TO +25 PSIG IS BASIC

M/N	FULL SCALE RANGE (H_2O)		
	FEET	PSI	BAR
G1 *	3.5	1.5	0.1
G2 *	7.0	3.0	0.2
G3 *	17.5	7.5	0.5
G4 *	35.0	15.0	1.0
G5 *	70.0	30.0	2.0
G6 *	125.0	60.0	4.0
G7 *	250.0	120.0	8.0
G8 *	500.0	250.0	16.0
G9 *	1250.0	500.0	40.0
G10 *	2500.0	1000.0	80.0
V8 *	–	0/–15	0/–1
V9 *	–	–15/+15	–1/+1
V10 *	–	–15/+30	–1/+2
V11 *	–	–15/+60	–1/+4
V12 *	–	–15/+120	–1/+8

RANGES REFERENCED TO:
"G" = ATMOSPHERIC PRESSURE
"A" = HARD VACUUM
"V" = BELOW ATMOSPHERIC

* DIAPHRAGM MATERIAL
"Y" = 316 S.S.
"G" = PLATINUM

M/N	DESCRIPTION
4X	ENVIRONMENT PROOF; 4X; PVC; S.S. TRIM; INTRINSICALLY SAFE; CLASSES 1 & 2, DIVISIONS 1 & 2, GROUPS ABCD,EFG
7W	EXPLOSION PROOF; CLASSES 1 & 2; DIVISIONS 1 & 2; GROUPS BCD,EFG; ALUMINUM CONSTRUCTION
7T	EXPROOF, SAME AS ABOVE, EXCEPT ALL 300 STAINLESS STEEL CONSTRUCTION

M/N	INCHES MOVEMENT
18	18 INCHES
*	UP TO 20 FEET

REPLACE "*" WITH NUMBER OF INCHES REQUIRED

M/N	MAT	CONNECTION DESCRIPTION
2"MPTS	STEEL	2" MALE NPT PIPE THREAD
2"150RS	STEEL	2"/150# R.F. ANSI FLANGE;
2"150RY	316 S.S.	O.K. WITH SCH 160 NOZZLE
ZA	ANY	ANY STYLE, ANY MATERIAL ANSI, JIS, DIN, BPT, ETC.

M/N	DESCRIPTION
AA	NONE
328	DIRECT READING LCD DISPLAY
TPC	PRESSURE CORRECTOR, USED WHEN THE TANK IS PRESSURIZED
IEJ	INSERT–EXTRACT JACK UNIT; FOR PROCESS PRESSURES BETWEEN 25 AND 1000 PSIG; 18" STROKE; DETACHABLE (USE WITH SEVERAL M/N 564); STEEL; S.S. TRIM
SCI	VENT TUBE ISOLATION BLADDER; PERMANENT, REFILLING AND MAINTENANCE IS NOT REQUIRED
PSM	BRACKET FOR 2" PIPE STAND OR VERTICAL WALL HOUSING MOUNTING
BVS	2" NPT FULL PORT BALL VALVE, FIRESAFE, BOLTED BODY, 1500# WOG, 316 S.S. BALL AND TRIM, TEFLON SEATS AND SEALS, CARBON STEEL BODY
BVY	SAME, EXCEPT 316 S.S. BODY
TC	4–20 mADC DAMPENING; SELECTABLE 0.1 TO 22 SECONDS
RT	2 WIRE 4–20 mADC BUILT–IN LIQUID TEMPERATURE TRANSMITTER
RC	20–4 mADC REVERSED SIGNAL
RH	REMOTED ELECTRONICS HOUSING
ZA	OTHER CONFIGURATIONS

LOW PRESSURE INSERTION PROCEDURE

1. Connect the transmitter to the block valve.
2. Open the block valve.
3. Loosen the follower clamp collar.
4. Loosen the follower seal nut enough to allow the stem to slide in, but not enough to allow the process to leak out.
5. Push the stem through the block valve and into the process.
6. Tighten the follower seal nut.
7. Torque the follower clamp collar to 14 ft/lbs.

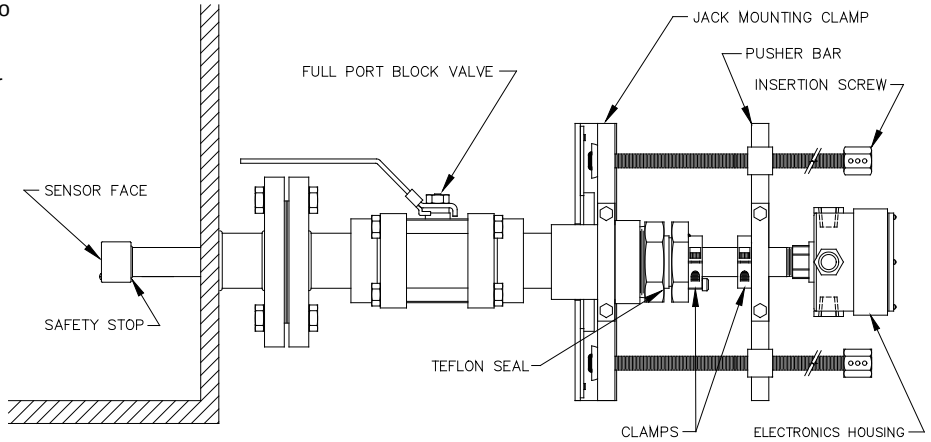
HIGH PRESSURE INSERTION PROCEDURE

When the pressure is higher than 25 PSIG, up to 1500 PSIG, then a mechanical jack unit must be used to insert or extract the Model 564. This is a requirement for both safety and ease of operation because the unit can be ejected with a force of 1300 pounds at 1500 PSI (max design pressure).

WARNING - Without the jack, the unit will move out at a high rate of speed when the clamp collar is loosened. It will continue to accelerate until:
A. It hits someone
B. It hits equipment in its path
C. It hits its safety stop

Procedure for inserting the Model 564 with a jack:

1. Connect the transmitter to the block valve
2. If not already done, slide the jacking clamp into position from the side.
3. Bolt the two stay plates in position.
4. Slide the jacking clamp against the pusher bar and tighten to a torque of 14 foot-pounds.
5. Open the block valve and loosen the follower clamp collar.
6. Loosen the follower seal nut. Do not allow the process to leak.
7. Rotate the two insertion screws alternately. Screw one side in about 2" then switch to the other one. Continue until the sensor is in the desired position. Tighten the follower.
8. Tighten the follower clamp collar to a torque of 14 foot-pounds.
9. The jack may be left in place, removed for storage, or used to install another unit.



Made in the USA by Delta Controls Corp

THIRD PARTY APPROVALS

CSA (Canada)
NRTL/C (USA)
Intrinsically Safe
Explosion Proof
Environment Proof

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