



# CAPACITANCE LEVEL SWITCHES 576

Electrode Comparative Type

## FEATURES

- SIMPLEX SENSITIVITY FACILITATING EASY CALIBRATION
- NO INFLUENCE TO ADHERED OBJECT ATTACHED ON THE ELECTRODE
- WIDE RANGE OF PROBE SENSITIVITY
- EXTENSIBLE ELECTRODE ADJUSTABLE AT FIELD SITE
- TWO SENSORS CAN BE AS CLOSE TO 150mm WITHOUT INTERFERENCE
- ANTI-ELECTROSTATIC & ANTI-CORROSSIVE (OPTIONAL)
- UP TO 800°C TEMPERATURE RESISTANCE (OPTIONAL)
- ANTI-HUMIDITY ELECTRODE CONSTRUCTION

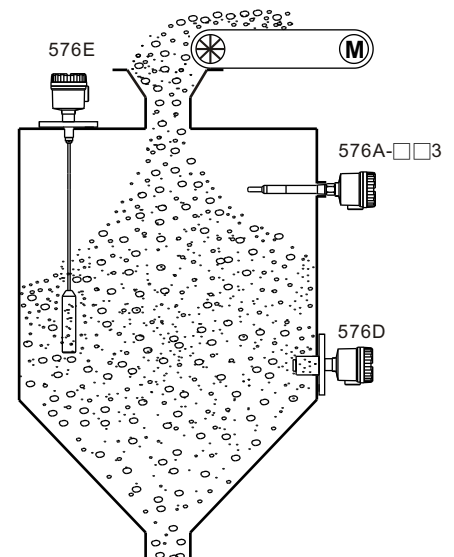
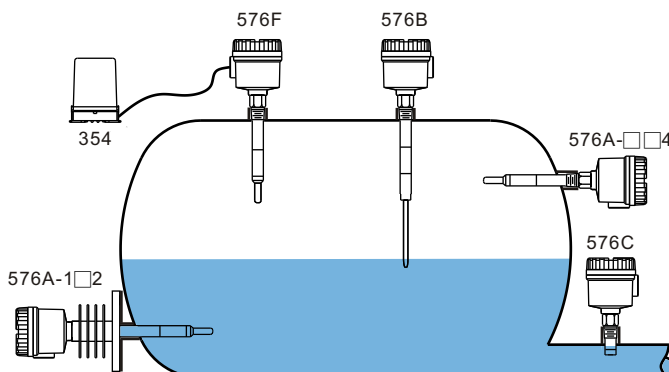


## GENERAL SPECIFICATIONS

|                              |  |                              |                                      |
|------------------------------|--|------------------------------|--------------------------------------|
| <b>OBJECT</b>                | Liquid, powder, granular, slurry, lump, mineral etc. | <b>OPERATING PRESSURE</b>    | ≤10bar (St'd) or options             |
| <b>POWER SUPPLY</b>          | AC 110/220V 50/60 Hz or DC 24V for options           | <b>OPERATING TEMP.</b>       | -20~+80°C (St'd) or options          |
| <b>POWER CONSUMPTION</b>     | Approx. 2VA  | <b>AMBIENT TEMP.</b>         | -20~+80°C/90%RH                      |
| <b>SENSITIVITY RANGE</b>     | 0.5~1500 PF  | <b>INSULATION MATERIAL</b>   | UPE (St'd) or PTFE (option)          |
| <b>SENSITIVITY ACCURACY</b>  | ±0.5PF   | <b>HOUSING MATERIAL</b>      | Aluminium alloy w/ epoxy or 316SS    |
| <b>HYSTERESIS WIDTH</b>      | ±0.15PF  | <b>CONDUIT CONNECTION</b>    | 1/2" NPT (F) or optional             |
| <b>CONTACT FORM</b>          | SPDT of relay type<br>NPN for optional versions      | <b>IMPACT LIMITATION</b>     | 10G at electrode                     |
| <b>CONTACT RATING</b>        | AC 250V 2A for st'd or other options                 | <b>VIBRATED LIMITATION</b>   | 2mm at 6000 wiggle / min             |
| <b>INSULATION RESISTANCE</b> | ≥100MΩ at DC 500V                                    | <b>ENCLOSURE CLASS</b>       | IP67 or Exd IIB T4/T6                |
|                              |  | <b>ELECTRICAL PROTECTION</b> | With a safety barrier for Exia grade |

## APPLICATIONS

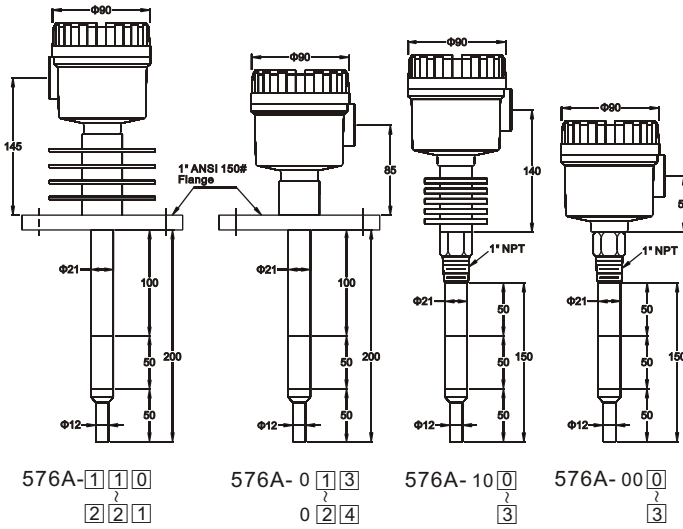
- **LIQUID** : For water fuel, solvent, acid, alkali, liquefied gas and others
- **MIXTURE** : Factory waste, sewage, agricultural chemicals, slurries, manufactured goods and solution
- **INTERFACE** : Oil, water, mercury in water, alcohol, acid, sediment in water, liquid and foam
- **FOAM** : Latex, beer, soap foam and others
- **VISCOUS** : Mud, sludge, excrements, tar, warnish, panit, grease, adhesive paste, soap, paraffin, cheese, honey and others
- **POWDER** : Plastic powder, slaked lime, carbon, oxide iron powder, dust, soil, sand, sugar, flour and others
- **GRANULOUS** : Plastic pellet, metal pellet, chemical fertilizer, medicine, grains, foods and others
- **LUPM** : Coal, caustic lime, ore gravel and others



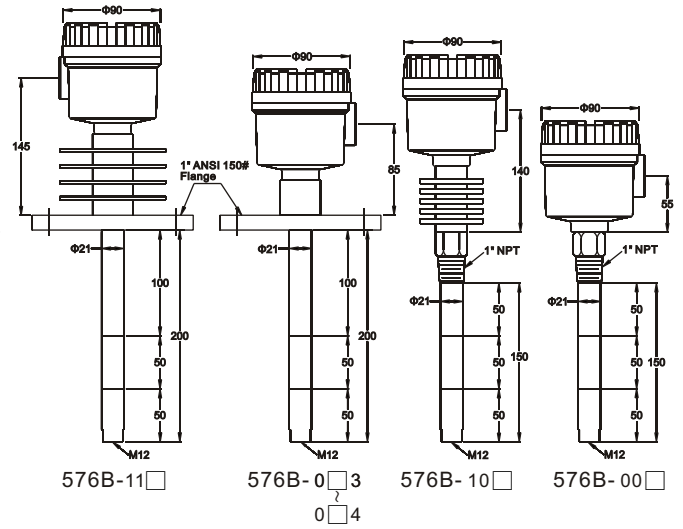
| ITEMS                              | CODE | SPECIFICATIONS   |   |                 |                     |
|------------------------------------|------|--|---|-----------------|---------------------|
| ① MODEL (PROBE TYPE)               | 576A | STANDARD PROBE TYPE (FOR GENERAL PURPOSE)                        |   |                 |                     |
|                                    | 576B | SCREW JOINT TYPE (FOR EXTENSIBLE ELECTRODE)                      |   |                 |                     |
|                                    | 576C | SMALL PROBE TYPE (AVAILABLE FOR FLOW SWITCH)                     |   |                 |                     |
|                                    | 576D | HEAVY LOAD TYPE (SUITABLE FOR GRANULOUS)                         |   |                 |                     |
|                                    | 576E | WIRE PROBE TYPE (SUITABLE FOR DEEP VESSEL)                       |   |                 |                     |
|                                    | 576F | SEPARATE TYPE (WITH A SAFETY BARRIER SUITABLE FOR Exia SYSTEM)   |   |                 |                     |
|                                    | 576G | TO BE SPECIFIED  |   |                 |                     |
| ② COOLING FIN                      | -0   | Not required (-20~80°C)  |   |                 |                     |
|                                    | -1   | Required (-20~200°C)   |   |                 |                     |
|                                    | -2   | Required (≥201~800°C, with ceramic insulated)                    |   |                 |                     |
|                                    | -3   | To be specified  |   |                 |                     |
| ③ PROCESS CONNECTION               | 0    | STANDARD (See table 2)   |   |                 |                     |
|                                    | 1    | To be specified  |   |                 |                     |
| ④ PROBE MATERIAL                   | CODE | CONNECTION   | GROUND  | INSULATION      | DETECTING ELECTRODE |
|                                    | 0    | 304SS  | 304SS   | UPE             | 304SS               |
|                                    | 1    | 316SS  | 316SS   | PTFE            | 316SS               |
|                                    | 2    | 304SS  | 304SS   | Ceramic         | 304SS               |
|                                    | 3    | 304SS  | UPE coating for anti-electrostatic / damp-proof |                 |                     |
|                                    | 4    | 316SS W/PVDF raised face   | PVDF coating for anticorrosive version          |                 |                     |
|                                    | 5    | To be specified  |   |                 |                     |
| ⑤ AMPLIFIER                        | CODE | POWER SUPPLY   |   | CONTACT OUTPUT  |                     |
|                                    | -A   | AC110 / 220 V  |   | SPDT AC 250V 2A |                     |
|                                    | -B   | AC110 / 220 V  |   | SPDT AC 250V 5A |                     |
|                                    | -C   | DC 24 V  |   | SPDT DC 30V 5A  |                     |
|                                    | -D   | DC 16~24 V   |   | NPN 100mA       |                     |
| ⑥ MATERIAL/ PROTECTION FOR HOUSING | A    | Aluminium alloy with epoxy coating (Standard), IP67              |   |                 |                     |
|                                    | B    | Aluminium alloy with epoxy coating (Standard), Exd II B T4, IP67 |   |                 |                     |
|                                    | C    | 316SS, IP67  |   |                 |                     |
|                                    | D    | 316SS, Exd II B T4   |   |                 |                     |
|                                    | E    | To be specified  |   |                 |                     |
| ⑦ CONDUIT CONNECTION               | A    | 1/2" NPT (F)   |   |                 |                     |
|                                    | B    | To be specified  |   |                 |                     |
| ⑧ INSERTION LENGTH                 | A    | Standard length (See table 2)                                    |   |                 |                     |
|                                    | B    | To be specified  |   |                 |                     |

Note : We accept tailor-made orders to meet your requirements or OEM/ODM.

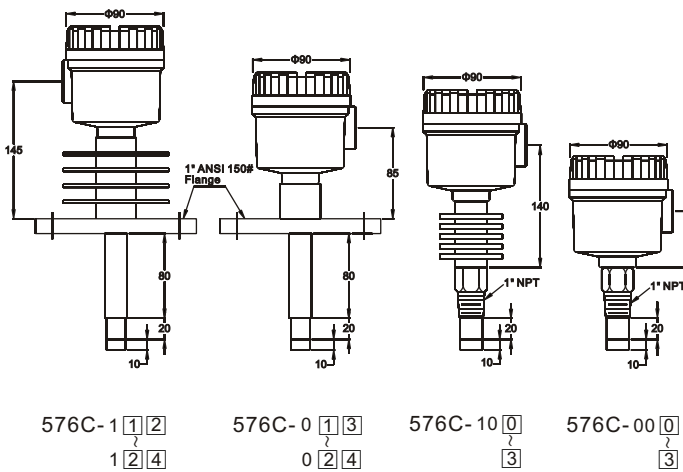
■ **576A STANDARD PROBE TYPE**



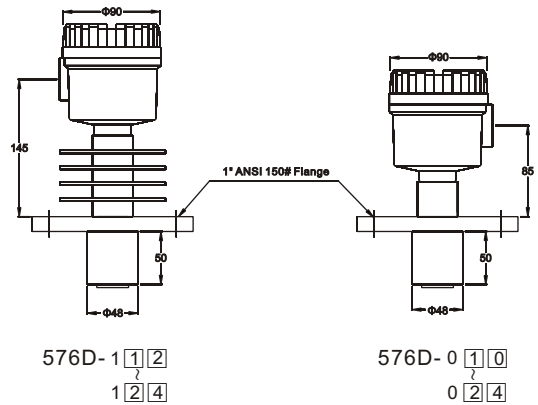
■ **576B EXTENSIBLE ELECTRODE TYPE**



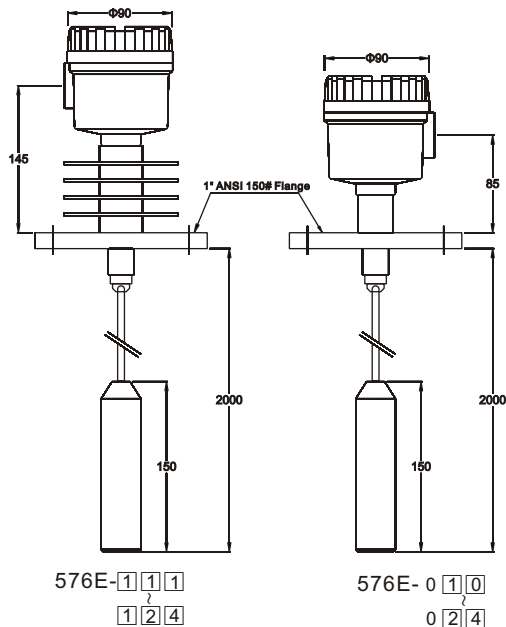
■ **576C SMALL PROBE TYPE**



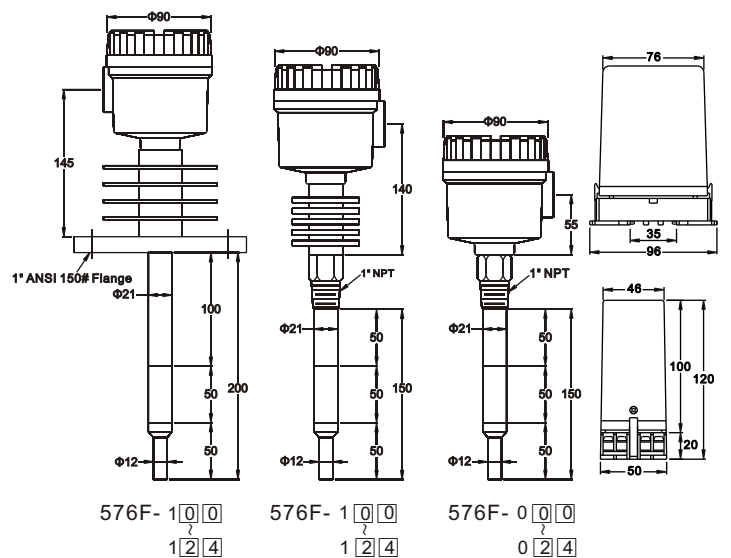
■ **576D HEAVY LOAD TYPE**



■ **576E WIRE PROBE TYPE**



■ **576F SEPARATE TYPE**  
Amplifier P/N : 354A



# INSTRUCTIONS

## SENSITIVITY CALIBRATION AT FIELD SITE

When installation is completed, ensure the wiring and ground are accurate before feeding the power.

### A. If the material level has not reached the induction electrode

- If the "LED" lights up, slowly adjust the "ADJ" screw toward "L" direction until the "LED" goes out. In this case, when the incoming material reaches the induction electrode, the "LED" lights up and control signal appears.
- If the "LED" does not light up, slowly adjust "ADJ" screw toward "H" direction until the "LED" lights up. Then slowly adjust the "ADJ" screw toward "L" direction and stop when the "LED" goes out. In the case, when the incoming material reaches the induction electrode, the "LED" lights up control signal appears.

### B. If the material level reaches induction electrode

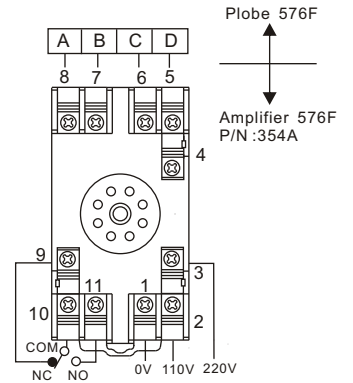
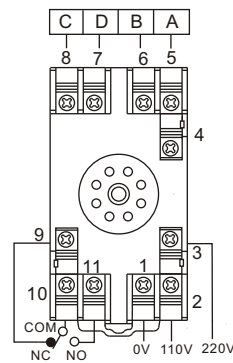
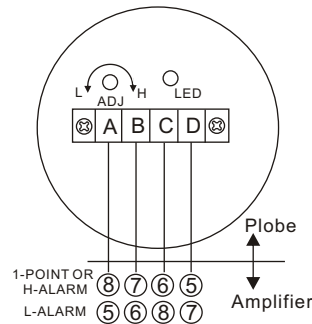
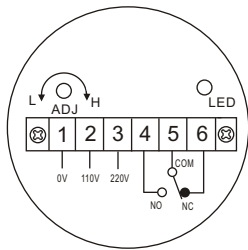
- If the "LED" lights up, slowly adjust the "ADJ" screw toward "L" direction until the "LED" goes out. Then slowly adjust the "ADJ" screw toward "H" direction and stop when the "LED" lights up. When the material level drops and the material does not touch the induction electrode the "LED" will go out and control signal appears.
- If the "LED" does not light up, slowly adjust the "ADJ" screw toward "H" direction until the "LED" lights up. When the material level drops and the material leaves induction electrode, the "LED" will go out and control signal appears.

Probe of 576A/B/C/D/E

Probe of 576F

L-ALARM

1-POINT OR H-ALARM

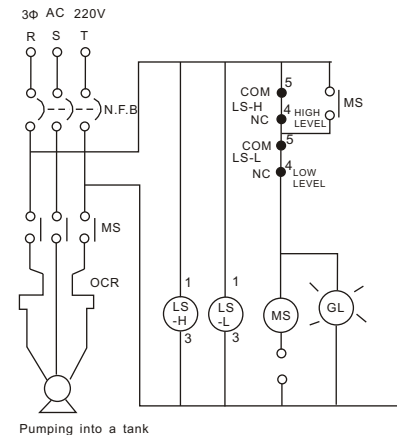
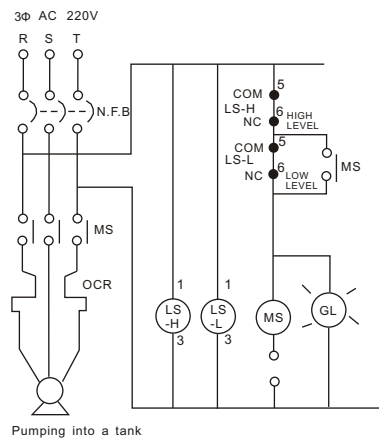
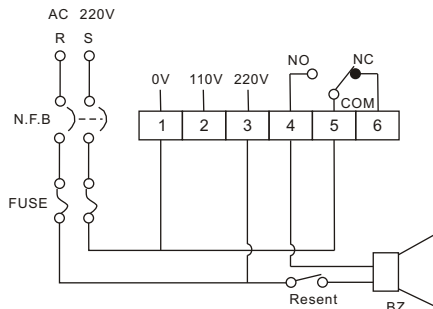


## EXAMPLE FOR SYSTEM WIRING OF TYPE 576A/B/C/D/E

SUITABLE FOR ALARM

REFILLING FOR EMPTY TANK

H/L LEVEL CONTROL FOR PUMPING OUT



The specifications are subject to change without prior notice.

## DOERS TECHNOLOGY CORPORATION

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