

**WATER SUPPLIES DEPARTMENT**  
**STANDARD SPECIFICATION E-86-41**  
**SUBMERSIBLE LEVEL TRANSMITTERS**

1. GENERAL

Submersible level transmitters are used to measure water levels of service reservoirs or header tanks in terms of water pressure and translate the measured signals into electrical signals that are suitable for transmission and processing.

2. DESIGN

The equipment shall meet the following design requirements :-

2.1 Submersible Level Transmitter

Transducer	:	Strain gauge technology
Accuracy	:	Better than $\pm 0.3\%$ of calibrated span, including combined effects of linearity, hysteresis, repeatability and temperature compensation
Input range	:	Water pressure of range specified in the Particular Specification
Output range	:	4 – 20mA d.c. proportional to the water pressure
Overpressure	:	150% of nominal immersion range
Operating temperature	:	-10 to 60 °C
Enclosure protection	:	IP68

2.2 Power Supply Unit

The power supply unit for the submersible level transmitter shall comply with WSD Standard Specification E-86-03.

3. CONSTRUCTION

The casing of the submersible level transmitter shall be made of stainless steel for fresh water and Hastelloy C, or equivalent, for salt water applications. The requirement of the cable insulation material shall be up to the standard that is suitable for both fresh water and salt water applications.

#### 4. EQUIPMENT PARTICULARS

The contractor should refer to the Particular Specification for the following particulars of the equipment :-

- (a) Contact fluid : Fresh water / Salt water
- (b) Measuring range
- (c) Cable length