



TEMPERATURE SENSOR 3444

A platinum sensor for water and soil temperature measurements

The Temperature Sensor 3444 is designed for water and soil temperature measurements but it is also well suited for measuring temperature in most liquids because of the physical properties of the stainless steel it is made of. It can be installed in tanks or molded into concrete structures for monitoring purposes.

The sensor is intended for use with Aanderaa sensor scanning and reading units.

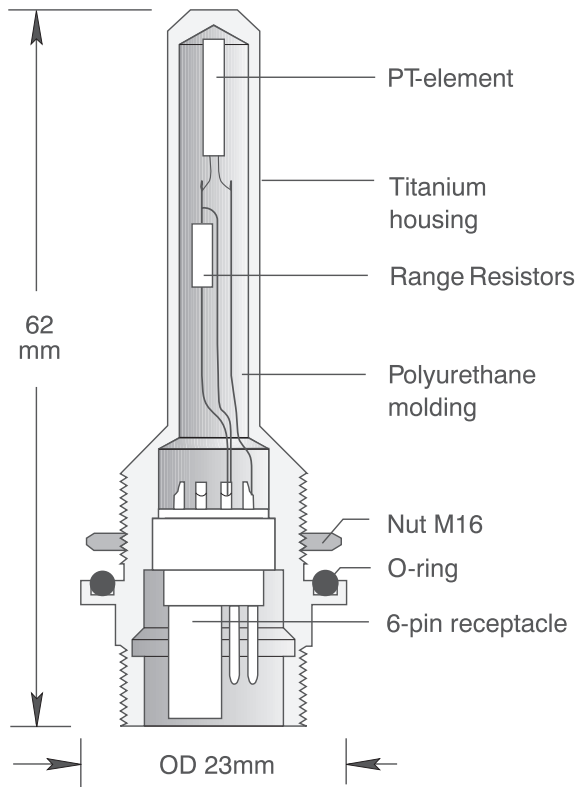
The sensor consists of a titanium probe with the platinum element and range resistors inside. It is 62mm long with a 6-pin watertight receptacle in one end. The sensor has a flange with an O-ring and nut for chassis mounting and watertight installation in tanks. The mating plug has part number 2828A.

The sensor is based on the ohmic half-bridge principle (VR-22) and employs a 2000 Ω film-type platinum resistor as the sensing element. Standard temperature ranges are -7.5 to +41°C, -30 to +60°C and -60 to +30°C. Other ranges are available on request.

Standard sensor cables in different lengths of up to 500 meters are available. For cables longer than 75 meters however, the wire resistance will influence the measurements and must be corrected for (see overleaf).

Cables exceeding 10 meters in length should be shielded or kept as close to the ground as possible to avoid pick-up of atmospheric electricity.

SPECIFICATIONS FOR TEMPERATURE SENSOR 3444



Measuring Ranges:

Part No. 3444:	-7.5 to +41°C
" 3444A:	-30 to +60°C
" 3444B:	-60 to +30°C
" 3444S:	to °C

Sensing Element:

Range Resistor: Pt 2000

R1: R2:

Part No. 3444:	2120Ω	Pt2000 + 0Ω
" 3444A:	4020Ω	Pt2000 + 1920Ω
" 3444B:	3985Ω	Pt2000 +
" 3444S:	2120Ω	Ω Pt2000 + Ω

Resolution:

0.1% of range

Accuracy:

±0.1% of range

Sensor Output:

Aanderaa half-bridge (VR-22)

Time Constant (63%):

In water: 12 seconds

Electrical Connection:

Watertight Plug 2828A

Material and Finish:

Titanium and polyurethane

Degree of Protection:

IP68

Net Weight:

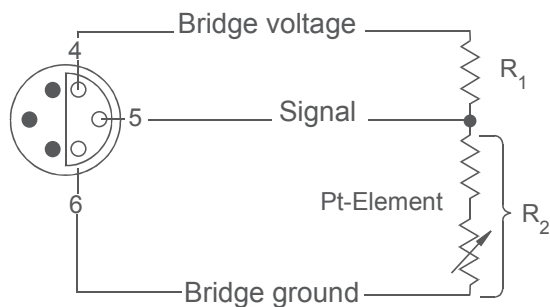
25 grams

Warranty:

Two years against faulty materials and workmanship

Circuit Diagram

Receptacle, exterior view; pin = ●; bushing = ○



Connecting Cable 2842 (a 10 meter cable with Watertight Plugs), is available for connecting this sensor to Aanderaa data-logging systems. Other lengths, or separate plugs and cables, are available on request. If connecting cables longer than 75 meters for the 3444 or 150m for the 3444A or B are used, the reading N should be corrected for cable resistance. Add a correction factor for each 10 meters of Cable 2842 as follows: (N-512)x0.00023 for the 3444 sensor and (N-512)x 0,00011 for the 3444A and 3444B sensors.



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