

Model 4482 Waterproof Temperature Probe and Mounting Assembly

User's Manual



CONTENTS

INTRODUCTION	1
SPECIFICATIONS.....	1
INSTALLATION	1
THEORY OF OPERATION.....	1
CALIBRATION.....	2
MAINTENANCE.....	2
WARRANTY	2
PARTS LIST	3

INTRODUCTION

The automatic measurement of the temperature of water in evaporation pans is facilitated by the Waterproof Temperature Probe and Mounting Assembly Model 4482. The Model 4482 consists of a Model 4485 temperature probe and a mounting assembly. The probe is a waterproof thermistor temperature probe with a 50-foot cable attached. Refer to the Model 4485 manual for detailed information. The mounting assembly attaches to the side of the evaporation pan to hold the temperature probe in place and shield it from direct sunlight.

The Model 4482 provides a convenient, easy method for obtaining evaporation station water temperature data at automated stations. The Model 4482 may also be used in other situations where water temperature measurement is required and the mounting assembly is suitable.

SPECIFICATIONS

Probe	Model 4485
Probe type	Thermistor, 4 wire
Cable length	50 ft. (15 m)
Cable type	4-conductor, 18 AWG , shielded with neoprene jacket
Mounting base	Plexiglas with steel clamp
Mounting base size	2" W x 8.5" L (51 x 216 mm)
Weight/Shipping	5 lbs/10 lbs (2.3 kg/4.5 kg)

INSTALLATION

The Model 4482 is shipped either fully or partially assembled. If the unit is fully assembled, simply attach the hanger clamp onto the side of an evaporation pan and tight en down the clamping screw. Refer to installation drawing number 4482-007.

If the unit is shipped with the Model 4485 probe unattached to the mounting assembly, attach the probe by removing the two screws from the cable clamps. Spread open the clamps and place them onto the probe cable near the probe. Position the clamps so that when the screws are reinstalled the tip of the probe is centered beneath the white plastic shield. The tip of the probe should not extend beyond the lower edge of the shield.

Route the cable over the edge of the pan and to the monitoring equipment in the safest, most direct manner possible. The cable can be buried in the soil, if necessary. The best method for cabling is to run the cable inside metal or plastic conduit with the conduit buried 18 to 24 inches beneath the surface to protect against accidental damage.

Refer to manual 4485-001 for electrical connections for the temperature probe.

THEORY OF OPERATION

The Model 4482 Waterproof Temperature Probe and Mounting Assembly is designed to allow automatic, electronic monitoring of evaporation pan water temperature, eliminating the requirement for daily, manual readings of mercury thermometers.

The mounting assembly is designed to mount on the side of classic stainless steel evaporation pans. The probe, Model 4485, is supported by two steel clamps to prevent the probe from drifting into the sunlight or settling onto the bottom of the pan.

The Model 4485 probe is a precision linear thermistor probe, similar to the Model 4480, and is suitable for use with All Weather Inc. modules and data acquisition systems.

CALIBRATION

Calibration of the Model 4482 is not required. Refer to manual 4485-001 for calibration information regarding the temperature probe.

MAINTENANCE

Maintenance of the Model 4482 assembly is limited to the removal of mineral deposits and corrosion due to the evaporation of the water. Examine the mounting hardware regularly and replace any damaged or corroded parts.

WARRANTY

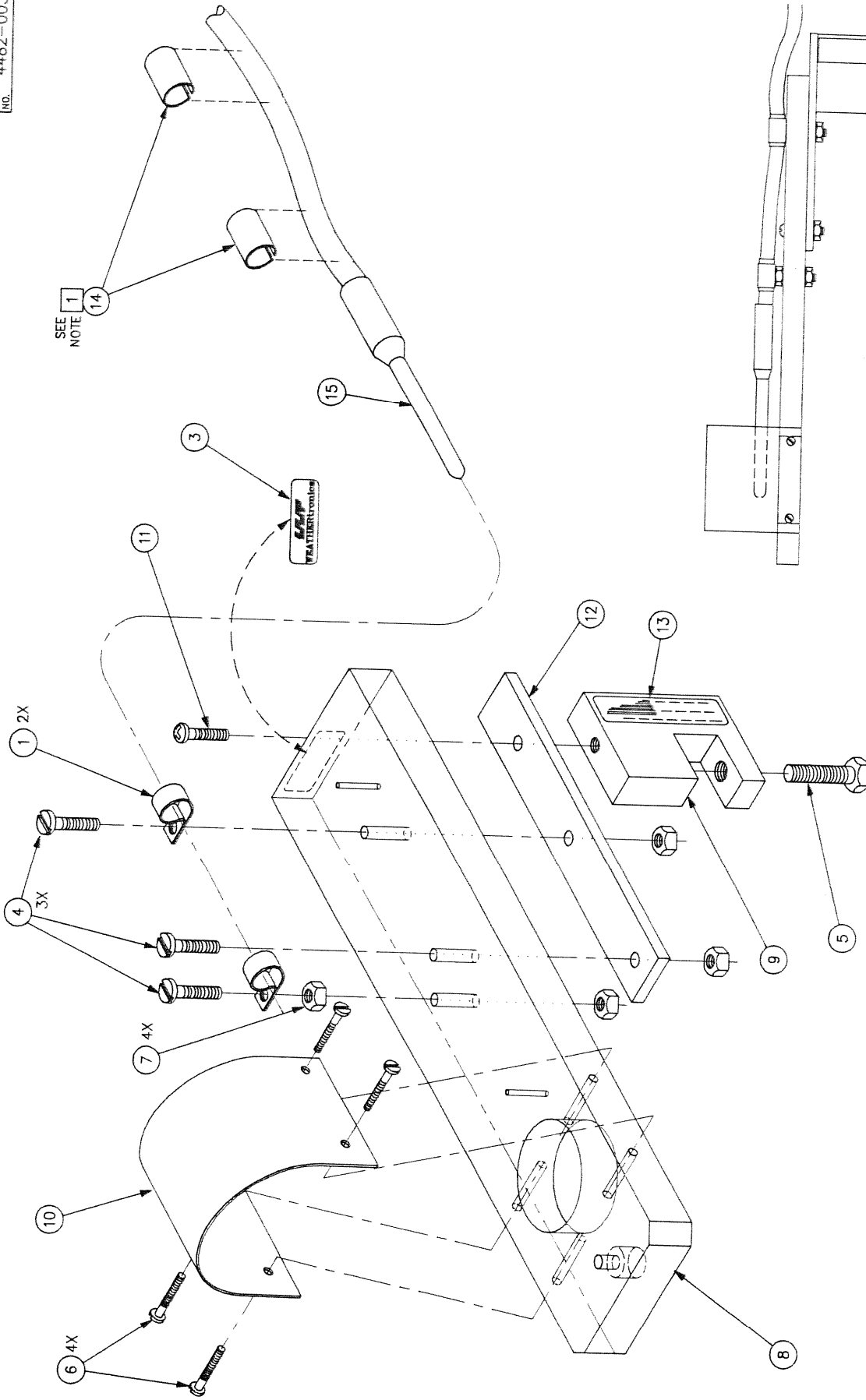
Unless specified otherwise, All Weather Inc. (the Company) warrants its products to be free from defects in material and workmanship under normal use and service for one year from date of shipment, subject to the following conditions:

- (a) The obligation of the Company under this warranty is limited to repairing or replacing items or parts which have been returned to the Company and which upon examination are disclosed, to the Company's satisfaction, to have been defective in material or workmanship at time of manufacture.
- (b) The claimant shall pay the cost of shipping any part or instrument to the Company. If the Company determines the part to be defective in material or workmanship, the Company shall prepay the cost of shipping the repaired instrument to the claimant. Under no circumstances will the Company reimburse claimant for cost incurred in removing and/or reinstalling replacement parts.
- (c) This warranty shall not apply to any Company products which have been subjected to misuse, negligence or accident.
- (d) This warranty and the Company's obligation thereunder is in lieu of all other warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, consequential damages and all other obligations or liabilities.

No other person or organization is authorized to give any other warranty or to assume any additional obligation on the Company's behalf, unless made in writing and signed by an authorized officer of the Company.

DRAWINGS AND PARTS LIST

The following pages include assembly drawings and parts list for this instrument. Please note that the parts lists are arranged in assembly/subassembly form. Each subassembly is listed on a separate page. Subassemblies and parts are listed in the smallest economical size available from All Weather Inc.



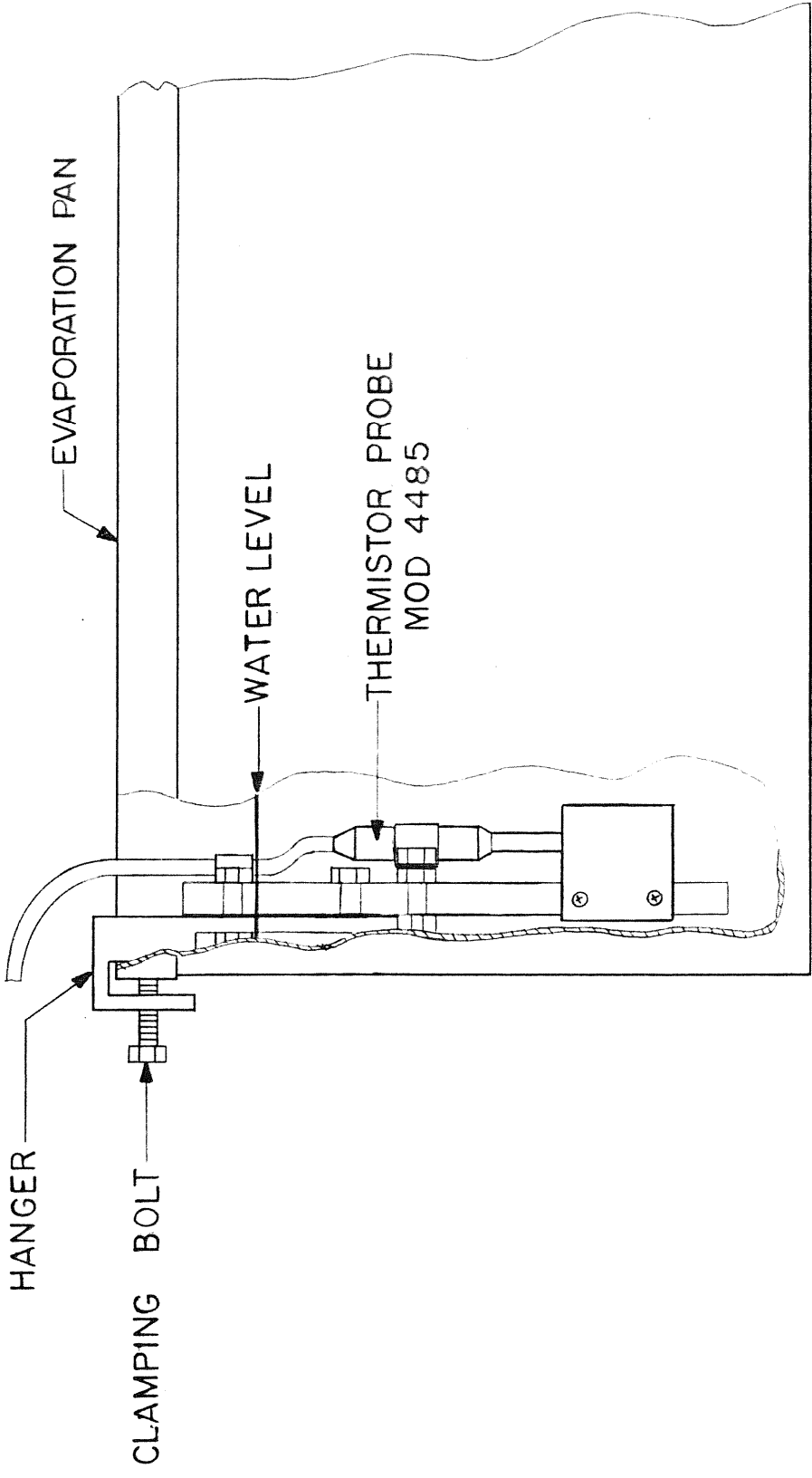
SEE NOTE 1

DETAIL 'A'
ASSEMBLED VIEW

NOTES:

- 1 CUT RUBBER SLEEVE, 14 INTO TWO EQUAL PARTS TO USE UNDER CLAMPS, 6.

REV	ECN	DATED	QTY	NEXT ASSY	TOLERANCES UNLESS OTHERWISE NOTED XX=±.005 XX=±.010 FRACTIONS=±.02 ANGLES ±1/2° CONCENTRICITY=.003 TIR
A	2767	3/88			MATL
					FINISH
					ENGR (RA)
					APPROVED
					DT 3/3/88
					DT
SEE BILL OF MATERIAL					SCALE DWG. NO.
ASSEMBLY, TEMPERATURE PROBE AND BASE					BY M/MDL
Weather Measurements WEATHER Electronics Division of QUALTRONICS, Inc.					SHEET 1 OF 1
MOD. USAGE 4482					DWG. NO. 4482-003
DATE 3-2-88					NONE
TITLE					C



REV	ECN	DATED	QTY	NEXT	ASM
B	2546	5/5/86			
<p>TOLERANCES UNLESS OTHERWISE NOTED: XXX = ± .005 XX = ± .010 FRACTIONS = ± .02 ANGLES ± 1/2° CONCENTRICITY = .003 TIR</p>					
MATL					
FINISH					
ENGR		APPRO		DT 8/12/83	
ENGR		APPRO		DT	
<p>QUALIMETRICS, Inc. WEATHERMEASURE / WEATHERTRONICS Instruments and Systems Division 3213 Orange Grove Avenue Sacramento, California 95660 U.S.A.</p>					
NOMENCLATURE INSTALLATION					
THERMISTOR PROBE, EVAPORATION PAN					
MOD. USAGE 4482				SHEET 1 OF 1	
BY GT		SCALE Ø		DWG NO. 4482-007 A	
DT 8-12-83					

QUALIMETRICS, INC.
BILL OF MATERIALS LISTING

03/11/88
PAGE 1

MASTER PART # 4482-
DESCRIPTION WATERPROOF TEMP PROB

COMPONENT PART # \ DESCRIPTION	QTY	REFERENCE
ASM- ASSEMBLY DRAWING	0	4482-007, 4482-003
ECN- ENGR CHANGE NUMBER	0 2767	
MAN- MANUAL	1	4482-001
4485- UNDERWATER TEMPERATURE THERMISTOR PROBE	1	15
M005005- MS 5-40 X 3/8 PAN HD S. S. PHIL DR.	4	6
M010017- MS 10-32 X1-0/0 BND HD S. S. SLOT 'D	3	4
M102814- HANGER, EVAPORATION PAN	1	9
M428010- SLEEVE, CABLE .222/.438	1	14
T280072- CLAMP METAL 1/2 IN. DIA. WITH PLAS COVER	2	1
T430006- ALUM LABEL WTRNCS	1	3
T430043- SERIAL TAG 0.5X1.7 QUALIMETRICS	1	13
T720405- SCREW CAP 1/4X20X1SS	1	5
T720857- SCREW, PHMS 8-32	1	11
T722111- NUT 10-32 HEX SS	4	7
T800273- BASE MODIFIED FOR 4482	1	8
T800276- BRACKET, PROBE MOUNTING	1	12

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BILL OF MATERIALS LISTING

03/11/88
PAGE 2

MASTER PART # 4482-
DESCRIPTION WATERPROOF TEMP PROB

COMPONENT PART # \ DESCRIPTION	QTY	REFERENCE
T801913- RAD SHLD MX/MN THERM	1	10



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4482-001
ECN 2546