



MODEL 58101
WETNESS DETECTOR

INSTRUCTION SHEET 58101-90
REV 8-95

INTRODUCTION

The Wetness Detector detects the presence of liquid precipitation or dew on a leaflike detector grid. Ordinary surface contaminants on the detector grid and electrolytes in rain allow sufficient electrical conduction for a simple ON-OFF indication of wetness.

The threshold of wetness detection on the grid is not completely characterized. The device has been shown empirically to work under ordinary rainfall and dew conditions.

INSTALLATION

Mount the unit with the detector grid facing skyward but sloping 45° to the ground. Do not apply waxes or other surface treatments to the detector grid since this could adversely affect its detection capability.

OPERATION

An adjustable voltage output indicates the wetness condition. This voltage is NOT proportional to the amount of wetness, it is simply an ON-OFF indicator. The output voltage may be measured as a digital or analog value giving great flexibility in connecting to data collecting/measuring equipment. Typically, for digital measurement, the ON output is set for 5 VDC. For analog measurement, 1 VDC or 5 VDC may be chosen. The OFF condition is represented by 0 VDC.

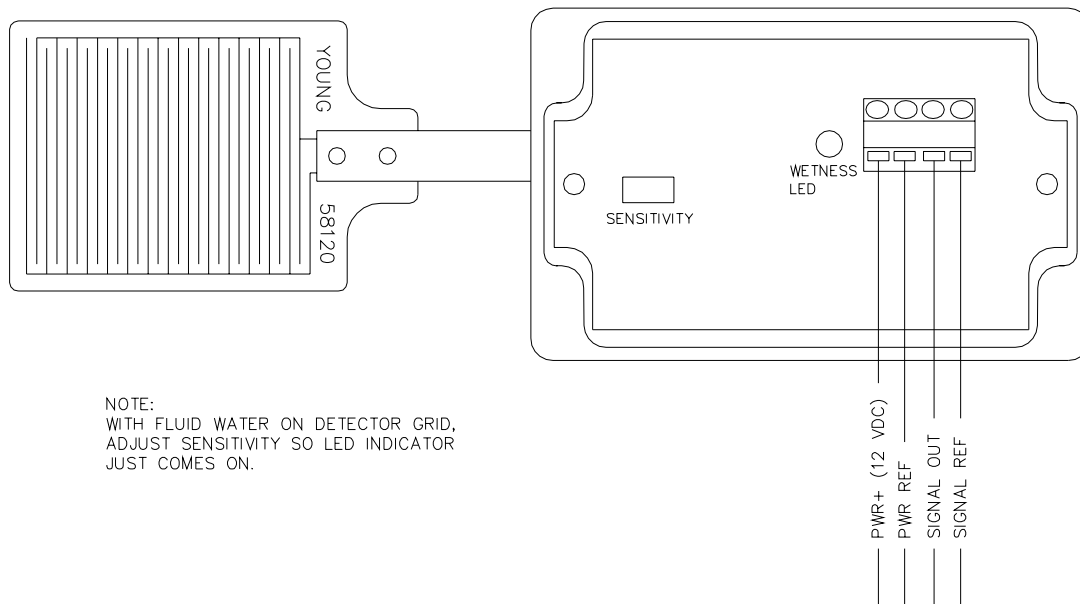
To determine the proportion of time a wetness condition exists over some period, integrate the digital or analog values measured during that period.

MAINTENANCE

The grid is gold plated to minimize corrosion and AC excitation voltage is used to minimize electrolysis. Use distilled water and tissue to clean as needed.

SPECIFICATIONS

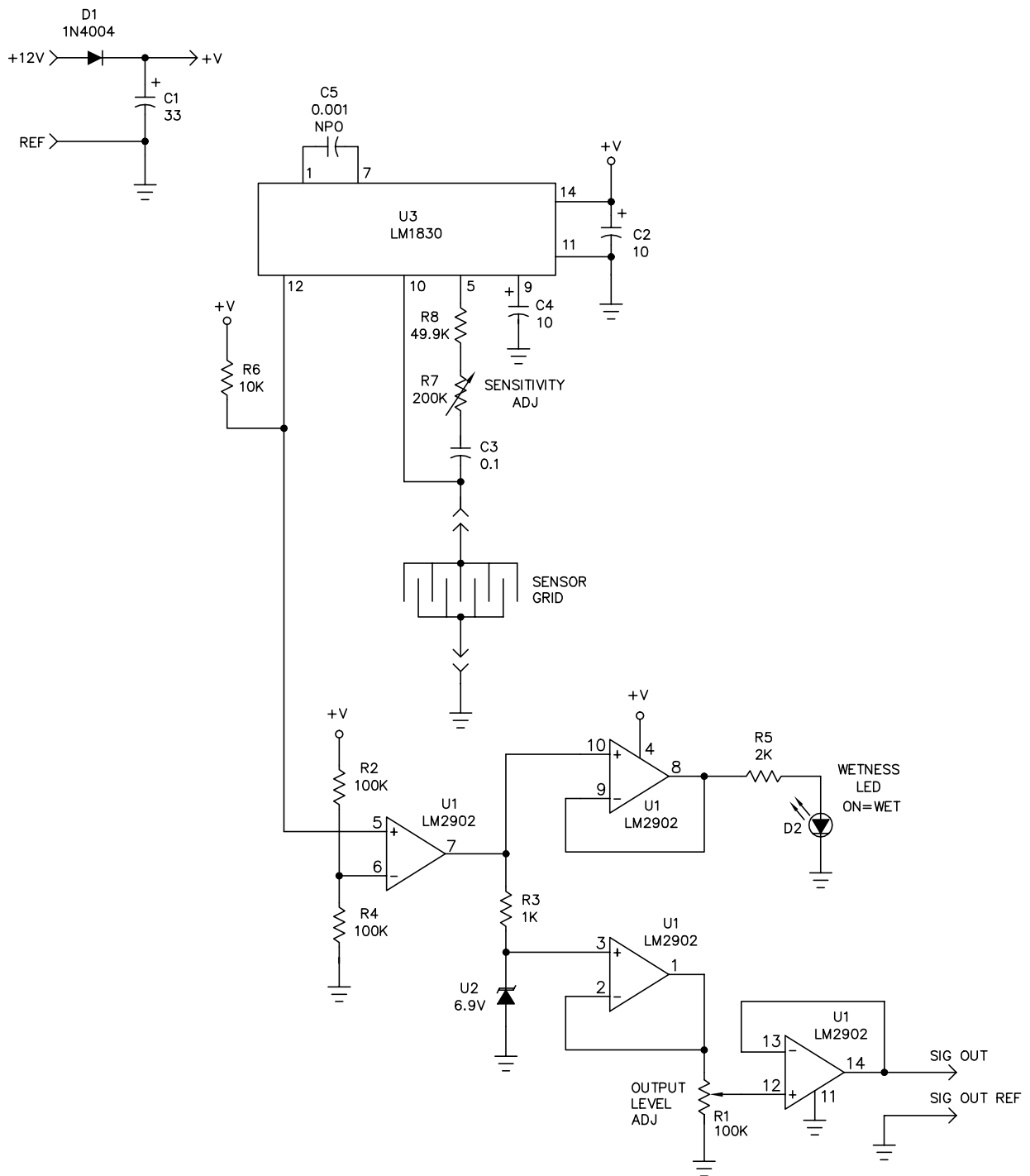
- Power Requirement:** 8 - 24 VDC
6 mA @ 12 VDC - Wetness ON
12 mA @ 12 VDC - Wetness OFF
- Operating Temperature:** 0 to 50° C
32 to 104° F
- Outputs:** 0V OFF 5V ON (STANDARD)
0V OFF 1V ON
- Dimensions:**
 - Housing:** 110 mm (4.33 in) w x 75 mm (2.95 in) h x 60 mm (2.36 in) d
 - Detector Grid:** 64 mm (2.5 in) w x 51 mm (2.0 in) d
Grid spacing 1.9 mm (.075 in)
Bracket with U-Bolt fits pipe 1'-2' DIA.
- Mounting:** vertical



NOTE:
WITH FLUID WATER ON DETECTOR GRID,
ADJUST SENSITIVITY SO LED INDICATOR
JUST COMES ON.



MODEL 58101 WETNESS DETECTOR CIRCUIT SCHEMATIC



MODEL 58101	DWG B	PRD 01/93
WETNESS DETECTOR	DWN KL	DWN 08/95
WIRING DIAGRAM	CHK	W58101
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