ZI-1164 REV. 1

MODEL 3275 LIGHT SENSOR

PRODUCT DESCRIPTION:

Model 3275 is a light sensor to control outdoor or indoor lighting loads. It generates voltage signal levels compatible to 3282 temperature sensor for direct read out of 0 to 230 foot candles. (Foot candle is a measure of light level.)

The Model 3275 does not require any external power supply and being a two terminal device it is easy and economical to install and use. It offers the user the ability of automatically switching lighting loads based on ambient light levels (0 to 230 foot candles). It enhances time of day programming operation by turning lighting loads on and off based on ambient light levels contributing to additional energy savings.

OPERATION:

The light sensor generates varying voltage output responding to visible light levels. As the ambient light goes up, so does the output voltage reading accordingly. During day time, or inclement weather, the sensor will permit the controller to turn lighting loads on based on the controllers program and light levels received.

The 3275 light sensor is designed for use in areas illuminated by florescent light with intensity less than 150 foot candles. When used with other light sources, primarily those with a high infra-red content, the foot-candle reading from the sensor will be inaccurate.

The 3275 may still be used outdoors for lighting control applications, however. During daylight hours, sunlight will cause the sensor to oversaturate and continually read maximum intensity, but at dusk the sensor reading will change in accordance with the decreasing light. The sensor reading will not necessarily provide an accurate foot-candle measurement of the outdoor light, but the reading can still be used to trigger outside building lights.

ZI-1164 REV. 1

SPECIFICATIONS:

Input voltage:	8 to 20 VDC where current is limited to 1mA DC
Output voltage:	See Table 1
Operating Temp:	-20° to +150°F

INSTALLATION:

Locate the 3275 sensor so that the light entrance is exposed to ambient light that is to be measured. For outside use do not locate near a light source.

The photo control is designed to be water resistant (but not water proof), by the gasket around the clear plastic cover.

PROGRAMMING

Please note that analog offset values can be programmed into the controllers if any discrepancy is noticed between actual ambient light measured compared to the value displayed by the Micromizer or Clipper controller. The 3275 can be used to enhance time of day programming by turning lighting loads on and off thus providing additional lighting load "ON TIME" reductions. For indoor applications, (especially for areas which receive plenty of sunlight during daytime hours) groups of lights can be shut down and still meet light requirements for these areas.

Example: Parking garage lights to be turned "ON" when ambient light goes below 5 foot candles and "OFF" when it exceeds 30 foot candles. If sensor is attached directly to analog input sensor #3 and Load #5 is being controlled between 3:30 pm and 10:30 pm.

Load 6

Everyday (Holiday)

3:30 PM

Analog Control

3 Sensor

30 OFF

5 ON

Everyday (Holiday)

10:30 PM OFF

NOTE: In order to minimize the effect of temporary fluctuations of ambient light conditions it may be advisable to average the sensor readings over a few minutes before load status is determined. Refer to controller manual for Averaging Period (AP) programming explanation. Another possible solution may be to program minimum on or off times for the particular load. Refer to controller manual for minimum ON/OFF time programming.

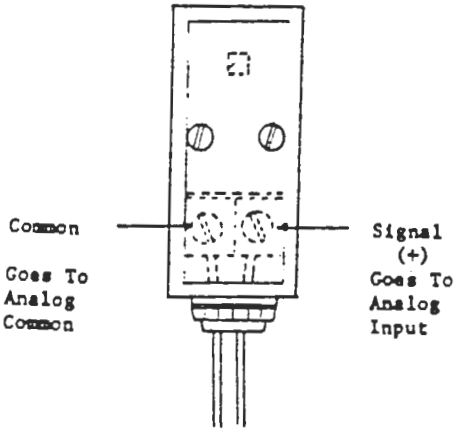

Fig. 1

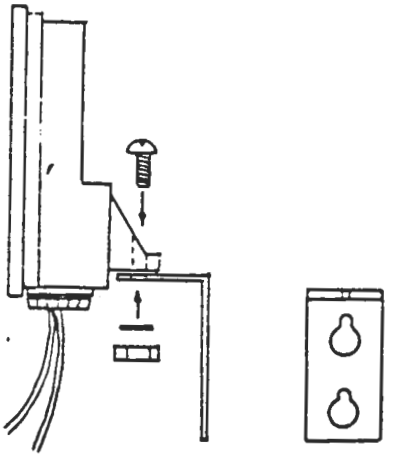

Fig. 2

TABLE I

TABLE OF TEMPERATURE SENSOR VOLTAGE VS. FOOT-CANDLE READOUT

Foot Candles	Sensor Voltage	Foot Candles	Sensor Voltage	Foot Candles	Sensor Voltage	Foot Candles	Sensor Voltage
0	2.554	58	2.876	116	3.198	174	3.520
1	2.559	59	2.882	117	3.204	175	3.526
2	2.565	60	2.887	118	3.209	176	3.532
3	2.570	61	2.893	119	3.215	177	3.537
4	2.576	62	2.898	120	3.220	178	3.543
5	2.582	63	2.904	121	3.226	179	3.548
6	2.587	64	2.909	122	3.232	180	3.554
7	2.593	65	2.915	123	3.237	181	3.559
8	2.598	66	2.920	124	3.243	182	3.565
9	2.604	67	2.926	125	3.248	183	3.570
10	2.609	68	2.932	126	3.254	184	3.576
11	2.615	69	2.937	127	3.259	185	3.582
12	2.620	70	2.943	128	3.265	186	3.587
13	2.626	71	2.948	129	3.270	187	3.593
14	2.632	72	2.954	130	3.276	188	3.598
15	2.637	73	2.959	131	3.282	189	3.604
16	2.643	74	2.965	132	3.287	190	3.609
17	2.648	75	2.970	133	3.293	191	3.615
18	2.654	76	2.976	134	3.298	192	3.620
19	2.659	77	2.982	135	3.304	193	3.626
20	2.665	78	2.987	136	3.309	194	3.632
21	2.670	79	2.993	137	3.315	195	3.637
22	2.676	80	2.998	138	3.320	196	3.643
23	2.682	81	3.004	139	3.326	197	3.648
24	2.687	82	3.009	140	3.332	198	3.654
25	2.693	83	3.015	141	3.337	199	3.659
26	2.698	84	3.020	142	3.343	200	3.665
27	2.704	85	3.026	143	3.348	201	3.670
28	2.709	86	3.032	144	3.354	202	3.676
29	2.715	87	3.037	145	3.359	203	3.682
30	2.720	88	3.043	146	3.365	204	3.687
31	2.726	89	3.048	147	3.370	205	3.693
32	2.732	90	3.054	148	3.376	206	3.698
33	2.737	91	3.059	149	3.382	207	3.704
34	2.743	92	3.065	150	3.387	208	3.709
35	2.748	93	3.070	151	3.393	209	3.715
36	2.754	94	3.076	152	3.398	210	3.720
37	2.759	95	3.082	153	3.404	211	3.726
38	2.765	96	3.087	154	3.409	212	3.732
39	2.770	97	3.093	155	3.415	213	3.737
40	2.776	98	3.098	156	3.420	214	3.743
41	2.782	99	3.104	157	3.426	215	3.748
42	2.787	100	3.109	158	3.432	216	3.754
43	2.793	101	3.115	159	3.437	217	3.759