by Schneider Electric

INSTALLATION

Spectra® Mini Dome

C3401M-D (3/09)

Contents

Important Safety Instructions 3

Regulatory Notices 4

Description 5
- Models 5

Before You Begin 6
- Package Contents 6
- Switch Settings 7
- Wiring Tables 16

Installation 17
- Surface Mount 17
- Recessed 19

Maintenance 22
- Data Port 22

Specifications 23

REVISION HISTORY

Manual #	Date	Comments
C3401M	12/05	Original version.
C3401M-A	1/06	Added warning about over-tightening mounting hardware.
C3401M-B	6/06	Updated model numbers and specifications to include black models.
C3401M-C	8/08	Added operating temperature range to specifications.
C3401M-D	3/09	Revised per CN21990 to include spring paddle flex assembly.

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
6. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
7. Only use attachments/accessories specified by the manufacturer.
8. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
9. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
10. Installation should be done only by qualified personnel and conform to all local codes.
11. Unless the unit is specifically marked as a NEMA Type 3, 3R, 3S, 4, 4X, 6, or 6P enclosure, it is designed for indoor use only and it must not be installed where exposed to rain and moisture.
12. Use only installation methods and materials capable of supporting four times the maximum specified load.
13. Use stainless steel hardware to fasten the mount to outdoor surfaces.
14. To prevent damage from water leakage when installing a mount outdoors on a roof or wall, apply sealant around the bolt holes between the mount and mounting surface.
15. **CAUTION:** These servicing instructions are for use by qualified service personnel only. To reduce the risk of electric shock do not perform any servicing other that contained in the operating instructions unless you are qualified to do so.
16. Only use replacement parts recommended by Pelco.

The product and/or manual may bear the following marks:

This symbol indicates that dangerous voltage constituting a risk of electric shock is present within this unit.

This symbol indicates that there are important operating and maintenance instructions in the literature accompanying this unit.

CAUTION:
RISK OF ELECTRIC SHOCK. DO NOT OPEN.

Regulatory Notices

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

RADIO AND TELEVISION INTERFERENCE

This equipment has been tested and found to comply with the limits of a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that the interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

You may also find helpful the following booklet, prepared by the FCC: "How to Identify and Resolve Radio-TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington D.C. 20402.

Changes and Modifications not expressly approved by the manufacturer or registrant of this equipment can void your authority to operate this equipment under Federal Communications Commission's rules.

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Description

The Spectra® Mini is an indoor dome system designed for ceiling applications. The dome can be mounted to the surface of ceilings, or it can be recessed in hard ceilings or standard 2 x 2 ft (61 x 61 cm) tiles in suspended ceilings. The Spectra Mini includes a high resolution color camera; video output capability through either coaxial cable or UTP wiring; pan/tilt control using Pelco D, Pelco P, or Coaxitron® protocol; and on-screen programming.

A translator board can be installed on the dome for communication with non-Pelco controllers. The dome is compatible with the following translator boards:

TXB-AD	Translator board for American Dynamics™ controllers
TXB-B	Translator board for Philips® (Burle) controllers
TXB-S422	Translator board for Sensormatic® controllers
TXB-V	Translator board for Vicon™ controllers

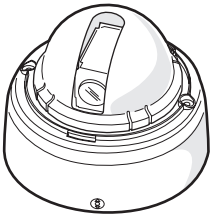
MODELS

SD4-B0	Indoor dome system, black, smoked bubble, NTSC
SD4-B1	Indoor dome system, black, clear bubble, NTSC
SD4-B0-X	Indoor dome system, black, smoked bubble, PAL
SD4-B1-X	Indoor dome system, black, clear bubble, PAL
SD4-W0	Indoor dome system, white, smoked bubble, NTSC
SD4-W1	Indoor dome system, white, clear bubble, NTSC
SD4-W0-X	Indoor dome system, white, smoked bubble, PAL
SD4-W1-X	Indoor dome system, white, clear bubble, PAL

Before You Begin

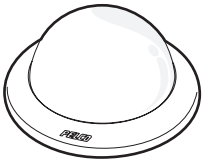
PACKAGE CONTENTS

The following diagram shows the box contents. When installing the Spectra Mini dome, refer to this diagram.



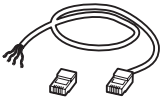
DOME DRIVE

SPRING PADDLE FLEX ASSEMBLY



TRIM RING AND BUBBLE

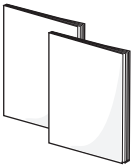
TRANSLATOR BOARD COVER



INTERFACE CABLE AND RJ45-10 CONNECTOR

MACHINE SCREWS, #8-32 X 3.5-INCH 2 EA.

SELF-TAPPING SCREWS, 3.5-INCH, 1.5-INCH 2 EA.



INSTALLATION MANUAL

OPERATION/PROGRAMMING MANUAL

Figure 1. Package Components

The following parts, in addition to normal installation tools, are needed but not supplied:

Qty	Description
1	Small flashlight for viewing switches
1	Long-handled flat-blade screwdriver (for setting switches)
2	Toggle bolts, 6-32 (for surface mount installation)
2	Studs and nuts, 8-32 (for surface mount installation to concrete)

SWITCH SETTINGS

Coaxitron control: If you are going to use Coaxitron protocol to communicate with the dome system, you do not have to set any switches. Proceed to the installation instructions that follow this section.

Non-Pelco control: If you are going to install a protocol translator board to communicate with the dome system through a non-Pelco controller, proceed to the installation instructions that follow this section. When you are instructed to install the translator board, you will set the switches as described in the installation/operation manual that accompanies the translator board.

Pelco D or Pelco P control: If you are going to use Pelco D or Pelco P protocol to communicate with the dome system, follow the steps below to set the switches (refer to Figure 10).

⚠ **WARNING:** Do not remove the dome liner (refer to Figure 2). Replacing the dome liner requires qualified service personnel; otherwise, the dome drive may not operate properly.

1. Place the dome drive on a flat surface with the dome liner pointing up.
2. Point the camera straight up.
3. Using a flashlight, look straight down through the viewing slot of the dome liner. Look at the circuit board in the bottom of the housing. Rotate the dome liner until you see two DIP switches on the circuit board.
4. Set the switches (refer to Table A and Table B on page 8 and Table C on page 9). There are no settings for SW1.

NOTE: The unit automatically detects Pelco D or Pelco P protocol.

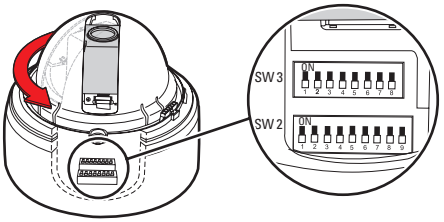


Figure 2. Switch Location

Table A. Switch Settings for SW2

Special Systems									
Switch Number	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	SW2-9
AD-32 Preset System	ON								
CM9502 Setting		ON							
Baud Rate									
Switch Number	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	SW2-9
2400 Baud						OFF	OFF	OFF	
4800 Baud						ON	OFF	OFF	
9600 Baud						OFF	ON	OFF	
Protocol Termination									
Switch Number	SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	SW2-9
Terminated									ON*
Not Terminated									OFF*

*If you are connecting a single dome to a controller, terminate the dome. When connecting more than one dome to a single controller, terminate the dome farthest from the controller.

Table B. Switch Settings for SW3: Pelco P-Type Control

SPECTRA ADDRESS	SWITCH SETTING				
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5
1	OFF	OFF	OFF	OFF	OFF
2	ON	OFF	OFF	OFF	OFF
3	OFF	ON	OFF	OFF	OFF
4	ON	ON	OFF	OFF	OFF
5	OFF	OFF	ON	OFF	OFF
6	ON	OFF	ON	OFF	OFF
7	OFF	ON	ON	OFF	OFF
8	ON	ON	ON	OFF	OFF
9	OFF	OFF	OFF	ON	OFF
10	ON	OFF	OFF	ON	OFF
11	OFF	ON	OFF	ON	OFF
12	ON	ON	OFF	ON	OFF
13	OFF	OFF	ON	ON	OFF
14	ON	OFF	ON	ON	OFF
15	OFF	ON	ON	ON	OFF
16	ON	ON	ON	ON	OFF

SPECTRA ADDRESS	SWITCH SETTING				
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5
17	OFF	OFF	OFF	OFF	ON
18	ON	OFF	OFF	OFF	ON
19	OFF	ON	OFF	OFF	ON
20	ON	ON	OFF	OFF	ON
21	OFF	OFF	ON	OFF	ON
22	ON	OFF	ON	OFF	ON
23	OFF	ON	ON	OFF	ON
24	ON	ON	ON	OFF	ON
25	OFF	OFF	OFF	ON	ON
26	ON	OFF	OFF	ON	ON
27	OFF	ON	OFF	ON	ON
28	ON	ON	OFF	ON	ON
29	OFF	OFF	ON	ON	ON
30	ON	OFF	ON	ON	ON
31	OFF	ON	ON	ON	ON
32	ON	ON	ON	ON	ON

Table C. Switch Settings for SW3: Pelco D-Type Control *(1 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF	OFF	OFF
17	ON	OFF	OFF	OFF	ON	OFF	OFF	OFF
18	OFF	ON	OFF	OFF	ON	OFF	OFF	OFF
19	ON	ON	OFF	OFF	ON	OFF	OFF	OFF
20	OFF	OFF	ON	OFF	ON	OFF	OFF	OFF
21	ON	OFF	ON	OFF	ON	OFF	OFF	OFF
22	OFF	ON	ON	OFF	ON	OFF	OFF	OFF
23	ON	ON	ON	OFF	ON	OFF	OFF	OFF
24	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF
25	ON	OFF	OFF	ON	ON	OFF	OFF	OFF
26	OFF	ON	OFF	ON	ON	OFF	OFF	OFF
27	ON	ON	OFF	ON	ON	OFF	OFF	OFF
28	OFF	OFF	ON	ON	ON	OFF	OFF	OFF
29	ON	OFF	ON	ON	ON	OFF	OFF	OFF
30	OFF	ON	ON	ON	ON	OFF	OFF	OFF
31	ON	ON	ON	ON	ON	OFF	OFF	OFF
32	OFF	OFF	OFF	OFF	OFF	ON	OFF	OFF
33	ON	OFF	OFF	OFF	OFF	ON	OFF	OFF
34	OFF	ON	OFF	OFF	OFF	ON	OFF	OFF
35	ON	ON	OFF	OFF	OFF	ON	OFF	OFF
36	OFF	OFF	ON	OFF	OFF	ON	OFF	OFF
37	ON	OFF	ON	OFF	OFF	ON	OFF	OFF
38	OFF	ON	ON	OFF	OFF	ON	OFF	OFF

Table C. Switch Settings for SW3: Pelco D-Type Control *(2 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
39	ON	ON	ON	OFF	OFF	ON	OFF	OFF
40	OFF	OFF	OFF	ON	OFF	ON	OFF	OFF
41	ON	OFF	OFF	ON	OFF	ON	OFF	OFF
42	OFF	ON	OFF	ON	OFF	ON	OFF	OFF
43	ON	ON	OFF	ON	OFF	ON	OFF	OFF
44	OFF	OFF	ON	ON	OFF	ON	OFF	OFF
45	ON	OFF	ON	ON	OFF	ON	OFF	OFF
46	OFF	ON	ON	ON	OFF	ON	OFF	OFF
47	ON	ON	ON	ON	OFF	ON	OFF	OFF
48	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF
49	ON	OFF	OFF	OFF	ON	ON	OFF	OFF
50	OFF	ON	OFF	OFF	ON	ON	OFF	OFF
51	ON	ON	OFF	OFF	ON	ON	OFF	OFF
52	OFF	OFF	ON	OFF	ON	ON	OFF	OFF
53	ON	OFF	ON	OFF	ON	ON	OFF	OFF
54	OFF	ON	ON	OFF	ON	ON	OFF	OFF
55	ON	ON	ON	OFF	ON	ON	OFF	OFF
56	OFF	OFF	OFF	ON	ON	ON	OFF	OFF
57	ON	OFF	OFF	ON	ON	ON	OFF	OFF
58	OFF	ON	OFF	ON	ON	ON	OFF	OFF
59	ON	ON	OFF	ON	ON	ON	OFF	OFF
60	OFF	OFF	ON	ON	ON	ON	OFF	OFF
61	ON	OFF	ON	ON	ON	ON	OFF	OFF
62	OFF	ON	ON	ON	ON	ON	OFF	OFF
63	ON	ON	ON	ON	ON	ON	OFF	OFF
64	OFF	OFF	OFF	OFF	OFF	OFF	ON	OFF
65	ON	OFF	OFF	OFF	OFF	OFF	ON	OFF
66	OFF	ON	OFF	OFF	OFF	OFF	ON	OFF
67	ON	ON	OFF	OFF	OFF	OFF	ON	OFF
68	OFF	OFF	ON	OFF	OFF	OFF	ON	OFF
69	ON	OFF	ON	OFF	OFF	OFF	ON	OFF
70	OFF	ON	ON	OFF	OFF	OFF	ON	OFF
71	ON	ON	ON	OFF	OFF	OFF	ON	OFF
72	OFF	OFF	OFF	ON	OFF	OFF	ON	OFF
73	ON	OFF	OFF	ON	OFF	OFF	ON	OFF
74	OFF	ON	OFF	ON	OFF	OFF	ON	OFF
75	ON	ON	OFF	ON	OFF	OFF	ON	OFF
76	OFF	OFF	ON	ON	OFF	OFF	ON	OFF
77	ON	OFF	ON	ON	OFF	OFF	ON	OFF

Table C. Switch Settings for SW3: Pelco D-Type Control *(3 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
78	OFF	ON	ON	ON	OFF	OFF	ON	OFF
79	ON	ON	ON	ON	OFF	OFF	ON	OFF
80	OFF	OFF	OFF	OFF	ON	OFF	ON	OFF
81	ON	OFF	OFF	OFF	ON	OFF	ON	OFF
82	OFF	ON	OFF	OFF	ON	OFF	ON	OFF
83	ON	ON	OFF	OFF	ON	OFF	ON	OFF
84	OFF	OFF	ON	OFF	ON	OFF	ON	OFF
85	ON	OFF	ON	OFF	ON	OFF	ON	OFF
86	OFF	ON	ON	OFF	ON	OFF	ON	OFF
87	ON	ON	ON	OFF	ON	OFF	ON	OFF
88	OFF	OFF	OFF	ON	ON	OFF	ON	OFF
89	ON	OFF	OFF	ON	ON	OFF	ON	OFF
90	OFF	ON	OFF	ON	ON	OFF	ON	OFF
91	ON	ON	OFF	ON	ON	OFF	ON	OFF
92	OFF	OFF	ON	ON	ON	OFF	ON	OFF
93	ON	OFF	ON	ON	ON	OFF	ON	OFF
94	OFF	ON	ON	ON	ON	OFF	ON	OFF
95	ON	ON	ON	ON	ON	OFF	ON	OFF
96	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF
97	ON	OFF	OFF	OFF	OFF	ON	ON	OFF
98	OFF	ON	OFF	OFF	OFF	ON	ON	OFF
99	ON	ON	OFF	OFF	OFF	ON	ON	OFF
100	OFF	OFF	ON	OFF	OFF	ON	ON	OFF
101	ON	OFF	ON	OFF	OFF	ON	ON	OFF
102	OFF	ON	ON	OFF	OFF	ON	ON	OFF
103	ON	ON	ON	OFF	OFF	ON	ON	OFF
104	OFF	OFF	OFF	ON	OFF	ON	ON	OFF
105	ON	OFF	OFF	ON	OFF	ON	ON	OFF
106	OFF	ON	OFF	ON	OFF	ON	ON	OFF
107	ON	ON	OFF	ON	OFF	ON	ON	OFF
108	OFF	OFF	ON	ON	OFF	ON	ON	OFF
109	ON	OFF	ON	ON	OFF	ON	ON	OFF
110	OFF	ON	ON	ON	OFF	ON	ON	OFF
111	ON	ON	ON	ON	OFF	ON	ON	OFF
112	OFF	OFF	OFF	OFF	ON	ON	ON	OFF
113	ON	OFF	OFF	OFF	ON	ON	ON	OFF
114	OFF	ON	OFF	OFF	ON	ON	ON	OFF
115	ON	ON	OFF	OFF	ON	ON	ON	OFF
116	OFF	OFF	ON	OFF	ON	ON	ON	OFF

Table C. Switch Settings for SW3: Pelco D-Type Control *(4 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
117	ON	OFF	ON	OFF	ON	ON	ON	OFF
118	OFF	ON	ON	OFF	ON	ON	ON	OFF
119	ON	ON	ON	OFF	ON	ON	ON	OFF
120	OFF	OFF	OFF	ON	ON	ON	ON	OFF
121	ON	OFF	OFF	ON	ON	ON	ON	OFF
122	OFF	ON	OFF	ON	ON	ON	ON	OFF
123	ON	ON	OFF	ON	ON	ON	ON	OFF
124	OFF	OFF	ON	ON	ON	ON	ON	OFF
125	ON	OFF	ON	ON	ON	ON	ON	OFF
126	OFF	ON	ON	ON	ON	ON	ON	OFF
127	ON	ON	ON	ON	ON	ON	ON	OFF
128	OFF	OFF	OFF	OFF	OFF	OFF	OFF	ON
129	ON	OFF	OFF	OFF	OFF	OFF	OFF	ON
130	OFF	ON	OFF	OFF	OFF	OFF	OFF	ON
131	ON	ON	OFF	OFF	OFF	OFF	OFF	ON
132	OFF	OFF	ON	OFF	OFF	OFF	OFF	ON
133	ON	OFF	ON	OFF	OFF	OFF	OFF	ON
134	OFF	ON	ON	OFF	OFF	OFF	OFF	ON
135	ON	ON	ON	OFF	OFF	OFF	OFF	ON
136	OFF	OFF	OFF	ON	OFF	OFF	OFF	ON
137	ON	OFF	OFF	ON	OFF	OFF	OFF	ON
138	OFF	ON	OFF	ON	OFF	OFF	OFF	ON
139	ON	ON	OFF	ON	OFF	OFF	OFF	ON
140	OFF	OFF	ON	ON	OFF	OFF	OFF	ON
141	ON	OFF	ON	ON	OFF	OFF	OFF	ON
142	OFF	ON	ON	ON	OFF	OFF	OFF	ON
143	ON	ON	ON	ON	OFF	OFF	OFF	ON
144	OFF	OFF	OFF	OFF	ON	OFF	OFF	ON
145	ON	OFF	OFF	OFF	ON	OFF	OFF	ON
146	OFF	ON	OFF	OFF	ON	OFF	OFF	ON
147	ON	ON	OFF	OFF	ON	OFF	OFF	ON
148	OFF	OFF	ON	OFF	ON	OFF	OFF	ON
149	ON	OFF	ON	OFF	ON	OFF	OFF	ON
150	OFF	ON	ON	OFF	ON	OFF	OFF	ON
151	ON	ON	ON	OFF	ON	OFF	OFF	ON
152	OFF	OFF	OFF	ON	ON	OFF	OFF	ON
153	ON	OFF	OFF	ON	ON	OFF	OFF	ON
154	OFF	ON	OFF	ON	ON	OFF	OFF	ON
155	ON	ON	OFF	ON	ON	OFF	OFF	ON

Table C. Switch Settings for SW3: Pelco D-Type Control *(5 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
156	OFF	OFF	ON	ON	ON	OFF	OFF	ON
157	ON	OFF	ON	ON	ON	OFF	OFF	ON
158	OFF	ON	ON	ON	ON	OFF	OFF	ON
159	ON	ON	ON	ON	ON	OFF	OFF	ON
160	OFF	OFF	OFF	OFF	OFF	ON	OFF	ON
161	ON	OFF	OFF	OFF	OFF	ON	OFF	ON
162	OFF	ON	OFF	OFF	OFF	ON	OFF	ON
163	ON	ON	OFF	OFF	OFF	ON	OFF	ON
164	OFF	OFF	ON	OFF	OFF	ON	OFF	ON
165	ON	OFF	ON	OFF	OFF	ON	OFF	ON
166	OFF	ON	ON	OFF	OFF	ON	OFF	ON
167	ON	ON	ON	OFF	OFF	ON	OFF	ON
168	OFF	OFF	OFF	ON	OFF	ON	OFF	ON
169	ON	OFF	OFF	ON	OFF	ON	OFF	ON
170	OFF	ON	OFF	ON	OFF	ON	OFF	ON
171	ON	ON	OFF	ON	OFF	ON	OFF	ON
172	OFF	OFF	ON	ON	OFF	ON	OFF	ON
173	ON	OFF	ON	ON	OFF	ON	OFF	ON
174	OFF	ON	ON	ON	OFF	ON	OFF	ON
175	ON	ON	ON	ON	OFF	ON	OFF	ON
176	OFF	OFF	OFF	OFF	ON	ON	OFF	ON
177	ON	OFF	OFF	OFF	ON	ON	OFF	ON
178	OFF	ON	OFF	OFF	ON	ON	OFF	ON
179	ON	ON	OFF	OFF	ON	ON	OFF	ON
180	OFF	OFF	ON	OFF	ON	ON	OFF	ON
181	ON	OFF	ON	OFF	ON	ON	OFF	ON
182	OFF	ON	ON	OFF	ON	ON	OFF	ON
183	ON	ON	ON	OFF	ON	ON	OFF	ON
184	OFF	OFF	OFF	ON	ON	ON	OFF	ON
185	ON	OFF	OFF	ON	ON	ON	OFF	ON
186	OFF	ON	OFF	ON	ON	ON	OFF	ON
187	ON	ON	OFF	ON	ON	ON	OFF	ON
188	OFF	OFF	ON	ON	ON	ON	OFF	ON
189	ON	OFF	ON	ON	ON	ON	OFF	ON
190	OFF	ON	ON	ON	ON	ON	OFF	ON
191	ON	ON	ON	ON	ON	ON	OFF	ON
192	OFF	OFF	OFF	OFF	OFF	OFF	ON	ON
193	ON	OFF	OFF	OFF	OFF	OFF	ON	ON
194	OFF	ON	OFF	OFF	OFF	OFF	ON	ON

Table C. Switch Settings for SW3: Pelco D-Type Control *(6 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
195	ON	ON	OFF	OFF	OFF	OFF	ON	ON
196	OFF	OFF	ON	OFF	OFF	OFF	ON	ON
197	ON	OFF	ON	OFF	OFF	OFF	ON	ON
198	OFF	ON	ON	OFF	OFF	OFF	ON	ON
199	ON	ON	ON	OFF	OFF	OFF	ON	ON
200	OFF	OFF	OFF	ON	OFF	OFF	ON	ON
201	ON	OFF	OFF	ON	OFF	OFF	ON	ON
202	OFF	ON	OFF	ON	OFF	OFF	ON	ON
203	ON	ON	OFF	ON	OFF	OFF	ON	ON
204	OFF	OFF	ON	ON	OFF	OFF	ON	ON
205	ON	OFF	ON	ON	OFF	OFF	ON	ON
206	OFF	ON	ON	ON	OFF	OFF	ON	ON
207	ON	ON	ON	ON	OFF	OFF	ON	ON
208	OFF	OFF	OFF	OFF	ON	OFF	ON	ON
209	ON	OFF	OFF	OFF	ON	OFF	ON	ON
210	OFF	ON	OFF	OFF	ON	OFF	ON	ON
211	ON	ON	OFF	OFF	ON	OFF	ON	ON
212	OFF	OFF	ON	OFF	ON	OFF	ON	ON
213	ON	OFF	ON	OFF	ON	OFF	ON	ON
214	OFF	ON	ON	OFF	ON	OFF	ON	ON
215	ON	ON	ON	OFF	ON	OFF	ON	ON
216	OFF	OFF	OFF	ON	ON	OFF	ON	ON
217	ON	OFF	OFF	ON	ON	OFF	ON	ON
218	OFF	ON	OFF	ON	ON	OFF	ON	ON
219	ON	ON	OFF	ON	ON	OFF	ON	ON
220	OFF	OFF	ON	ON	ON	OFF	ON	ON
221	ON	OFF	ON	ON	ON	OFF	ON	ON
222	OFF	ON	ON	ON	ON	OFF	ON	ON
223	ON	ON	ON	ON	ON	OFF	ON	ON
224	OFF	OFF	OFF	OFF	OFF	ON	ON	ON
225	ON	OFF	OFF	OFF	OFF	ON	ON	ON
226	OFF	ON	OFF	OFF	OFF	ON	ON	ON
227	ON	ON	OFF	OFF	OFF	ON	ON	ON
228	OFF	OFF	ON	OFF	OFF	ON	ON	ON
229	ON	OFF	ON	OFF	OFF	ON	ON	ON
230	OFF	ON	ON	OFF	OFF	ON	ON	ON
231	ON	ON	ON	OFF	OFF	ON	ON	ON
232	OFF	OFF	OFF	ON	OFF	ON	ON	ON
233	ON	OFF	OFF	ON	OFF	ON	ON	ON

Table C. Switch Settings for SW3: Pelco D-Type Control *(7 of 7)*

SPECTRA ADDRESS	SWITCH SETTING							
	SW3-1	SW3-2	SW3-3	SW3-4	SW3-5	SW3-6	SW3-7	SW3-8
234	OFF	ON	OFF	ON	OFF	ON	ON	ON
235	ON	ON	OFF	ON	OFF	ON	ON	ON
236	OFF	OFF	ON	ON	OFF	ON	ON	ON
237	ON	OFF	ON	ON	OFF	ON	ON	ON
238	OFF	ON	ON	ON	OFF	ON	ON	ON
239	ON	ON	ON	ON	OFF	ON	ON	ON
240	OFF	OFF	OFF	OFF	ON	ON	ON	ON
241	ON	OFF	OFF	OFF	ON	ON	ON	ON
242	OFF	ON	OFF	OFF	ON	ON	ON	ON
243	ON	ON	OFF	OFF	ON	ON	ON	ON
244	OFF	OFF	ON	OFF	ON	ON	ON	ON
245	ON	OFF	ON	OFF	ON	ON	ON	ON
246	OFF	ON	ON	OFF	ON	ON	ON	ON
247	ON	ON	ON	OFF	ON	ON	ON	ON
248	OFF	OFF	OFF	ON	ON	ON	ON	ON
249	ON	OFF	OFF	ON	ON	ON	ON	ON
250	OFF	ON	OFF	ON	ON	ON	ON	ON
251	ON	ON	OFF	ON	ON	ON	ON	ON
252	OFF	OFF	ON	ON	ON	ON	ON	ON
253	ON	OFF	ON	ON	ON	ON	ON	ON
254	OFF	ON	ON	ON	ON	ON	ON	ON

WIRING TABLES

Table D. Video Coaxial Cable Requirements

Cable Type*	Maximum Distance
RG59/U	750 ft (229 m)
RG6/U	1,000 ft (305 m)
RG11/U	1,500 ft (457 m)

*Cable requirements:
75-ohm impedance
All-copper center conductor
All-copper braided shield with 95% braid coverage

Table E. Interface Cable Wiring

Pin	Color	Function
1	ORANGE	UTP-
2	WHITE/ORANGE	UTP+
3	GREEN	RX-
4	WHITE/GREEN	RX+
5	BLUE	TX-
6	WHITE/BLUE	TX+
7	NOT USED	—
8	NOT USED	—
9	BROWN	24 V ~
10	WHITE/BROWN	24 V ~

Table F describes the recommended maximum distances for 24 VAC applications, which are calculated with a 10 percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.)

Table F. Wiring Distances

Voltage	Wire Gauge			
	18 (1.0 mm^2)	16 (1.5 mm^2)	14 (2.5 mm^2)	12 (3.5 mm^2)
24 VAC	215 ft (97 m)	341 ft (154 m)	542 ft (245 m)	863 ft (391 m)

NOTE: Power consumption is 21 VA per unit. Use a power source with a minimum of 21 VA per unit.

Installation

SURFACE MOUNT

1. On top of the dome drive is an opening for an optional translator board. The opening has a cover that must remain in place if a translator board is not required. A taller cover is supplied if a translator board is installed.

   If you are going to install a translator board, follow the instructions that come with the translator board.

   If you are not going to install a translator board, save the taller cover in case you ever choose to install a translator board.

2. Prepare the ceiling as follows:

   a. Using the surface mount ring as a template, drill holes for the mounting hardware.

   - **Standard ceiling:** When mounting the dome system to a standard ceiling, use either 6-32 toggle bolts (not supplied) or #8 x 3.50-inch self-tapping screws (supplied). Refer to Figure 3.
   - **Concrete ceiling:** When mounting the dome system to a concrete system, use 8-32 studs and nuts (not supplied). Refer to Figure 4.

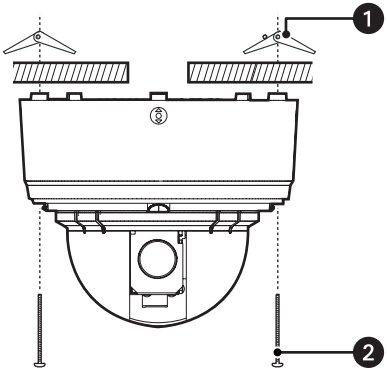


Figure 3. Standard Ceiling Installation

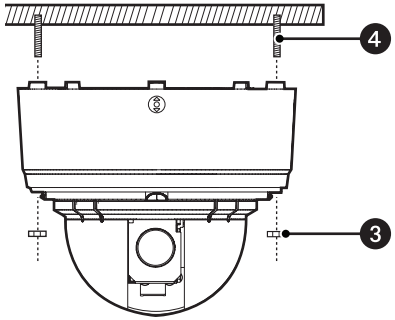


Figure 4. Concrete Ceiling Installation

1. 6-32 toggle bolts (not supplied)
2. #8 x 3.50-inch self tapping screws (supplied)

   NOTE: Use either toggle bolts or self-tapping screws when mounting the dome to a standard ceiling.

3. Nuts (not supplied)
4. 8-32 studs (not supplied)

   b. If you are installing a translator board, cut out the pie-shaped section from the supplied template (refer to Figure 11 on page 25). Using the pie-shaped template, either cut a hole through the ceiling or make a hole with a depth of 0.25 inches (6 mm).

c. Drill a hole in the ceiling for wiring; pull all wiring through the hole and terminate all wires (if not already terminated).

NOTE: You do not have to run wiring through the ceiling; you can fasten the wires to the ceiling and then run the wires through the gap between the ceiling and the surface mount ring (refer to Figure 5).

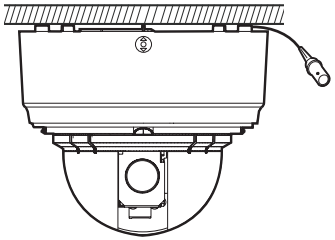


Figure 5. Wiring Attached to Ceiling

3. If you are wiring more than one dome drive to the same transformer, connect one side of the transformer to pin 9 of the RJ45-10 connector on all modules. Connect the other side of the transformer to pin 10 of the RJ45-10 connector on all modules.

   NOTE: Failure to connect all modules identically may produce a vertical roll when switching between cameras.

4. Connect your power wiring to the dome drive using one of the following options (refer to Table F on page 16 for wiring distances):

   - Plug the RJ45-10 connector on the end of the supplied interface cable (refer to Figure 6) into the mating connector on top of the dome drive, and then connect your wiring to the other end of the cable.
   - Connect the supplied RJ45-10 connector to your wiring, and then plug the connector into the dome drive.

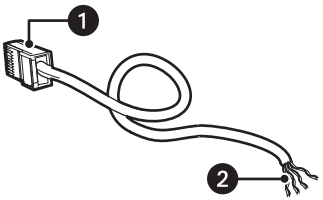


Figure 6. Interface Cable

1. RJ45-10 connector
2. Twisted pairs

5. Connect your video and data wiring to the dome drive using either an unshielded twisted pair (UTP) of wires (refer to Table E on page 16) or coaxial cable (refer to Table D on page 16). A BNC connector for coaxial cable is attached to the dome drive.

⚠ **WARNING:** Do not overtighten the mounting hardware; doing so can impede the pan movement of the dome drive.

6. Attach the dome drive to the ceiling (refer to Figure 3 and Figure 4 on page 17).
7. Line up the tabs on the trim ring with the slots in the dome drive. Snap the trim ring and bubble into place.

RECESSED

1. On top of the dome drive is an opening for an optional translator board. The opening has a cover that must remain in place if a translator board is not required. A taller cover is supplied if a translator board is installed.

   If you are going to install a translator board, follow the instructions that come with the translator board.

   If you are not going to install a translator board, save the taller cover in case you ever choose to install a translator board.

2. Remove the spring paddle flex assembly from the surface mount ring (refer to Figure 7).

Figure 7. Spring Paddle Flex Assembly

3. Remove the surface mount ring from the dome drive as follows (refer to Figure 8):
   a. Place your fingers on the circular marks located on the sides of the surface mount ring.
   b. Pinch the sides.
   c. Lift and remove the surface mount ring from the dome drive.

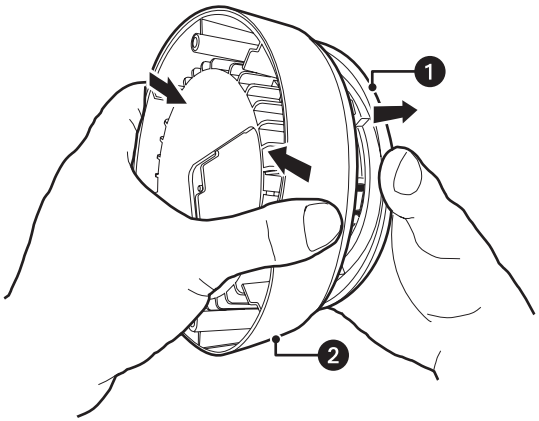


Figure 8. Removing the Surface Mount Ring

1. Dome drive
2. Surface mount ring

4. Attach the spring paddle flex assembly to the dome drive using the two #8-32 x 3.50-inch machine screws (supplied). Thread the screws into the ends of the spring paddle flex assembly so the paddles remain at the end of the screws (refer to Figure 9 on page 21).

5. Cut a 5-inch diameter hole in the ceiling tile. You can either use the two holes in the spring paddle flex assembly as a compass tool to mark the 5-inch diameter hole, or use a 5-inch hole saw.
6. If you are wiring more than one dome drive to the same transformer, connect one side of the transformer to pin 9 of the RJ45-10 connector on all modules. Connect the other side of the transformer to pin 10 of the RJ45-10 connector on all modules.

   NOTE: Failure to connect all modules identically may introduce noise in the video for some installations.
7. Pull all wiring through the hole in the ceiling and terminate all wires (if not already terminated).
8. Connect your power wiring to the dome drive using one of the following options (refer to Table F on page 16 for wiring distances):
   - Plug the RJ45-10 connector on the end of the supplied interface cable (refer to Figure 6 on page 18) into the mating connector on top of the dome drive, and then connect your wiring to the other end of the cable.
   - Connect the supplied RJ45-10 connector to your wiring, and then plug the connector into the dome drive.
9. Connect your video and data wiring to the dome drive using either an unshielded twisted pair (UTP) of wires (refer to Table E on page 16) or coaxial cable (refer to Table D on page 16). A BNC connector for coaxial cable is attached to the dome drive.
10. Attach the dome drive to the ceiling (refer to Figure 9 on page 21).
    a. Stabilize the spring paddle flex assembly by applying pressure to the machine screws.
    b. With the screws stabilized, insert the spring paddle flex assembly and dome drive into the hole in the ceiling tile.

       NOTES:
       - You may need to cut notches in the ceiling and insert the dome drive at an angle to allow the ends of the paddle to clear the hole.
       - Be sure to route all wiring away from the spring paddle flex assembly.

    c. Once the spring paddle flex assembly has cleared the hole in the ceiling tile, release the machine screws and allow the spring paddle flex assembly to expand. You do not need to support the dome drive, as the ends of the paddle will hold the dome drive in place.

       ⚠ **WARNING:** Do not overtighten the mounting hardware; doing so can impede the pan movement of the dome drive.

    d. Tighten the machine screws completely to secure the ceiling tile between the spring paddle flex assembly and the dome drive.
11. Align the tabs on the trim ring with the slots in the dome drive. Snap the trim ring and dome bubble into place.

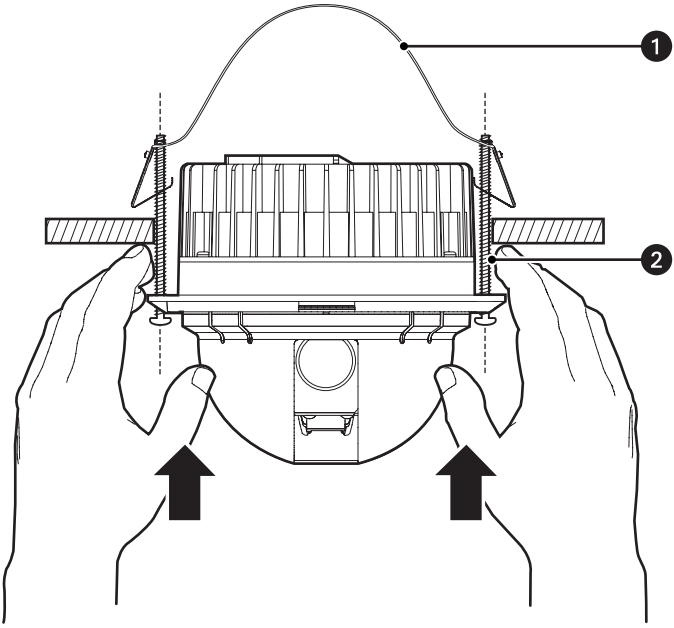


Figure 9. Recessed Installation

DATA PORT

The data port (refer to Figure 10) allows access for on-site setup and testing of the dome system. It also is used for uploading revised operating software and language files. Refer to *Software/Language File Upload* in the Operation/Configuration manual.

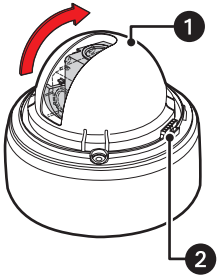


Figure 10. Component Locations

1. Dome liner
2. Remote data port

Specifications

MECHANICAL

Pan Movement	360° continuous pan rotation
Vertical Tilt	Unobstructed +2° to -92°
Manual Pan/Tilt Speeds	
Pan	0.4 to 80°/sec manual operation, 100°/sec turbo
Tilt	0.7 to 40°/sec manual operation
Preset Speeds	
Pan	140°/sec
Tilt	80°/sec
	For variable speed operation an appropriate controller is required.

ELECTRICAL

Input Voltage	18 to 30 VAC, 24 VAC nominal
Input Power	21 VA nominal
Fuse	1.6 A

GENERAL

Construction	
Top Cap	Anodized cast aluminum
Trim Ring and Surface Mount Ring	ABS plastic
Bubble	Acrylic
Finish	White or black
Light Attenuation	
Smoked	f/0.5 light loss
Clear	Zero light loss
Cable Entry	Single RJ45-10 connector, pigtail supplied BNC connector
Environment	Indoor
Operating Temperature	32° to 122°F (0° to 50°C)
Weight	1.75 lb (0.79 kg)

CAMERA

Signal Format	NTSC/PAL
Scanning System	2:1 interlace
Image Sensor	1/4-inch interline CCD
Effective Pixels	
NTSC	768 (H) x 494 (V)
PAL	752 (H) x 582 (V)
Horizontal Resolution	
NTSC	>470 TV lines
PAL	>460 TV lines
Minimum Illumination	3.0 lux
Sync System	AC line lock, phase adjustable via remote control, V-Sync
White Balance	Automatic with manual override

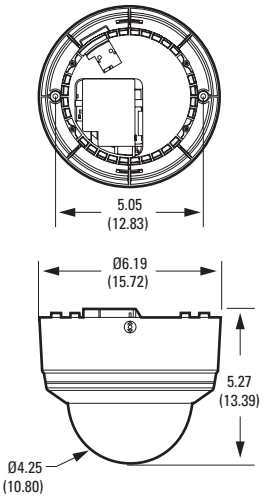
Shutter Speed	Automatic (electronic iris)/manual
	1/60~1/30,000
Gain Control	Automatic with manual override
Video Output	1.0 to 1.2 Vp-p, 75 ohms, adjustable
Video Signal-to-Noise Ratio	>50 dB

LENS

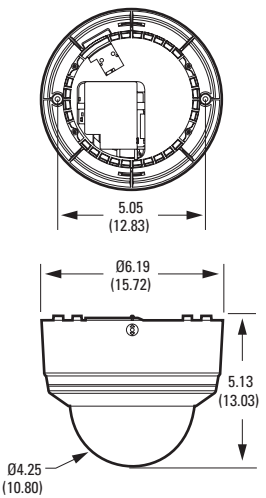
Lens	f/1.8 (4.2~42 mm optical) 10X optical zoom, 8X digital zoom
Zoom Speed (optical range)	1.5/2.5/4.3 seconds
Horizontal Angle of View	46.4° wide zoom 5.0° telephoto zoom
Focus	Automatic with manual override
Iris Control	Automatic with manual override

(Design and product specifications subject to change without notice.)

WITH TXB TRANSLATOR BOARD



WITHOUT TXB TRANSLATOR BOARD



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

Green The materials used in the manufacture of this document and its components are compliant to the requirements of Directive 2002/95/EC.

This equipment contains electrical or electronic components that must be recycled properly to comply with Directive 2002/96/EC of the European Union regarding the disposal of waste electrical and electronic equipment (WEEE). Contact your local dealer for procedures for recycling this equipment.

For surface mount installations with a translator board, use this template (refer to *Surface Mount* on page 17).

⚠ **WARNING:** Before printing this document, your printer must be set for 100% scaling. The diameter of the circle is 4.7 inches (11.95 cm). Printing the template at an incorrect scale could result in equipment damage.

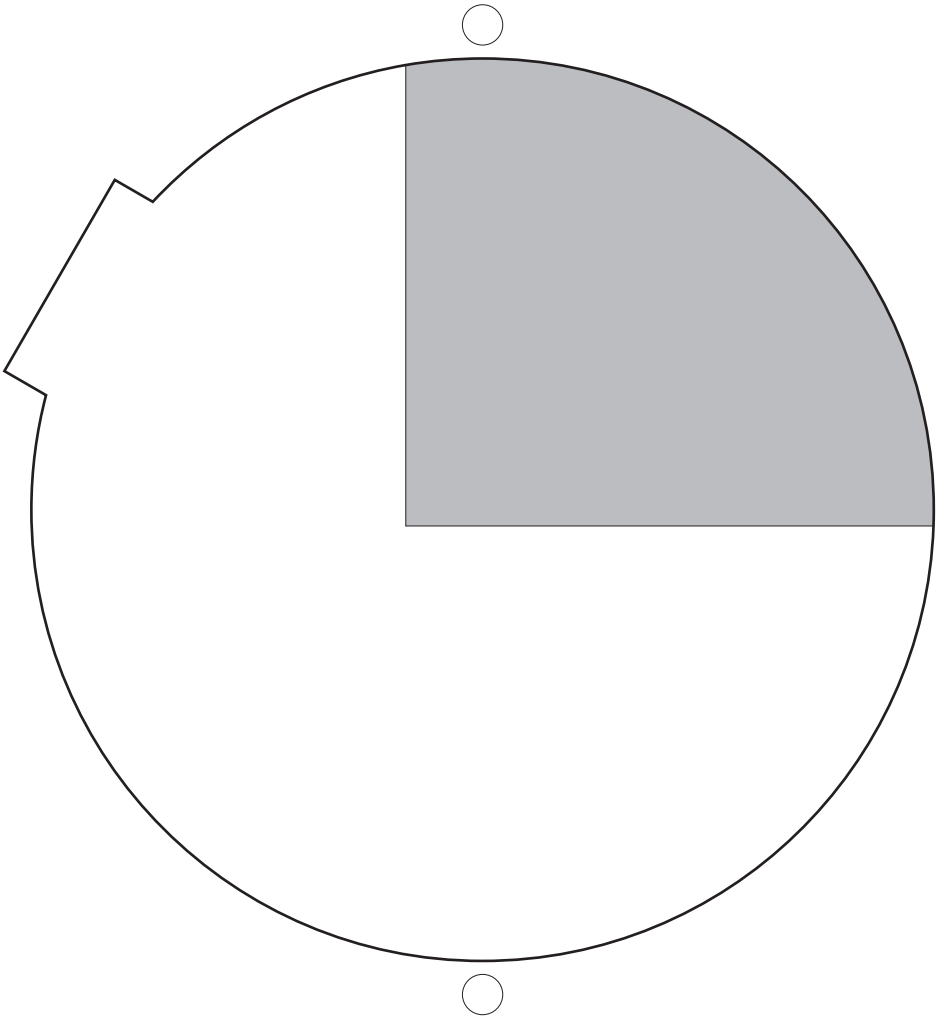


Figure 11. Template for Surface Mount Installation with a TXB Translator Board

PRODUCT WARRANTY AND RETURN INFORMATION

WARRANTY

Pelco will repair or replace, without charge, any merchandise proved defective in material or workmanship **for a period of one year** after the date of shipment.

Exceptions to this warranty are as noted below:

- Five years:
  - Fiber optic products
  - TW3000 Series unshielded twisted pair (UTP) transmission products
  - CC3701H-2, CC3701H-2X, CC3751H-2, CC3651H-2X, MC3651H-2, and MC3651H-2X camera models
- Three years:
  - Pelco-branded fixed camera models (CCC1390H Series, C10DN Series, C10CH Series, IP3701H Series, and IX Series)
  - EH1500 Series enclosures
  - Spectra® IV products (including Spectra IV IP)
  - Camclosure® Series (IS, ICS, IP) integrated camera systems
  - DX Series digital video recorders, DVR5100 Series digital video recorders, Digital Sentry® Series hardware products, DVX Series digital video recorders, and NVR300 Series network video recorders
  - Endura® Series distributed network-based video products
  - Genex® Series products (multiplexers, server, and keyboard)
  - PMCL200/300/400 Series LCD monitors
- Two years:
  - Standard varifocal, fixed focal, and motorized zoom lenses.
  - DF5/DF8 Series fixed dome products
  - Legacy® Series integrated positioning systems
  - Spectra III™, Spectra Mini, Spectra Mini IP, Esprit®, ExSite®, and PS20 scanners, including when used in continuous motion applications.
  - Esprit Ti and TI2500 Series thermal imaging products
  - Esprit and WW5700 Series window wiper (excluding wiper blades).
  - CM6700/CM6800/CM9700 Series matrix
  - Digital Light Processing (DLP®) displays (except lamp and color wheel). The lamp and color wheel will be covered for a period of 90 days. The air filter is not covered under warranty.
  - Intelli-M® eIDC controllers
- One year:
  - Video cassette recorders (VCRs), except video heads. Video heads will be covered for a period of six months.
- Six months:
  - All pan and tilts, scanners, or preset lenses used in continuous motion applications (preset scan, tour, and auto scan modes).

Pelco will warrant all replacement parts and repairs for 90 days from the date of Pelco shipment. All goods requiring warranty repair shall be sent freight prepaid to a Pelco designated location. Repairs made necessary by reason of misuse, alteration, normal wear, or accident are not covered under this warranty.

Pelco assumes no risk and shall be subject to no liability for damages or loss resulting from the specific use or application made of the Products. Pelco's liability for any claim, whether based on breach of contract, negligence, infringement of any rights of any party or product liability, relating to the Products shall not exceed the price paid by the Dealer to Pelco for such Products. In no event will Pelco be liable for any special, incidental, or consequential damages (including loss of use, loss of profit, and claims of third parties) however caused, whether by the negligence of Pelco or otherwise.

The above warranty provides the Dealer with specific legal rights. The Dealer may also have additional rights, which are subject to variation from state to state.

If a warranty repair is required, the Dealer must contact Pelco at (800) 289-9100 or (559) 292-1981 to obtain a Repair Authorization number (RA), and provide the following information:

1. Model and serial number
2. Date of shipment, P.O. number, sales order number, or Pelco invoice number
3. Details of the defect or problem

If there is a dispute regarding the warranty of a product that does not fall under the warranty conditions stated above, please include a written explanation with the product when returned.

Method of return shipment shall be the same or equal to the method by which the item was received by Pelco.

RETURNS

To expedite parts returned for repair or credit, please call Pelco at (800) 289-9100 or (559) 292-1981 to obtain an authorization number (CA number if returned for credit, and RA number if returned for repair) and designated return location.

All merchandise returned for credit may be subject to a 20 percent restocking and refurbishing charge.

Goods returned for repair or credit should be clearly identified with the assigned CA or RA number and freight should be prepaid

12-23-08

www.pelco.com

Pelco, Inc. Worldwide Headquarters 3500 Pelco Way Clovis, California 93612 USA
USA & Canada Tel (800) 289-9100 Fax (800) 289-9150
International Tel +1 (559) 292-1981 Fax +1 (559) 348-1120